
EBRD/KAZENERGY

The role of women in the energy sector in Kazakhstan

Final report
April 2020



Photo credit: Samruk-Energy / Almaty Power Plants

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Acknowledgements

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Ekibastuz GRES-2 JSC	Meerbusch LLP
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Energy Solutions Center LLP	North Caspian Operating Company N.V.
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First Wind Power Plant LLP	Samruk-Energy JSC (Head Office)
Karachaganak Petroleum Operating B.V.	Samruk-Green Energy LLP
Kazakhstan-China Pipeline LLP	Shardarinsk Hydroelectric Power Plant JSC
Kazmortransflot LLP	Shell Kazakhstan Development B.V.
KazMunayGas JSC (Head Office)	SSM Oil LLP
KazMunayTeniz LLP	Tengizchevroil LLP

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Foreword by EBRD

The EBRD recognises gender equality as a key driver for sustainable transition and inclusive growth across its region. Through investment projects, policy engagements and technical assistance, the Bank directly supports Sustainable Development Goal 5 on gender equality with activities designed to strengthen women's access to economic opportunities and integration into labour markets. As outlined in EBRD's Strategy for the Promotion of Gender Equality (2016-2020) and the Economic Inclusion Strategy (2017-2021), these activities include, for example, the introduction of high-quality work-based learning programmes, mentorship schemes and Equal Opportunity Action Plans (EOAP) to address human capital development challenges of our clients.

In Kazakhstan, the EBRD is working with companies in the male-dominated sectors of power and energy to promote equal opportunities for women and men in the workforce. For instance, as a result of this engagement, the Chair of Samruk-Energy signed the UN Women's Empowerment Principles, in line with the objectives of the company's EOAP. This report shines the spotlight on companies, such as Samruk-Energy, that are supporting women's increased participation in the power and energy sector through the adoption of STEM (science, technology, engineering and maths) Ambassadors programmes, internal targets for diversity or flexible work arrangements.

However, this study also sheds light on the obstacles women face both within and in entering the energy sector. The results are based on a detailed labour survey covering the period 2016-2019, where 36 companies shared workforce data, providing information on more than 55,000 workers in each data year and all subnational regions. In the study period, while the number of male employees remained relatively stable, the number of women employed in the sector declined by 14.3%, which means a net loss of 2,174 female employees.

Moreover, less than 12% of all women in the sample are employed at management level, whereas 16% of male employees are in management roles. Women's share of employment is also lowest among older workers. This is important as senior managers are typically drawn from this experienced employee cohort. It is also noteworthy that turnover rates for women are consistently higher than the rates for men, suggesting that efforts to increase women's representation in leadership roles will need to focus on retention of experienced women at the mid- and late-career stage.

This study will inform ongoing policy engagements in the country, as the EBRD continues to support the Government and the National Commission for Women Affairs, Family and Demographic Policy under the President of Kazakhstan in achieving the objectives of the Action Plan for 2020-2022. In this context, the EBRD will continue to foster the active engagement of the private sector in promoting gender equality and to support the government to eliminate legal barriers to women's equal opportunity in employment.

In particular, the EBRD will continue to support the government to reduce and eliminate regulatory restrictions on women's employment in certain occupations and types of work. Such restrictions not only reduce the employment opportunities available to women, but they also reinforce stereotypes about women's and men's traditional areas of interest and aptitude. Current regulations prohibit women's employment in 212 occupations and/or types of work, which include a significant number of professions relevant for the energy sector. However, with EBRD support, a 2018 revision removed 75 occupations from the prohibited list (which



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originally included 287 jobs) on the grounds that such occupations were no longer detrimental to women's health. The EBRD intends to strengthen further its work with the government and private sector in this area.

Finally, we would like to thank KazEnergy's Women in Energy Club for their collaboration and support for this study. We look forward to ongoing cooperation in pursuit of our joint objectives to facilitate learning on best practices and take practical steps to promote gender equality and, more generally, the greater role of women in the energy sector in Kazakhstan.



Nandita Parshad
Managing Director
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European Bank for Reconstruction and
Development



Barbara Rambousek
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European Bank for Reconstruction and
Development

Foreword by KAZENERGY

Dear ladies and gentlemen,

Contemporary social trends demonstrate that one of the factors in strengthening the economy is increasing the role of women in society, the expansion of their business and economic activity. In the Republic of Kazakhstan, supporting women's employment, and gender policy development in general, is one of the priorities of state policy.

Since women's economic potential is yet to be fully realised, various initiatives are underway serving to ensure more equal gender representation in each sector of employment. A growing number of studies reveal a positive relationship between the presence of women in leadership positions, as well as at other structural levels, and company performance.

The energy industry is a leading sector in Kazakhstan's economy and one in which thousands of women work alongside men, playing a significant role in its stable growth and development.

As a commitment to the development of gender policy in the energy sector, KAZENERGY Association is implementing various activities related to the pressing issues of women's leadership and gender diversity, one of which is the preparation of this study, "The Role of Women in the Energy Sector in Kazakhstan".

This is the first industry-wide gender study in the energy sector which aims to:

- understand the role of women in the sector based on the data obtained (including in managerial, technical and other positions);
- identify the economic benefits and advantages associated with increased attention to gender equality and equal opportunity for our companies; and
- raise awareness of the specific barriers and challenges women face in the industry.

This report provides information on the share of women's employment in the country's energy sector, education levels, hiring and promotion, remuneration, corporate policies and programs, best international and national practice on supporting women in the industry, and more.

On behalf of the Association, I express my sincere gratitude to the European Bank for Reconstruction and Development, to Ergon Associates (the consultants that carried out this study), and to all companies for their support and participation in the study and in the preparation of this report.

Bolat Akchulakov
General Director of KAZENERGY Association



Foreword by the Ministry of Energy of the Republic of Kazakhstan

Dear colleagues, friends and readers,

Life has shown that the status of women in society is one of the indicators of the general socio-economic development of states.

According to national statistics and to this report, the share of women in Kazakhstan's oil and gas and energy sectors is 25%, and their professional contribution to the establishment and development of the enterprises they work at is highly valuable.

The Ministry of Energy, as one of the state executive bodies of Kazakhstan, assists in the creation of favourable conditions for the development of human capital and for ensuring equal opportunity and eliminating all types of discrimination in employment, which not only improves the atmosphere in teams, but also increases the return on investment in each employee in the industry.

To ensure equal opportunity, energy companies take various measures to attract women and girls to their companies: undertaking targeted projects, holding special forums and conferences, creating mentoring programs, collaborating with higher and professional education institutions, and many other activities.

The report presenting the results of the study "The Role of Women in the Energy Sector in Kazakhstan", prepared by the European Bank for Reconstruction and Development with the support and active participation of KAZENERGY members, expands our knowledge of women's employment in the energy sector of Kazakhstan. The data obtained during the study will allow us to build a more diverse and inclusive work environment that will meet the needs of both women and men in the oil and gas and energy sectors in the future.

I would like to express my gratitude to the European Bank for Reconstruction and Development, to Ergon Associates (the consultants that developed this study), to KAZENERGY Association, and to all the companies for initiating, conducting and participating in the study.



Aset Magauov

Deputy Minister of Energy of the Republic of Kazakhstan

Foreword by NC KazMunayGas JSC

Dear reader,

Women are actively involved in all areas of social life. The rising role of women's economic potential and their contribution to the socio-economic development of the country must be noted. They are distinguished by a responsible approach to business and effective problem-solving.



At National Company KazMunayGas, we attach great importance to the topic of gender diversity, to protecting women's rights and lawful interests, and to the creation of optimal conditions for their professional, creative and spiritual development. Through the introduction of new technologies and equipment, modernization and automation of production processes, we are creating favourable working conditions and increasing the number of jobs available to women. We also take other measures aimed at ensuring equal opportunity for women at the company, including cooperation with universities and colleges, holding trainings and seminars, skills upgrading courses, and developing special programs.

This study raises relevant issues related to the active participation of women in the energy sector. The data obtained over the course of the study give us an idea of the conditions for women's professional growth and development in the industry. The recommendations are relevant for employers; their implementation will help to increase the level of women's participation in company activities at different levels.

I am grateful to the European Bank for Reconstruction and Development, KAZENERGY Association, and other companies for this contribution to the development of gender diversity.

Alik Aidarbayev
Chair of the Management Board
National Company KazMunayGas JSC

Foreword by Samruk-Energy JSC

Dear ladies and gentlemen,

It is my pleasure to welcome you and express my gratitude to KAZENERGY Association, to our partner the European Bank for Reconstruction and Development (EBRD) and its consultants Ergon Associates for their fruitful cooperation in an area as important as gender equality. This study will contribute to the development of initiatives on providing equal opportunities and improving corporate policies aimed at supporting women working in the energy sector of Kazakhstan's economy.



Samruk-Energy JSC joined the UN Global Compact in 2011 and follows its ten principles in its business strategy and activities. In June 2018, we launched a project together with EBRD and Ergon Associates, which led to Samruk signing a Statement of Support for the Women's Empowerment Principles, developed as a result of collaboration between the UN Global Compact and UN Women. This document assumes adherence to the principles of gender equality as a key element of sustainable development, as well as the conviction that companies providing women and men with equal opportunities are more successful and achieve better results. It is noteworthy that the signing of this Statement took place in March 2019, on the eve of International Women's Day – March 8.

Today, upon completion of the EBRD/Samruk-Energy project, we are pleased to state that Samruk-Energy JSC has an effective and productive gender equality policy, as concluded during the final meeting with European experts in September last year. We are also grateful to our partners for their recognition of our work and the significant results achieved on the implementation of the EBRD project incorporating international best practice to strengthen equal opportunity in Kazakhstan's energy sector, and for their assurance that the company's experience will be recommended to all energy enterprises in the country.

As the largest energy holding in Kazakhstan - currently employing about 4,700 women across its corporate group - Samruk-Energy JSC aims to not only develop its human rights policies, but also to focus on key issues related to promoting gender equality, empowering women and widening their opportunities. We have a strong desire to build our public profile as a modern and progressive company.

Bakitzhan Zhulamanov
Chair of the Management Board
Samruk-Energy JSC

Foreword by Chevron

Chevron supports women leadership and gender equality in Kazakhstan.

I would like to express my gratitude to EBRD and KAZENERGY Association for publishing their important report on “The Role of Women in the Energy Sector in Kazakhstan”. As a company committed to fostering diversity and inclusion at all levels, Chevron proudly supports women in leadership and overall gender equality.

At Chevron, we strongly believe that developing human capital by investing in building capacity and people’s talents is critical for getting results the right way. A diverse workforce and inclusive culture strengthens our business performance, drives innovation, and leads us as to greater success both as individuals, and as a company.

Chevron in Kazakhstan is proud of the development opportunities that enables every employee to take a leadership role. Today over 40% of Chevron Eurasia Business Unit’s leadership team are women. In fact, company’s biggest project in Kazakhstan, Tengizchevroil (TCO), is led by Eimear Bonner, TCO’s first woman General Director.

Our support for women of all ages extends beyond our own internal employee development. As part of the company’s social investments in Kazakhstan, we partner with local communities and support communities through education, business development and health with focus on creating an equal opportunity for all. Chevron is committed to continue supporting initiatives which help create a gender-inclusive environment for the benefit of businesses and communities around the world.



Sincerely,

John Baltz
Managing Director
Chevron Eurasia Business Unit

Foreword by Shell Kazakhstan

Dear friends,

On behalf of Shell Kazakhstan let me express our appreciation and congratulate the authors of the report on finalizing such an important and comprehensive research work, which provides a detailed analysis on the gender balance situation in energy and petroleum sectors of Kazakhstan.

For Shell Kazakhstan, it has been a great honor to participate in drafting the report and to once again demonstrate our commitment to diversity and inclusion within our company's personnel.



Shell Kazakhstan has been successfully working in Kazakhstan for more than 25 years by contributing to the development of the oil and gas sector by meeting the leading safety, environmental and reliability standards. All of this would be impossible without our talented team representing various age, ethnic, social, gender and other groups.

One of our key strategies is to develop our workforce and we implement it regardless of our employees' gender. Almost half of Shell Kazakhstan's Top Management and half of personnel are our female colleagues.

We are confident that in the contemporary world women should have all opportunities for maximum implementation of their potential and that they are able to create value in different aspects of their activity equally with men and even more effectively.

We hope that as a result of the work carried out by the report authors, there will be decisions made and initiatives implemented for women's wider involvement in solution of the most critical and complex issues of Kazakhstan's energy and petroleum industries.

We wish our Partners from EBRD and KAZENERGY Association success in promoting women's role in the economic growth of the independent country.

Olivier Lazare
Shell Kazakhstan Country Chair

Foreword by Tengizchevroil LLP

Diversity is a core value at Tengizchevroil (TCO). Each of our employees brings incredible value to the workplace through the diversity of their experiences, ages, educational and personal backgrounds, and gender. We are incredibly proud of the role that women have played every day in contributing to the success of our company and the broader energy industry in Kazakhstan.



That is why we are pleased to support the joint study on “The Role of Women in the Energy Sector in Kazakhstan”. Our female colleagues have played a critical role in shaping Kazakhstan’s energy industry. This informative study underscores the importance of continuing to support the hiring, professional growth and development of women in energy.

Throughout my six years of working in Kazakhstan’s energy sector, I have been most impressed by colleagues’ demonstrated respect and unwavering commitment to supporting the professional development of women in our industry. The energy industry offers tremendous opportunities for professional growth and development, and I encourage women in Kazakhstan to continue pursuing careers in this great and rewarding profession. Work hard, be confident and aspire to leadership roles in industry, if those opportunities are of interest.

I am delighted to see initiatives like this joint study that continue to shine light on the contributions of women in Kazakhstan’s energy sector. And I strongly support the efforts of the Republic of Kazakhstan to encourage and promote the leadership roles of women in business. TCO remains committed to our strong support for women in Kazakhstan’s energy industry.

Eimear Bonner
General Director
Tengizchevroil LLP

Foreword by the Chinese National Oil and Gas Corporation (Kazakhstan)

Dear colleagues of the energy sector of Kazakhstan,

The EBRD/KAZENERGY experts have presented detailed and well-developed analytical material on the role of women in the energy sector of Kazakhstan. The research, based on statistical data and practical experience of the companies of the energy sector of Kazakhstan, has practical and applied importance for everyday work with human resources in production, which is the engine and the main factor of the company's achievements. An important place and role in the workforce of any enterprise belongs to women who, equally, and often, ahead of male colleagues, make a significant contribution to the successful work and achievements of companies.

The Chinese National Oil and Gas Corporation (CNPC) participated in this project and provided data and materials on its own experience in promoting gender policy in Kazakhstan. In practice, implementing the thesis "People come first, and human capital contributes to sustainable development", and following the principles of corporate culture, CNPC makes persistent efforts and a significant contribution to the training of Kazakhstani personnel, among which there are many representatives of the female half of the country's population. At the same time, the number of working women in CNPC is similar to the indicators of gender statistics of other enterprises in the energy sector of Kazakhstan and foreign countries. In this regard, we believe that creating a more representative talent pool will contribute to solving gender-related problems and to adding qualified women specialists to the staff of enterprises.

In conclusion, I would like to thank those who initiated and carried out this project for this study on an important topic and developed specific practical recommendations in the field of gender policy in collaboration with the teams of enterprises of the energy sector of Kazakhstan.

With respect and wishes for success,

Li Yonghong
General Director of CNPC (Kazakhstan)



Foreword by the Atyrau University of Oil and Gas

Issues of gender equality are among the most pressing social problems of the 21st century, which is evidenced by the report “The Role of Women in the Energy Sector in Kazakhstan”, prepared by Ergon Associates for the European Bank for Reconstruction and Development and KAZENERGY Association. This study pays particular attention to the training of personnel in connection with the involvement of girls in science, technology, engineering and mathematics (STEM) education. Providing help and vocational guidance in choosing technical specialties to girls at school, and then at higher education institutions, expands their opportunities for employment in highly profitable technical sectors of the economy.



In the years since independence, Kazakhstan has made some progress in protecting the rights and interests of men and women. As the Rector, I observe a slight increase in the number of girls entering technical specialties with each new academic year. There are currently 2,123 students studying technical specialties at the Atyrau Safi Utebayev University of Oil and Gas, of whom 1,657 are boys and 466 are girls. For us, this means that there is considerable potential to increase female participation in technical education and in doing so contribute to expanding their opportunities for quality employment in the labour market.

At the same time, our analysis of graduate employment shows that the share of graduates of technical specialties in the total number of graduates in employment has recently increased, with men accounting for the majority of those employed in their field.

According to the latest expert estimates, energy sector specialists are among the most sought-after employees in Kazakhstan. Increasing the number of girls entering technical specialties will also lead to an increase in the pool of highly qualified graduates for recruitment. Companies that focus their recruitment efforts on men only and cannot provide equal employment opportunities run the risk of restricting their access to valuable professionals by excluding a significant portion of qualified candidates from consideration.

Gulzada Shakulikova
Chair of the Management Board – Rector
Atyrau Safi Utebayev University of Oil and Gas

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List of Abbreviations

AIES	Almaty Power Plants JSC
CEACR	Committee of Experts on the Application of Conventions and Recommendations (ILO)
CEDAW	Committee on the Elimination of All Forms of Discrimination against Women
CIS	Commonwealth of Independent States
EBRD	European Bank for Reconstruction and Development
ICESCR	International Covenant on Economic, Social, and Cultural Rights
ICRW	International Centre for Research on Women
IFC	International Finance Corporation
ILO	International Labour Organization
IMF	International Monetary Fund
KAZENERGY	Association of legal entities “Kazakhstan Association of Oil-Gas and Energy Sector Organisations “KAZENERGY”
KEGOC	Kazakhstan Electricity Grid Operating Company JSC
KPO	Karachaganak Petroleum Operating B.V.
OECD	Organisation for Economic Co-operation and Development
STEM	Science, technology, engineering and mathematics
TVET	Technical and vocational education and training
TCO	Tengizchevroil
WEC	Women in Energy Club of KAZENERGY
WEF	World Economic Forum
WEPS	Women’s Empowerment Principles
WPC	World Petroleum Council

Executive Summary

This study aims to expand the knowledge base on women's employment in Kazakhstan's energy sector, with a view to fuelling informed discussions among policymakers and companies on how to boost the representation of women in the sector. One of its key contributions is to enhance the existing statistical picture on women in the energy sector in Kazakhstan by providing new and more detailed quantitative data from companies in the sector. Additionally, it considers how energy companies in Kazakhstan can better support women's employment and leadership, by examining both the principal challenges faced by women in the sector and outlining examples of national and international good practice.

Women continue to be under-represented across the energy sector in Kazakhstan, especially in leadership and technical roles. National survey data indicate that women account for approximately 30% of all direct employees in the electricity, gas, and steam subsector, and just 20% of employees in oil and gas production. Although these figures compare favourably to global benchmarks, it is clear that women remain an untapped source of talent and skills for Kazakhstan's energy sector.

The increased participation of women presents a potential source of competitive advantage for the energy sector in Kazakhstan, especially in the context of a rapidly changing global energy landscape. International research shows how companies that invest in women's employment and leadership stand to gain a range of benefits, including enhanced shareholder value, improved access to labour and talent, higher levels of innovation and team cohesion, and more robust decision-making in leadership teams.

Women's participation in the energy sector is also an important matter for national policymakers, given that energy is a key strategic sector for Kazakhstan and an important part of the country's economic growth story since independence in 1991. Thus, the underrepresentation of women in the energy workforce, and the loss of associated benefits and opportunities for company performance and growth, have broader significance for national economic and social development.

