Nordic Energy Research

Gender equality in the Nordic energy sector

Contents

Foreword

Since 2017, Nordic Energy Research has had an increased focus on gender equality and worked to integrate this into the organisation's main task to facilitate cooperative energy research and policy development in the Nordic region. During the years, Nordic Energy Research has gathered professionals from the industry, academia and authorities in the Nordic energy sector for discussions and knowledge exchange to identify challenges and solutions to reduce the energy sector's gender gap. The discussions identified the importance of professional networks focusing on women in energy, which led to the establishment of the Nordic Energy Equality Network (NEEN), promoting gender diversity and empowerment of women for an inclusive and equal energy future. This report has been initiated by NEEN and is a contribution to the Nordic vision of a socially sustainable Nordic region.

Research has shown a link between gender equality in the workplace and corporate performance. Currently, a growing body of research and scientific literature is also investigating the link between lack of gender equality in leadership positions and the lack of ambitious commitment of companies and administrations in the sector to align their strategy with the climate commitments. The transition to sustainable energy is one of our time's most critical questions, but there is a risk that carrying on in traditional ways misses the opportunity to add other perspectives that can stimulate innovation and progression. It is a question of engaging all the available brainpower to be able to develop and implement the necessary energy solutions and reach the climate goals in time. The concept of sustainability is not just a one-sided technical or economical one – it must include the aspects of society and ecology too. Otherwise, solutions might fail to become sustainable. Improving gender equality lies at the core of the socially sustainable future.

The lack of women in decision-making positions in industry, research groups, and at energy authorities is often identified as the energy sector's obvious flaw. The Nordic region is often praised for equality and inclusion, but the energy segment seems to fall behind. The purpose of this report is to gather statistics from the Nordic countries and provide an overall status of gender balance and attitudes within energy companies, universities and energy authorities in the region. The intention is to highlight this topic and to stimulate further discussions to make a positive impact on the sector. After all, statistics are only numbers, and it is the people behind them who can make a difference.

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Acknowledgements

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Sofia Elamson and Karina Barnholt Klepper at Nordic Energy Research were the coordinators of the project.

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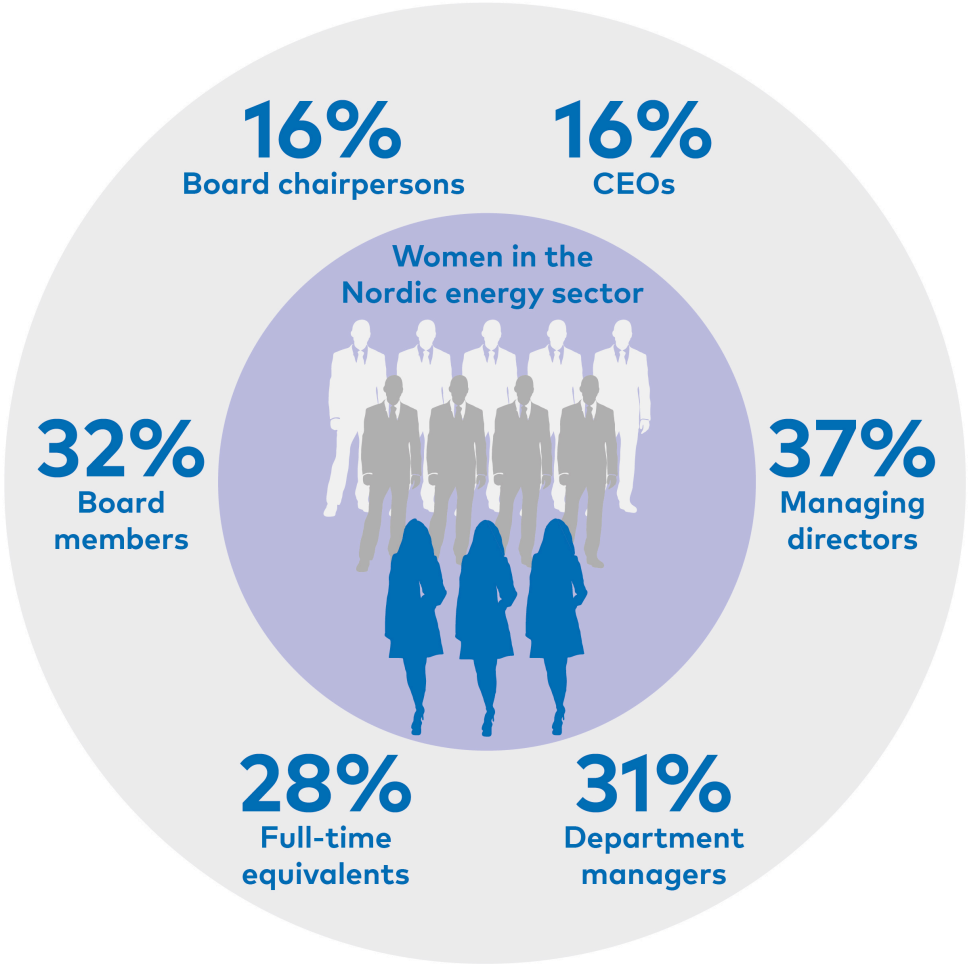
Additional materials, press coverage, presentations etc. can be found at www.nordicenergy.org

Main results

This is the first report on gender equality conducted by Nordic Energy Research, funded by the Nordic Council of Ministers. The report addresses that status of women within the Nordic energy sector. The information was obtained from three different parts of the energy sector; energy companies, academia and energy authorities. The report's main finding is that there is a major gender imbalance, where women are a minority throughout the Nordic energy sector, and in many cases, there is still a long way to go. The report lays a foundation for monitoring the development of gender balance in the Nordic energy sector in the coming years.



Energy companies

Women make up one third of decision-making positions in the Nordic region
Women hold 31% of all the decision-making power among the responding companies and make up 28% of the companies' full-time equivalents (FTE). Using the FTE

employment rate is preferable as it, unlike the standard headcount, takes into consideration the diversity of employment circumstances. This is particularly relevant when addressing gender gaps in employment rates.

Despite the fact that women hold 31% of the decision-making power in the energy companies included in the report, women are less represented in main leadership positions. Only 16% of the board chairpersons and 32% of board members are women. The same trend can be seen in C-suite positions, where women make up 37% of the managing directors, but only 16% are CEOs. In addition, a large part of the C-suite positions women hold, such as HR positions where women are in the majority, rarely lead to CEO positions.

The "women's leadership score" which the report uses, assigns different weights to the different levels of decision-making power. As women are less represented in the main leadership positions, which bear the most weight of decision-making, they have less overall decision-making power. Therefore, women's average decision-making power is 24%, based on the scoring method used in the report.

FULL-TIME EQUIVALENT (FTE)

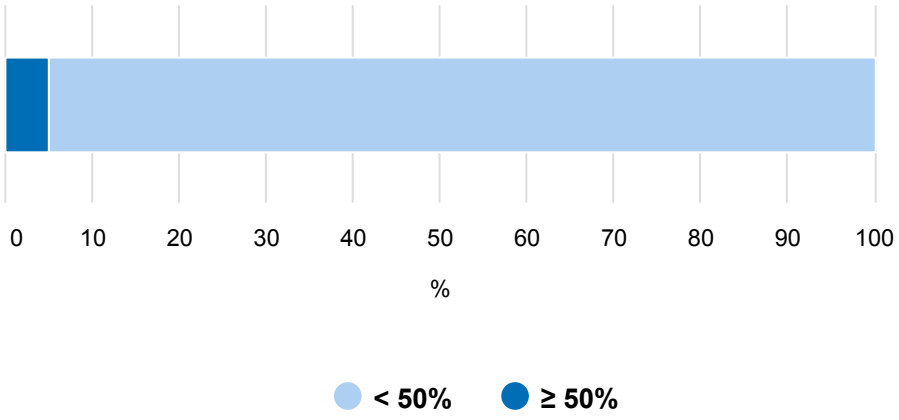
An employee's working hours divided by the number of full-time hours indicates the workload of the company's employee. For example: two employees are each working 80% on a given task, which makes the FTE = 1.6)

WOMEN'S LEADERSHIP SCORE

The scoring used in the analysis. The higher the women's leadership score is, the higher is the number of women with decision-making power within a given company. A score of 0% means that there are no women in the decision-making power and a score of 100% means there are only women.

Women play a major leadership role in only 5% of the Nordic energy companies
Out of the 94 companies in the sample, only five have a women's leadership score of 50% or higher, which is 5% of all the companies in the sample.

Figure 1: Women's leadership score



OUT OF THE 94 COMPANIES in the sample, only five have a women's leadership score of 50% or higher, which is 5% of all the companies in the sample.

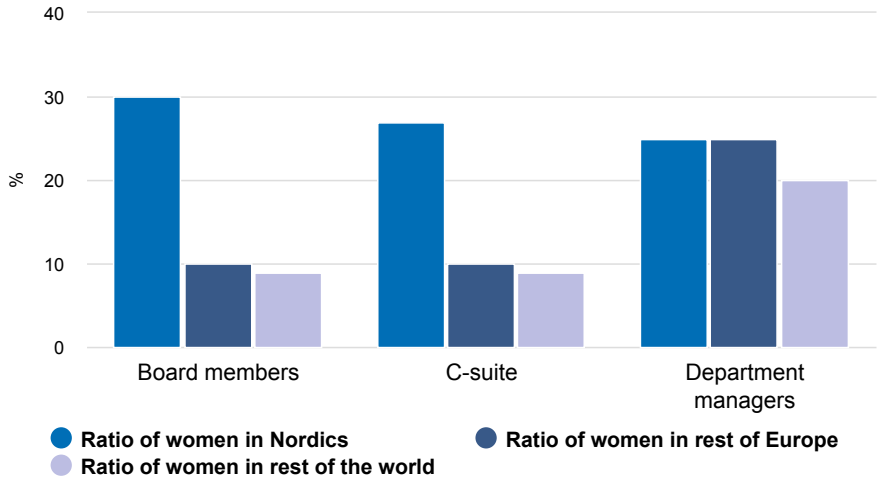
Nine out of the top 15 energy companies have female CEOs and six have female chairpersons

The women's leadership score was calculated for all responding companies. The companies were ranked in a descending order, based on score. Out of the top 15 companies arranged by women's leadership score, nine have a female CEO and six have female chairpersons. Compared to the average women's leadership score of 24%, the top five companies scored high (50% or more), meaning that women hold 50% or more of the companies' decision-making power.

The Nordic energy companies have a higher ratio of women in the decision-making power compared to the top 100 global companies

When comparing the largest Nordic energy companies to the rest of the world, it was found that the Nordic companies had a higher number of women in decision-making positions. They scored well above other regions, in terms of the ratio of women board members and C-suite executives. The ratio of department managers is however 5 percentage points higher than other global companies and is the same as the rest of Europe. Included in the extended sample of Nordic companies below are the companies that participated in the survey which have 150 employees or more (17 companies) and, in addition, another 14 Nordic companies that did not participate in the survey but were deemed to be of high importance because of their size. Of these 14 companies, two are part of the top 100 global companies.

Figure 2: Comparison of Nordic energy companies with top 100 global companies by revenue



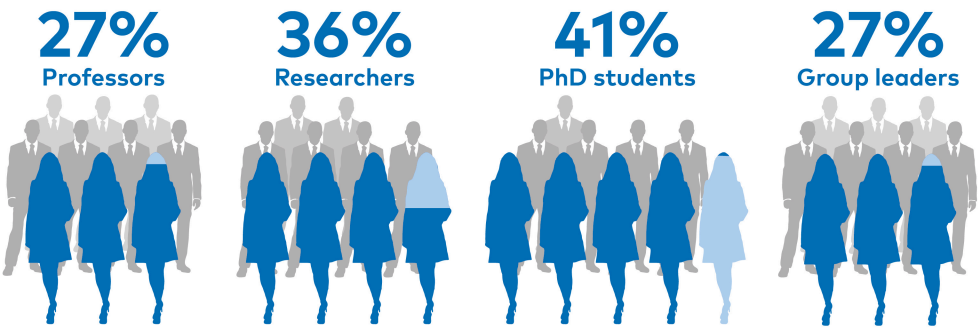
Academia

Research groups

The main reason behind gender imbalance in research groups is because too few women apply for these positions

Women are a minority in all research positions within the responding research groups. In 2019, 27% of the group leaders and professors were women. However, there ratio of women is a bit higher among researchers and PhD students: 36% and 41%. Most of the research group respondents think that gender balance is relevant for their work, and that the main reason for the gender imbalance within the group is that too few women apply for the positions.

Figure 3: Gender balance within Nordic research groups



University departments

12% of the department leaders and 19% of the professors are women

Out of the 26 departments that answered the survey, three have female department leaders (12%). 19% of the professors at the departments are women, most of them within engineering or technical science departments. Just as the respondents for the research groups, the respondents for the university departments suggest that the main reason for the gender imbalance is that too few women apply for scientific positions. Half of the departments encourage women to apply through their job announcements and many promote women especially as role models.