The research for this study is based on four main elements:

- A workforce survey of companies operating in the energy sector, providing annual workforce data for 2016-2019 from 36 companies operating in the energy sector in Kazakhstan, and covering more than 55,000 workers in each survey year (see Chapter 3);
- Analysis of national statistical data from Kazakhstan and international comparator countries;
- A review of legal and policy frameworks in Kazakhstan (see Chapters 2 and 6) and international experience (see Chapter 4) concerning the promotion of women's labour force participation and practices that aim to address barriers to women's employment both in the energy sector;
- Interviews with a small number of companies to gain closer insight into best practices on equal opportunity in the sector in Kazakhstan (see Chapter 5).

Key findings from the company survey

- **Women are under-represented across the workforce in the energy sector:** Women account for approximately 25% of the total workforce in the energy sector, with little indication of significant positive change in recent years. The level of women's participation is very similar across energy sub-sectors.

- **Energy companies are missing out on female talent in their management and leadership teams:** Women hold just 12% of senior managers and account for 17% of Board members. Women's share of employment declines progressively from non-management roles (26%), through mid-level management positions (20%), to senior management (12%), indicating persistent underutilization of women's potential when it comes to their professional advancement in the sector.
- **Women are concentrated in office-based roles, and under-represented in technical roles:** Women account for 50% of business and administration roles, but less than 20% of technical and operational roles (where the greatest number of job opportunities are found).
- **However, when women do work in technical / operational roles, they are more likely to be higher-skilled specialists:** Women who enter technical and operational roles in the energy sector do so primarily at higher skill levels, especially as 'specialist professionals' (engineers and similar). However, more than 60% of technical jobs in the sector are in non-specialist roles, where women's share of employment is just 12% (compared to 31% among 'specialist professionals').
- **Women's participation in the energy sector is lowest amongst older and younger workers:** Women's workforce participation is notably lower among early-career age groups (23%), and late-career groups (22%), compared to mid-career age groups (26%). The drop-off in female workforce participation among older, more experienced workers may contribute to women's under-representation in senior leadership roles by reducing the female talent pool for senior managers.
- **Women in the sector have a higher level of education than men:** A total of 64% of women working in the energy sector have advanced university qualifications, compared to 48% of men. While these data suggest that the Kazakh energy sector is an attractive employment option for high-skilled women, it is equally clear that women's under-representation in senior leadership roles cannot be attributed to an absence of qualified women.
- **Women's representation in the sector is unlikely to increase based on current recruitment and turnover rates:** Women's share of new recruits is consistent with women's current share of the total workforce over the three years considered by the survey, indicating little prospect for a fundamental change in women's representation across the sector without proactive policy and practical measures on the part of companies and policymakers.
- **Similarly, survey data provide little indication of significant change over time in relation to women's share of management positions:** Female share of new promotions are broadly in line with women's current share of the total workforce, while female share of promotions to management and senior leadership positions is below women's share of the 'eligible' employee categories. These trends indicate little prospect of women increasing their representation at more senior levels in their organisations.
- **Women's average pay is less than men's average pay across the energy sector workforce:** Women's average total pay is approximately 81% of men's average total pay according to survey data collected for this study. These proportions are broadly in line with estimates from national statistical sources for the energy sector. These figures suggest the need for energy companies to pay further attention to ensuring equality in employment, including equal pay for work of equal value.
- **Few companies have adopted active measures to promote gender equality or have in place specific policies to address physical and verbal sexual harassment¹:** Although between 40-60% of companies

¹ During preparation of this report, a draft law proposed by Members of Parliament of the Republic of Kazakhstan "On Amendments and Additions to Some Legislative Acts of the Republic of Kazakhstan on Family and Gender Policy" was discussed at a meeting of the Interdepartmental Commission under the Ministry of Justice of the Republic of Kazakhstan.

in the sample collect and report on gender-disaggregated workforce data and have in place formal policies on equal opportunities, just 32% have adopted *active* initiatives to promote equal opportunity beyond statutory requirements, while only 16% have in place specific policies and mechanisms to address physical and verbal sexual harassment.

Meeting the challenge

National governments have increasingly recognised gender equality as a key factor in promoting inclusive and sustainable economic growth. Many governments, including the Government of Kazakhstan, have adopted policies and programmes aimed at increasing female labour force participation and promoting diversity in public and private sector leadership. For their part, leading energy sector companies – internationally and in Kazakhstan – have come to see increased gender diversity as a potential source of competitive advantage and are setting out to tackle the under-representation of women as a matter of business priority. Given the scale of the challenge involved, companies often choose to adopt an integrated strategy that targets progress across a range of different areas, and tackles women’s recruitment, retention and progression. This report profiles the initiatives taken by five diverse energy companies: Karachaganak Petroleum Operating, Samruk-Energy, Tengizchevroil, China National Petroleum Corporation, and KEGOC.

Nevertheless, despite growing recognition of the value of increasing the participation of women, there remain significant challenges to achieving gender equality and ensuring equal opportunity in the energy sector. These challenges require concerted attention from governments and energy sector companies. Key challenges include ongoing regulatory restrictions on women’s employment, the under-representation of women in science, technology, engineering and mathematics (STEM) studies (particularly in technical and vocational education and training), and challenges for women in balancing paid employment and unpaid care responsibilities. At the same time, negative stereotypes and misperceptions can deter women from pursuing careers in energy or applying for technical positions typically viewed as ‘jobs for men’.

Recommendations

Women already play a significant role in the energy sector in Kazakhstan, but there is substantial scope to increase the depth and breadth of their participation. Importantly, women continue to be under-represented in senior management and technical and operational roles. Without proactive measures from companies and national government, women’s participation in the sector will not change, as recruitment and promotion rates remain static over time. As such, it is necessary for policy-makers and companies to work together to identify effective measures to promote women’s entry and progression in the sector, including in technical and operational roles, so that the sector can realise the gains of increased gender diversity.

Recommendations for policymakers

1. Continue the work started in 2018 on the gradual removal of statutory restrictions on women’s employment in the energy sector, with a focus on reducing the list of prohibited jobs.
2. Work to encourage higher levels of enrolment by women in STEM disciplines that are relevant to the energy sector, particularly in relation to higher education and TVET, but also among secondary school children.

Recommendations for energy companies

3. Seek out opportunities to collaborate and share experiences with other companies and industry platforms, such as KAZENERGY.

4. Demonstrate public commitment to increasing women's representation in their operations and the energy sector more widely.
5. Adopt measures to increase the proportion of women in senior leadership roles and develop the pipeline of female talent in the industry (for example, through the inclusion of practical measures to support women's advancement among key performance indicators for technical specialists and managers at different levels).
6. Develop new strategies for attracting women into the sector, with a focus on dispelling myths about the "unsuitability" of the sector for women and increasing women's representation in technical and operational roles (for example, through strengthening company outreach and messaging to young girls and women, as well as highlighting how technological advances are changing the nature of work in the sector and opening up potential new employment opportunities for women and men).
7. Invest in creating safer and more inclusive working environments that respond to the needs of women and men alike.
8. Introduce new technologies and techniques, modernize and automate production processes, and increase the number of jobs available to women as a result of favourable conditions in the workplace.

Recommendations for KAZENERGY

9. Continue to provide and expand opportunities for KAZENERGY members to collaborate, discuss challenges, and share good practices on women's employment and leadership.
10. Engage in dialogue with stakeholders on key issues related to gender equality in the industry, including regulatory restrictions on women's employment.
11. Monitor, to the extent possible, women's representation in the sector through regular company surveys.

1. Introduction

Energy is a key strategic sector for Kazakhstan, which benefits from significant oil, gas, coal, and uranium reserves. The country is a net exporter of energy and one of the major producers of fuel energy in the Commonwealth of Independent States (CIS).² Like other energy producing countries, the energy sector in Kazakhstan is facing an array of challenges, including the emergence of new technologies, fluctuations in oil prices, and global financial and environmental regulatory change. Retaining competitive advantage in this rapidly changing global energy landscape requires governments and companies to make full use of all the available natural, technological, and human capital resources.

In this context, there is increasing recognition from companies and policy-makers that the participation of women in the labour force, especially in sectors that are traditionally male dominated such as the energy sector, is a potential source of competitive advantage. Women represent half the world's (and more than half of Kazakhstan's) population and thus half of its economic and social potential. The economic and human development costs of persisting gender inequality are therefore significant, just as a reduction of the gender gap implies significant positive gains in terms of social and economic development.

1.1 The role of women in the energy sector in Kazakhstan

Women's labour force participation rate in Kazakhstan is comparatively high by international standards; an estimated 61% of working age women are engaged in work, compared to an OECD average of 62% (OECD, 2017). However, women are still notably under-represented in certain sectors, including energy; according to official national data, women account for just 30% of employment in the electricity, gas, and steam sector, and just 20% in oil and gas production (see 2.3). Although these figures compare favourably to international benchmarks – for example, the World Economic Forum estimates women represent just 19% of the energy sector workforce worldwide – there is clearly scope to increase women's participation in the energy sector in Kazakhstan.

The business case for an increased focus on gender diversity in the energy sector is compelling. A growing body of research shows that greater female inclusion in the workforce – and especially in leadership roles – offers a range of concrete benefits to companies, from an expanded talent pool for recruitment, to improved financial and corporate governance performance. In recognition of the performance gains associated with greater gender equality, leading companies have increasingly looked to develop policies and practices to attract more women to the workforce, and to develop and retain the most talented women (see 2.4).

For policymakers, the case for increasing women's employment in the energy sector is equally persuasive, especially given the strategic significance of the energy sector to Kazakhstan's economy and national development agenda. Thus, promoting gender equality in employment – in the energy sector and beyond – is not only a matter of fundamental human rights for governments, but a policy priority for ensuring sustainable and inclusive economic growth. In this context, the Kazakh government has put in place a wide-

² Kazakhstan holds 30 billion barrels of proven oil reserves (1.7% of global reserves) and 1 trillion cubic meters of natural gas reserves (0.5% of global reserves) as of the end of 2018. According to these figures, Kazakhstan has the second largest proven oil reserves in the CIS region (after the Russian Federation) and the twelfth largest in the world (BP, 2019).

reaching legislative and policy framework to support equal opportunities for women and men and to promote gender equality across social, economic, and political domains (see 2.2).

However, despite a favourable regulatory context for promoting gender equality in Kazakhstan, and the increasing attention paid by energy companies to increasing their share of women in the workforce, significant challenges remain that require systematic and practical solutions. Women's participation in the energy sector continues to be impeded by low levels of enrolment in energy-relevant studies, particularly those needed for technical and operational roles, while the number of women in leadership positions reinforces outdated stereotypes that the sector is not suited to women.

In order to strengthen the role of women in the energy sector, there is a clear need for better information and data about women's employment and leadership in the sector; better diffusion of guidance and best practices on how energy companies in Kazakhstan can support women's entry and progression in the sector; and coordinated action by companies and policy-makers.

1.2 Scope and objectives

This study aims to expand the knowledge base on women's employment in Kazakhstan's energy sector, with a view to fuelling informed discussions amongst policymakers and companies on how to boost the representation of women in the sector. One of the main contributions of this report is to enhance the existing statistical picture on women in the energy sector in Kazakhstan, by providing new and more detailed quantitative data from companies in the sector. Although the Government of Kazakhstan collects gender-disaggregated employment data, there are still industry-specific gaps with respect to women's participation in management and technical occupations.

This study also aims to consider how energy companies in Kazakhstan can better support women's employment and leadership, by examining examples of national and international good practice.

This study is principally focused on women's employment in oil and gas production and processing and in power utility subsectors, which took active part in the survey. These subsectors currently account for a significant proportion of KAZENERGY's membership.

This study comprises seven principal sections:

- **Chapter 1** outlines the scope and objectives of the study and provides an overview of the methodology applied.
- **Chapter 2** outlines why the role of women in the energy sector is of critical importance for policymakers and companies in Kazakhstan, focusing on women's current participation in education and employment, the national policy context, the Kazakhstan energy sector in international perspective, and the business case for promoting gender equality for companies.
- **Chapter 3** provides more detailed analysis of the national situation of women in the energy sector based on the result of a new workforce survey of 36 energy sector companies. The final section of the Chapter summaries the key findings from the survey and outlines their wider implications.
- **Chapter 4** reviews international and local good practice on how national governments, energy sectoral associations, and energy companies can support women's participation in the sector, while;

- **Chapter 5** presents five more detailed cases studies to illustrate best practice among energy companies in Kazakhstan.
- **Chapter 6** assess some of the key challenges relating to women's greater participation in Kazakhstan's energy sector.
- Finally, **Chapter 7** sets out a series of practical recommendations for policymakers, companies and KAZENERGY on how to remove barriers to women's participation and increase their representation in the energy sector.

1.3 Methodology

The research for this study is based on four main elements:

- A workforce survey of companies operating in the energy sector, providing annual workforce data for 2016-2019 from 36 companies operating in the energy sector in Kazakhstan, and covering more than 55,000 workers in each survey year (see Chapter 3);
- Analysis of national statistical data from Kazakhstan and international comparator countries;
- A review of legal and policy frameworks in Kazakhstan (see Chapters 2 and 6) and international experience (see Chapter 4) concerning the promotion of women's labour force participation and practices that aim to address barriers to women's employment both in the energy sector and more broadly;
- Interviews with a small number of companies to gain closer insight into best practices on equal opportunity in the sector in Kazakhstan (see Chapter 5).

The methodology for the company survey and company interviews is set out in further detail below.

1.3.1 Company survey

The company workforce survey was developed by Ergon in close consultation with KAZENERGY. The survey comprised a detailed questionnaire on a range of workforce characteristics for the period 2016-2019.³ All KAZENERGY member companies and other selected energy companies (as agreed with KAZENERGY) were invited to participate in the survey. The invited companies included more than 80 small, medium, and larger private and state-owned enterprises across all major energy sub-sectors in Kazakhstan.

Company respondents completed the survey during June and July 2019. A total of 36 companies provided workforce data in response to the survey, covering more than 55,000 workers in each data year. A summary of the survey sample is provided in Table 1.

Although this sample cannot be considered as fully representative at the national and sector level, it nevertheless provides a broad cross-section of the Kazakhstan energy sector for the period 2016-2019. It encompasses most major energy sub-sectors (oil and gas, electric utility, renewables, coal mining), it covers companies with operations in all subnational regions, and it comprises private and state-owned enterprises with varying workforce size and scope of business activities (from highly specialised service companies with < 20 employees, to large multinationals with > 7,500 employees across a range of business activities in

³ Respondent companies provided annual workforce data for 2016, 2017, and 2018, and comparable data for quarter 1 and/or quarter 2 for 2019.

Kazakhstan). As such, it is reasonable to generalise key findings from the company survey to the Kazakhstan energy sector as a whole.

However, the survey sample is not sufficient to draw reliable inferences about all sub-sectors. In particular, the sample includes only one coal mining company (of approximately 6,500 employees), while the six renewables companies combined account for less than 350 employees in any given survey year. As such, the sample provides a good basis for drawing inferences about the energy sector overall, and – to some extent – the oil and gas and electric utility subsectors. However, the sample provides only a weak basis for drawing wider inferences about the role of women in the coal mining and renewables sub-sectors.

Table 1: Company survey

Sub-sector	Companies	Workforce (total)			
		2016	2017	2018	2019*
Oil and gas	20	35,599	33,623	33,679	32,620
Electric utility	9	15,329	15,214	15,247	15,411
Coal mining	1	6,424	6,305	6,486	6,575
Renewables	6	342	335	317	319
Total	36	57,694	55,477	55,729	55,956

*As of June 2019.
Source: Company survey.

The findings presented in this Report are based on analysis of company data at the aggregate level. This form of analysis is appropriate in order to provide a general picture of employment in the sector overall, as well as to protect individual company confidentiality.

1.3.2 Interviews with energy companies

Additional qualitative information on the opportunities and practical challenges for women working in the sector was gathered during the meeting of the Executive Committee of KAZENERGY's Women in Energy Club (WEC), hosted by Karachaganak Petroleum Operating B.V. (KPO) in June 2019 and discussions during the IV Forum of the WEC held on 25 September 2019 in Nur-Sultan as part of Kazakhstan Energy Week.

A small number of interviews were conducted with KAZENERGY member companies between June 2019 and October 2019 to gather examples of good practice on women's employment in the energy sector in Kazakhstan. These companies were identified on the basis of good practices articulated in their survey responses and in consultation with KAZENERGY.

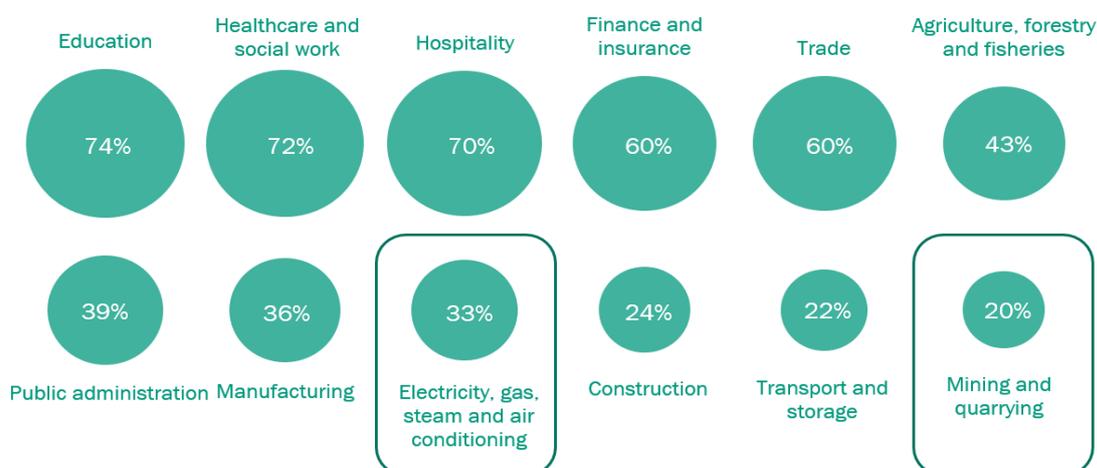
2. Why women’s employment and leadership matter for the energy sector in Kazakhstan

Sustainable and inclusive development relies on providing equal opportunities to women and men in education, employment, and leadership across all sectors of the economy. Ending gender discrimination and reducing barriers to women’s more equal participation in the economy is not only a question of fundamental human rights, but it is also key to ensuring more sustainable and stable growth: women and girls represent half the world’s population and thus half of its economic and social potential. The economic and human development costs of ongoing gaps in gender equality are significant, as are the potential gains in closing them, at both the macroeconomic and enterprise levels. Increasing women’s employment and leadership in high value sectors such as energy is therefore a priority issue for both governments and energy sector companies.

2.1 National context: women’s employment and education

Gender gaps in labour force participation are low in Kazakhstan; there is relatively high level of women’s labour force participation (61%), compared with the OECD average of 62% (OECD, 2017). Nevertheless, there are still important differences in labour market outcomes for women and men. Women are still under-represented in higher paid sectors such as energy, and over-represented in traditionally female – and typically lower-paid – sectors such as healthcare and social services, education, and hospitality (see Figure 1). This contributes to a persistent gender wage gap of 34% (Committee on Statistics, 2018g), which the Government of Kazakhstan attributes to men’s disproportionate employment in high-paying industrial jobs, including the energy sector (Government of Kazakhstan, 2016). Company registration data indicates that, across the economy, only 18% of companies with more than 250 employees have women in top management positions (Committee on Statistics, 2019c).