Figure 4 (left): Gender balance among Nordic university department leaders
Figure 5 (right): Gender balance among Nordic professors

Energy authorities

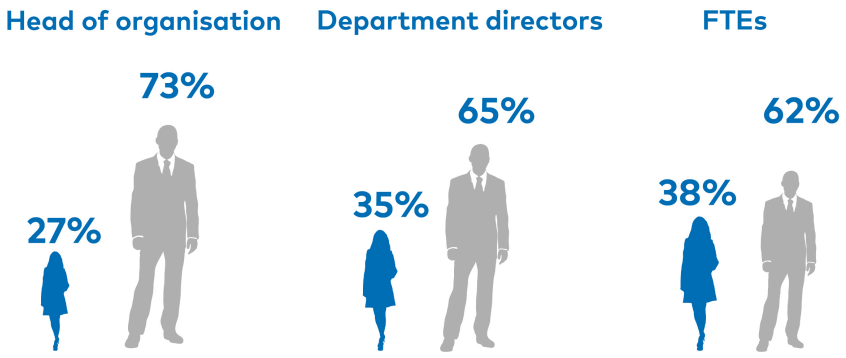
27% of head of organisations are women

Women are a minority in leadership roles within the Nordic energy authorities. Among the 11 energy authorities responding to the survey, 27% of the positions as the head of organisations* were held by women and 35% of the department directors were women. 38% of the total full-time equivalents (FTEs) were women in 2019, but with no significant change in three years.

All organisations take steps to improve gender equality within the workplace and are actively working with questions of diversity, inclusion and well-being. All but one of the organisations have implemented both gender equality policy and equal pay policy.

*CEO / Director general / Minister

Figure 6: Gender balance within Nordic energy authorities



Nordic energy voices: Iceland

Confronting hidden and complex inequality

Iceland has been the most gender-equal country in the world for more than a decade, according to the World Economic Forum's Global Gender Gap Report. Still, there is a lot of work to do.

Name: Þórdís Kolbrún Reykfjörð Gylfadóttir

Position: Minister of Tourism, Industry and Innovation

Organisation: Ministry of Industries and Innovation

Country: Iceland

Description: Youngest female minister the country has ever had

– I have always just jumped at the opportunities I have been given when they presented themselves, says Þórdís Gylfadottir. (Photo credit: Ministry of Industries and Innovation, Iceland)

In 2017, at the age of 29, Þórdís Gylfadottir became Minister of Tourism, Industry and Innovation. She is also a member of Iceland's parliament, the Althing, and vice-chair of the Independence party.

– When I entered politics, I didn't think gender equality would be my focus. I thought we had pretty much crossed that off on society's list of things to do. Later, I realised that the gender gap is in fact still there – just more hidden and complex, Gylfadottir says.

Real power

Now, she is very conscious of her own responsibility to stand up for equality and diversity.

– Through my position I have a voice which I have to put to good use every day for the women around me, and those who come after me, she says.

Gylfadottir thinks one of the important remaining hurdles for achieving genuine gender equality in Iceland is making sure that women are not there just for show.

– I have been vocal about the fact that even though it may appear that we slowly have more women at the big table, these positions must also come with real power. It is meaningless to have gender quotas for the board room if the decisions are made on the golf course where the women are not present.

Greatest importance

While gender equality is a human right, it can also be viewed as a strategic advantage. Gylfadottir sees only upsides to making women part of all decision making.

– It is of the greatest importance, in both public and private sectors.

Being a leader and minister within an established and somewhat conservative political party, she has seen first-hand how having women at the table makes a difference in various ways.

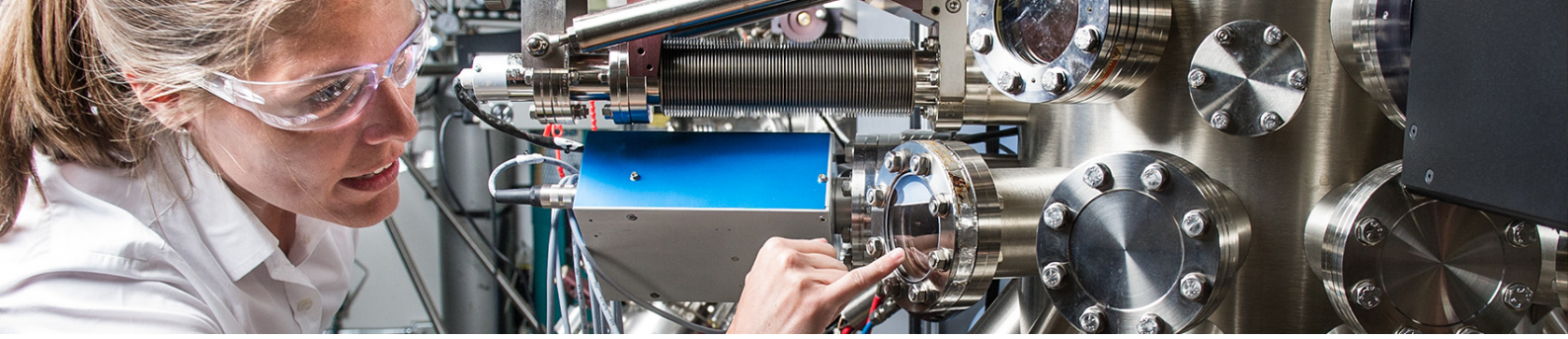
– For instance, it affects what we focus on, and how we approach and prioritise tasks at hand.

She believes the same to be true in a broader diversity perspective too.

– This applies to all minorities. It is important that they too have a seat at the big table.

Gylfadottir hopes the Nordic energy sector will contribute by giving more women control over big and bold decisions. She thinks this will help the sector move faster towards a sustainable and smarter future.

– Iceland and the other Nordic countries are ahead of the rest of the world in the area of gender balance. We have a responsibility to continue to carry that torch high, Gylfadottir says.



The position of women within Nordic energy companies

This part of the report investigates the position of women in the Nordic energy industry by gathering statistics from 94 companies mainly working with distribution and production of energy, district heating and electricity networks. Data was collected to provide information about the gender balance in the companies' decision-making positions, and the results indicate that women are a minority within the Nordic energy industry.

The survey was carried out as an online questionnaire between October 2020 and March 2021. Out of the 630 energy companies contacted, 94 companies participated in the survey, which gives a response rate of 15%. A possible explanation for the limited response rate could be methodological flaws, such as difficulties in finding the suitable person to reply to the survey and design of the survey. Due to the limited response rate, the results cannot be seen as representative for the entire Nordic energy industry, only indicate a likely trend in the sector.

More information about the method can be found in the Methodology section.

Each company was ranked with a women's leadership score based on different weighting for the positions within the decision-making power

WOMEN'S LEADERSHIP SCORE

The scoring used in the analysis. The higher the women's leadership score is, the higher is the number of women with decision-making power within a given company. A score of 0% means that there are no women in the decision-making power and a score of 100% means there are only women.

DECISION-MAKING POWER

Lies with board members, C-suite executives and department managers

Women's decision-making power is analysed by the gender balance in the companies' positions of decision-making, here defined as board of directors, C-suite executives and department managers. The responding companies had in total 602 board members, 397 C-suite executives and 341 department managers. The companies provided information on gender, seniority and tenure in key positions and each level was ranked according to its decision-making power and responsibility to calculate women's leadership score as follows:

- The board of directors is the highest level and is given the highest weight in the analysis of which the chairperson of the board is given double weight as compared to other board members. This is because the chairperson has a double vote.
- CEOs are the second highest level and thus receive the second-highest weight, and thereafter other C-suite executives. The department managers are given the lowest weight.

The women's leadership score gives an indication of the share of women in decision-making positions in the company, i.e. among board members, C-suite executives and department managers. The higher the women's leadership score is, the higher number of women hold decision-making positions within a particular company. A score of 0% means that there are no women in decision-making positions and a score of 100% means there are only women. As there are different weights for the level of responsibility, it is not accurate to say that a score of 50% means a fully equal gender division, but it tells us that 50% of the decision-making power and responsibility lies with women, based on the analysis weighting.

When comparing the average score for each country, Iceland ranks in first place whereas Denmark has the lowest score

When examining the responding companies in each of the Nordic countries, Iceland has the highest average women's leadership score, and Denmark has the lowest. These results reflect the World Economic Forum (WEF) annual Global Gender Gap Report 2020[1], which measures the general state of gender equality in a country. In the latest report, the World Economic Forum lists Iceland in an overall first place and Denmark rated last of the Nordic countries in 14th place out of 156 countries. Finland, Norway and Sweden are all ranked in top five in the World Economic Forum rankings. Nevertheless, our Nordic survey suffers from low participation from Danish companies, meaning that the result might be skewed.

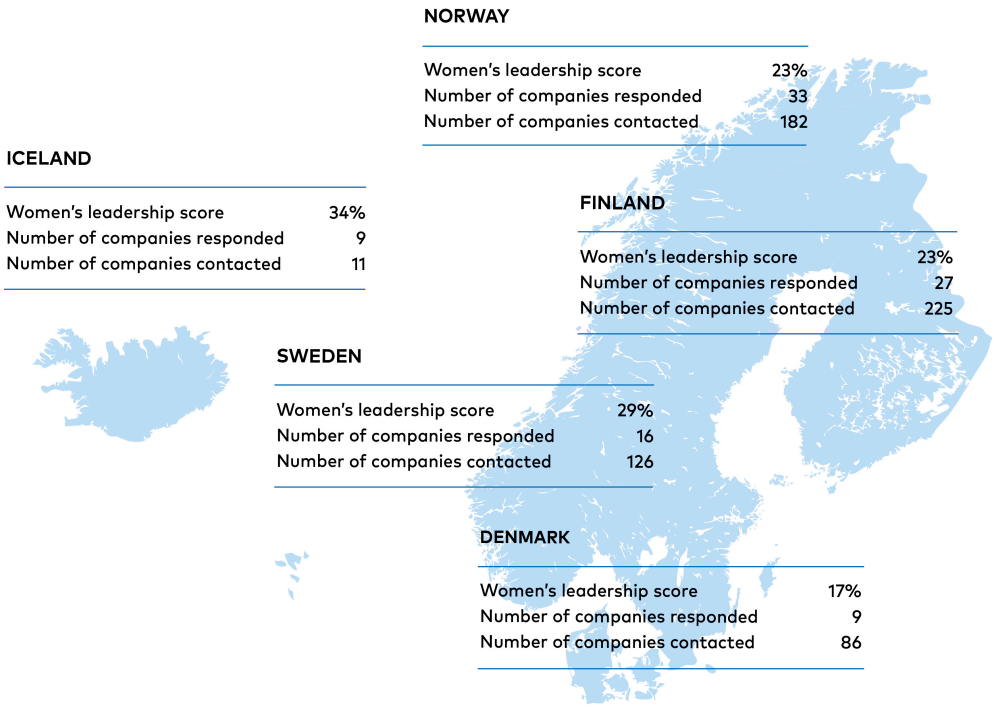
The average Nordic women's leadership score is 24%

The average women's leadership score among the respondents of the survey is 24%. Iceland and Sweden are the only two countries with an average score above this,

1. World Economic Forum. (2020). *Global Gender Gap Report 2020.*

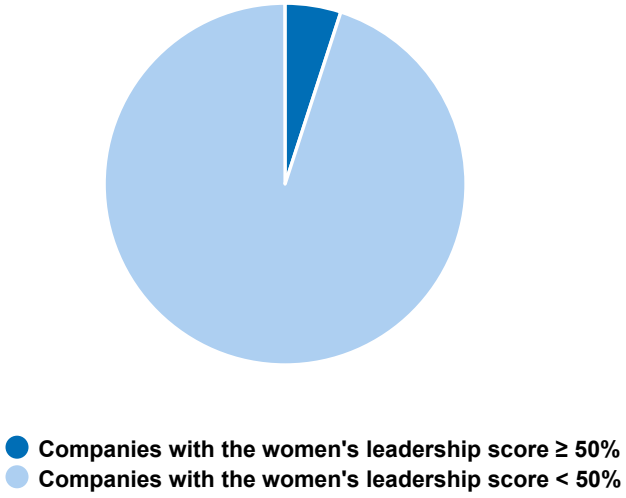
with eight of the Icelandic and eight of the Swedish companies above the average score.

Figure 7: Nordic region comparison - women's leadership score



Women still play a minor leadership role in 95% of the Nordic energy companies
Only five of the 94 energy companies that responded to the survey have a women's leadership score that is 50% or higher. The score gives an indication of the level of women amongst the decision-making power in the companies. A score of 50% indicates that half of the decision-making power lies with women. The remaining 89 energy companies, or 95% of the respondents have decision-making positions largely represented by men where few or no women are represented in the company's key positions.

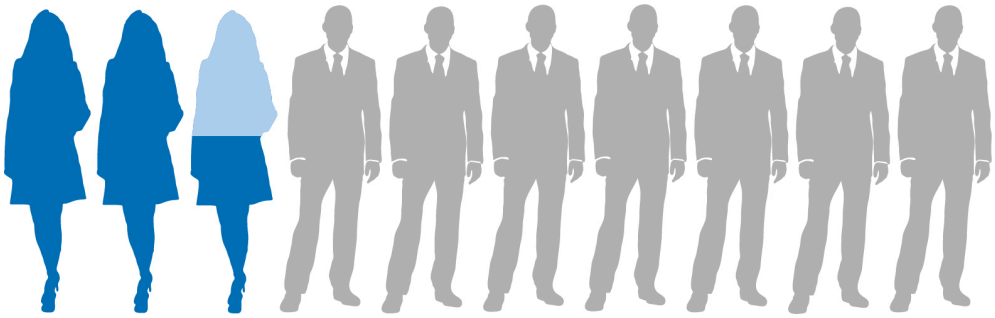
Figure 8: Women's leadership score



Women have 24% of the decision-making power within the Nordic energy companies
Women fill 31% of all the decision-making power in the sample, however, they are less represented in the top-level leadership positions. Only 16% of board chairpersons are women compared to women who make up 32% of other board members. The same can be said about the C-suite, where women fill 37% of the positions, but only 16% of them are CEOs.

The women's leadership score assigns different weights to different level of decision-making power. As women do not hold the leadership positions with the most weight, they have less decision-making power overall and therefore their decision-making power is 24% based on the scoring method used in the report.