Figure 1: Women’s share of employment in key economic sectors in Kazakhstan



Note: Data refer to total employment (direct and indirect) in the given sectors / industries. Mining and quarrying includes, but extends beyond, oil and gas production and processing.
 Source: Committee on Statistics, 2018a.

These labour market outcomes are reinforced by educational choices that tend to orient women and girls towards more typically feminised sectors and less towards more traditionally male-dominated sectors like energy. Nevertheless, Kazakhstan enjoys overall high levels of gender parity in education: in higher education, the gross enrolment ratio of girls and boys in 2018 was 67.04 for girls and 54.68 for boys (Committee on Statistics, 2019b). Women account for 47% of students in vocational education, 60% of students in master's programmes and 71% in doctoral programmes (Committee on Statistics, 2019b). However, these educational outcomes are not translating into more equal participation in higher-paying sectors, and women are still more likely to choose fields of study that are more likely to lead to more traditional female occupations listed above, rather than science and technology.

2.2 National policy commitments to gender equality

Policies that facilitate women's economic integration across all sectors of the economy enhance prospects for both productivity and macroeconomic growth while the persistence of gender inequality implies conversely negative impacts on national economic performance (e.g., Cuberes et al, 2017; OECD, 2017; WEF, 2015). When women and men participate in labour markets in more equal measure, governments and companies across all sectors have access to the widest pool of available skills and talent in the population and all individuals – regardless of gender – have opportunities to make best use of their talents.⁴

In recognition of the fundamental human right to gender equality (including obligations assumed under international law) and the associated economic benefits, the Government of Kazakhstan has put in place a wide-reaching legislative and policy framework that supports equal opportunities for women and men. Key legislation and policy documents include:

- **The Constitution of the Republic of Kazakhstan (1995)** prohibits discrimination on various grounds, including gender. The Constitution also provides for freedom of labour, free choice of occupation, the right to working conditions that meet safety and hygiene requirements, and the right to remuneration without discrimination.
- **The Law on State Guarantees of Equal Rights and Opportunities for Men and Women (2009)** prohibits sex-based discrimination and stipulates equal employment opportunities for women and men (including in relation to recruitment, working conditions, promotion, and training).
- **The Labour Code (2015)** prohibits discrimination against women in employment and provides for equal pay for work of equal value. The Code allows for flexible working arrangements and off-site employment, as well as providing for a range of benefits for working parents such as maternity leave, adoption leave, and parental leave. The Labour Code is supplemented by a list of occupations for which the use of female labour is prohibited, which has been subject to ongoing reforms by the Government of Kazakhstan in order to increase women's access to these occupations (see 6.1).
- **Concept of Family and Gender Policy in the Republic of Kazakhstan to 2030** (implemented through a corresponding National Action Plan) sets out the government's key gender policy aims. The Concept includes specific objectives to:
 - increase women's participation in vocational training within high-value and technical sectors;

⁴ Chapter 4 provides a more detailed review of international experience concerning legal and policy initiatives to support women's increased labour market participation and to remove barriers to women's employment across all sectors of the economy, including energy.

- combat discrimination against women in non-traditional occupations; and
- reduce legal prohibitions against women’s employment in certain types of work and occupations.

The *Concept* sets an ambitious target for women’s participation in decision-making roles, aiming to increase the share of women at decision-making level in the executive, representative, and judicial branches of government as well as in the state, quasi-state, and corporate sectors to 22% by 2020, 25% by 2023, and 30% by 2030. The *Concept* also sets targets to reduce the gender wage gap at the national level to 30% by 2020, 27% by 2023, and 25% by 2030.

- **Action Plan to implement the Concept of Family and Gender Policy in the Republic of Kazakhstan to 2030 (2017-2019)** outlines the key initiatives to achieve the Concept’s objectives, including:
 - annual reporting on the appointment of women and men to leadership positions;
 - training on work-life family balance, based on positive international practice;
 - gender-sensitive, sector-focused (re-)training for unemployed people, including promotion of (re)training for women returning to work after maternity leave / career breaks; and
 - revision to the list of occupations prohibited for women.

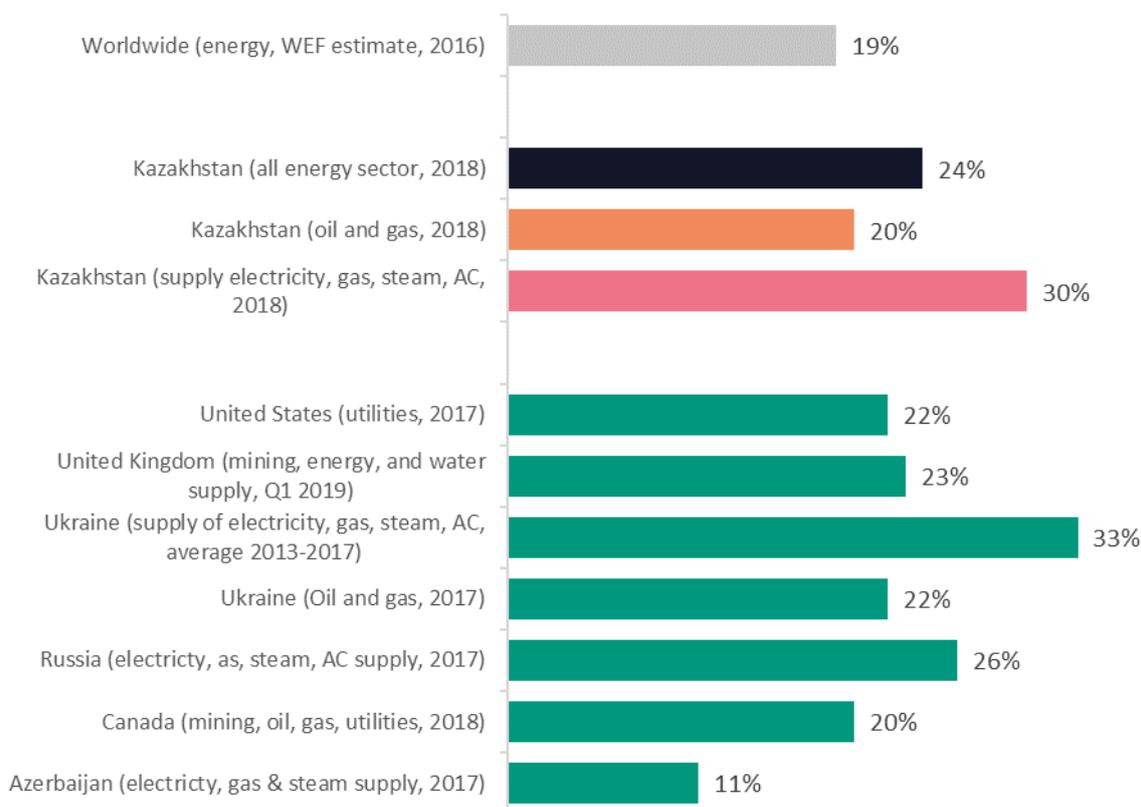
Kazakhstan has also ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and ILO Conventions No. 100 on Equal Remuneration and No. 111 on Discrimination – Employment and Occupation, all of which commit the state to ensure the protection of women’s rights and non-discrimination principles. In its latest report to CEDAW, the government reiterated its commitment to “equal pay for equal work for men and women [as] a fundamental tenet in the realisation of human rights in Kazakhstan” (Government of Kazakhstan, 2018).

In sum, there is a strong legal and policy framework that supports (and to some extent requires) energy companies and policymakers to ensure equal opportunity in employment, including a particular emphasis on increasing women’s participation in non-traditional occupations and in leadership. As the results of this study make clear (Chapter 3), the latter remain key challenges for the energy sector in Kazakhstan.

2.3 Women in the energy sector in Kazakhstan

The energy sector in Kazakhstan compares favourably to international benchmarks with respect to women’s share of total employment (Figure 2). According to data from the World Economic Forum (WEF), women account for just 19% of all employees in energy sector worldwide. Cross-country comparison of women’s employment rates in the energy sector is problematic due to differences in how national governments define economic sectors and disaggregate data. However, a review of other significant energy-producing economies, both in Central Asia and outside the region, show women’s share of employment ranging from 11% (Azerbaijan) to 33% (Ukraine), with most national sectors showing female workforce shares of between 20% and 25%. There is some indication that women are better represented among workers in the electricity and gas supply subsectors (for example, 33% in Ukraine, 30% in Kazakhstan) compared to oil and gas production and other extractive subsectors (for example, 22% in Ukraine, 20% in Kazakhstan), although Azerbaijan (11%) and the United States (22%) record low shares of female employment even in the electricity and gas supply subsector.

Figure 2: Women as a proportion of the energy sector workforce – global benchmarks



Note: In light of differences in national statistical classifications of industrial sectors, it is difficult to find directly comparable national sources on the energy sector. Therefore, Figure 2 provides only approximate benchmarks. In order to report data with the necessary level of (sub-)sector disaggregation, data for Kazakhstan refer to direct employment in medium and large enterprises only.

Source: Committee on Statistics, 2018g; HBS (Ukraine), 2019; ONS, 2019; Rosstat, 2018; State Statistical Committee of the Republic of Azerbaijan, 2017; Statistics Canada, 2018; US DOE, 2017; WEF, 2016.

In Kazakhstan, women represent an estimated 24% of all employees in the wider energy sector, comprising an estimated 30% of the workforce in the electricity, gas, steam, and AC supply subsector and approximately 20% of all direct employees in oil and gas production (Committee on Statistics, 2018g).⁵ Although these figures compare somewhat favourably with several other energy-producing economies, it is clear that women remain under-represented in the workforce across Kazakhstan’s energy sector. Moreover, findings from this study indicate that women are severely under-represented in key occupational categories across the wider energy sector – notably, in higher-paid technical and operational roles – as well as among supervisors and senior managers. There is, therefore, significant scope and opportunity to increase women’s participation in the energy sector in Kazakhstan, with a particular need to boost women’s representation in traditionally ‘male’ occupations (such as engineers and other technical workers) and in leadership roles in the sector.

⁵ These data exclude employees of small companies engaged in entrepreneurial activities and employees not in direct employment (e.g. self-employed).

2.4 The business case for increased gender diversity in the energy sector

The business case for an increased focus on gender diversity in the energy sector is compelling. A growing body of research shows that greater female inclusion in the workforce – and especially in leadership roles – offers a range of concrete benefits to companies, from an expanded talent pool for recruitment, to improved financial and corporate governance performance (e.g., Hunt et al, 2018).

Supporting women’s employment widens companies’ access to top talent and can help meet the industry’s demand for labour. According to government estimates, energy and oil and gas specialists are among the most in-demand workers in Kazakhstan today (Government of Kazakhstan, 2019). Hiring and retaining more women can therefore help ease labour shortages as the sector grows and as qualified employees retire (AHR, 2019). More women entering the industry would also result in a larger pool of highly qualified candidates from which companies can recruit (Rick et al, 2017). Companies that focus their recruitment efforts on men and fail to ensure equal opportunity in employment risk limiting their access to top talent by excluding a significant proportion of qualified candidates from consideration.

Hiring more women enables companies to recruit locally and strengthens their reputation as an employer of choice. Greater women’s employment in the energy sector can benefit companies’ efforts to increase the share of local staff in their workforce, including in senior management (AHR, 2019; Rick et al, 2017). In addition, given the growing importance of sustainable development and social responsibility to corporate affairs, supporting equal opportunity in employment can benefit the company’s reputation as a socially responsible company and strengthen its position as an employer of choice for women and men alike (ILO, 2019a; Rick et al, 2017). Introducing policies to support women’s employment, such as offering childcare options or flexible work arrangements, also has a positive impact on retention of talent and costs of recruitment by incentivizing women to stay with the company (AHR, 2019; Clerkin, 2017; Hunt et al, 2018; ILO, 2019a). Moreover, research shows that employers that offer childcare options improve staff productivity through reduced absenteeism, greater focus and enhanced motivation and commitment (e.g., IFC, 2017).

Gender-diverse teams make better decisions and are more innovative. Companies perform better when women and men are not segregated into certain roles and departments. Research indicates that homogenous groups are susceptible to bias and ‘group think’, whereas diverse groups are more resilient more inclined to consider problems from different angles (Brogan, 2019; Hoogendorn et al, 2013; Hunt et al, 2018; Rick et al, 2017; Rock and Grant, 2016). Greater gender equality can also stimulate higher levels of innovation. One recent study of more than 4,000 companies with research and development (R&D) teams found that the probability of innovative developments increased with higher levels of gender diversity (Díaz-García et al, 2014). An analysis carried out by BHP Billiton, an Anglo-Australian mining company with global operations, found that its top 10 most inclusive sites performed at least 15% better than the company average on safety, production, and cost efficiency (Hume, 2017).

Business benefits associated with an enhanced focus on gender equality:

- Better access to top talent by recruiting from a larger talent pool
- Stronger corporate governance and financial performance
- More robust decision-making in leadership teams
- Improved employee retention rates
- Enhanced innovation and team performance
- Stronger reputation with stakeholders and the public as a socially responsible company
- Better alignment with sustainability commitments

Companies perform better when they have more women in senior leadership roles. There is substantial evidence that the presence of women in senior management improves motivation, teamwork, and cooperation, and results in better performance and higher operating margins. One of the most comprehensive recent studies analysed the performance of over 20,000 companies in 91 countries and found that having a 30% share of women in senior leadership positions (CEO, board members, and other C-suite positions) led to a 15% increase in profitability (Noland et al, 2016). Similarly, a recent McKinsey study found that companies ranking in the top quartile for gender diversity on their executive teams are 21% more likely to have financial returns higher than the national industry medians (Hunt et al, 2018). This positive relationship between diversity in leadership and company performance has also been identified in the context of the extractives / energy sector (e.g., WIM-Canada, 2016).

The business benefits associated with women's presence among senior managers is not a question of women outperforming men. Rather, it is *diversity* in leadership that matters most; a single woman among the ranks of senior managers is not sufficient to achieve such benefits.

In the energy sector, more gender-diverse leadership can lead to improved shareholder returns. Analysis by Ernst and Young (EY) of the world's 200 largest utilities (by revenue) found that more women in leadership leads to improved financial performance. The top 20 global utilities in terms of diverse leadership achieved 1.07% better return on equity (ROE) for shareholders compared to the 20 lowest ranked companies. Given that utilities are typically asset heavy, a 1.07% difference may be worth several millions of dollars. Return on equity is especially important in the energy sector, where many utilities are subject to regulated maximum returns and thus efficient operations can result in better ROE (EY, 2016). These findings have been replicated elsewhere (e.g., Beck and Pánczél, 2018; Clerkin, 2017; Eastman et al, 2016; Hunt et al, 2018).

Companies with gender-diverse boards are better equipped to meet rising public and investor demand for good corporate governance. Research at Board level shows that Boards of Directors with at least three women demonstrate improved communications, greater adherence to codes of conduct, and better criteria for managing strategy and monitoring its implementation (Brown et al, 2002). Global investors are increasingly requiring energy companies to be more transparent in showing their efforts to build gender-diverse boards and disclosing gender-related information (AHR, 2019). For example, IFC's Performance Standard 2 and the EBRD's Performance Requirement 2 both include requirements for non-discrimination and equal opportunity employment for men and women.

3. Women in the energy sector in Kazakhstan: results of the company survey

Results from the company survey provide a detailed picture of women's participation in the Kazakh energy sector over the period 2016 to 2019. Results are based on workforce data from a sample of 36 energy companies operating in Kazakhstan, covering an average annual workforce of over 55,000 employees.

The findings presented in this Chapter focus primarily on data from 2018, the most recent year for which full annual data are available. Data from other survey years are included only where trends over time are particularly relevant. In most cases, however, workforce data do not vary substantially across survey years.

3.1 Women in the workforce



Women are under-represented across the sector

- Women account for approximately 25% of the total workforce
- Women's share of employment remained relatively stable in 2016-2019, with a slight decline
- Women's share of the workforce is comparable across subsectors (oil and gas, utilities, coal mining, renewables)

Overall, women represent approximately one-quarter of all employees in the survey sample. For the period 2016-2019, energy companies in the survey sample employed 13,901 women and 42,055 men, giving an average female share of total employment of 24.8% (Figure 3). The total number of female employees declined slightly over the survey period, from 15,196 in 2016 to 13,022 at the end of June 2019, a decrease of 14.3% and a net loss of 2,174 female employees.⁶ By comparison, the total number of male employees remained relatively stable over the same period. As a result, women's share of total employment across the sample declined from 26.3% in 2016 to 23.7% at the end of June 2019.

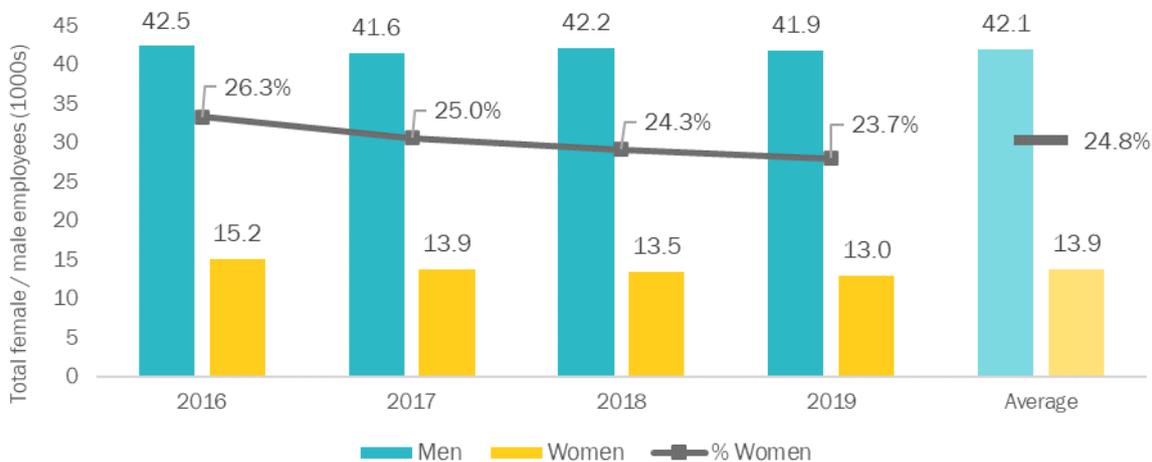
Although a four-year period is not sufficient to draw meaningful conclusions about long-term employment trends, these survey data suggest that – at best – women's share of employment is static and, as such, that women's long-standing under-representation in the sector's workforce will persist. At worst, these data indicate a possible negative trend in women's share of employment in the sector (see also 3.6).

Women's under-representation in the total workforce is consistent across sub-sectors. According to survey data from 2018 (the most recent year with full annual data), women account for 24% of all employees in the oil and gas subsector, 25% in the electric utility subsector, 26% in coal mining, and 17% in renewables (Figure 4).⁷ These data make clear that women's under-representation in the workforce is a pressing concern for companies across the Kazakh energy sector, including all major subsectors.

⁶ The negative change in female workforce share is statistically significant ($p < 0.05$) for the year 2018 and 2019 from a 2016 baseline (fixed-effect linear model).