Figur 9: Women leadership score in Nordic energy companies.



WEIGHTING:

50% Board (chairperson = 2x board members)
20% CEO
20% Other C-suite
10% Department Managers

Top 15 companies

Women hold a majority of leadership positions in only 5% of the Nordic energy companies. The company with the highest women's leadership score is based in Norway, and Norway also has the most companies in the top 15

The companies are ranked on a scale of 0%-100% and the results of the women's leadership score are shown in table 1. The score provides an indication of the number of women in decision-making positions within the companies. Further information on the applied methodology can be found in the Methodology section.

The Norwegian company Valdres Energi AS is in top with the highest score, followed by companies from Iceland, Finland and Sweden. The top five companies have a final score of 50% or more, meaning that women have 50% or more of the decision-making power in those top 5 companies, based on the analysis weighting.

The first Danish company is found in place 18 among the respondents. As mentioned, the response rate within Danish sample is low and it cannot be ruled out that more Danish companies would have made the top 15 if participation in the survey had been higher.

Table 1: Top 15 companies ranked by women's leadership score

Rank	Company	Final score (%)	Country
1	Valdres Energi AS	61.9	Norway
2	ON Power	59.3	Iceland
3	BKK	51.9	Norway
4	Hålogaland Kraft AS	51.3	Norway
5	eSett Oy	50.0	Finland
6	Värnamo Energi AB	48.8	Sweden
7	LEVA i Lysekil AB	48.4	Sweden
8	Norðurorka hf.	48.1	Iceland
9	Orkuveita Reykjavikur	47.3	Iceland
10	Kinnekulle Energi AB	46.7	Sweden
11	Chemitec Consulting Oy	45.0	Finland
12	Vardar	43.3	Norway
13	Nacka Energi AB	42.6	Sweden
14	Ymber AS	40.5	Norway
15	Kragerø Energi Holding AS	40.0	Norway

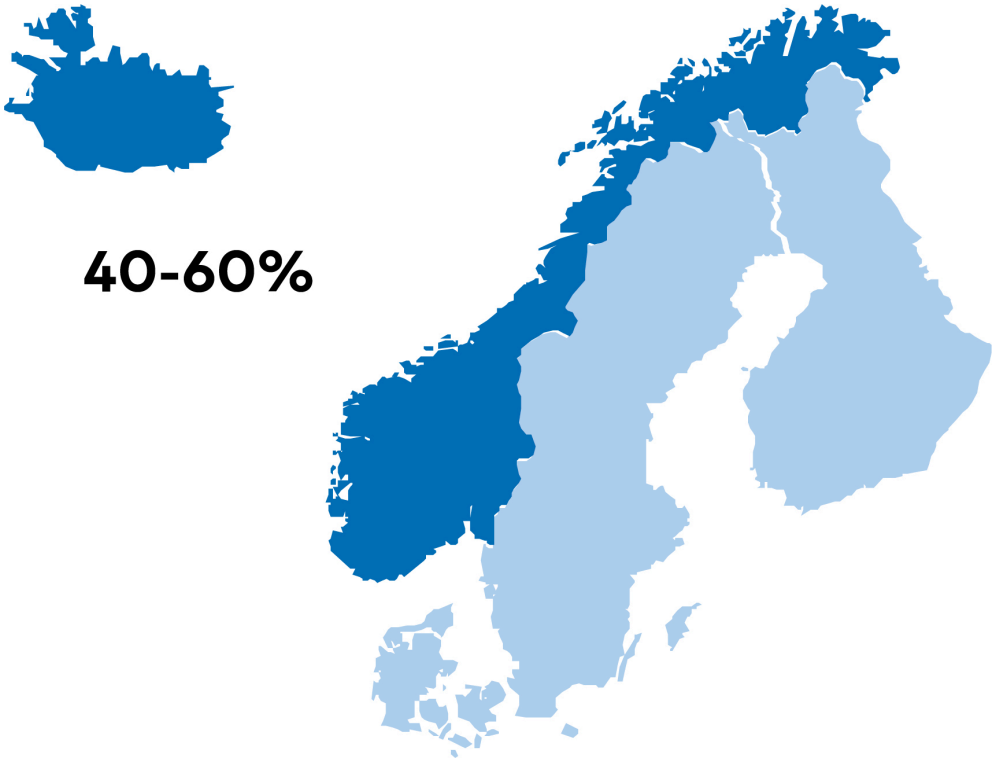
Company boards

Women participation at board level averages at 32% in the Nordic energy companies
32% of the board members in the responding Nordic energy companies are women, led by Iceland with an average representation of women of 41%. Furthermore, 16% of the chairpersons in the boards of the responding energy companies are women.

Norway and Iceland have introduced gender quotas
In 2008, as the first country in the world, Norway implemented a gender quota law stating that listed companies and public enterprises should have at least 40% of each gender. Since then, Iceland has followed and adopted a similar law for company boards. Denmark, Sweden and Finland have no legal gender quota[2].

2. Nordic Council of Ministers. (2019). *The Nordic Gender Effect at Work - Nordic experiences on parental leave, childcare, flexible work arrangements, leadership and equal opportunities at work.*[1] World Economic Forum. (2020). Global Gender Gap Report 2020.

Figure 10: The required minimum of each gender in company boards in Iceland and Norway



Although some of the Nordic countries have implemented gender quotas in company boards, women's representation still does not appear to reach a minimum of 40% in the company boards in most of the Nordic energy companies**.** According to the World Economic Forum rankings in 2020[3], female company board members in the Nordic countries range between 43% (Iceland) and 30% (Denmark). Based on the results from the companies participating in the survey, some of the Nordic countries' energy companies could be lagging behind in comparison, with less women in their boards.

Less than a third of the companies have a gender balance of 40-60% in their boards

Only 30% of the companies responding to the survey had a ratio of either gender between 40%-60% in their boards. Companies in Iceland are way ahead of the other countries, with 89% of the companies within the 40%-60% ratio in their boards. In the other end of the scale, none of the Danish companies reach 40% representation of women.

3. World Economic Forum. (2020). Global Gender Gap Report 2020.

Figure 11: Companies' boards with gender share between 40%-60%

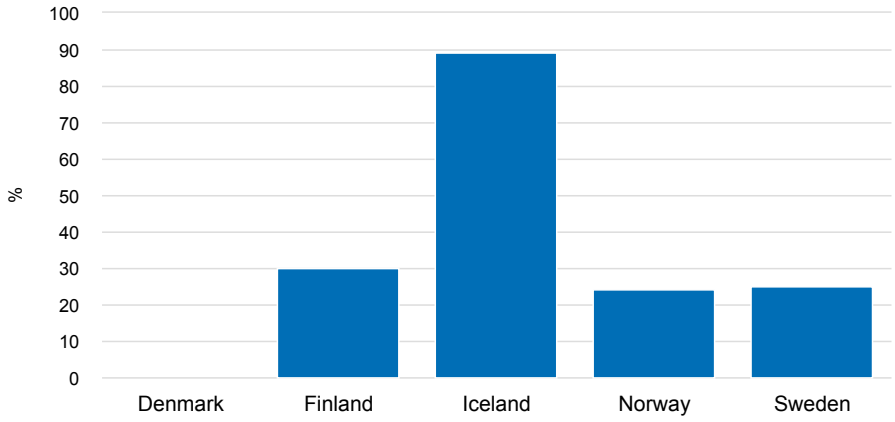
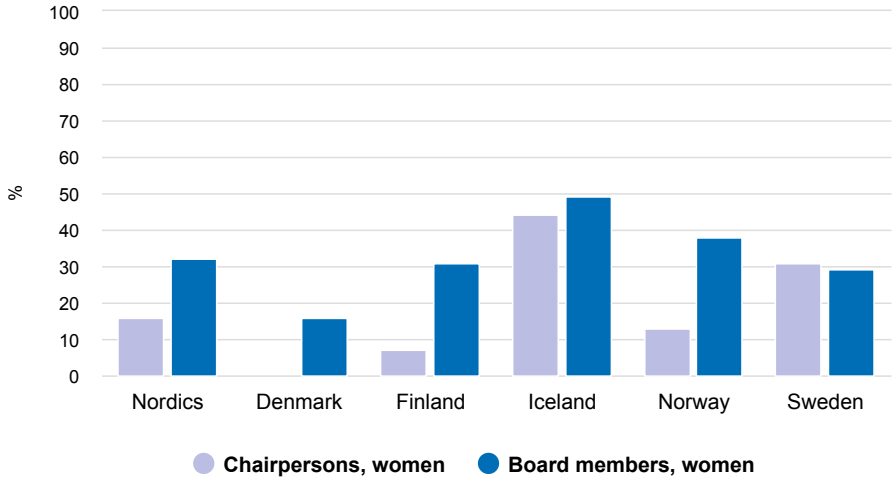


Figure 12: Gender ratio of board members within the responding companies



As seen in figure 12, very few women serve as chairpersons in the responding company boards. Only in the Icelandic companies, women are represented almost equally, with 44%. The share of women represented as regular board members is in general a bit higher, especially in Iceland where women comprise as much as 49% of the companies' board members.

Managing directors

One third of managing directors are women within the responding energy companies
Across the Nordic energy companies responding to the survey, 32% of all managing directors are women. Only 16% of all CEOs are women.

Women hold a majority of HR-related managerial positions
Figure 13 shows the distribution between genders in different C-suite positions. The biggest gender gap is found for CEOs and COOs, where men fill 84% and 88% of the positions, followed by CIOs where men fill 69% of the positions.

The only C-suite position where women are in the majority is in the CHRO positions, where 71% are women. These results are coherent with findings from the International Labour Organization's global report on Women in Business and Management. The report states that a majority of women are found in managerial positions related to business support functions, such as human resources, finance and administration. The report stresses that job positions within human resources often have limited strategic input or decision-making power, and for that reason less opportunities to advance within the organization.[4]

C-SUITE POSITIONS

CEO: Chief Executive Officer
CFO: Chief Financial Officer
COO: Chief Operating Officer
CMO: Chief Marketing Officer
CIO: Chief Information Officer
CHRO: Chief Human Resources Officer
CLO: General Counsel / Chief Legal Officer
Other: Other C-suite positions

4. International Labour Organization. (2019). *Beyond the glass ceiling: Why businesses need women at the top.*

Figure 13: Ratio of women in C-suite positions by country

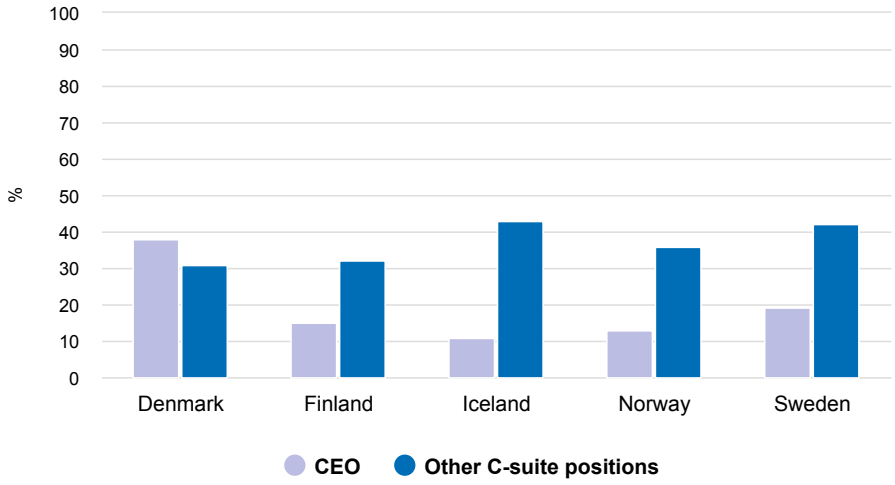
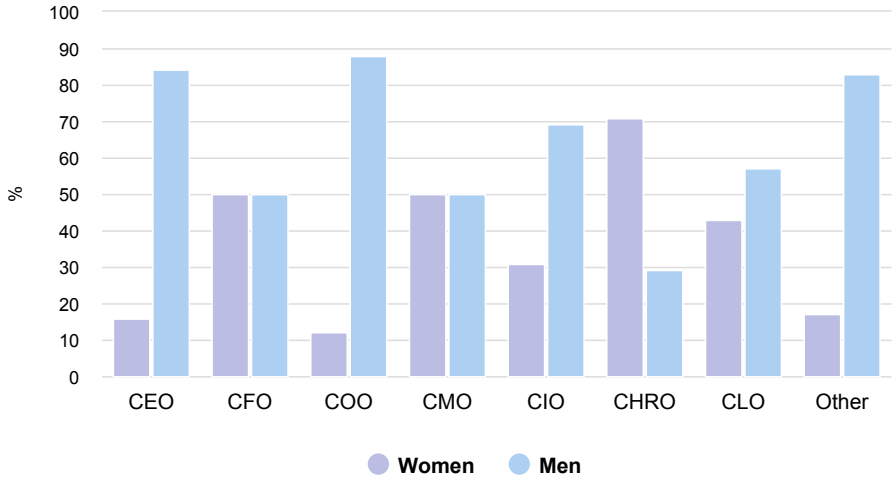


Figure 14: Gender ratio of C-suite within the sample companies



Department managers

31% of the department managers in the responding energy companies are women
Across the responding Nordic companies, only 31% of all department managers are women. While looking at each country, Iceland has the highest representation of women among department managers (35%), followed by Norway with 34%.

Female representation within technical departments is low
When looking at different departments, women are mostly leading departments within human resources, followed by marketing and communication. The ratio of women leading in technical departments (Research & Development and production) is, however, very low.

Figure 15: Department managers - gender composition per country

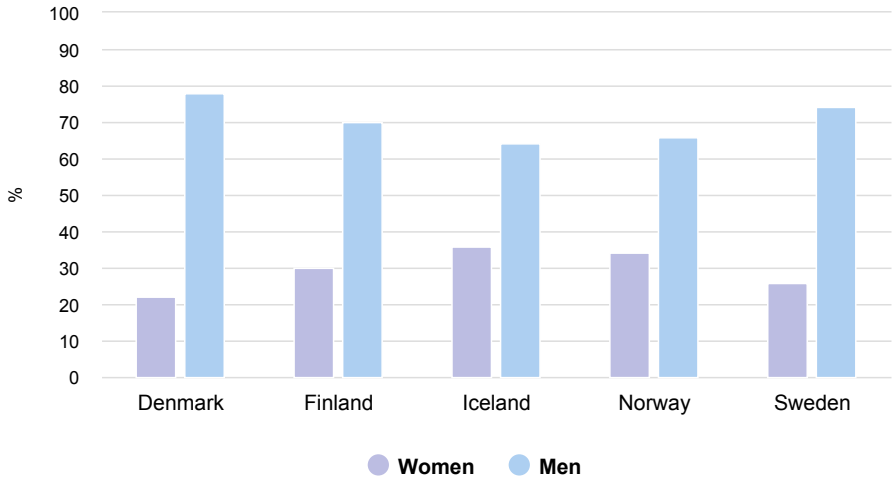
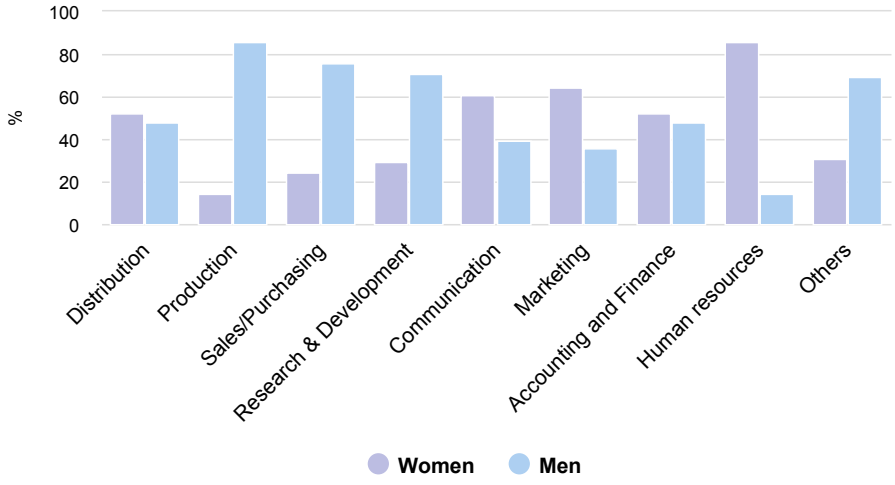


Figure 16: Department managers - gender composition per department



Full-time equivalents

A company's full-time equivalents (FTEs) show its employees' collected workload, consisting of both full-time and part-time workers. The FTE employment rate is preferable as it, unlike the standard headcount, takes into consideration the diversity of employment circumstances. This is particularly relevant when addressing gender gaps in employment rates. In 2019, the responding energy companies had in total 19 113 full-time equivalents. Women made up less than a third of them.

In 2019, women only accounted for 28% of full-time equivalents (FTE) within the energy companies participating in the survey. The numbers have remained almost the same for the past three years, with few or minor changes.

One of the largest responding companies is responsible for 43% of the FTEs in our survey. The company raises the ratio of women overall by 2%, which means that when excluded, the ratio of women's FTEs in the Nordic energy companies is reduced to 26% in 2019.

FULL-TIME EQUIVALENT (FTE)

An employee's working hours divided by the number of full-time hours indicates the workload of the company's employee. For example: two employees are each working 80% on a given task, which makes the FTE = 1.6)

Figure 17: FTEs in the Nordic region (2019)

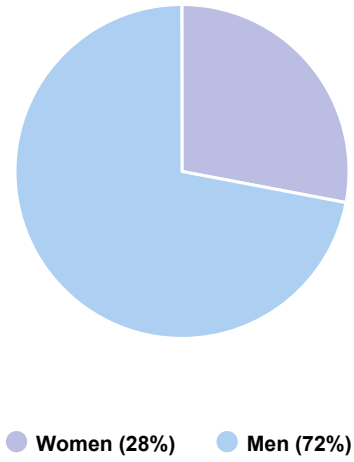
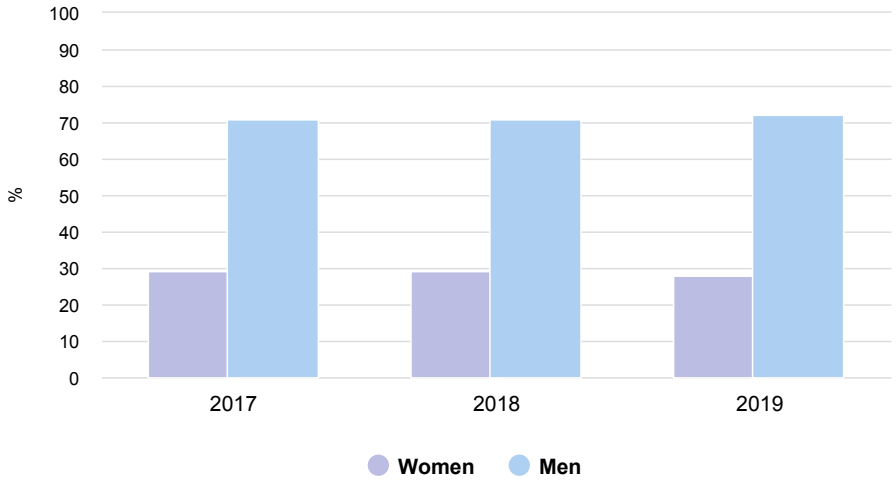


Figure 18: Women FTEs in the Nordic region during 2017-2019



Gender equality and equal pay policies

The survey respondents replied to whether the company had implemented any kind of gender quality policy and/or equal pay policy at the workplace. Among the top 15 companies, a majority have implemented both policies.

67% of the top 15 companies have implemented both gender equality policies and equal pay policies.
Out of the top 15 companies, based on the women's leadership score, ten have implemented both policies. All but one has implemented equal pay policy.

Gender equality and equal pay policies are available in several different versions and with different methods for potential evaluation of how a company is succeeding in implementing it. The survey results do not show in what ways the policies are being implemented, or if/how they are assessed. **Nevertheless, the analysis points to a strong relation between high women's leadership score and having these policies implemented.** The average women's leadership score for the companies that have implemented both gender equality and equal pay policy is higher than for the companies that have just implemented one of the policies or no policy. Women's leadership scores for the companies without policies are 7.2 percentage points lower than for the companies that have implemented both policies.

Table 2: Gender equality and equal pay policies for top 15 companies

Top 15 companies	Country	Gender equality policy	Equal pay policy	Women's leadership score (%)
Valdres Energi AS	Norway	Yes	Yes	61.9
ON Power	Iceland	No	Yes	59.3
BKK	Norway	No	Yes	51.9
Hålogaland Kraft AS	Norway	Yes	Yes	51.3
eSett Oy	Finland	Other	Yes	50.0
Värnamo Energi AB	Sweden	Yes	Yes	48.8
LEVA i Lysekil AB	Sweden	Other	Yes	48.4
Norðurorka hf.	Iceland	Yes	Yes	48.1
Orkuveita Reykjavikur	Iceland	Yes	Yes	47.3
Kinnekulle Energi AB	Sweden	No	No	46.7
Chemitec Consulting Oy	Finland	Yes	Yes	45.0
Vardar	Norway	Yes	Yes	43.3
Nacka Energi AB	Sweden	Yes	Yes	42.6
Ymber AS	Norway	Yes	Yes	40.5
Kragerø Energi Holding AS	Norway	Yes	Yes	40.0

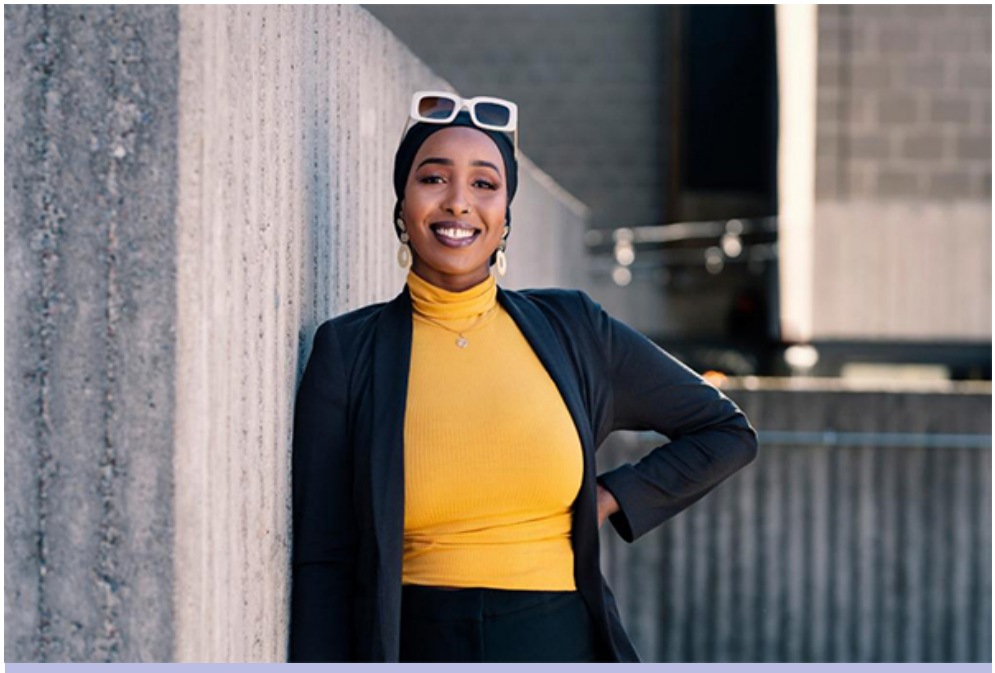
Table 3: Gender equality and equal pay policies - average women's leadership score (%)

Policy	Average women's leadership score (%)
Both gender equality and equal pay policy	27.0
Either gender equality policy or equal pay policy	21.4
No policy	19.8

Nordic energy voices: Sweden

The challenger wants to be challenged

Big dreams and a lot of guts were needed to brave a sector almost devoid of recognisable role models. Now, she seeks out people with ideas that are different from her own.



Name: Faisa Abdi

Position: Founder and CEO

Organisation: QC Renewable Energy

Country: Sweden

Description: Energy engineer, entrepreneur and highly socially engaged

– I think a lot of employers and leaders recruit people they see themselves in, because they don't really want to be challenged, says Faisa Abdi. (Photo: Evelina Carborn)

Woman. Black. Muslim. Young. More than enough otherness there. Faisa Abdi knows just how hard it can be, having to make a bigger effort, perform better and fight harder for it. For that reason, she cares deeply for the aspirations of the next generation of women like her. She strives to be visible, so she can inspire and make their path a bit easier.

– We cannot expect their dreams to live in sectors where no one is like them. Everyone needs role models, she says.

Solar power
Her company offers sustainable energy products and services around the world, particularly in Sweden and East Africa. Solar powered systems in both small and larger scales, energy storage and waste management, as well as consultancy and educational services.

Strength in diversity
Diversity is a required foundation for a sustainable future, according to Abdi.

– Evidence shows very positive effects for organisations and businesses that are more inclusive and strive for diversity and gender equality. They develop society and grow in a way that they never would otherwise, she says.
Diversity facilitates inventiveness and creativity – and new ideas are needed now, more than ever, to solve problems that threaten the whole planet

– All organisations and companies should be required to document their discussions on how to implement both gender equality and diversity, Abdi says.

Inner diversity
As she grappled with identity issues arising from her combined Swedish and Somali background, she discovered her own inner diversity, which she now cherishes and cultivates.

– I will be better at developing the company if I develop personally at the same time. I am curious, I want to be challenged, and I want to meet people with ideas very different from my own. I don't need to surround myself with people who are exactly like me, Abdi says. It doesn't matter if the differences are skin tone, gender, age, religion, sexual orientation, professional history or cultural background.

– Diversity is when a mixed group of people meet each other's differences with respect and acceptance, she says.

The Nordic region in comparison

In recent years, countries around the world have started to focus more on gender diversity and some have resorted to law and legislation to achieve gender equality on company boards.

Figure 19 shows the Nordic region in comparison to the top 100 energy companies in the world by revenues. Note that Nordic companies are separated from the rest of Europe. Included in the Nordic companies are all the companies that answered the survey, and in addition, 14 companies from the Nordic region that did not participate in the survey but were deemed to be of high importance because of their size. Of the 14 companies added to the extended Nordic sample, two are part of the top 100 global companies.