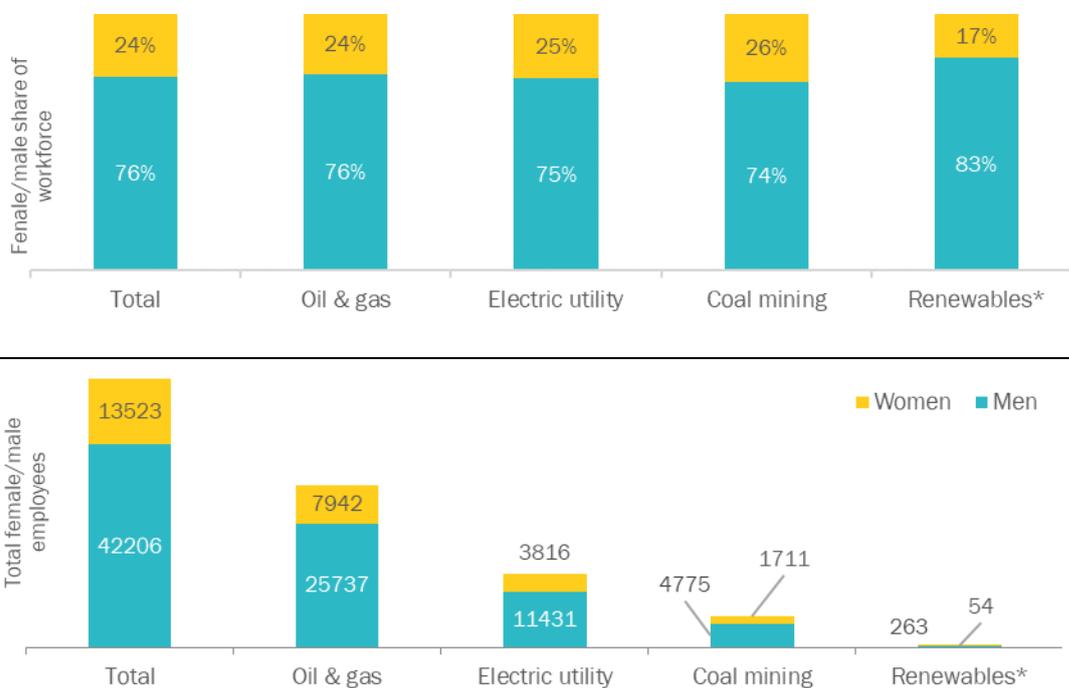
⁷ However, please see section 1.3 (Methodology) on the limitations of the survey sample with respect to coal mining and renewables sub-sectors.

Figure 3: Women and men in the workforce, 2016-2019



Source: Company survey.

Figure 4: Women and men in the workforce, by subsector (2018)



* Renewables accounted for just 317 workers in the sample and thus provide only a weak basis for drawing wider generalisations about the subsector.

Source: Company survey.

3.2 Women in management



Energy companies in Kazakhstan are missing out on female talent in their leadership teams:

- Women hold 19% of all management positions (compared with 24% of the total workforce)
- Women represent 17% of Board members and 12% of senior managers
- Male-only Boards / senior management teams in significant minority of companies
- There is a notable lack of female managers / supervisors in technical and operational fields

Although women represent 24% of the total workforce (in 2018), women hold just 19% of all management and leadership roles (Figure 5). According to survey data from 2018, a total of 6,577 men hold some form of management or leadership position in their companies (defined as members of the Board of Directors, senior managers, or mid-level 'functional' managers).⁸ Women hold 1,592 of the total management or leadership positions – a share of 19%. Thus, women are not only under-represented among managers compared to men, but they are also under-represented in management roles compared to the female share of the total workforce (24%). In fact, while 16% of all male employees are in some form of management role, less than 12% of all women in the sample are employed in a management or other leadership role.

Women's representation among senior leadership teams is even more concerning. **Women hold just 17% of Board positions and a significant minority of companies have no women on their Boards** (Figure 5 and Figure 6). Across those companies in the sample that operate with their own Boards of Directors (a total of 12 companies), women hold 11 out of 66 seats on Boards (17%). A total of 4 out of the 12 companies (33%) have male-only Boards in 2018.

Women's representation in senior management teams is similarly low – just 12% in 2018 (Figure 5 and Figure 7). Across the 35 companies in the sample with independent senior management teams, women hold 50 out of a total of 414 (12%) senior manager positions in 2018. A total of 14 of the 35 companies have no women among their senior managers.

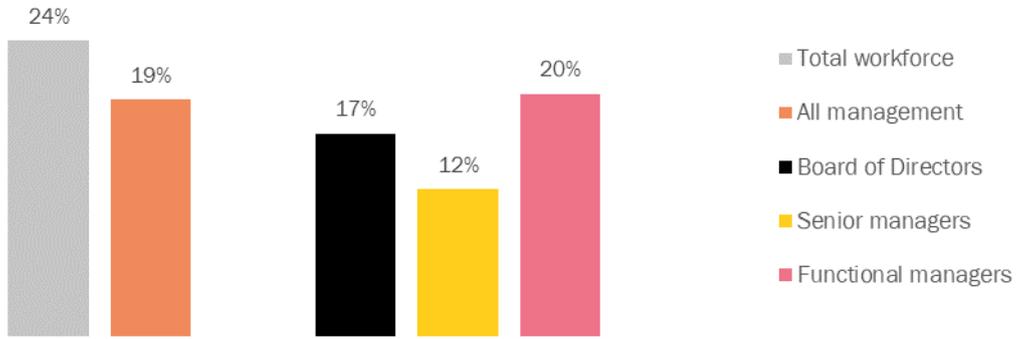
Women are particularly under-represented in management roles related to technical and operational business functions (Figure 8). At all levels of seniority, women are notably better represented in business and administration roles compared to technical and operational roles (see 3.3). This broader trend is particularly evident with respect to management positions.

⁸ For the purposes of the company survey, 'Board of Directors' includes all members of the Board of Directors and/or Supervisory Council, including independent directors.

'Senior management' may include the President, General Director, Chair of the Board, deputies of senior managers, and heads of subsidiaries and representative offices registered as legal entities. Senior management may also include individuals who are not members of the Board (for example, Vice-Presidents, Executive Directors, Managing Directors, etc.), as well as heads of subsidiaries and representative offices that are separate structural divisions of legal entities.

'Functional managers' refers to the next level of management in the organisational structure below senior management, who are not part of the Board of Directors (for example, heads of departments/sites).

Figure 5: Women in leadership roles, overview (2018)



Source: Company survey.

Figure 6: Women on Boards (2018)

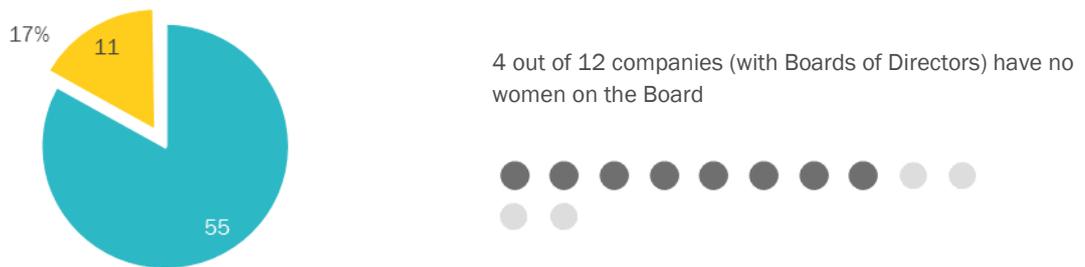
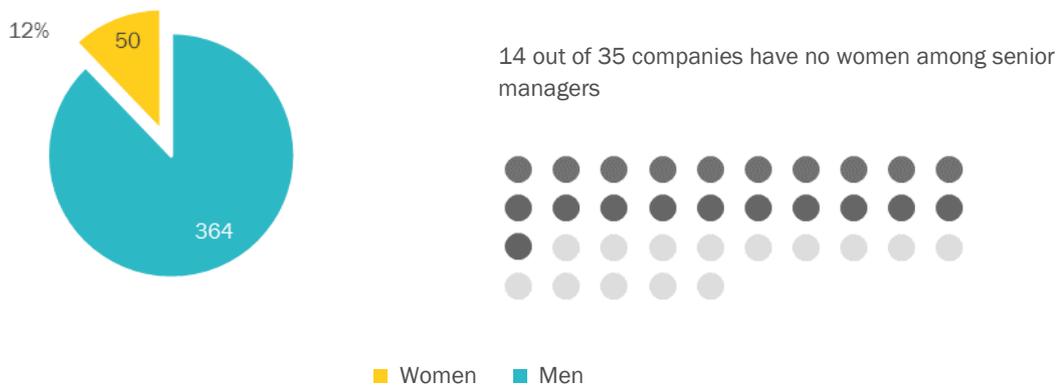
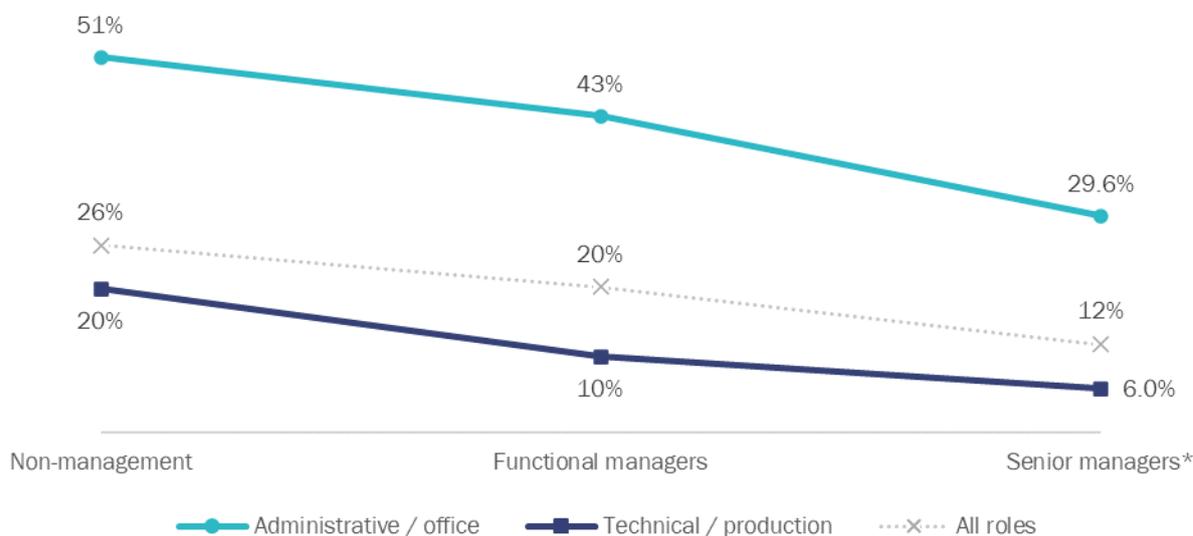


Figure 7: Women in senior management (2018)



Source: Company survey.

Figure 8: Women in leadership roles, by occupational category (2018)



* Most companies do not distinguish between business/administration and technical/operational categories at senior management level. As a result, estimates for female share of senior manager positions, by occupational category, are indicative estimates based on applying the same distribution of all male and all female functional managers (respectively) by occupational category to the total number of female/male senior managers.

Source: Company survey.

Although women account for 20% of all non-management employees in technical and operational roles, they represent just 10% of functional managers in technical and operational fields. In partial contrast, women represent 43% of functional managers in business and administration roles, although this figure still represents a notable decrease from women’s share of non-management positions in the same business and administration fields (51%).⁹

Once again, these data indicate barriers to women’s progression to both mid-level manager and supervisor roles (functional managers) and, in particular, to more senior management positions. The data indicate that women face challenges to progressing their careers even in business functions and professional spheres in which women are comparatively better represented in the overall workforce; that is, in business support and administration roles such as human resource, sales and marketing, law and compliance, and administrative specialists. Women face particular barriers to progression in business areas where women are traditionally under-represented; that is, in technical and operational roles such as oil and gas or chemical engineers, production and electrical technicians, mechanics, and equipment operators.

⁹ It was not possible to distinguish consistently between business and administration, and technical and operational, fields in relation to senior managers. In many companies, senior managers worked across business areas. As indicated in the notes to Figure 8, estimates for female share of senior manager positions, by occupational category, are indicative estimates based on applying the same distribution of all male and all female functional managers (respectively) by occupational category to the total number of female / male senior managers.

3.3 Occupational fields



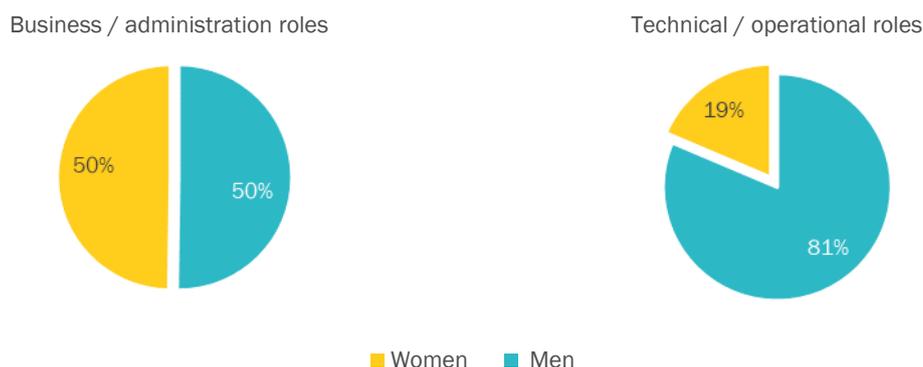
Women are concentrated in office-based roles, and under-represented in technical roles:

- Women account for 50% of business and administration roles
- However, women account for just 19% of all technical / operational workers
- When women do work in technical / operational roles, they are more likely to be higher-skilled specialists
- Women are particularly under-represented amongst non-specialist skilled workers, which represents one of the largest sources of job opportunities in the sector

Women are comparatively better represented in business and administration roles and severely under-represented in technical and operational roles (Figure 9). In 2018, women represent approximately 50% of all business and administration employees across the sample (5,746 employees out of a total of 11,545), but only 19% of all technical and operational workers (8,603 employees out of a total of 46,245).¹⁰ An alternative elaboration of the same data highlights how 42% of all female employees across the sample work in business and administration fields, compared to less than 14% of all male employees.

These data highlight the ‘horizontal’ (occupational) segregation by gender in the sector workforce, underlining the need for concerted efforts to increase women’s training and employment in technical subjects and roles. The low share of women’s employment in technical and operational roles also contributes to an explanation for women’s wider under-representation across the sector, given that the majority of jobs in the sector fall within technical and operational fields. For example, in this survey sample, approximately 80% of all employees work in technical and operational fields.

Figure 9: Occupational fields of women and men (2018)



Source: Company survey.

Such ‘horizontal’ (occupational) segregation of women and men is replicated across vertical segments of the workforce. As indicated previously (Figure 8), women account for 51% of all employees in business and

¹⁰ Employee numbers refer to all non-management and ‘functional’ managers in relevant occupational categories, but they exclude senior managers and directors. There may be small discrepancies in total workforce numbers compared to similar data cited elsewhere due to some overlap and/or duplication of personnel classified as non-management and functional managers in individual company survey responses.

administration roles at non-management level (4,787 out of a total of 9,319), compared to 20% of technical and operational workers at the same level of seniority (8,034 out of 40,782). Similarly, among mid-level functional managers, women represent 43% of all functional managers in business and administrative roles (962 out of a total of 2,226), but just 10% of comparable functional manager positions in technical and operational fields (569 out of a total of 5,463).

3.3.1 Women in technical and operational roles

The company survey collected additional data on technical and operational workers, disaggregated by professional/occupational subcategory – ‘specialist professionals’, ‘specialist technicians’, ‘other skilled workers’, and ‘unskilled workers’. These professional categories align with broad occupational categories established by the Government of Kazakhstan’s *National Classification of Occupations* (2017).¹¹

In technical roles, women are better represented among higher-skilled workers (Figure 10, Figure 11). Although women account for just 19% of technical and operational workers overall (for 2018), they represent as much as 31% of technical workers classified as ‘specialist professionals’ (3,209 out of 10,502 employees), a category that includes high-skilled specialists requiring university level education; for example, geophysical, chemical, or electrical engineers. Women also represent 24% of ‘specialist technicians’ (938 out of 3,957 employees), which includes professions requiring specialist qualifications at university or similar vocational level; for example, assistants to engineers, or specialist chemical, electrical, or oil and gas technicians (Figure 10).¹²

However, women are notably under-represented among non-specialist skilled workers (‘other skilled workers’), the largest sub-category of technical / operational employees (Figure 10). In partial contrast to higher-skilled technical roles, women represent just 12% of all technical and operational workers in the ‘other skilled workers’ sub-category (2,985 out of 24,946 employees), which accounts for more than 60% of all technical and operation employees. ‘Other skilled workers’ include non-specialist workers engaged in occupations and roles that typically require some form of vocational qualification, but not the same level of education or training as ‘specialists’; for example, industrial workers, electrical workers, operators of production equipment, and so forth.

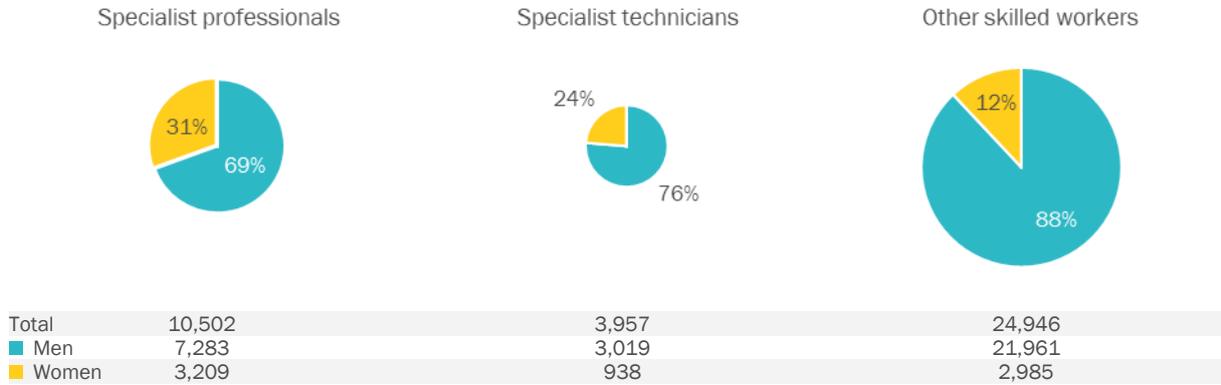
¹¹ ‘Specialist professionals’ refers to employees who typically engage in activities related to the implementation of complex technical and/or practical tasks that require in-depth theoretical knowledge, expertise, and technical skills in a specialised field (aligns with occupational categories ‘2XXX - Specialists / professionals’ of the official *Classification of Occupations*, 2017). Examples include production engineers, oil and gas engineers, chemical engineers, electrical engineers, etc.

‘Specialist technicians’ refers to employees who are specialists with vocational education, engaged in maintenance, operation, and repair of equipment and technical facilities (aligns with occupational categories ‘3XXX - Technicians and other auxiliary professionals’ of the official *Classification of Occupations*, 2017). Examples include assistants to engineers, chemical production technicians, oil and gas technicians, electrical technicians, etc.

‘Other skilled workers’ refers to employees who are not specialists but typically hold some form of qualification / certification that is required to carry out job tasks in standard conditions and with a certain degree of independence (aligns with occupational categories ‘7XXX - workers in industry, construction, transport, and related fields’, or ‘8XXX - operators of production equipment, assemblers, drivers’ of the official *Classification of Occupations*, 2017). Examples include workers responsible for the routine operation of technical installations, machinists (e.g., of a flushing unit or mobile compressor), electricians responsible for basic repair of equipment at oil depots, mechanics carrying out routine maintenance of technical installations, etc.