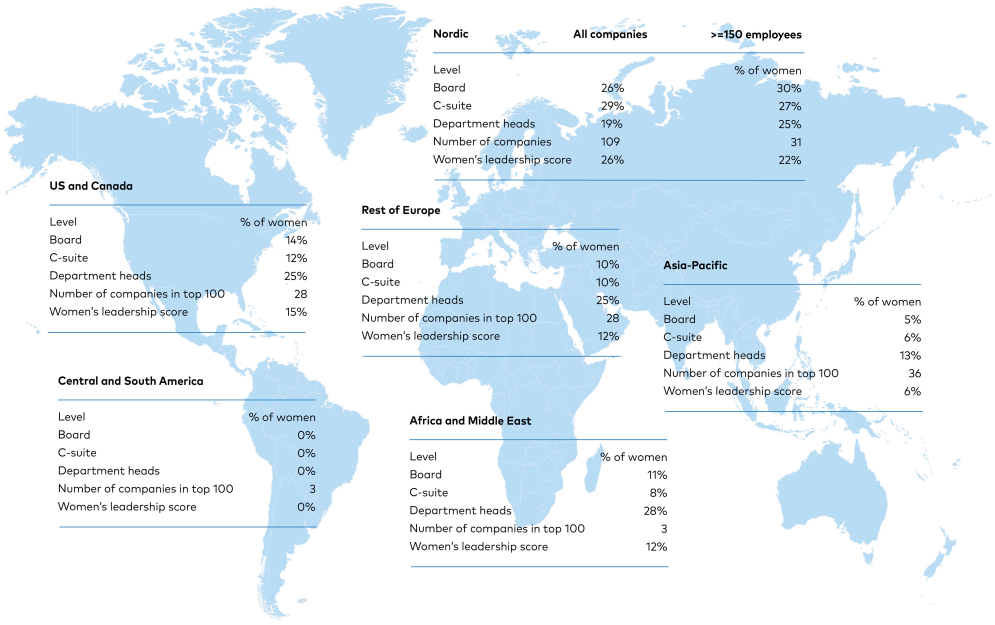
Energy companies in the Nordic region have the highest women's leadership score compared to the rest of the world

When comparing the leadership score of all the Nordic energy companies (26%) to the biggest 100 energy companies in the world, the Nordic region has the highest women's leadership score. It is 11 percentage points higher than US and Canada, which have the second highest score (15%).

There are more women in boards (26%) and on C-suite levels (29%) in the Nordic region compared to the rest of the world.

The Nordic survey is a mixture of companies of various sizes. If we compare the larger companies in our extended Nordic sample (≥150 employees) with the 100 biggest companies in the world, the representation of women in company boards is the double for the Nordic sample as compared to the US and Canada, and triple as compared to the rest of Europe. There is some reduction in the representation of women in C-suite positions, but still twice as many as in the US and Canada and the rest of Europe. The representation of women as department managers, however, is the same for all three regions.

Figure 19: Energy companies in the Nordic region compared to the top 100 energy companies in the world



Nordic	All companies	>=150 employees
Level		% of women
Board	26%	30%
C-suite	29%	27%
Department heads	19%	25%
Number of companies	109	31
Women's leadership score	26%	22%

US and Canada	
Level	% of women
Board	14%
C-suite	12%
Department heads	25%
Number of companies in top 100	28
Women's leadership score	15%

Rest of Europe	
Level	% of women
Board	10%
C-suite	10%
Department heads	25%
Number of companies in top 100	28
Women's leadership score	12%

Asia-Pacific	
Level	% of women
Board	5%
C-suite	6%
Department heads	13%
Number of companies in top 100	36
Women's leadership score	6%

Central and South America	
Level	% of women
Board	0%
C-suite	0%
Department heads	0%
Number of companies in top 100	3
Women's leadership score	0%

Africa and Middle East	
Level	% of women
Board	11%
C-suite	8%
Department heads	28%
Number of companies in top 100	3
Women's leadership score	12%

Nordic energy voices: Finland

The value of unlikeness

Sometimes she questions if diversity is the right word. Perhaps the real challenge is promoting the understanding that being different is valuable.

Name: Pirjo Jantunen

Position: Business development manager

Organisation: Helen Oy

Country: Finland

Description: Specialised in carbon neutrality, sustainable energy and corporate social responsibility

– Women in male dominated fields should be conscious of their chances to provide representation and be role models, says Pirjo Jantunen. (Photo: Helen Oy)

– When I was a teenager I didn't want to be like the others. Being different was important to me. I still think it's harmful for everyone if we have to be the same, says Pirjo Jantunen. The struggle for gender equality is often framed as a battle against male dominance, and expectations towards men are not the main concern.

– Stereotypes are harming men also. Research has shown that more diverse workplaces are more comfortable for men too. Less pressure to fit in the traditional masculine roles leaves more room to choose your own role, Jantunen says.

Unsolved problem

During more than a decade working for Helen Oy, she has observed that the company is moving in the right direction. For the last five years, the share of women has increased by one percentage point each year. For the top management the shares are pretty even now. The numbers hide a professional unevenness, though. Previously, management positions were not just filled by men – but by men who were engineers. Focus on new business opportunities created a need for professionals from other fields. This has brought more women on board. For example, women with a business background are easier to find than female engineers, who are still a pretty rare breed.

– That is a problem which still has to be solved, and one of the big challenges going forward, says Jantunen, who has studied natural resources and business herself.

Support

The business development manager has no illusions that the change will be fast. The patterns that need to be disrupted are so deeply ingrained. Company culture can be part of these societal and cultural changes, not the whole solution. For the time being, a girl who wants to be an engineer needs to tolerate her own unlikeness.

– Getting more involved in recruitment campaigns in schools. Emphasising representation by enhancing the presence and visibility of a broad spectrum of role models, she says. After all, discovering one's own possibilities of unlikeness seems to require at least a slight touch of likeness as a point of navigation.

The position of women within Nordic academia

This part of the report focuses on the share of women within the Nordic academia, to better understand women's position in Nordic energy as education and research may often serve as a first step into the sector. The survey targets the Nordic universities, and the results provide an insight to who is performing energy research in the Nordic region, and the framework they are operating within.

The focus was set on two different sections within academia: research groups and departments at Nordic universities. The research groups in the sample are either energy-focused or perform research related to energy, for example material research groups working on materials used in energy solutions are included. The university department respondents represent both departments that focus specifically on energy research and departments with a broader scope, such as electrical engineering, environmental science, and materials science. The common denominator for the departments is that they are housing one or both categories of research groups. The sample has been chosen to represent the Nordic countries' main universities where energy research is performed.

Research groups
Out of the 147 research groups contacted, 53 groups from 27 Nordic universities and colleges participated in the survey, which gives a response rate of 36%. A contact person, in most cases the group leader, replied to the survey on behalf of their group.

University and departments
Out of the 68 university departments contacted, 26 departments from 19 universities participated in the survey. The contact person replied to the survey on behalf of their department. Note that the departments that replied to this survey are not necessarily corresponding to the departments of the research groups that replied to the research group survey.

More information about the method can be found in Methodology section.

Research groups

This part of the report focuses on the position of women within energy research groups in the Nordic academic sector. The main findings are based on the replies from 53 research groups based at 27 Nordic universities.

The sample is defined as research groups with a research focus on energy or on research related to energy. The data was collected by an online survey questionnaire sent to a contact person in the research groups, active at Nordic universities. Out of the 147 research groups contacted, 53 groups participated in the survey. Survey respondents were asked to fill out the gender balance within their research group among professors and associated professors, researchers and post docs, and PhD students.

The results show that the gender composition in the research groups remains similar during the years 2017-2019. The lowest ratio of women is among professor positions, and the highest is found among PhD students.

Respondents were also asked to fill out the gender of the research group leader. The results show that men are in the majority among group leaders with 73%.

Figure 20: Gender composition of research groups (2017-2019)

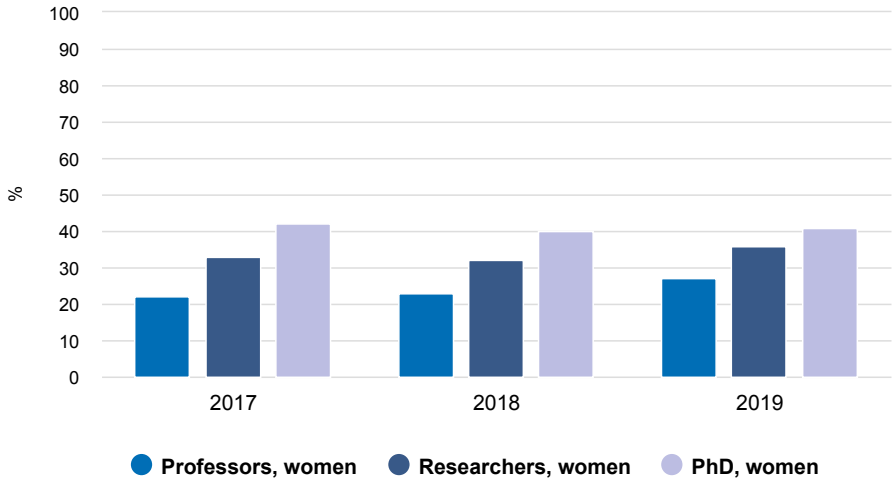
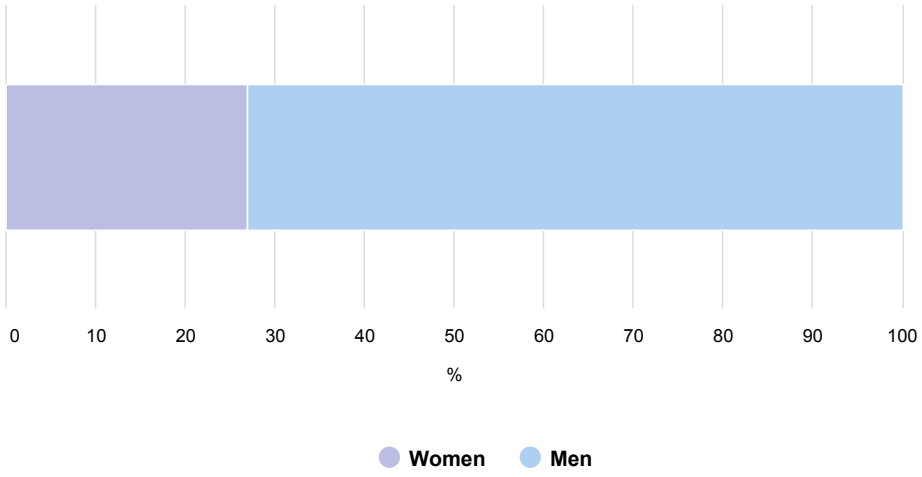
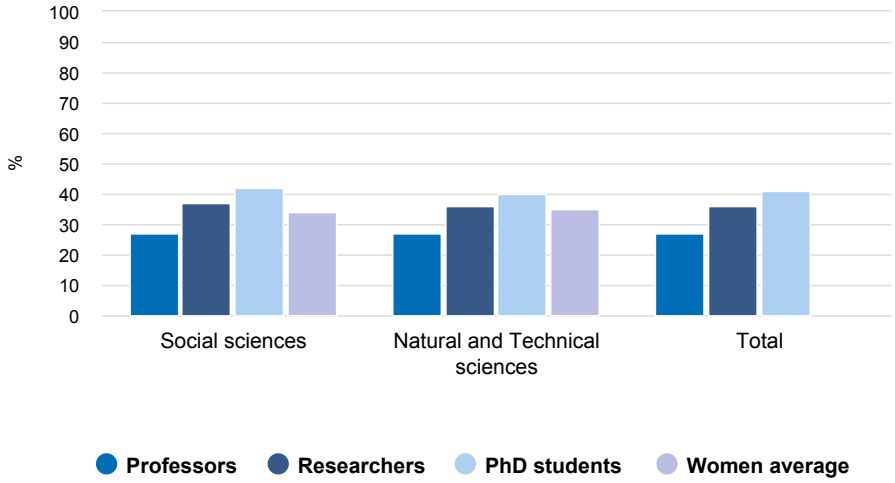


Figure 21: Gender composition of research group leaders



Research group respondents also filled out within which scientific discipline the group was active. The results show that the share women working within social sciences and natural and technical sciences are approximately the same (~35%), however the sample size is much smaller for social sciences. In general, the sample size is low, and outliers will therefore have a significant impact on the results. It is also likely that research groups with higher gender equality are more prone to respond to such surveys. One can therefore not disregard that the results might skewed in a positive direction.

Figure 22: Ratio of women as professors, researchers and PhD students by scientific discipline (2019)



Gender parity within Nordic research groups is still limited

Figure 23 shows the gender composition of the responding research groups by country. In 2019, Icelandic research groups had the highest ratio of women as professors, researchers and PhD students.

Almost half of the research groups implement gender equality policies

49% of the research groups state in the survey that their department or institution have a gender equality policy that the group continuously implement. 81% of the research groups also states that their department or institute maintains equal pay policy.

Figure 23: Gender composition of research groups by country (2019)

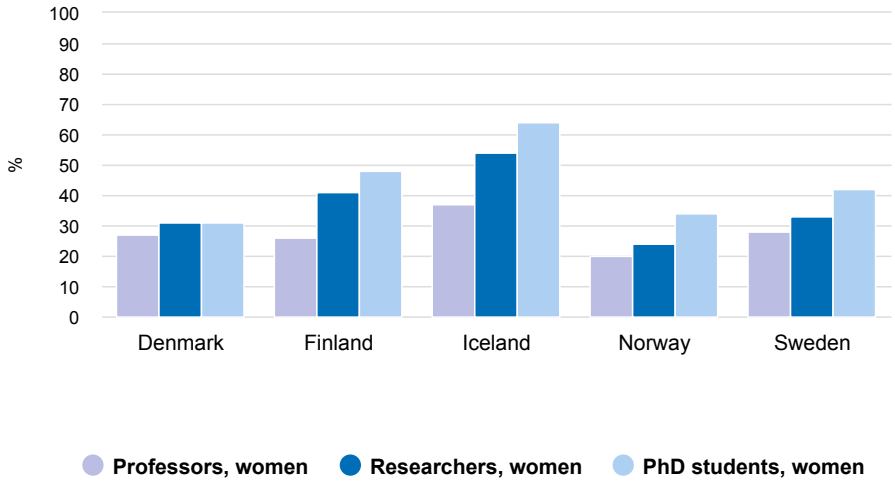


Table 4

Status of gender equality policy at the department/institution	% of research groups
Policy in place with continuous implementation	49%
Policy in place but with ad hoc or implementation of only some measures	23%
No gender equality policy / Under development	28%

Table 5

Status of equal pay policy at the department/institution	% of research groups
Yes	81%
No	13%
No response	6%

Respondents to the survey were asked for their opinions related to gender balance in relation to research activities, and their suggestions for explaining gender imbalance. The survey also asked for any implemented measures to increase gender balance.

A majority of the research group respondents think that gender balance is relevant
75% of the research groups representatives think that their group either benefits from being gender balanced or that they lack gender balance today but could benefit from increased gender balance. The rest of the groups do not think that gender balance is relevant for their work.

Table 6

Significance of gender balance	% of research groups
The group lacks gender balance and would possibly benefit from being more gen-der balanced.	45%
The group benefits from being gender balanced	30%
Gender balance is not relevant for the research group's work	25%

A lack of gender balance attributed to a deficit of applications from women to energy groups in academia
The main reason for gender imbalance within the research groups is that too few women apply for the positions, according to the respondents of the research groups. 70% of the respondents pointed to this as the main reason for gender imbalance.

15% also state that their female colleagues leave academia for the industry sector.

It should be noted that the responses may reflect the individual opinion of the respondent and may not be representative for the whole group.

Table 7

Main reasons for gender imbalance within the research groups	
Too few women apply for the positions	70%
Women leave our department for the industry sector	15%
The women applying for positions do not qualify	9%
Women from our department choose to apply for promotion at other departments	8%
Women do not have the same scientific merits due to family engagement	8%
Women do not apply for professor promotion	8%
Women lack professional networks that would aid career advancement	4%

Survey participants were also asked about whether there were any measures taken to improve gender balance with regards to recruitment processes, career development and work-life balance.

When asked for any steps taken to improve gender balance within the research group, 38% of the respondents state that they specifically encourage women to apply in job advertisements. One third also states that they formulate job advertisements in an inclusive way, to attract more women.

With regards to career development, 36% of the groups have taken steps to make sure that women are not subjected to unconscious gender bias. 25% encourage women's network building, for example by attending conferences and workshops.

For measures related to work-life, almost half of the research groups address work-life balance regularly on meetings.

Table 8

Equality measures implemented within the research groups to improve gender balance	
Recruitment process measures	
Women are specifically encouraged to apply in job advertisements	38%
Job advertisements are formulated in an inclusive way to attract more women	30%
Other measures to encourage more women to apply	11%
Search committees are used to get more women to apply	9%

Career development measures	
Women in the research group is especially encouraged to go to conferences and workshops etc. to build work networks	25%
Steps have been taken to make sure that women are not subjected to unconscious gender bias	36%
Women in the research group are especially promoted as presenters and panellists at conferences and workshops etc.	19%
Work-life measures	
Work-life balance is a regular topic at meetings	47%
Work-life balance is a regular topic in appraisals	19%
Frequent social gatherings in place to improve the social environment in the research group	9%

University departments

University departments are included in the report to provide additional insight into the academic sector and provide a context of the work-environment for Nordic researchers. Included in the survey are both departments that focus specifically on energy research and departments with a broader scope, such as electrical engineering, environmental science, and materials science. The main findings are based on the replies from representatives at 26 departments located at 19 Nordic universities.

The survey sent to university departments contained questions regarding gender among department leaders and professors, department gender policies and other measures meant to improve gender equality.

The statistical sample consisted of the university departments that host energy related research groups. Data was collected through a survey sent to representatives at the various departments, in most cases department leaders. Out of the 68 departments contacted, 26 participated in the survey. Note that the departments that replied to the survey are not necessarily correlated to the departments of the research groups that replied to the research group survey.

More information about the method can be found in the Methodology section.

12% of the university department leaders are women

Out of the 26 departments that answered the survey, women are department leaders in only three of them, located at universities in Norway and Sweden. Women are only leaders in departments belonging to the natural sciences and engineering or technical sciences, which might be explained by this being a dominant field within energy research and thereby overrepresented among the departments in the sample.

Figure 24: Gender composition of department leaders by scientific field

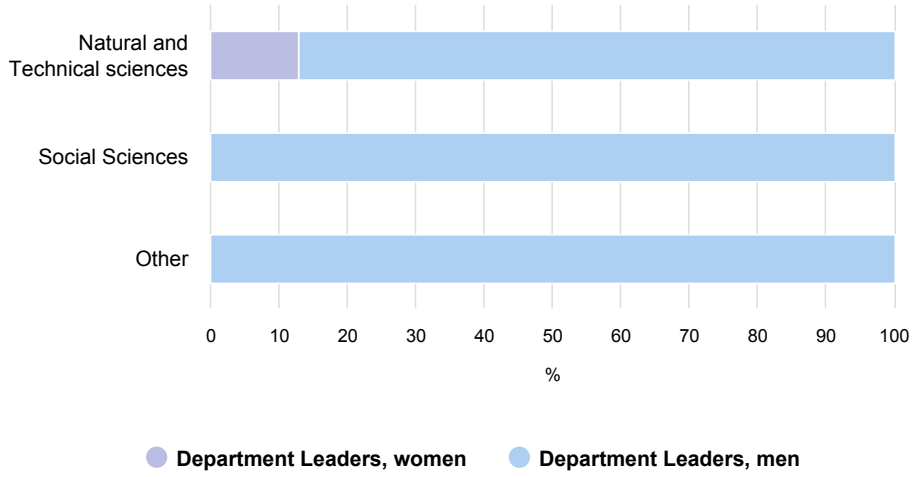
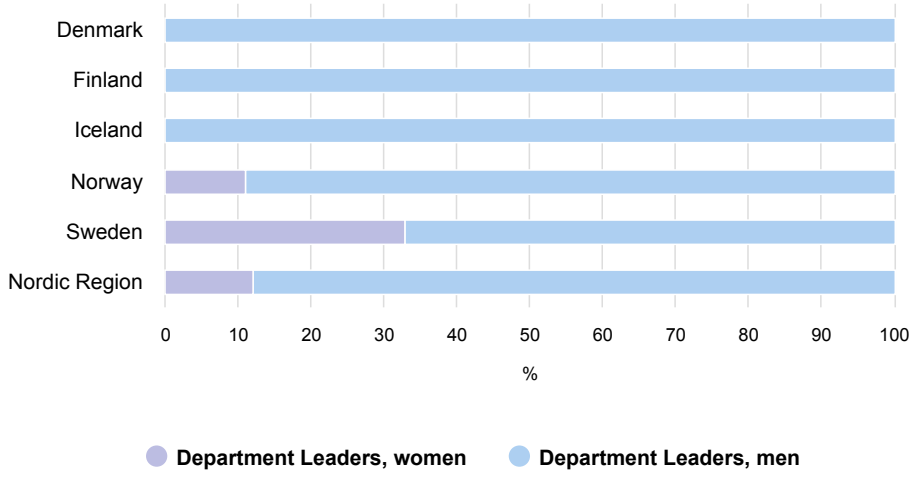


Figure 25: Gender composition of department leaders by country



19% of professors are women

The respondents were also asked to state the number of female professors at the department (not only within energy research). Denmark has the highest ratio of female professors, while Norwegian university departments only have 14%. Within the responding departments, 19% of the professors working in Natural and Technical sciences are women and 12% of women work in social sciences.

Figure 26: Gender composition of professors by scientific field (2019)

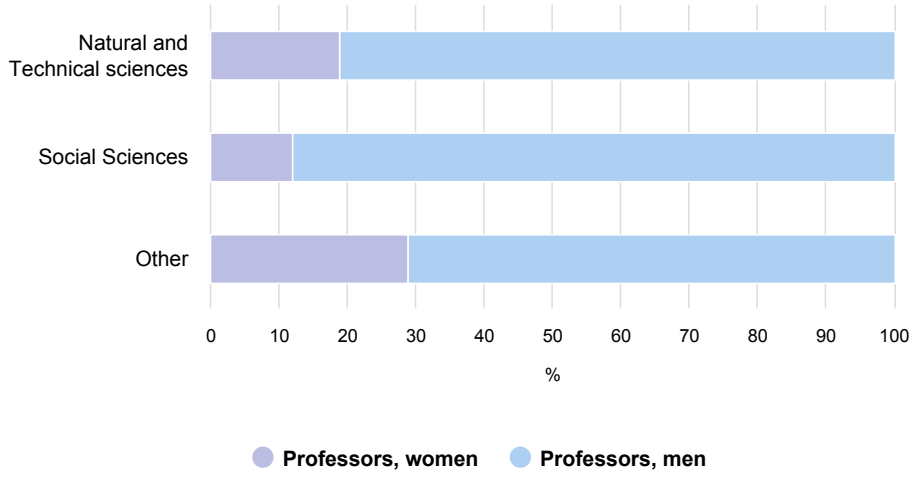
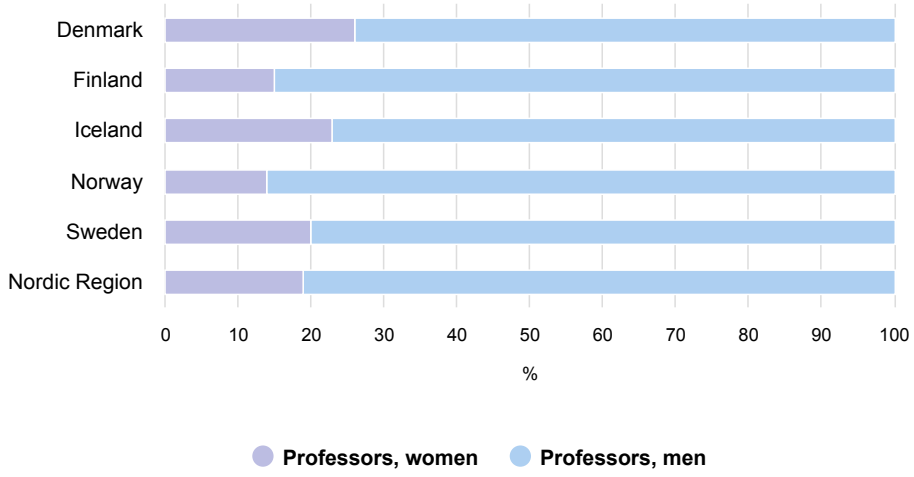


Figure 27: Gender composition of professors by country (2019)



61% of the university departments have a gender equality policy

61% of the departments in the sample say that they have a gender equality policy in place. Eight of the responding departments (31%), have either no gender equality policy or they chose the option "other" with no further explanation.

Table 9

Status of gender equality policy	Share of departments
Gender equality policy in place	61%
No gender equality policy / other	31%
Policy in development	8%

84% of the university departments have an equal pay policy

A majority of the responding departments operates an equal pay policy. Only two departments state that they have no equal pay policy.

Table 10

Status of equal pay policy	Share of departments
Equal pay policy in place	84%
No equal pay policy	8%
No response	8%

Too few women apply for scientific positions

The main reason for gender imbalance within the university departments is that too few women apply for the positions, according to the respondents of the department. Almost all the respondents pointed to this as the main reason for gender imbalance. 15% also state that women do not apply for professor promotion. Other alternatives for explanations were also available in the survey, but none of the respondents chose any of these.

It should be noted that the responses may reflect the individual opinion of the respondent and may therefore not be representative for the whole group.

Table 11

Main reasons for gender imbalance within scientific staff	Share of departments
Too few women apply for the positions	96%
Women do not apply for professor promotion	15%
Women leave our department for the industry sector	15%
The women applying for positions do not qualify	8%
Women do not display the same degree of engagement in interviews and in their work	0%
Women do not have the same scientific merits due to family engagement	0%
There is a lack of resources to give women candidates (and their families) good working conditions (salaries, benefits, etc.)	0%
Women from our department choose to apply for promotion at other departments	0%

19% of the department representatives do not think that the gender of their researchers has any relevance for their research

77% of the departments are taking active steps to improve gender balance amongst their scientific staff. The rest of the departments do not think the gender of the researchers has any relevance for the research they do (19%) or they have already reached gender balance (4%).

Half of the departments encourage women to apply, and many promote women especially as role models

To improve gender balance within the departments, 46% of the departments encourage women specifically to apply in the announcement texts in recruitment processes. 35% promote women as role models on their website and 31% have network building programs for women. 58% of the departments have annual surveys on work environment well-being amongst their staff.

Table 12

View on taking active steps to improve gender balance amongst the scientific staff	
Taking active steps to improve gender balance	77%
The gender of the researchers has no relevance for the research they do	19%
The department has already reached gender balance	4%

Table 13

Gender equality measures implemented at the department	
Recruitment process measures	
Women are specifically encouraged to apply in announcement texts	46%
Search committees are used to get more women to apply	27%
The job advertisements are formulated in an inclusive way to attract more women	38%
Programmes in place to recruit more women for bachelor and master studies	27%
Other measures in place to get more women to apply	12%
Annual statistics on gender balance within the department is done on a regular basis	38%
Career development measures	
Network building programmes in place for women	31%
Women at our department who have represented our institute/research centre/department as pre-senters or panellists are promoted etc. as role models on our website	35%
Fast-track programmes in place for women	0%
Work-life measures:	
Annual surveys in place on work environment well-being amongst our permanent and temporary staff	58%
Research group leaders are asked to have regular discussions within the group about work-life balance	8%
Research group leaders are asked to have frequent social gatherings to improve the social environment in the research group	12%

Nordic energy voices: Denmark

Calling all hands on deck

The world needs gender balance and diversity, according to this experienced and acknowledged expert. She does not believe the green transition can be pulled off without putting all talent to good use.