¹² Overall, women in the sector have completed higher levels of formal education and hold higher-level qualifications (see 3.5).

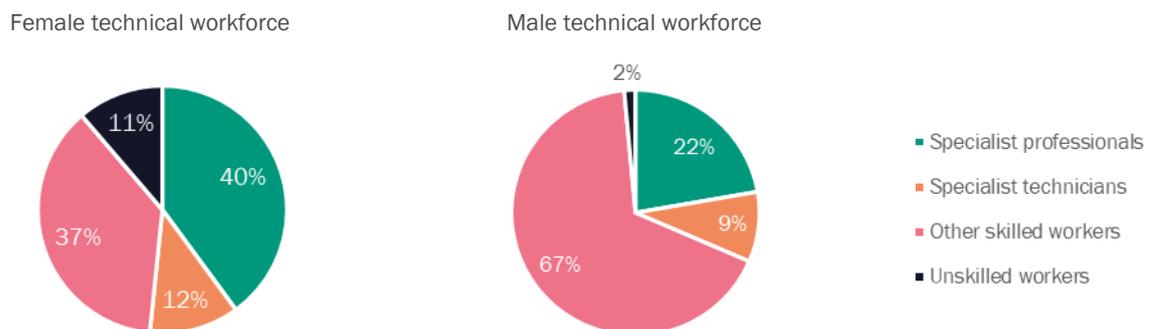
Figure 10: Women and men in technical / operational roles, by professional category (2018)



Note: The size of individual pie charts is proportional to total number of employees (shown in table below) in the given occupational category. The figure omits a small sub-group of ‘unskilled workers’ (1,377 employees in total).
 Source: Company survey.

Analysis of the female and male technical workforces similarly highlights women’s greater participation in higher-skilled technical roles (Figure 11). More than half of all women in technical and operational roles are employed as ‘specialist professionals’ (40%) or ‘specialist technicians’ (and further 12%). By comparison, less than a third of all male technical workers (31%) are employed in one of these two higher-skilled technical sub-categories (22% as ‘specialist professionals’ and 9% as ‘specialist technicians’), with the majority (67%) of male technical workers in a range of occupations within the broad ‘other skilled workers’ sub-category. Approximately 11% of the female technical workforce are classified as ‘unskilled workers’ (902 out of 1,377 employees), although the total number of workers that fall into this final sub-category is small overall (< 3% of all technical workers in the sample) and there remains some ambiguity in how individual survey respondents attributed employees to this category.

Figure 11: Composition of female and male technical / operational workforce (2018)



Source: Company survey.

3.4 Age



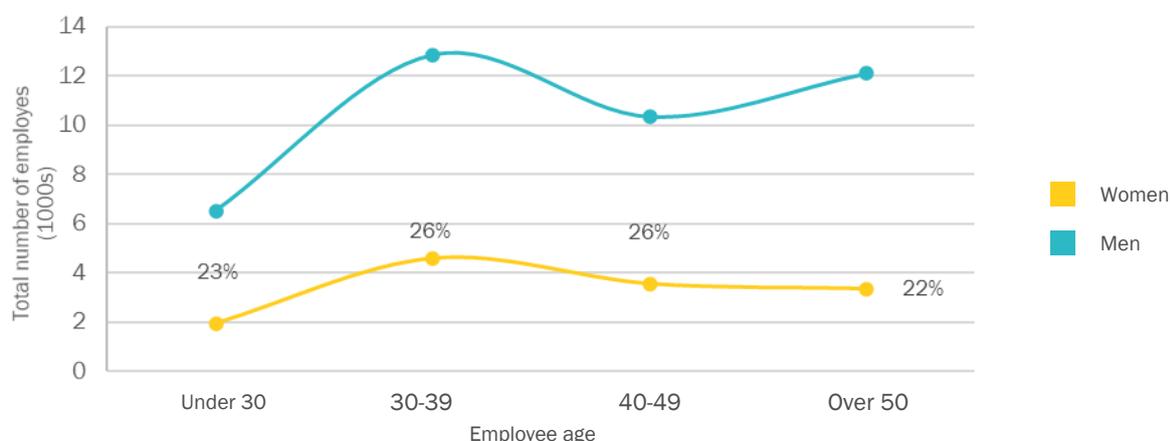
Women’s participation in the energy sector is lowest amongst older and younger workers:

- Women’s workforce participation declines from mid- to late-career age groups – female share of total workforce is lowest among over 50s

Figure 12 shows the total number of female and male employees across four age categories (under 29, 30-39, 40-49, and over 50 years) for 2018. Overall, women’s share of total employment does not vary substantially across age groups, although women’s lower share among younger and older workers may point to underlying challenges to women’s participation in and opportunity to progress in the workforce.

Women’s share of total employment is lowest among older workers (22% among over-50s) and younger workers (23% among under-30s), compared to the female share of total workforce among mid-career employees (26% for 30-49 year-olds). The current survey did not generate sufficient data (that is, individual-level and over-time panel data) to draw reliable casual inferences about the relationship between employee age and women’s employment share. However, the decline in women’s share of total employment in the over-50 category is noteworthy in part because senior managers are often drawn from this more experienced employee cohort.

Figure 12: Women and men in the workforce, by age (2018)



Note: Graph shows total numbers of employees (y-axis) by age category (x-axis) for 2018. Percentages refer to female share of total workforce for given age category.

Source: Company survey.

According to the survey data for 2018, the over-50s group represents both the lowest female share of total employment (22%) and the greatest difference in total numbers of employees between women and men (3,353 women compared to 12,093 men, a difference of 8,740). While the total number of male workers increases from 10,327 among 40-49 year-olds to 12,093 among over-50s, the total number of female workers decreases from 3,556 to 3,353 across the same two age groups. These figures suggest a higher drop-out rate for women between mid- and late-career levels.

The survey data themselves do not suggest any clear explanation for women’s comparatively lower share of total employment among younger workers (under 30 years). Longer education and training to prepare for higher-skilled roles (see 3.3.1) and career breaks related to maternity and childcare may be contributing factors.

3.5 Education and qualifications



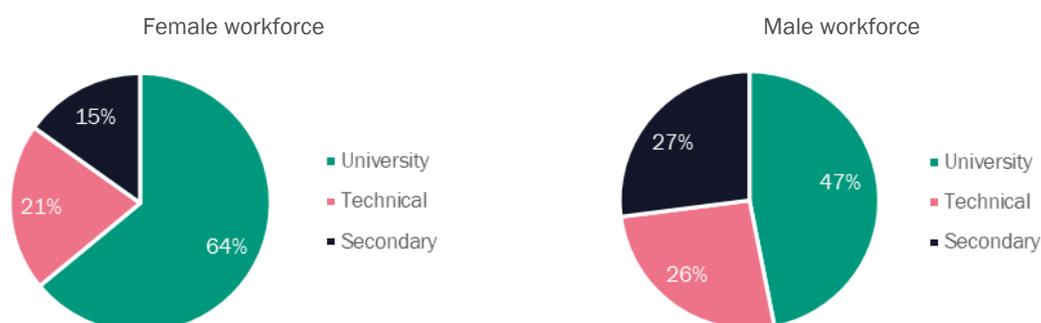
Women in the sector have a higher level of education than men:

- 64% of women working in the energy sector have advanced university qualifications, compared to 48% of men

Women employed in the sector typically have higher levels of education than men (Figure 13). In 2018, a total of 64% of all women employed across the surveyed companies hold an advanced university degree (at master's, doctoral, or equivalent level), compared to 47% of all male employees. A further 21% of the female workforce hold a technical qualification (typically an undergraduate university degree or comparable TVET qualification), a similar proportion to the male workforce (26%). However, employees with only secondary school education comprise a substantially larger proportion of the male workforce (27%) than the female workforce (15%).

Overall, these data are in line with findings concerning women and men in technical roles (3.3.1), which highlights women's greater proportional representation in higher-skilled technical occupational categories.

Figure 13: Level of formal education, by gender (2018)



Source: Company survey.

3.6 Recruitment and turnover



Women's representation in the sector is unlikely to increase based on current recruitment and turnover rates identified in the survey:

- Female share of new recruits is broadly aligned with total female workforce share
- Turnover rates are slightly higher among women compared to men across all survey years (but differences are not statistically significant)

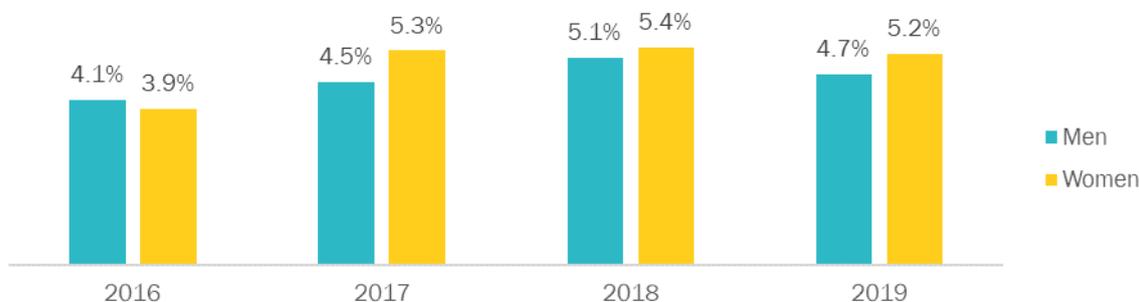
Turnover rates for women are slightly higher than the rates for men (Figure 14), although these differences are not statistically significant.¹³ The difference between the rates for women and men are

¹³ Based on separate OLS regression (annual turnover rate on employee sex) for each year, weighted by company male and female workforce size.

small for 2016 (3.9% and 4.1%) and 2018 (5.4% and 5.1%), although it is somewhat more pronounced in 2017 (5.3% for women compared to 4.5% for men) and for 2019 based on Q1 and Q2 data (5.2% compared to 4.7%). Overall, however, survey data do not indicate significantly different turnover rates for men and women across the full sample.

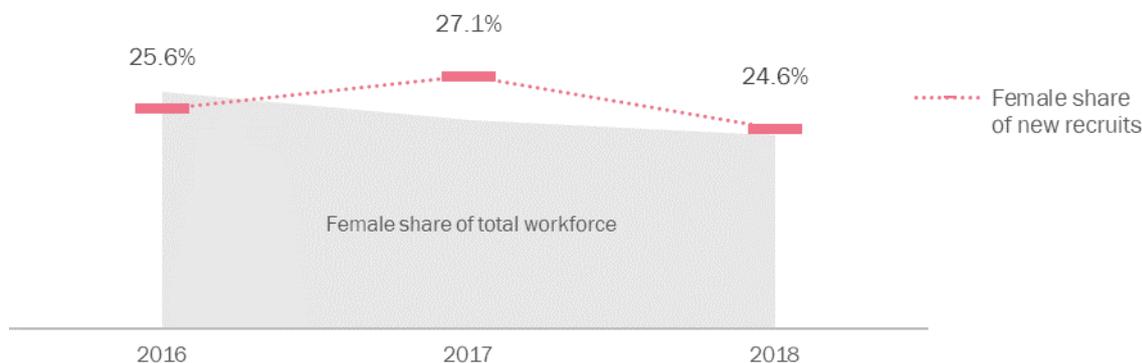
Women’s share of new recruits is broadly in line with women’s share of the total workforce (Figure 15). Between 2016 and 2018, women’s share of all new recruits ranges from 25.6% in 2016, to 27.1% in 2017, to 24.6% in 2018. Despite some variation, these proportions are generally in line with women’s overall share of the workforce in the comparable years, and the differences are not statistically significant ($p < 0.05$) for any for the survey years. Overall, these data suggest limited change in women’s total workforce representation over time.

Figure 14: Annual turnover rates, 2016-2019



Note: Rates for 2019 are based on data for Q1 and/or Q2 prorated to a one-year period.
Source: Company survey.

Figure 15: Female share of new recruits, 2016-2018



Source: Company survey.

3.7 Promotions



Women's share of promotions is in line with their overall representation in the workforce:

- Women accounted for 24% of all promotions in 2016-2018 (compared to 25.2% share of the total workforce); in general, female share of promotions do not vary significantly from female share of the total workforce
- Female share of promotions to mid-level and senior management roles are typically in line with, or fall below, female share of the respective 'eligible' workforce

Women's share of total promotions is in line with, or falls slightly below, women's share of the total workforce (Figure 16). Between 2016 and 2018, women's share of all new promotions ranges from 26.9% in 2016, to 21.8% in 2017, to 23.0% in 2018. These proportions are consistent with, or fall slightly below, women's overall share of the total workforce in the comparable years, and none of the differences reach conventional levels of statistical significance ($p < 0.05$). Once again, these data suggest little change in women's share of more senior management positions (see also Figure 22 and Figure 23).

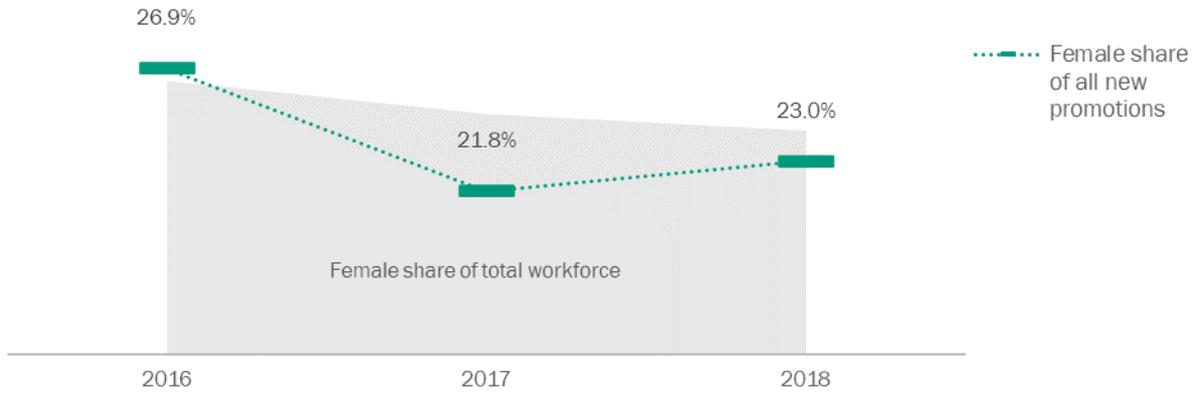
More specifically, women's share of all promotions to management roles is inferior to female share of the relevant 'eligible' workforce.¹⁴ For example, women's share of total promotions to mid-level functional manager roles is notably lower than women's share of the total workforce 'eligible' for promotion in two out of the three full survey years (2016 and 2018). In both cases, these differences are statistically significant ($p < 0.05$). Across the 2016-2018 period, women accounted for 21.7% of all promotions to functional manager roles, despite representing 26.2% of the total workforce 'eligible' for promotion (Figure 17); this overall difference approximates conventional levels of statistical significance ($p = 0.052$).

Similarly, women's share of total promotions senior manager roles is consistently lower than women's share of the total workforce 'eligible' for promotion across all survey years, although in this case the differences do not reach statistical significance. On average, women accounted for 16.7% of all promotions to senior manager roles, although they represented as much as 19.9% of all employees 'eligible' for such promotions (Ошибка! Источник ссылки не найден.).

These survey data do not allow for a detailed analysis of promotion rates that take into account individual employee characteristics, nevertheless, these general trends indicate little positive change in terms of women's representation among functional and especially senior management. If anything, the data indicate a decline in women's share of leadership roles.

¹⁴ The survey data do not allow for a nuanced estimate of 'eligible' workforce for the purposes of promotion to different levels of management (for example, consideration of length of service or performance indicators at the individual level). In this analysis, 'eligible' workforce for promotion to functional manager roles is defined simply as 'non-management employees', while 'eligible' workforce for promotion to senior manager roles is defined as 'functional managers'.

Figure 16: Female share of all new promotions, 2016-2018



Source: Company survey.

Figure 17: Female share of all new promotions to functional management, 2016-2018



Figure 18: Female share of all new promotions to senior management, 2016-2018



Source: Company survey.

3.8 Pay

Many companies did not provide data on salary or provided only partial data. As a result, findings concerning the average total pay of women and men in the sector should be treated with caution.



There is a persistent gender pay gap across the energy sector:

- Women’s total average pay is approximately 81% of men’s total average pay across the full workforce (including management)
- The gender pay gap is notably larger among non-management employees, and especially in technical fields

Women’s total average pay is approximately 81% of men’s total average pay across the full workforce, according to data from the company survey for 2018 (Figure 19). Although pay differentials are likely to derive in part from women’s underrepresentation in more senior – and better paid – leadership roles (see 3.2), even among non-management employees, women’s pay is on average significantly lower than men’s. At the same time, companies ensure equal wages for women and men in similar positions. **Women earn on average 77% of men’s total pay in non-management business and administration roles, and just 59% of men’s total pay in technical / operational roles.**

Figure 19: Women’s average total as a proportion to men’s average total pay, by occupational field (2018)

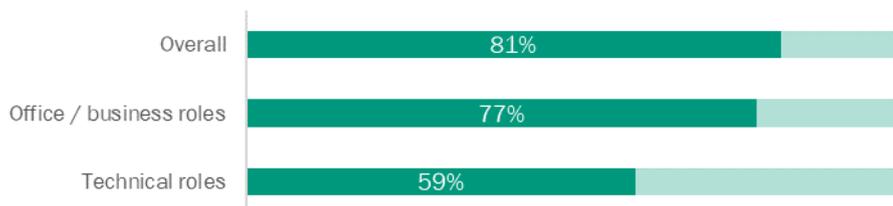
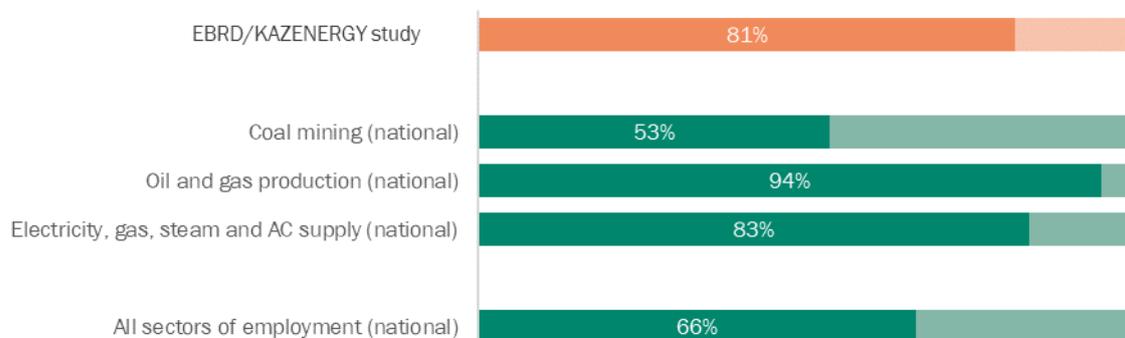


Figure 20: Women’s average total as a proportion to men’s average total pay: national data (2018)



Source: Company survey; Committee on Statistics, 2018g.

Of course, vertical segregation may still play a role in generating these overall gender pay differentials; the non-management category includes a range of seniority levels below ‘functional’ management, and career

breaks linked to maternity and childcare are likely to impede women’s career progression relatively to men (see 6.4). With respect to technical and operational workers, extant regulations that continue to bar women from certain highly paid jobs and activities that are considered especially arduous or hazardous may also contribute to the gender pay gap (see 6.1).

These figures are broadly aligned with national statistical data on pay in the energy sector (Figure 20). According the company survey, which covers primarily the oil and gas and electricity subsectors, women earn on average 81% of men’s total pay across all occupation categories and levels of seniority. National statistical data for these two subsectors indicate that women earn on average 94% of men’s total pay in the oil and gas sector, and 83% of men’s total pay in the electricity, gas, and steam sector (Committee on Statistics, 2018g). Although both the survey data and national statistical data suggest a gender pay gap in the energy sector, the latter also indicate that gender-based pay differentials are notably less pronounced among workers in the energy sector compared to the national average (66%).

3.9 Company policies and programmes

Company initiatives are mostly focused on public reporting, maternity, and general policies on non-discrimination and equal opportunity (Figure 21). For example, a majority of companies (62%) in the sample include gender-disaggregated data in their annual reports; 43% report maternity / paternity entitlements that go beyond national legal requirements; and 41% have in place a formal policy on equal opportunity (as a stand-alone policy or incorporated into human resources or other corporate policies).

Figure 21: Company initiatives related to gender equality / equal opportunity (2019)



Source: Company survey.

However, only one-third of companies report proactive measures to promote equal opportunity and gender equality beyond legal requirements. Just 32% of companies in the sample reported that they had adopted active measures to promote equal opportunity beyond legal requirements. Such active measures could include a wide range of policies and programmes, such as outreach to schools and higher education institutions with an explicit equal opportunity dimension; internships reserved specifically for women; leadership and mentoring programmes for women; a women’s network or club; targets for women in

management or technical roles; or a requirement for women to be represented in shortlists for management positions.¹⁵

Few companies have in place adequate mechanisms to address sexual harassment and gender-based violence. Only 16% of companies reported having in place a formal policy on sexual harassment or gender-based violence or a related complaints mechanism (separate from general grievance mechanisms).

Similarly, just 11% of companies report policies to support care responsibilities and flexible working that go beyond legal requirements. Just 4 out of the 36 companies surveyed reported that they had implemented policies to support employees' care responsibilities and/or support flexible working arrangements that went beyond legal requirements. Examples of initiatives that companies might have in place include free or subsidised workplace childcare centres, formal partnerships with local care providers, or opportunities for flexible or remote working.

3.10 Key findings and implications

Women are under-represented across the sector (3.1).

Women are severely under-represented in the total workforce across energy subsectors and there is little indication of significant change in recent years. There is, therefore, a clear need for policymakers and companies to take proactive steps to promote women's greater participation in the Kazakh energy sector.

Energy companies, including those in the sample, are missing out on female talent in their management and leadership teams (3.2).

The absence of women in senior leadership roles – including a significant minority of companies operating with male-only leadership teams – should be a significant concern to companies given the increasing body of evidence that links diversity in leadership to improved company performance across a range of indicators, including financial performance.

The progressive decline in women's share of employment from non-management roles, through mid-level management positions, to senior management indicate persistent barriers to women accessing more senior leadership roles and advancing their careers in the sector. The impact is particularly pronounced in fields where women are traditionally under-represented (technical/operational roles), but it extends to business areas with a higher proportion of female employment (business/administration roles).

Women are concentrated in office-based roles, and under-represented in technical roles (3.3).

Data suggest gender parity (on average) in business and administration roles. However, women are severely under-represented in technical and operational fields where most energy-sector jobs are found. There is clearly scope – and a strong economic and business case – for policymakers and companies to do more to promote women's employment in these traditionally 'male'

¹⁵ These and other policies and programmes were provided as examples for companies completed the survey. However, most companies did not provide specific details on which type of initiative they had in place.

occupational fields – including to change popular perceptions about jobs in the sector and encourage more girls/women to study relevant disciplines.

Women who enter technical and operational roles in the energy sector do so primarily at higher skill levels, especially as ‘specialist professionals’ (engineers and similar). However, most technical jobs in the sector are in non-specialist roles (skilled workers), where women’s share of employment is notably lower. Efforts to attract more women to the sector should focus not only on higher-skilled technical roles, but could also examine how to create opportunities for (and increase interest among) women to take up non-specialist roles, which continue to comprise a significant proportion of employment opportunities in the sector.

Women’s participation in the energy sector is lowest amongst older and younger workers (3.4)

Various factors may contribute to women’s declining workforce share among older workers (for example, an earlier statutory retirement age for women). However, the drop-off in female workforce participation among older, more experienced workers may also contribute to women’s particular under-representation in more senior leadership roles by reducing the female talent pool for senior managers. Thus, efforts to increase women’s representation in leadership roles may need to include efforts to increase retention of more experienced women at the mid- and late-career stage.

Women in the sector have a higher level of education than men (3.5).

A significant proportion of women with high levels of education are employed across the sector. While these data suggest that the Kazakh energy sector is an attractive employment option for high-skilled women, it is equally clear that a lack of qualifications cannot explain women’s under-representation in senior leadership roles (see 3.2).

Women’s representation in the sector is unlikely to increase based on current recruitment and turnover rates (3.6).

Female share of new recruits is broadly consistent with women’s current share of the total workforce, indicating little prospect for a fundamental change in women’s representation across the sector. In fact, the slightly higher female turnover rate compared to men suggests a potential decrease in women’s workforce share if current trends persist. There is, therefore, a clear need for proactive measures on the part of companies to increase the proportion of female new recruits and ensure better retention of female staff.

Similarly, survey data provide little indication of significant change over time in relation to women’s share of management and senior leadership positions (3.7).

Female share of new promotions is broadly in line with women’s current share of the total workforce, while female share of promotions to management and senior leadership positions is below women’s share of the ‘eligible’ employee categories. These trends indicate little prospect of women increasing their representation among both mid-level functional managers and, especially, among senior managers.

Women’s average pay is less than men’s average pay across the workforce (3.8).

Pay differentials are likely to result from women's concentration in lower-paid business and administration roles (compared to higher-paid technical roles) and/or women's comparative lack of representation at more senior levels of management. Addressing the gender pay gap, therefore, requires concerted efforts to facilitate women's progression to more senior roles, including in technical fields, as well as ongoing efforts to ensure pay equality and transparency.

Company initiatives are mostly focused on public reporting, maternity, and general policies on non-discrimination and equal opportunity. Few companies have adopted active measures to promote gender equality, and even fewer have in place specific policies to address sexual harassment (3.9).

The proportion of women in the total workforce and in management positions appears static across the survey years (in part, the result of female recruitment and promotion rates that simply maintain the status quo). In this context, it seems unlikely that more 'passive' approaches to equal opportunity – such as company policies focused on reporting and compliance – will be sufficient to alter fundamental gender inequalities in the sector. More companies will need to adopt more proactive, promotional initiatives in order to increase women's share of employment in the sector, and in senior management roles in particular.

Similarly, given the reports of frequent workplace sexual harassment in Kazakhstan (Government of Kazakhstan, 2016; Kavasa and Rupenheite, 2017; see also 6.6) – which is particularly likely to affect women in male-dominated industries such as the energy sector – the lack of appropriate policies and mechanisms to address such workplace discrimination may act as a further deterrent to attracting and retaining talented women in the sector.

4. Promoting women's employment in the energy sector: International experience

Governments across the world are increasingly recognising the importance of gender equality for achieving sustainable economic growth, making full use of national human capital, and meeting their obligations under international law. As a result, many governments have increasingly looked to develop legislative and policy frameworks to promote women's greater participation in the economy.

Although national experiences vary, many national governments are looking to go beyond general non-discrimination laws and adopt more proactive policies and regulations concerning women's employment. Many governments have focused on boosting women's representation in leadership roles in the public and private sectors, recognising the range of potential economic and social benefits associated with more diverse leadership.

Several countries have also focused initiatives on the energy sector and other high-value technical industries, responding to both the exceptional under-representation of women in these sectors and the latter's importance to the national economy as a source of well-paid, stable employment and a driver of macroeconomic growth. Kazakhstan's *Concept of Family and Gender Policy to 2030* is a notable example of such national policy commitments to gender equality, including a specific focus on promoting women's greater involvement in technical professions and fields such as energy (see 2.2 and 2.4).

Importantly for the energy sector, many governments – including the government of Kazakhstan – have also revised or repealed laws that prohibit women's employment in specific occupations or professions. Many of these prohibited jobs have traditionally been relevant for employment in the energy sector (see 4.1.6).

Leading international companies are also taking steps to promote women's greater participation in their workforces. These activities are driven both by a need to comply with a growing range of national legal requirements concerning gender equality and diversity, as well as recognition of the concrete business benefits associated with more gender-balanced workforces and leadership teams (see 2.4).

Amongst other initiatives, energy sector companies have made efforts to embed equal opportunity and gender equality as key organisational principles, develop policies and practices to support women's progression and promotion (for example, through revised recruitment and hiring procedures), and invested in outreach to educational institutions to attract more girls and women to the sector. Many companies have also strengthened their policies and practices concerning sexual harassment and gender-based violence, seeking to create a safe and inclusive working environment that appeals to both women and men.

International legal instruments

International legal instruments imply a range of obligations on national governments to guarantee women and men equal employment rights, opportunities, and benefits.

The United Nations Convention on Elimination of All Discrimination against Women (CEDAW) and the International Covenant on Economic, Social, and Cultural Rights (ICESCR) both affirm women's fundamental right to work and require governments to ensure that women can exercise that right on an equal basis to men. The International Labour Organisation's Conventions Nos. 100 and 111 further establish governments' respective obligations to ensure equal pay for women and men and prohibit all forms of discrimination in employment in law and in practice.

Kazakhstan has ratified CEDAW, ICESCR, ILO C100 and C111.

4.1 Governments: Creating a legal and policy framework to promote equal opportunity in employment

National governments have adopted a range of legislative and policy initiatives to promote women's increased labour market participation and address barriers to women's equal opportunity and participation in employment. Although most of these labour market policies and initiatives apply across all sectors of the economy, they are likely to lead to particularly noteworthy impacts in sectors and industries where women are traditionally under-represented, including the energy sector.¹⁶

4.1.1 Strengthening women's participation in leadership

Increasing women's representation in public and private sector leadership roles, for example on corporate boards, has been an important recent focus for many governments.¹⁷

For example, many countries have legislated mandatory quotas for women on boards with sanctions in the form of fines and / or other penalties for non-compliance (e.g., Australia, Germany, France, India, Italy, Norway). Others require companies to disclose information on the gender composition of their management teams and, in some case, to explain any disproportionality (e.g., UK, Finland, South Africa, Sweden). Some countries have set public targets for women's representation on boards – for example, via corporate governance codes – but they have stopped short of legislating for specific sanctions for non-compliance (e.g., Pakistan, Poland).¹⁸

Quotas for women on boards

Mandatory gender quotas may be more effective than voluntary targets in increasing female board representation.

Recent research indicates that companies domiciled in jurisdictions with compulsory quotas have attained greater overall gender diversity at the board level, with almost three-quarters having at least 30% female directors as of October 2019. In jurisdictions with no gender-related requirements or voluntary quotas, less than one quarter of companies had reached a 30% threshold of female directors.

In France, women's representation on boards increased from 9% to 38% between 2009 and 2016. A mandatory target of 40% by 2017 was set by legislation introduced in 2011 (Lee et al, 2015).

In Norway, which requires that women make up 40% of the board, 39% of the board seats were held by women.

In Germany, which has implemented a quota of 30% by 2017, women held 26.7% of board seats in 2016.

Sources: Emelianova and Milhomen, 2019; Lee et al, 2015; MacDougall et al, 2018

¹⁶ In most countries, national energy policies do not include specific gender objectives or targets (Rojas et al, 2015). Conversely, national gender equality policies rarely include specific objectives or targets concerning employment in the energy sector in particular (Pearl-Martinez, 2014).

¹⁷ Such quotas are controversial, with concerns that such legislation may lead to 'tokenism', the appointment of under-qualified female board members, and fail to promote substantive change in corporate practices, attitudes, and culture (e.g., *Economist*, 2018; He and Kaplan, 2017; Merchant, 2011).

¹⁸ The European Commission proposed a bloc-wide directive to set quotas for women on boards in 2012 (EC 2012). However, due to opposition from some Member States, the development of the proposals has stalled, although the European Parliament has recently indicated renewed interest in advancing the initiative (EP, 2019).

Kazakhstan has set wider targets to increase progressively women's representation at decision-making level in government and corporate sectors to 22% by 2020 and to 30% by 2030 (see 2.2).

4.1.2 Equal pay

Many countries worldwide have implemented laws requiring equal pay for women and men engaged in comparable work, in line with the ILO's Convention No. 100.¹⁹

Increasingly, national governments are looking to support this legislation with additional reporting requirements for companies. For example, many European governments have introduced (or will soon introduce) legislation that requires companies to report publicly on the gender pay gap in their organisation, with a view to driving more proactive corporate efforts to reduce pay inequality. Similar legislation has been adopted or is under discussion in other OECD countries (for example, Australia and Canada).

4.1.3 Women in technical fields

Many governments have also implemented labour market policies specifically designed to reduce occupational segregation and encourage women into new professions and fields, especially technical and engineering professions, many of which are relevant to the energy sector.

A wide range of countries have revised national educational policies and curricula to ensure materials are free from gender stereotypes concerning fields of study and professions, as well as develop partnerships between government departments, sector associations, and educational institutions to promote women's increased participation in STEM subjects and professions. For example, Austria has introduced a female-specific programme that offers certified qualifications through apprenticeships, TVET schools, and universities in non-traditional professions, while the French education ministry has partnered with private sector actors to create a 'Science Ambassador' programme to encourage more young women to study STEM subjects. The programme explicitly aims to combat stereotypes about women in scientific fields, including energy, and to provide positive female role models to young people (cited in Kring, 2017).

Similarly, the UK government has established the UK Resource Centre (UKRC) with the aim of increasing the participation and position of women in science, engineering, and technology. Amongst other activities, the UKRC offers direct expert advice to individuals and organisations on how to access, set up, or improve mentoring and networking schemes to help women access support, develop skills, and make professional contacts. It also administers awards schemes to encourage employers in relevant sectors, including energy, to improve their work practices and address barriers faced by women in pursuing careers in the field (UKRC, nd).

¹⁹ Some countries that have traditionally adopted a more conservative position with respect to gender pay equality have recently taken steps to legislate for equal pay. For example, China's State Council continues to implement an 'Outline on Women Development in China for Year 2011-2020', a policy initiative that urges the adoption of measures to ensure equal pay for equal work. The United Arab Emirates (UAE) passed the Gender Equal Pay law in 2018, which aims to guarantee equal pay for men and women (e.g., Donaldson, 2018).

4.1.4 Changing social norms and stereotypes

Governments have also recognised the importance of promoting a more equitable distribution of family and household responsibilities and changing long-standing stereotypes about the respective roles of women and men in the family and workplace.

Significantly, many countries have taken steps to extend paternity leave entitlements. According to World Bank (2019) analysis, a total of 33 countries have increased paid paternity leave entitlements since 2009, including a significant proportion of countries in the Eastern European / Central Asia region (e.g., Albania, Chile, Bulgaria, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, and Turkey). Some governments have accompanied legislative changes with public information campaigns to encourage men to make use of paternity leave entitlements and promote a more equitable distribution of family responsibilities between men and women more generally (e.g., Barker et al, 2016).

As indicated above, some governments have also focused on developing gender-neutral national education policies. For example, Mexico has introduced requirements that national educational curricula for primary and secondary school are free of gender stereotypes and that teachers are trained on gender-sensitivity (Kring, 2017).

4.1.5 Addressing gender-based violence

A growing number of countries have also taken steps to strengthen the legislative regime around sexual harassment and other forms of gender-based violence in the workplace. According to the World Bank (2019), 35 countries have introduced new sexual harassment laws to protect women at work in the last decade, including a number of countries in Eastern / Central Europe and Central Asia (Montenegro, Georgia, Moldova, Mongolia, North Macedonia, Turkey).

Other governments have introduced various public policy initiatives to address GBV in society more widely that may include, and should support, a more specific focus on work-related GBV. Public policy responses range from national telephone hotlines, to school-based prevention programmes, to psychological and legal support for victims, and employment placement support for victims (e.g., Barker et al, 2016).

4.1.6 Removing legal barriers to women's employment

In many countries, including Kazakhstan, women's range of employment possibilities continue to be limited by restrictions on what occupations women can hold, the hours they can work, or the tasks they may perform. Such restrictions also reduce employers' pool of qualified job seekers. The World Bank (2019) identifies 104 economies that still have laws prohibiting women's employment in specific occupations, including and particularly in mining (65 countries) and energy (29 economies).

The exclusion of women from certain occupations not only deviates from the principle of equal treatment and non-discrimination established by international legal instruments, but it is also associated with lower female labour force participation rates and higher labour market segregation (ILO, 2019b). Indeed, although such prohibitions are often motivated by a concern for women's health and safety, in practice such regulations often bar women from higher paid industries (such as energy) and thus exacerbate wider gender inequalities in the labour market and the gender pay gap (ADC Memorial, 2018; ILO, 2019b; USAID, 2018).

Instead of restricting women's occupational choices, many national governments have shifted the focus of regulatory activity to improving health and safety regulations and labour conditions for all workers – women and men alike (USAID, 2018). Such an approach is in line with ILO jurisprudence and prevalent international thinking on labour legislation. For example, the ILO's *Guidance on Labour Legislation* (2001) expressly states that health protection against specific workplace hazards should be available to all workers irrespective of their sex. It emphasizes that special protections for women should be adopted only in the case of work that is proven to be harmful to reproduction, and that such measures should be reviewed periodically in the light of advances in scientific knowledge.

“Women should have the right to pursue freely any job or profession and the Committee points out that the exclusions or preferences in respect of a particular job . . . should be determined objectively without reliance on stereotypes and negative prejudices about men's and women's roles” (ILO, 2012).

Labour market impact of restrictions on women's employment

The World Bank (2018) estimates that the removal of legal barriers to women's employment in certain sectors can increase labour productivity by as much as 25% in some economies. A review of global labour market indicators over the last 10 years indicates that broader reform of national laws concerning women's employment – which includes the elimination of prohibited jobs lists as well as other reforms such as equal pay laws and anti-sexual harassment regulations – is also associated with a significant increase in female labour force participation (World Bank, 2019). Closing gender gaps in female labour force participation may bring gains of between 15% and 34% in GDP, according to IMF estimates (Gonzales et al, 2015).

UN Committee views on prohibited jobs in Kazakhstan

The ILO and CEDAW have identified Kazakhstan's list of prohibited jobs for women as a key impediment to achieving equality at work in Kazakhstan.

The CEACR has urged the government review the list of prohibited jobs to ensure that protective measures on women's employment are limited to maternity protection in the strict sense and do not arise from stereotypes regarding women's professional abilities and role in society and the family (ILO CEACR, 2017; see also 6.1).

The experience of some countries that have removed bans on women's employment in the mining and energy sector indicates positive outcomes for female labour force participation. For example:

- **Chile** repealed a prohibition on women working in the mining sector in the 1990s. Since then, female share of the total mining workforce has risen to 8% nationally and as much as 25% in companies that have adopted proactive measures to employ women (USAID, 2018).
- In **South Africa**, the removal of similar bans on women's employment in mining has helped the female share of the national mining workforce grow to 13% in 2016, including 15% of senior managers (USAID, 2018).

Concerning occupational safety and health (OSH), international experience does not suggest any negative impacts associated with removing legislative restrictions on women's employment. Indeed, there are few studies or data that provide any evidence of harm to women's health

associated with many of the professions that are typically banned via such legislation, or that such professions have a different impact on women's and men's health. The UN's CEDAW expressly noted the lack of adequate scientific evidence to support a ban on women's employment in specific occupations in its response to an individual complaint against the Russian Federation (UN CEDAW, 2016).