Name: Birte Holst Jørgensen

Position: Senior Researcher

Organisation: DTU Wind Energy

Country: Denmark

Description: Expert in energy science, technology and innovation policy

– The general development of global growth and welfare depends on equal treatment of the diverse groups in our societies, says Birte Holst Jørgensen. (Photo:

Christina Bode)

– Gender equality is a bit difficult here in Denmark, compared to the other Nordic countries, says Birte Holst Jørgensen. Her own workplace, DTU Wind Energy, is one of the world's largest public research organisation for wind energy. 24% of the employees are women.

There is no doubt that the Danes are serious about their wind energy. 4 000 onshore and 500 offshore wind turbines provide very close to half the annual production of electricity. DTU Wind Energy educates the next generation wind energy engineers and provides research and development that can drive the green transition. Holst Jørgensen coordinates the institution's global scientific advice and research-based consultancy.

Special treatment for centuries

She has a long and varied career behind her, as deputy head of DTU Management Engineering, director of Nordic Energy Research, and positions at several private and public consultancy companies. She gives advice to the EU Commission on energy research and has leading expert positions at the IEA, joint programme initiatives and research funding institutions.

Holst Jørgensen observes that Danish women are generally negative to affirmative action. They don't want positive special treatment.

– However, men have been given positive special treatment for centuries, she says. Therefore, it matters that the leadership of her own university supports diversity as well as better gender balance.

Recruitment

Holst Jørgensen wants more women in the STEM-disciplines (science, technology, engineering, and mathematics).

– More diversity means much better use of talent. Factors like more women, different ethnicities and different age groups provide a diversity that makes us all better at both research and decision making. We need all the talent we can get for the green transition. If we settle for just half, we won't make the transition, she says.

The toolbox has other measures than positive special treatment, though. A greater effort can be made to inspire girls to choose the STEM-disciplines, for instance.

Controversial program

Holst Jørgensen applauds certain types of positive special treatment, like when the Danish minister of higher education and science re-established a funding program for talented, young, female researchers. It's called the Inge Lehmann-program, after the female Danish seismologist. In 1936 she discovered that earth has a solid inner core.

– Lehmann was terribly neglected at home, even though she was highly recognised abroad. The program was met with scepticism, also by women, but has proven to be very popular.

– Women need some friendly nudges. But they also need to grab the opportunities that come their way, and be brave instead of self-apologetic, Holst Jørgensen says.

The position of women within Nordic energy authorities

This part of the survey focuses on the position of women within the Nordic countries' energy authorities. The main findings are based on the replies from 11 organizations within the Nordic countries. The survey was sent to HR persons or other relevant contact people within each organization. The purpose of this survey was to highlight women's position and contribute to a positive effect on the energy sector.

None of the Nordic countries' energy authority organisations are structured exactly the same. The ministry in one country might have a specific focus on energy issues, while in other cases the ministry is also responsible for additional topics. Some countries also have unique organisations with no equivalent in their Nordic neighbour countries. This makes it difficult to compare the countries to each other. For this survey, the statistical sample included each country's ministry responsible for energy, the state energy authority, transmission system operator, funding agency and national regulatory authority (electricity), to gather an overall image of gender equality in the Nordic region's energy authorities. Data was collected using a survey questionnaire. Out of the 19 organisations contacted, 11 participated in the survey.

NORDIC ENERGY AUTHORITIES*

- Ministries
- National energy authorities
- Transmission system operators
- Funding agencies
- National regulatory authorities

*In some of the countries, some of these organisations overlap, i.e. a national energy authority also being a funding agency

35% of the department directors are women

Out of the 11 organizations within the authorities in the Nordic countries, 27% of the head of organisations* and 35% of the department directors were women. 38% of the total full-time equivalents (FTEs) were women in 2019.

As there is a limited number of the energy authorities in each country, and the number of replies and types of organisations differ between the countries, the foundation for a comparison of the Nordic countries is too small. The results are therefore evaluated from the perspective of the entire Nordic region.

Table 14: The position of women in Nordic energy authorities

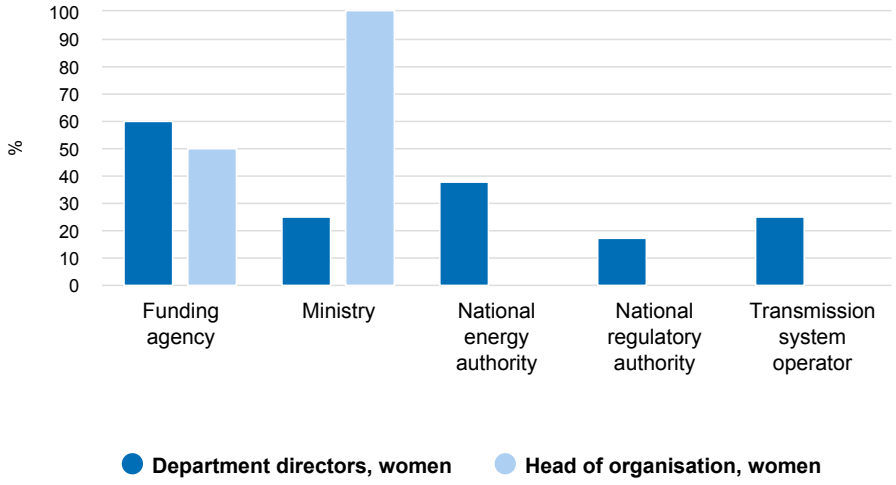
Energy authorities with women as head of organisation*	27%
Energy authorities with women as department directors	35%
Number of organizations	11/19
Women FTEs in 2019	38%

*Head of organisation = CEO / Director general / Minister

Two countries have a female energy minister

Figure 28 shows the responding energy authorities' gender composition by type of organisation in 2019. As the number of answers from each type of organisation is low, it is not possible to compare the organisation types by country. Note that out of the five ministries in the Nordic region, only two answered of which both had a female minister. The other three ministers are men, so the actual share of women as head of organisations in the Nordic ministries is 40%.

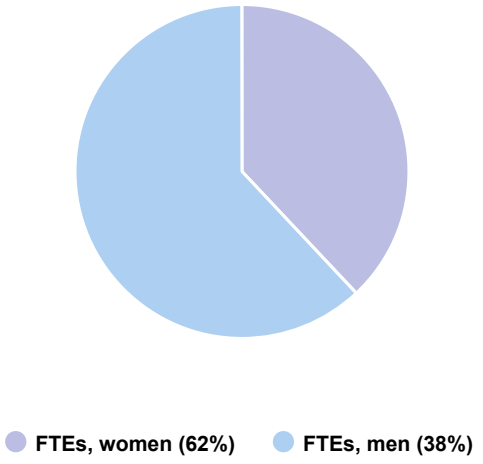
Figure 28: Gender composition by type of organization in 2019



Energy authorities' employees are almost reaching the 40/60 gender balance

Figure 29 shows the gender balance of the full-time equivalents (FTE) in the Nordic authorities' organizations in 2019. There has been no significance change during the years 2017-2019. The total FTE in the responding organisations were 3299 in 2019, whereof 1263 women. The results from the survey do not show the partition between part-time and full-time employment or how they are divided with relation to gender.

Figure 29: Gender composition of FTEs in the Nordic authorities' organizations (2019)



Nordic energy authorities take steps to improve gender equality within the workplace

All organisations answering the survey state that they take steps to improve gender equality within the workplace. 82% of the organizations in the survey have both gender equality policy and equal pay policy. The organisations are actively working with questions of diversity, inclusion, well-being, and values in the work environment and table 16 shows by which means. They also have a flexible working hours approach to improve work-life balance.

Table 15

If steps are taken to improve gender equality within the workplace, which of these measures are the most accurate for the organization?	
The organization has a flexible work hours approach to improve work-life balance.	100%
Gender diversity is considered in recruitment processes.	91%
Gender diversity is considered in representation of the organization (e.g. in panels, speaker events, media).	91%
The organization is actively working with questions of diversity, inclusion, well-being, and values in the work environment.	82%
The organization has specific aims for gender diversity in advisory groups, strategic groups or similar.	55%
The organization offers mentoring programmes or other methods for competence development.	55%

Nordic energy voices: Norway

On a mission to motivate

One of her main drives for taking the job as Head of school, was to get in a good position to motivate girls and young women to study science, technology, engineering and mathematics (STEM).

Name: Sonja Monica Berlijn

Position: Professor and Head of school

Organisation: School of Electrical Engineering and Computer Science (EECS) at KTH Royal Institute of Technology

Country: Sweden

Description: Power engineer and experienced leader

– Nordic universities have a big challenge recruiting women to science, technology, engineering and mathematics, says Sonja Berlijn. (Photo: Susanne Kronholm)

Sonja Monica Berlijn recently started a new job as Head of school at the School of Electrical Engineering and Computer Science (EECS) at KTH Royal Institute of Technology. The first thing she did was to also take over the responsibility for heading the school's work with equality, diversity and equal treatment.

– Since recruiting women to technical areas is challenging, I thought maybe I can serve as a source of inspiration and a role model, she explains. In studies like theoretical engineering at EECS, the share of women in some courses is as low as 10 percent.

Inspire

Behind her, Berlijn has a long career in the Nordic energy sector. Her previous position was senior vice president for the research and development department at Statnett, the system operator in the Norwegian energy system.

– Only 30 percent of the R&D-projects at Statnett were managed by women. Recruiting women is challenging, since female students still make up only 10-30 percent in many STEM-disciplines. Without diversity in innovation teams, the innovation and development process becomes unrepresentative, according to Berlijn. This can lead to a multitude of problems, like solutions that are not suitable for all.

– Also, we know from research that the innovation speed and quality increases when we have more diversity in innovation teams, she says.

Bullied by girls

According to Berlijn, women shouldn't be bystanders while men try to solve the enormous challenges the human race is facing. The future is too important for everyone not to be part of it.

– I really want a better understanding of why so many women are concerned about global warming, but so few are studying to take part in finding the solutions. Young girls like Greta Thunberg are active in raising awareness for climate challenges and sometimes even protesting. Why are they not considering studying at KTH? In technical studies they can help solve the challenges. In the Netherlands, where she grew up, Berlijn was the first woman to study power engineering. She always felt very supported in her professional career – by male students, academic staff and colleagues.

– The men have been very inclusive, and happy to see someone from the opposite gender take an interest in the field. When I was growing up, however, other girls bullied me for my technology interests – all the way up to university level. My biggest hurdles were private, not professional, Berlijn says.

Benefits of gender diversity

Gender diversity within the energy sector is crucial for stimulating more inclusive and innovative solutions to achieve the green energy transition. The energy sector is, however, considered to be one of the least gender diverse parts of the global economy, with a significant gender gap in the oil and gas as well as the renewable energy workforce[5]. The results analysed in this report give an indication that women are a minority also throughout the Nordic energy sector, just as they are globally. We need change.

Gender diversity leads to better management and boosts innovation
Increased diversity brings broader knowledge, experiences and perspectives that result in better decision making, better management, improved quality of workplace interactions, and more significant innovation[6]. Companies with higher numbers of women on board can break down stereotypes and have a trickle-down effect on the rest of the employees within the company. Diverse boards can therefore influence internal cultural changes and provide role models that encourage women to pursue leadership roles[7].

Better gender diversity = better performance and higher profitability
Researchers have shown that increasing gender awareness is a win-win proposition and affects the company's performance and profitability. According to the EY Women Fast Forward report from 2016, showed that 64% of the most productive companies reported an equal gender balance in the company's decision-making power, compared with 43% in the least efficient companies[8]. Clearly, company profits can outperform competitors when women form a larger part of the board[9]. The 2015 MSCI study showed that companies with more women on the board gave a 36% higher return on equity[10].

Investing in diversity is an investment in sustainability
Gender equality is not just a fundamental human right, but an essential foundation for a sustainable world as stated in UN Sustainable development goals[11]. Public

5. Johnstone, N. & Silva, M. (2020). *Gender diversity in energy: what we know and what we don't know.* International Energy Agency.
6. Zukis, B. (2020). *How Women Will Save The Future, One Corporate Board At A Time.* Forbes.
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8. EY. (2016). *Women Fast Forward.*
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11. United Nations. (n.d.) *Goal 5: Achieve gender equality and empower all women and girls.*

companies are facing growing pressure from investors regarding environmental, social and governance (ESG) issues[12]. Gender diversity plays a large role in corporate sustainability as a part of the governance sections on ESG related issues. Socially conscious investors are increasingly starting to screen their potential investment based on corporate boards, C-suite positions and other executives. This rapid development and increased pressure on companies may lead to a positive impact on how companies will address workplace diversity, inclusion and the gender gap in the coming years[13].

Gender equality is not just a fundamental human right, but also an essential foundation for a sustainable world

12. Warren, B. (2020). *Why investors are putting sustainability at the top of the agenda.* EY.
13. S&P Global. (2020). *How gender fits into ESG?*

Change is possible

The report's main finding is that there is a major gender imbalance in the Nordic energy sector, where women are a minority both across companies, academia and energy authorities. In many cases, there is still a long way to go. However, this does not mean we cannot do anything about that – it is possible to take matters into our own hands and contribute to a faster change.

Accelerating change is possible

We have seen that accelerating change within the energy industry is in fact possible. The organisation Women in Icelandic Energy saw a significant improvement between their first and second report addressing the status of women within the Icelandic corporate energy sector. Their report was similar to the first part of this report. All gender-division numbers increased between the two years except for the non-executive board members, which was still 50%[14].

Data and reports on gender diversity are often lacking in companies and in sectors as a whole, and without facts and figures, only personal opinions remain. Therefore, data and facts presented here are important for the energy sector to encourage people and organisations to perform better in this regard. This proved to be successful in Iceland, and it is possible to upscale this success across the entire Nordic region.