More generally, research undertaken in the Canadian extractives sector (for which there are no regulatory restrictions on women's employment) suggest that more women in the workforce improves health and safety outcomes, as well as reducing wear and tear on equipment and other related costs (Women in Mining Canada, 2016).

Data on occupational accidents and diseases in Kazakhstan's energy sector similarly provide little indication of specific negative OSH outcomes for women working in the sector. National statistical data from 2018 highlight a lower OSH injury rate for women in both the mining and quarrying and electricity, gas, steam and AC supply subsectors.²⁰

Although the lower injury rate for women is likely to derive from women's under-representation in more hazardous technical and operational roles (see 3.3), including some occupations currently prohibited for women, international experience suggests that concerted efforts to improve OSH outcomes for women and men may represent the most appropriate response to legitimate OSH concerns in the sector. Rather than prohibiting women's employment in hazardous professions (except where there is clear scientific evidence of potential harm to female reproductive function), such an approach would both align more closely with Kazakhstan's non-discrimination commitments under international legal instruments and promote more of the positive labour market outcomes associated with gender equality and workforce diversity more generally (see Chapter 2).

Prohibited jobs for women

In recent years, an increasing number of national governments have reduced or eliminated altogether legislative bans on women's employment in certain occupations and roles.

- Some countries have eliminated all job restrictions on women – including, **Bulgaria, Croatia, Kiribati, the Philippines, Poland, Taiwan, and China** (World Bank, 2019).²¹
- Other countries have removed general restrictions on women's employment in work considered hazardous, arduous, or morally inappropriate – including, **Bosnia and Herzegovina, Colombia, Guinea, Hungary, Samoa and Vietnam** (World Bank 2019).

²⁰ In the electricity, gas, steam and AC supply subsector, female employees accounted for just 10% (8 out of 77) of OSH injury and disease victims in 2018, despite comprising approximately 30% of the total workforce (Committee on Statistics, 2018h). Among victims, 19 men and four women sustained light injuries, eight men and two women sustained injuries of moderate severity, and 36 men and two women sustained serious injuries. No women died as a result of work-related injuries or experienced occupational disease, however. Women's accident rate in the subsector is 0.2 victims per 1,000 employees compared to an overall rate of 0.7 per 1,000 employees.

In the mining and quarrying subsector (which includes oil and gas production activities) women represented 20% of all employees in 2018 but only 3.5% (14 out of 404) of OSH injuries and disease victims (Committee on Statistics, 2018h). Of these, 109 men and five women sustained light injuries, while 131 men and eight women sustained serious injuries. There were no women among the 10 employees who sustained injuries of moderate severity or among the 28 employees who died as a result of work-related injuries in the subsector in 2018. The overall accident rate in mining and quarrying is 1.8 victims per 1,000 employees, while the comparable rate for women is just 0.3 victims per 1,000 employees. National statistical data on victims of occupational diseases are not disaggregated by gender.

The share of women employed in harmful and otherwise adverse working conditions (e.g., including exposure to high noise levels, vibrations, dust and gas, adverse temperatures, low lighting, etc.) in oil and gas production (19%) and electricity, gas, steam and AC supply (29%) is broadly in line with women's overall rate of employment in each subsector; that is, 20% and 30% respectively (Committee on Statistics, 2018i; 2018g).

²¹ These include, but extend beyond, jobs in the energy sector. For example, before the reform, Bulgaria had banned women from 35 specific jobs, which includes several directly relevant to the energy sector such as work in mines (Tsvetanova, 2018).

- Other countries have removed restrictions on women working in specific industries, including industries relevant to the wider energy sector. Many of these reforms were motivated by the improved use of technology in these industries.
 - **Colombia** and the **Czech Republic** removed restrictions on women working in mining;
 - The **Democratic Republic of Congo** removed restrictions on women working in construction, manufacturing, and mining;
 - **Mongolia** removed restrictions on women working in construction, energy, manufacturing, mining, transportation and water;²² and
 - **Slovenia** removed restrictions on women working in construction.

Many former Soviet Union countries, including Kazakhstan, have inherited lengthy lists of job restrictions for women from Soviet-era regulations. However, many of these countries are following wider international trends to reduce or eliminate restrictions on women's employment.

- **Armenia** revoked its list of 330 banned professions for pregnant women and women of child-bearing age as early as 1994.
- **Ukraine** abolished Order 256 of the Ministry of Health, which banned women from entering 458 professions, in 2017. The prohibitive provisions of the List were deemed not to reflect the needs and conditions of the modern labour market, where new technologies and equipment have improved working conditions (Herasymenko, 2019). However, Ukrainian law continues to ban women from any work that takes place underground, including in the mining and energy sector.²³
- **Uzbekistan** lifted the prohibitions on women's employment in 44 types of work, including mining and oil and gas production, in May 2019. According to a Decree of the President of Uzbekistan on strengthening the guarantees of women's labour rights, the list of prohibited professions is to be replaced with a recommendatory list of industries and occupations that may adversely affect women's health (*Газета.uz*, 2019).
- In August 2019, **Russia's** Labour Ministry announced plans to reduce the list of 456 prohibited jobs down to 98 under reforms set to be enacted in 2021. Russia currently prohibits women from holding jobs in dozens of industries that involve physically strenuous tasks or harmful working conditions. From 2021, however, women will be allowed to work as truck drivers and train operators, as well as serve in the navy. Professions requiring heavy lifting and manual labour, such as welding, underground mining and construction, aircraft repair or firefighting, will remain inaccessible to women (*The Moscow Times*, 2019).
- **Belarus** has reduced the number of professions in which female work is prohibited from 252 to 181 in 2014, responding to changing working conditions as a result of the improvement of

Countries have taken steps to remove regulatory restrictions on women working at night.

Example in the last 10 years include Bahrain, Brunei Darussalam, Guinea, Jamaica, Libya, Moldova, Samoa, and Tajikistan (World Bank, 20 in the 19).

Research suggests that the removal of restrictions on women working at night may contribute to improved labour market outcomes for women, including a higher proportion of women in management (Islam, Muzi and Amin, 2018).

²² The list of prohibited jobs for women was abolished altogether in 2008 (World Bank, 2019).

²³ The ban derives from Ukraine's failure to denounce ILO Convention No. 45. The ILO's Committee of Experts (CEACR) has requested the government denounce the Convention and amend legislation to remove the restrictions on women's employment (ILO CEACR, 2019).

technological processes and introduction of new technology, and is now considering cutting the list down further (*Finance.tut.by*, 2019).

4.2 Companies: Supporting women and promoting equal opportunity

Leading international energy companies have recognised gender equality and diversity in their workforce as a potential source of competitive advantage, as well as a matter of compliance with national laws on non-discrimination, inclusion, and diversity. To support women's increased employment in the sector and ensure equal opportunities for women and men, leading companies have embedded equal opportunity as an organisational priority, implemented targeted programmes to support women's internal progression and promotion, introduced programmes to attract more women to the sector, and stepped up efforts to ensure an inclusive and respectful working environment for all workers.

4.2.1 Embedding equal opportunity as an organisational priority

A key component in any strategy on gender equality is a strong organisational commitment to gender equality, with clear and visible support from senior leadership. This creates crucial support for and awareness of business strategy at all levels (Hunt et al, 2018; Osner, 2001).

Key actions for signalling senior leadership commitment and embedding equal opportunity:

- ✓ **Senior leaders make clear public statements in support of gender equality**, which are supported by actions. For example, senior management can emphasise equal opportunity as a business priority in their public statements.
- ✓ **Targets on women's employment and leadership are set**, publicly communicated and regularly reported on (e.g. on websites, in annual reports). Although not all companies choose to set targets, they can help to create momentum on women's employment and progression in the energy sector, where companies tend to be particularly data driven.
- ✓ **Responsibilities and accountability for progress on gender equality are clearly allocated**. This helps to ensure that commitment to equal opportunity goes beyond lip service. It may also include integrating targets, goals and measurements into the appraisal process for individual managers; for example, linking progress on gender equality or participation in women's mentoring schemes to financial incentives.
- ✓ **Internal and external communications reflect support for and progress on equal opportunity**. This includes ensuring that the business case for gender equality is clearly set out and signalled as a business priority and not just a 'social issue'. It also includes ensuring that there is a balanced representation of women and men in press releases, websites, newsletters and other publications, including images of women in technical and operational roles.
- ✓ **There are data collection frameworks in place to monitor progress**. Collecting data and monitoring change over time can help to establish whether HR policies and the enforcement of gender

Companies that set gender targets make the most tangible progress toward gender balance and equity, compared to those without targets (Hunt et al, 2015).

diversity policies and programmes are affecting women and men differently. Companies that have strong (gender-disaggregated) data collection frameworks are better positioned to understand how they can make progress on gender equality and to provide concrete evidence of change.

Best practice examples: equal opportunity as an organisational priority



Mining, oil and gas (global)

In 2016, BHP set an ambitious goal to achieve gender balance in its global workforce by 2025. Overall female representation has subsequently increased from 17.6% in 2016 to 24.5% in 2019. BHP's data shows its most inclusive and diverse teams had a 67% lower total recordable injury frequency rate, a 21% greater sense of pride in working for BHP, were up to 11% more productive, and were 68% more likely to speak up and share ideas (BHP, 2019).



Oil and gas (global and Kazakhstan)

Shell set a public target for women to be in 20% of senior management and executive positions. As a result, in the last six years Shell increased the proportion of women on its Board of Directors from 8% to 46%. Women in senior leadership positions also increased from 16% in 2012 to 24% in 2018 (Shell, 2018).



Electric utility (Spain and global)

Iberdrola has declared the development of professional relationships based on equal opportunity, non-discrimination, and respect for diversity as a strategic objective. The achievement of gender equality within the company is considered one of the essential values of the organisation.

In addition, Iberdrola's *Equal Opportunity and Reconciliation Policy* commits the company to eradicate the use of discriminatory language in all internal and external corporate communications (Iberdrola, nd).



Electricity and gas utility (Australia)

Energy Australia announced in March 2018 that women would be paid the same amount as men for doing the same job and that it was spending USD 0.85 million immediately to boost the pay of 350 women. The company, led by a female CEO, also announced that it would conduct a review in five years to ensure continued pay equality (Morgan, 2018).



Samruk Energy (Kazakhstan)

In March 2019, the Chairman of the Management Board of Samruk Energy, Bakitzhan Zhulamanov, signed the CEO Statement of Support for the Women's Empowerment Principles (WEPs), signalling senior management's strong commitment to equal opportunity as an organisational priority.

The WEPs are the result of a collaboration between the UN Global Compact and UN Women and provide an internationally recognised framework for companies to express their support for gender equality and take action (see Chapter 5).

4.2.2 Supporting women's progression and promotion

The company survey shows that women are particularly under-represented in leadership roles in the energy sector in Kazakhstan, and many energy companies struggle to increase the numbers of senior women in their ranks. As such, this is clearly an area where companies need to adopt a proactive approach to incorporating women into the management pipeline.

Key actions for supporting women's progression and promotion:

- ✓ **There are transparent, clear and merit-based processes for promotion.** There should be clarity, rigour, and transparency in standard talent processes to ensure that all new appointments are focused on objective assessments of merit rather than subjective preferences of individual managers. Rigorous and transparent processes can help challenge stereotypes about women's lack of suitability for management roles.
- ✓ **Women are included on all candidate shortlists (where candidates meet job requirements).** Many international energy companies aim to ensure that at least one woman is included on candidate shortlists for vacant positions, particularly leadership roles, conditional on meeting core job requirements. Companies may also make efforts to ensure women employees are involved in the initial selection process and represented on interview panels.
- ✓ **There is a proactive approach to getting women into the management pipeline/succession planning.** Companies that are serious about increasing women's representation in leadership roles track the presence of women in their talent pool in order to identify gaps in the talent pipeline (particularly with respect to progression towards senior management) and whether there are high-potential women who may benefit from additional support.
- ✓ **Leadership programmes for women (and men), including mentoring and sponsorship schemes.** Mentoring and sponsorship can help to increase the visibility of high-potential women with senior leaders, while providing women with invaluable opportunities for learning and support. Women-focused programmes can provide specialised guidance, but they should be carefully positioned so that they are not dismissed as a "women's thing". In some cases, it may make sense to open programmes up to women and men alike.
- ✓ **Women's professional networks provide support, advice, encouragement, and inspiration.** Personal and professional networks can play an extremely important role in career advancement, but women often have less access to these networks than men. As a result, many companies have introduced formal women's networks to make these opportunities more available to women.

- ✓ **Female and male role models are celebrated.** Many companies highlight successful senior women, including those in non-traditional roles, and raise their profile as role models for more junior women (and men). This is a particularly important strategy in the energy sector, where there are often few women in senior ranks. It is also valuable to profile senior leaders (female and male) who act as role models through their values and behaviours, particularly those who prioritise and reward results over long hours.

Best practice examples: supporting women's progression and promotion



Power generation, distribution, retail (UK)

To mark International Women's Day, several women working across the company were invited to share their advice on building a career in the energy sector, which was featured on EDF Energy's website (EDF Energy, nd).



Electricity and gas distribution (UK)

National Grid's UK women's network has published three volumes of the *Remarkable Role Model* book, celebrating gender diversity in engineering and energy industries to demonstrate the company's broader commitment to equality (National Grid, nd).



Power generation and distribution, oil and gas (Germany and global)

All staff (men and women) are considered part of the 'talent pool' and have personal career development plans. All staff also have access to a group-wide mentoring programme where mentors share personal tips and career advice with their mentees outside the constraints of a formal employer-employee relationship.

There is also a specific mentoring programme for women executives that includes a focus on junior women employees that are identified as having the potential for future leadership positions (E.ON, nd-a; 2018).



Oil and gas (Kazakhstan)

In May 2019, KPO launched a Women's Network to support the professional growth of its female employees, attracting significant interest from women across the company and high levels of participation. The Network is expected to serve as a platform to share experiences and advice, support women's professional development, and acquire new knowledge through interaction and cooperation (see Chapter 5).

4.2.3 Strategies to attract more women into the sector

One of the key challenges for energy companies is how to attract more women into the sector, particularly with respect to technical roles, where women are particularly under-represented. For companies to attract women into the sector, it is important to adopt initiatives to refresh and strengthen the recruitment and hiring process, while a focus on partnerships with training and educational institutions can complement recruitment strategies and can be linked to wider community outreach.

Key actions for attracting more women into the sector:

- ✓ **The wording of job advertisements is inclusive to appeal to women as well as men.** Simple changes make a difference. For example, some companies include text such as “we welcome applications from women and men”; or “we are an equal opportunity employer”. It is particularly important for technical or operational positions where women are less likely to apply, in part because they assume their applications are not welcome or that work is too physically demanding.
- ✓ **Job descriptions are revised, particularly in light of new technology and equipment.** Examining job descriptions can help companies re-evaluate whether some positions previously open to ‘men only’ (e.g., because of heavy lifting) can be opened to women in the light of technological development or other operational changes (e.g., introduction of heavy lifting machinery).
- ✓ **Educational scholarships, internship, and apprenticeship programmes aimed at women.** Some energy companies allocate scholarship opportunities specifically for women, particularly with respect to technical and operational roles. Some companies may offer stand-alone internship programmes with a quota for places reserved for qualified women.
- ✓ **Partnerships with TVET and higher education institutions incorporate a focus on equal opportunity.** Many large energy companies already have strong relationships with TVET and higher education institutions that create a platform for raising awareness education providers about specific initiatives and policies on equal opportunity, as well as up-to-date information about career opportunities for women in the sector.
- ✓ **Outreach to girls, young women, and their families.** Some companies choose to include outreach to students at all levels of education system as part of their equal opportunity strategy. This may include sending female role models to talk to primary or secondary school students, participating in careers fairs, or engaging with on-campus student networks at universities and colleges. This helps to cultivate a positive image of the energy sector and technical and operational roles amongst girls and young women (and their families, who are often involved in education and career decisions).

Best practice examples: Attracting more women into the sector



Oil and gas (Hungary and global)

MOL reviews job postings to avoid unconscious bias and ensures they use inclusive language. They include at least one female and one male member in every interview panel and ensure at least one female candidate is interviewed for 50% of positions (cited in Beck and Pánczél, 2018). MOL also runs an annual ‘Female Engineers Programme’ that provides training and scholarships for promising female engineering students (MOL Group, 2019).



Electricity and gas utility (UK and global)

Centrica UK actively seeks to recruitment women to its award-winning apprenticeship programme, and the company conducts regular open mornings for potential female engineers. It also publishes success stories of female employees in non-traditional roles in an explicit effort to 'fight back' against gender-based professional stereotypes (British Gas, nd-a, nd-b). Centrica has also established a Centrica Women's Network to identify needs and to support to women through training and skills development (Centrica, 2018).



Power generation, transmission, distribution, retail (Scotland)

SSE initiated a partnership with educational charity Teach First where SSE provided a grant of £100,000. SSE also partners with leading UK organisations that share its goal of encouraging greater female participation in STEM, including Opportunity Now, Everywoman, POWERful Women, WISE, WES and Equate Scotland. Additionally, SSE hosted a connection between its Senior Women's Development Network and Personal Boardroom (a networking organisation for senior women) to improve support to women in their professional development (SSE, 2017).



Power generation and distribution, oil and gas (Germany and global)

Dispelling the preconception that the energy sector is 'for boys' is central to the work of the company's 'ambassadors', who deliver science workshops in schools and offer career advice and information on how to get into the energy sector.

Similarly, the company provides free educational resources for teachers and parents on STEM subjects. Materials expressly aim to counteract prevalent stereotypes by showing women in non-traditional roles and reinforcing the company's message that the sector is open to women and men (E.ON, nd-a, nd-b, 2018).



Power generation, retail (Australia)

The careers section of the website contains a dedicated page for gender diversity, which includes positive profiles and images of women. All job advertisements include a statement that the company is an equal opportunity employer and the website provides information on flexible work arrangements to encourage more women to apply.

The company also ensures that, wherever possible, at least one woman took part in all interview panels. Now the shortlists for interviews aim to contain at least one woman (Origin Energy, nd).



Electricity utility (Kazakhstan)

Almaty Power Plants (AIES) has implemented a Schools Ambassador programme to raise awareness among students and their families about career opportunities in the sector. Ambassadors include both female and male employees to ensure children are exposed to positive female role models for careers in the sector, including in technical and operational roles (see Chapter 5).

4.2.4 Inclusive and safe working environment

Leading organisations in the energy sector aim to create a working environment that is inclusive, safe, and supports the needs of female and male workers alike.

Key actions for creating a more inclusive working environment include the following:

- ✓ **HR policies are gender-sensitive and include an express equal opportunity policy.** HR policies should set out a clear commitment to gender equality in all stages of the employment relationship, including recruitment, training, promotion, pay, parental leave, access to benefits, and termination of the employment relationship.
- ✓ **Flexible working arrangements are available to women and men** (to the extent possible). The type of flexible working arrangements that is feasible depends on the nature of the workplace: in professional environments, it may mean the ability to work from home; in a shift work environment, it may mean greater flexibility in swapping shifts (e.g., to respond to childcare emergencies). Where flexible working arrangements are available, they should be available to women and men alike.
- ✓ **Expectations on appropriate behaviour in the workplace are clearly communicated and enforced.** Many organisations now have zero tolerance of discrimination and gender-based violence, including sexual harassment, in the workplace. They also provide ongoing education about behavioural expectations and information about what behaviour is acceptable and unacceptable. These policies should be accompanied by effective internal grievance mechanisms that enable the safe reporting of discrimination and gender-based violence, including sexual harassment.
- ✓ **Men are engaged.** Equal opportunity and gender equality initiatives are often perceived as benefiting only women. However, it is important to ensure that equal opportunity initiatives and the creation of more inclusive workplaces are communicated as having benefits for all workers – women and men alike.
- ✓ **There is ongoing dialogue and consultation to understand the needs of women and men.** Mechanisms for gender-sensitive dialogue and consultation may include dedicated women's committees, or ensuring gender balance on worker-management committees. Staff satisfaction surveys can be an invaluable source of information, where data is gender-disaggregated. Importantly, where companies solicit the opinions of employees, they should take action to address the feedback and communicate to employees what action they have taken.