Advice on how to improve gender diversity have been and is continuously discussed in many different settings and arenas. Based on discussions and experiences of their members, Kraftkvinnorna in Sweden has for instance published a guide[15] to support work with gender equality. During the yearly Nordic Energy Equality Network (NEEN) seminars[16], the participants have developed advice on how to improve gender diversity in the three sections of the energy sector in this report. Across the energy sector, several actions can be taken to improve gender diversity:

14. EY. (2019). *Women in Icelandic energy.*
15. Kraftkvinnorna. (2021). *Stöd I jämställdhetsarbete.*
16. Nordic Energy Equality Network. (2017). *Women in the energy race.*

What can we do?

1. **ENCOURAGE AND SUPPORT WOMEN**
    - Hire and promote women into leadership roles to break down negative stereotypes and build more role models

2. **MAKE GENDER DIVERSITY A PRIORITY**
    - Make gender diversity and inclusion a priority in your organisation
    - Focus on creating a workplace culture based on the participation of all parties
    - Set goals – and follow up
    - Create metrics to monitor performance
    - Initiate mentorship programmes for women. In particular, reverse mentoring have proven very effective to inspire change in an organisation
    - Make a checklist for inclusiveness and consult it when announcing new positions, organizing events, arranging stakeholder groups etc.

3. **ENCOURAGE DEVELOPMENT AT ALL LEVELS**
    - Focus on developing men and women equally in all roles
    - Build on the need for success for each person
    - Educate organisation leaders and employees on inclusiveness and the benefits of gender balance and diversity to change ingrained habits and mind-sets. Make sure that information flow is not hindered or that people become excluded.
    - Place greater emphasis on making jobs where genders are imbalanced more accessible for women

4. **MAKE WORK-LIFE BALANCE A PRIORITY**
    - Redefine the organisational governance to create a more flexible framework that supports parents
    - Evaluate paternity and maternity leaves and minimise the pay penalty and/or other disadvantages for new mothers
    - Rethink norms around flexibility and encourage flexible work arrangements

5. **REMOVE THE GENDER PAY GAP**
    - Consider conducting a pay audit
    - Revise pay secrecy policies
    - Support women in engineering, finance, operations or sales to improve opportunities for women in more diverse jobs within the C-suite

6. **INCREASE DIVERSITY IN HIRING**
    - Modify the job descriptions to promote gender equality and assess if the requirements need to be altered to broaden the pool of

applicants, for example years of experience and education
- Consider work-life balance in the job description
- Application forms should include if the applicant has been on maternity/paternity leave and for how long
- It should be evaluated positively if parents have spent equal time at home with children
- Make sure evaluation boards are mixed, not only from a gender perspective, but also with regards to diversity in background, age, position etc.

7. **SHOWCASE ROLE MODELS**
    - Be conscious about how the organisations is portrayed in media and make role models more visible. Making role models more visible encourage more women to take the same path and stimulate diversity
    - Be conscious about gender balance and diversity at conferences and seminars with regards to the composition of presenters and in discussion panels

The advice developed by NEEN that be may added to the general advice for the entire sector is as follows:

ENERGY COMPANIES

It was recommended that the corporate sector create sponsorships to increase diversity. They should demand more equal gender composition of conferences, panels, workshops, seminars etc. that they participate in and contribute to, both as organizers and as sponsors. Energy companies need to realize that diversity is crucial to be part of the energy race, and as such, a smart business decision. A strategy for gender equality and diversity is an important tool to succeed, and a demand for such a strategy should also extend to include their suppliers.

ACADEMIA

The academic sector need to rethink their branding of all research areas involved in energy research. By showing how energy research contribute to a wider perspective of society and combating climate change, the field will become accessible and relevant to a wider set of participants. More

research on the role of women in the energy transition is needed and the research should be multidisciplinary. In many cases, the physical environment should be upgraded for the universities to be compatible with industry.

AUTHORITIES

The funding authorities should start programmes for young researchers to improve the chances for women to gain more experience in the field. They should support networks that promote diversity and gender equality, as women usually lack the very essential business networks that are crucial for recruitment into managerial positions. There should be a minimum requirement for how many project participants in a project are female, and a diversified project group should give extra points. A minimum requirement should also be in place for the percentage of project leaders that should be female in their portfolio of funded projects. It is also important that focus is given to not only funding large projects, but also smaller projects, as this improves the chances for diversity within the projects.

Nordic energy voices: Iceland

Gender equality should be executed

He turned a company crisis into a gender equality experiment. The result was better than anyone could have hoped for.

Name: Bjarni Bjarnason

Position: CEO

Organisation: Reykjavik Energy

Country: Iceland

Description: Geologist, mining engineer and executive

– Gender balance in management has improved so many things in the Reykjavik Energy group of companies, says Bjarni Bjarnason. (Photo: Reykjavik Energy)

In 2011 Reykjavik Energy was on the brink of bankruptcy. The task of saving the publicly owned company, with about 630 employees, was handed to Bjarni Bjarnason.

– We decided to see the situation as an opportunity to reinvent the company. In a deep crisis, the people who remain are open to rapid change, Bjarnason explains.

Up until this point, his professional career had been in male dominated environments. Now, he eyed a possibility to eliminate the gender pay gap and achieve gender balance for management positions.

– We had no idea if we could do it. It was more or less an experiment, he admits.

Mission completed

The starting point was 20 percent women in the management team and an unexplained gender pay gap of 8 percent. In 2017 the company reached the goal of gender balance in management positions, and the gender pay gap was cut down to zero.

– It was so simple, happened so fast, and went so well.

Currently, the company job satisfaction is well above the general Icelandic labour market, and the financial development has been a complete turnaround.

– Gender balance was the single most important factor for positive change. It created a much better workplace and a much stronger company. Decisions have become more solidly underpinned, we work in a more open manner, and we invite all views at the meeting table.

Execution

The CEO's conclusion from the experiment is simply that gender equality should be executed. It is not the kind of change that will come from the bottom up.

– It needs to be very firmly supported by the management. Company boards of directors must also have this on their agenda, next to things like growth, profit and environmental standards – to make sure the CEO executes gender equality.

A lot of people wish to hear the story of the transformation of Reykjavik Energy, and one of the questions that keep coming up is "Ok, so gender balance is great, but at what cost?".

– My answer is: Firstly, it is the wrong question. Gender balance is a human right, and you don't put a price tag on it. Secondly, gender balance was one of the key components in rebuilding Reykjavik Energy financially.
And he does not think a company crisis is required.

– It might take a bit longer, and the resistance to change might be a bit stronger, but it has to be done. There is no excuse, and you don't even need a plan or a strategy. You decide, and then you do it.

Conclusion

Although this report indicates that women are a minority within the Nordic energy sector, we know that there is hope for a change.

This report indicates that women hold 31% of all the decision-making power within the responding companies and constitute 28% of the full-time equivalents in the survey sample. However, few women are currently found in key leadership positions such as chair of steering boards or CEO, which resulted in an average leadership score of 24%. A majority of women are found in positions related to human resources, which often do not lead to advancement in the company's hierarchy. However, it is promising to see that half of the companies' CFOs are women, as this role has more profit-generating responsibilities and is more likely to lead toward CEO positions.

Women are also a minority within research groups and more so among department leaders within the Nordic universities, where they make up only 12%. The number of female PhD students in research groups is relatively high in our sample, which could indicate that more women in the Nordic countries are attending an education within science, technology, engineering and mathematics (STEM). On the other hand, there is also a risk that the groups with a higher number of women are more inclined to reply to a survey about gender equality. This may introduce an overrepresentation of women in our sample. Most of the research group and university department respondents explain gender imbalance being the result of too few women applying for the positions, demonstrating the deficit of women especially within STEM.

Energy authorities are performing well compared to the other sectors, with regards to women in department director roles (35%), almost reaching a 40/60% balance. About 38% of the full-time equivalents within the authorities are women, which is also a positive outcome. However, the fact that the share of women has not changed during the reporting period (2017 – 2019) may indicate that being close to the minimum representation limits of 40/60 reduces the drive to reach true equality.

A majority of the organisations in all three sectors have implemented gender equality policies and equal pay policies. This can be a useful tool to improve equality, but also requires setting goals and monitoring improvement, to make an actual impact.

It is our hope that this report is the first step in the right direction for gender diversity; we have gathered the facts and now we know where we need to improve. Equal opportunities benefit everyone, regardless of gender. Diversity brings new perspectives, better management, better decision making and higher profitability. It is our strong belief that gender diversity is in the whole energy sector's best interest.

Methodology

Context

This report demonstrates the outcome of a study that was funded by the Nordic Council of Ministers and was conducted by Nordic Energy Research in collaboration with EY Iceland between October 2020 – April 2021.

The purpose of this study was to examine women's participation in the energy sector in the Nordic region. There were two aspects of research; primary research which included survey of four types, and secondary research which included creating a global power and utility (P&U) women diversity index of the top 100 global utilities by revenues.

Sample definition and data collection

There were four different questionnaires for each of the four surveys, as listed below:

- Survey for energy companies
- Survey for energy authorities
- Survey for university departments
- Survey for energy related research groups

Companies

The statistical sample for energy companies was defined as every company mainly working with the distribution and/or production of energy, district heating and electricity networks in the Nordic region, each having 10 or more employees. The data for gender composition at different levels within the companies was collected using a survey questionnaire, and in a majority of the cases, employees at the HR department answered the survey. The global P&U women diversity index was created by doing desktop research to find gender composition of board members, C-suite executive team and department heads of top 100 global energy companies, selected based on their 2019 total revenues in USD.

Research groups

The statistical sample was defined as research groups in the main Nordic universities that are either energy-focused or perform research related to energy, for example on materials that are meant to be used for technical energy solutions. The data was collected by an online survey questionnaire sent to a contact person in the research groups at the Nordic universities. Survey respondents, who were either the group leaders or the group's contact persons, were asked to fill details on the gender balance within their research group among professors and associated professors, researchers and post docs, and PhD students.

University departments

The statistical sample for university departments was defined as departments in the main Nordic universities that focus specifically on energy research and departments with a broader scope, such as electrical engineering, environmental science, and materials science. The common denominator for the departments is that they are housing one or both categories of research groups. The data was collected through a survey sent to contact persons within the departments, like the department leaders. The departments that answered the survey are not necessarily correlated to the

departments of the research groups that have taken the other survey.

Energy authorities

The statistical sample for organisations within energy authorities authorities was defined as each Nordic country's ministry, state energy authority, transmission system operator, funding agency and national regulatory authority (electricity). In some countries, these organisations overlap. The data was collected through a survey sent to employees at the HR department or other contact people within each organisation.

Statistical significance and response rate

Companies

Out of the 630 energy companies contacted, 94 companies participated in the survey, which gives a response rate of 15%. For statistical significance, the confidence level is 90% and the margin of error is 25%. A possible explanation for the low response rate could be methodological flaws, such as difficulties in finding a suitable person to reply to the survey, or the design of the survey. Due to a limited response rate, the result is not truly representative of the entire Nordic energy industry, only indicating a likely trend in the sector.

Survey – Energy companies

	Denmark	Finland	Iceland	Norway	Sweden
Number of energy companies responded	9	27	9	33	16
Number of energy companies contacted	86	225	11	182	126

Research groups

Out of the 147 research groups contacted, 53 groups participated in the survey, which gives a response rate of 36%. The confidence level is 80% and the margin of error is 25%.

Survey – Research groups

	Denmark	Finland	Iceland	Norway	Sweden
Number of research groups responded	18	9	5	11	10
Number of research groups contacted	45	26	15	30	31

University departments

Out of the 68 departments contacted, 26 departments participated in the survey, which gives a response rate of 38%. The confidence level is 80% and the margin of error is 25%. The 26 departments housed 132 research groups spread across the Nordic countries in 2019.

Survey – Departments

	Denmark	Finland	Iceland	Norway	Sweden
Number of institutes responded	4	5	2	9	6
Number of institutes contacted	15	13	2	22	16

Authorities

Out of the 19 organizations contacted, 11 participated in the survey which gives a response rate of 58%. As the number of organisations is very small in each country, it is not applicable to compare the organisations between countries. The confidence level for all organisations used is 95% and the margin of error is 20%.

Survey – Energy authorities

	Denmark	Finland	Iceland	Norway	Sweden
Number of authorities responded	1	3	4	2	1
Number of authorities contacted	4	4	4	4	3

Women's leadership score

The women's leadership score gives an indication of the share of women that hold decision-making power and key leadership positions within the companies, i.e., among board members, C-suite executives and department managers.

The higher the women's leadership score is, the higher number of women have decision-making power within a particular company. A score of 0 means that there are no women in decision-making power positions and a score of 100 means there are only women. As there are different weights for different levels of responsibility, it is not accurate to say that a score of 50 means a fully equal gender division, but it tells us that 50% of the decision-making power and responsibility lies with women, based on the analysis weighting.

The board of directors are given the highest weight in the analysis, of which the chairperson of the board has the weighting of two board members, as the chairperson's vote carries double weight. CEOs received the second-highest weighting, followed by other C-suite executives. Department managers were given the lowest weighting.

	Board*	CEO	Other C-suite	Department Managers
Weight %	50%	20%	20%	10%

*Chairperson = 2x board members

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About this publication

Gender equality in the Nordic energy sector

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Nordic Energy Research

Nordic Energy Research is an institution under the Nordic Council of Ministers which manages and finances international research programs and projects that add value to national work in the Nordic countries. In addition, we perform certain secretariat and analytical functions in the energy policy cooperation under the Nordic Council of Ministers.