Best practice examples: Inclusive and safe working environments



Oil and gas (global)

BP's Code of Conduct expressly prohibits sexual harassment, which is defined broadly to include any form of unwanted sexual attention or offensive behaviour. Harassment does not have to take place at work or involve only BP employees in order to violate the Code. The document also provides practical guidance on how to report harassment and bullying by a manager or a colleague, as well as raising concerns on behalf of others (BP, nd).



Hydroelectricity generation (Brazil)

Itaipu started its equal opportunity programme by conducting a wide-ranging consultation exercise with all employees and sub-contractors. In response to this consultation, Itaipu introduced various new facilities including separate toilets for women and men.

The company also introduced flexible working hours to help parents balance work with childcare responsibilities (e.g., time to drop off or collect children from school). Open dialogue on work-life balance has helped Itaipu achieve higher levels of employee satisfaction for women and men (Itaipu, nd).



Mining, oil and gas, and energy sector services (global)

SAP offers a back-to-work program to young parents, which allows them to work either on premises or remotely, and they can take part in full-time assignments, projects, or part-time work (cited in Beck and Pánczél, 2018).



Oil and gas (Kazakhstan)

TCO has made diversity and inclusion an organisational priority, instituting a zero tolerance policy on discrimination, sexual harassment and violence in the workplace.

TCO believes that inclusion and non-discrimination contribute not only to improving the atmosphere in teams, but also increase employee productivity (see Chapter 5).

4.3 Sector associations

Many international energy companies are involved in collaborative initiatives through their industry associations and other relevant networks to promote women's participation in the sector, especially in leadership roles. By working together, companies can create joint initiatives, gain greater publicity for their efforts, and create a forum to exchange knowledge on challenges and good practices.

In Kazakhstan, the Women in Energy Club (WEC) of KAZENERGY is a notable example of such initiatives. The WEC aims to provide a forum for discussion among government and industry actors to address issues related to gender policy and practice in the sector, as well as establish a supportive professional network for women working in the sector.

In the UK, the professional initiative POWERful Women (PFW) aims to advance gender diversity in the energy sector through combining public campaigning and advocacy work with practical support for women building a career in the sector (see boxed content, below). Similar networks have been established elsewhere with the aim of facilitating contact among and supporting women working in the energy sector; for example, Women in Renewable Energy Scotland (WiRES) and the Spanish women's network Navarre are both organised to promote the visibility of women working in the renewable energy sector (cited in Clancy, 2019).

A wide range of industry and professional associations have also developed programmes to attract more women to STEM careers, including in energy. For example, the UK's Institute of Civil Engineering has expressly sought to challenge the image of engineering fields as a male-dominated profession through outreach to schools (Close the Gap, 2013), while the coalition of other STEM professional organisations has launched a STEM Returners programme to support women returning to work after career breaks through mentoring, career coaching, and work placements (*STEMReturners.com*, Nd).

POWERful Women (UK)

Encourage energy companies to improve gender diversity by highlighting company best practice

- accepting pledges from companies concerning gender diversity targets or objectives
- publishing annual statistics of women on boards and the gender pay gap for the sector in the UK

Support women in their careers, especially in relation to accessing leadership roles

- an active mentoring scheme
- coordination of women's groups in the sector
- provide information on professional coaching, sponsorship, head-hunters, career stories, and advice for employers

Practical support to individuals and organisations

- provide information on the current situation pertaining to gender diversity in the energy sector
- conduct and disseminate research on the business case for gender equality

(PFW, nd)

5. Best practice in Kazakhstan: Five company case studies

The results of the EBRD/KAZENERGY company survey indicate that there is substantial scope to increase women's participation in Kazakhstan's energy sector, particularly in senior management and in technical and operational roles. Recognising gender diversity as a potential source of competitive advantage, several energy sector companies operating in Kazakhstan are already taking active measures to increase women's engagement in the sector, ensure equal opportunity, and support female employees in their professional development.

This chapter provides five case studies of best practice on gender equality and equal opportunity from energy sector companies operating in Kazakhstan. The case studies are:

1. Karachaganak Petroleum Operating B.V.
2. Samruk Energy JSC
3. Tengizchevroil LLP
4. China National Petroleum Company
5. Kazakhstan Electricity Grid Operating Company JSC

Karachaganak Petroleum Operating B.V.

oil and gas

Company overview

Karachaganak Petroleum Operating B.V. (KPO) was established in 1997 as a partnership company, its partners currently including ENI (29.5%), Royal Dutch Shell (29.5%), Chevron (18%), Lukoil (13.5%) and KazMunayGas (10%).

KPO operates the Karachaganak field, one of the world's largest oil and gas condensate fields located in northwest Kazakhstan.



“We truly believe gender diversity results in a better workforce – better in terms of people feeling happier to come to work but also better in terms of output. This will be particularly important as KPO transitions from years of ‘run and maintain’ to delivering major projects.”

Edwin Blom, KPO General Director

Women in the workforce at KPO

Women currently represent 29% of KPO's 3,994 employees, and account for 19% of the company's top managers and heads of departments. Female managers tend to be concentrated in Human Resources, Finance, and

Corporate Governance where they account for 58%, 56% and 53% of managers respectively. In contrast, women make up 6% of managers and department heads in Operations and 17% in Project Execution. Some 14% of the company's female workers are employed in engineering and technical roles, which comprise the majority of KPO's activities.

Growing the number of women in management

KPO senior management recognizes the economic benefits of expanding women's role at the company and has introduced a number of measures to increase the number of women at different levels of employment, including in senior management.

In 2018-2019, the number of women on the Committee of Directors has increased from zero to four out of a total of 11 Directors.

According to General Director, Edwin Blom, “increasing the number of women among our senior leadership has made a huge qualitative difference to the types of conversations we have and to how we get to solutions in the Committee of Directors”.

Supporting women's professional development through women's networks

KPO has sought to develop new mechanisms for supporting the professional development of its female employees. In May 2019, the company launched a Women's Network to support the professional growth of female KPO employees, attracting significant interest from women across the company. The Network is expected to serve as a platform to share experiences and advice, support women's professional development, and acquire new knowledge through interaction and cooperation.

“The share of women in KPO's workforce is above the energy sector average, and I consider this one of reasons why KPO is considered a world-class operator – diversity is valuable.”

Gabriele Giona, KPO Deputy General Director and Operations Director

Removing structural barriers to women's employment

Expecting a rise in demand for labour as a result of possible future expansion of the Karachaganak field, KPO has sought to address the structural barriers to women's employment at the company. For instance, the company identified that remoteness of the site and rotational nature of employment, which requires some employees to be away from home for up to 28 days, were likely to act as a barrier to women's employment at the company, given that women are often more likely to take on household responsibilities and childcare. As a result, KPO has moved a number of onsite rotational roles from the field to the nearby city of Uralsk, where jobs can be taken up by local staff who can work a regular working week from Monday to Friday, without needing to travel to the site.

"Of course, fieldwork at KPO is physically demanding, but there is nothing that female staff cannot do: we see no difference in the field.

When it comes to problem solving – for instance, in production optimisation – we actually need more women and greater diversity of thought in order to come up with better solutions".

Edwin Blom, KPO General Director

Stereotypes about employment in the oil and gas sector

KPO senior management considers that the low share of women in technical roles is due in part to widespread misconceptions that the energy sector is unsuitable for women. KPO is currently considering how it can communicate the attractiveness of employment at the company to potential female candidates more effectively, recognising that this will require a departure from traditional approaches. According to Edwin Blom, "We often communicate the attractiveness of roles in terms of financial remuneration, but we need to do this differently: this might include a more developed informational campaign about the wider package of benefits and support we offer to our employees."

Sources: Presentation by KPO General Director Edwin Blom to KAZENERGY Women in Energy Club on 27 June 2019; KPO (June 27, 2019), "Delegation of KAZENERGY Women Energy Club visited Karachaganak", <http://www.kpo.kz/en/news-room/company-news/company-news/article/delegation-of-kazenergy-women-energy-club-visited-karachaganak.html>

Samruk-Energy JSC

energy generation, distribution, retail

Company overview

Samruk-Energy JSC (Samruk-Energy) is a multi-sectoral energy holding of 19 companies engaged primarily in the generation, distribution, and sale of electricity and heat to households and industrial enterprises. The company is a leading player in Kazakhstan's energy sector, responsible for generating 30% of all electricity and 27% of all renewable energy in the country.

Women in the workforce

Women currently account for 27% of the workforce across Samruk-Energy and its subsidiaries, but are underrepresented amongst senior leaders, where they comprise only 4% of top management positions. Women represent 45% of specialist professional roles, 55% of specialist technician roles and 14% of other skilled workers.

Senior leadership commitment to equal opportunity: the Women's Empowerment Principles

Samruk-Energy's senior management has voiced robust support for the principle of equal opportunity and is taking active measures to support women's employment and leadership across the company. In 2018-19, Samruk-Energy worked with EBRD in 2018-2019 on a project designed to strengthen equal opportunity in its workforce.



"Our energy holding aims not only to develop its human rights policy, but also to focus on key issues related to promoting gender equality and empowering women."

Bakitzhan Zhulamanov, Chair of Samruk-Energy JSC Management Board

In March 2019, Chairman of Samruk-Energy's Management Board Bakitzhan Zhulamanov signed the CEO Statement of Support for the Women's Empowerment Principles as a sign of the senior leadership's strong

commitment to gender equality. The WEPs are the result of a collaboration between the UN Global Compact and UN Women and provide an internationally recognised framework for companies to express their support for gender equality and take action. This clear expression of support from senior leadership has helped to galvanise action on equal opportunity at the company, and raise awareness amongst the workforce of initiatives to promote change.

In 2019, the company has enhanced its approach to gender and equal opportunity in its annual corporate reports, including greater use of gender disaggregated data and more prominent statements of commitment to equal opportunity. It has also updated and upgraded its HR policies and data collection frameworks, including disaggregation of employee survey data by gender, enhanced reference to equal opportunity commitments and a practice of including at least one woman on shortlists for management positions.

Introduction of concrete targets on women's employment and leadership

Samruk-Energy has recently revised its Sustainable Development Guidelines and Plan of Sustainable Development Initiatives 2019-2023 to include internal targets for increasing women's employment and participation in leadership in the company.

The commitment to equal opportunity is also emphasized by Samruk-Energy's subsidiary Almaty

Power Plants JSC (AIES), which is aiming to increase the number of women in its talent pool by at least 5% in the long run (Interviews with AIES senior managers, September 2019). To support women's professional growth, the company's HR Department provides proactive support for women to apply for management roles, encouraging qualified women who may lack confidence to put themselves forward, and ensuring a transparent and merit-based selection process.



"Almaty Power Plants JSC has a real chance to be a leader on equal opportunity in Kazakhstan's energy sector, especially when it comes to educational outreach to schools, universities and TVET institutions. There is firm commitment to equal opportunity among senior management and interviews with our staff show that employees are proud to work at AIES."

AseI Arginbaeva, Deputy Chair of Almaty Power Plants JSC Management Board for Economics and Finance

Raising awareness of career opportunities for women in the energy sector through schools outreach

To raise awareness of opportunities for women in the energy sector and encourage girls to pursue careers in energy, AIES has introduced a Schools Ambassador programme, which involves company outreach to primary schools and the organisation of school visits to its power plants. The visits feature a guided tour of the site and technical demonstrations by power plant employees, including women. As part of the programme, AIES' HR Department has also organised events at a summer camp for children of energy sector workers designed to provide guidance on how young women can get involved in energy and featuring interactive sessions with female AIES employees.

Partnerships with universities and TVET institutions

As part of its educational outreach efforts, AIES has sought to introduce an equal opportunity component into its partnerships with universities and TVET institutions, and held roundtable events on equal opportunity with its educational partners in 2019. The company recognizes that increasing the number of female employees at AIES relies on more young women entering technical fields of education.

Sources: Information provided by Samruk-Energy and AIES; Samruk-Energy, 2019, Annual Report 2018, <https://www.samruk-energy.kz/en/shareholder/annual-reports>; Samruk-Energy, 2019, Sustainable Development Guidelines, <https://www.samruk-energy.kz/ru/sustainability/dokumenty-k-razdelu>; Samruk-Energy (13 March 2019), "Samruk-Energy Supports the UN Principles for Women's Empowerment", <https://www.samruk-energy.kz/en/press/news/i4233>; AIES (21 May 2019), "School ambassadors program launched", <http://www.ales.kz/ru/novosti-kompanii/107-2019-god-5/1186-zapushchena-programma-shkolnykh-poslov>; AIES (1 August 2019), "CHP-1 workers told children about their profession", <http://www.ales.kz/ru/novosti-kompanii/107-2019-god-5/1259-rabotniki-tets-1-rasskazali-detyam-o-svoej-professii>; AIES (29 July 2019), "AIES: To children about the energy profession", <http://www.ales.kz/ru/novosti-kompanii/107-2019-god-5/1251-ales-detyam-o-professii-energetika>; AIES (22 May 2019), "Roundtable on gender equality held in AUPET", <http://www.ales.kz/ru/novosti-kompanii/107-2019-god-5/1188-proveli-kruglyj-stol-po-gendernomu-ravenstvu-v-aues>; AIES (12 June 2019), "Future leaders in the talent pool", <http://www.ales.kz/ru/novosti-kompanii/107-2019-god-5/1208-v-rezerve-budushchie-lidery>; AIES (5 March 2019), "Promoting equal opportunity", <http://www.ales.kz/ru/novosti-kompanii/107-2019-god-5/1121-prodvizhenie-ravnykh-vozmozhnostej>.

Tengizchevroil LLP

oil and gas

Company overview

Tengizchevroil LLP (TCO) is a partnership formed in 1993 to explore and develop the Tengiz and Korolev oil fields located in the Atyrau region of Kazakhstan. It is a joint venture between Chevron (50%), KazMunayGas (20%), ExxonMobil Kazakhstan (25%), and LukArco (5%).

Women in the workforce

TCO is the only large company in Kazakhstan with a female General Director, and three out of its 11 top managers (27%) are women. Across the workforce as a whole, women account for 27% of employees and 29% of managers.

Making "Diversity and Inclusion" a key company value

TCO has made Diversity and Inclusion one of its five central values. TCO takes pride in the diversity of its employees, attributing its success in the oil and gas sector to the benefits of a dynamic and diverse workforce – in terms of gender, age, educational background, and other factors.

The company has made inclusion a priority, instituting a zero-tolerance policy on discrimination, sexual harassment and violence in the workplace. A hotline is in place to facilitate the reporting of violations of the Code of Conduct. TCO believe that more talented individuals, including young women, will be encouraged to apply by prioritizing diversity and making it clear that the company will not tolerate discrimination.



“At the current time our industry is male-dominated, but things are starting to change. And attitudes along with it. I am a firm believer that a greater level of diversity, whether it be gender, background or discipline, helps bring different people and perspectives to the table – but by focusing on inclusiveness, I’ve learned to create opportunities to harness these differences and capture the diverse strengths to achieve better performance and results.”

Eimear Bonner, TCO General Director

Highlighting female role models

TCO has a relatively higher proportion of women in management positions than many other energy companies in Kazakhstan and is the only large woman-led energy company in Kazakhstan. As such, the company makes a special effort to highlight the valuable contribution of female employees to the success of TCO and women’s visibility in top leadership is believed to reinforce its image as a progressive company and equal opportunity employer in the country’s energy sector.

Gender-disaggregated data collection frameworks to identify and tackle barriers to women’s employment

For TCO, ensuring equal opportunity for women and men starts with identifying the factors that hinder women’s employment and professional growth in the energy sector. Here, the company relies on strong gender-disaggregated data collection frameworks including measuring levels of engagement and satisfaction of male and female employees. Periodic analysis of the qualitative composition, satisfaction and engagement of TCO’s workforce helps the company identify factors negatively impacting its employees, including women’s employment and careers.

Supporting women during ‘career breaks’

TCO has now sought to improve its ability to retain female talent following maternity leave by providing supervisors with guidance on how to keep women employees informed and engaged in company affairs while they are on leave. This allows employees to adapt faster when they return to work. Specific recommendations for continued development during childcare leave are also a topic of discussion at meetings of the company’s Women’s Network. In addition, TCO supports working parents by subsidising the cost of childcare for its employees.



“The first step to supporting women’s employment is to understand the barriers to their economic engagement. It is only by understanding the problems and stereotypes women face that we can develop effective ways to tackle them.”

Sholpan Altybayeva, General Manager of TCO HR Department

Active women's network (Women's Networking, WN) to support women and raise awareness among men

TCO's Women's Network was established in 2013 to expand women's opportunities for professional development and to provide female employees with a supportive environment to build connections, find mentors, exchange experience and knowledge, acquire new skills, and build self-confidence. TCO's Women's Network is very active, and regularly organises discussions, workshops and events to provide members with practical advice on how to achieve work-life balance, improve their leadership skills, and ease the transition back from maternity leave.

Given that diversity and inclusion are among TCO's values, as well as being an effective tool for managing labour productivity, male leaders also support and take part in the activities of the Women's Network.

Sources: Interview with General Manager of TCO Human Resources Department Sholpan Altybayeva, June 2019; TCO Corporate Responsibility Report 2017, <http://www.tengizchevroil.com/docs/default-source/publications/eng/tco-2017-corporate-responsibility-report.pdf?sfvrsn=4>; TCO Corporate Responsibility Report 2018, <http://www.tengizchevroil.com/docs/default-source/publications/eng/2018-corporate-responsibility-report.pdf?sfvrsn=4>; Chevron (March 8, 2018), "Celebrating International Women's Day at Chevron", <https://www.chevron.com/stories/celebrating-international-womens-day-at-chevron?ss=t>.

China National Petroleum Corporation (CNPC)

oil and gas

Company overview

The China National Petroleum Corporation (CNPC) is an integrated international energy company, a major state-owned oil and gas company of the People's Republic of China, working in over 30 countries worldwide. CNPC is engaged in the extraction, processing, transportation and sale of oil and gas. The company is ranked 3rd among the top 50 largest oil companies in the world. CNPC has operated in Kazakhstan since 1997 and is involved in a number of joint projects including Asia Gas Pipeline, Kazakhstan-China Pipeline, PetroKazakhstan, MangistauMunaiGas, PetroKazakhstan Oil Products, AktobeMunaiGas and others.

Women in the workforce

CNPC and its subsidiaries currently employ around 30,000 people in Kazakhstan, 18% (5,500) of whom are women. The company believes that the number of female employees, particularly in technical positions, is rising as a result of the modernization and automation of production processes, and the introduction of new equipment and technologies. For example, the modernization of the Shymkent oil refinery and the Zhanazhol gas processing plant eased working conditions in traditionally male-dominated jobs and increased the potential of women's employment.

Flexible work arrangements to support working parents

CNPC has introduced various measures to support working mothers in its subsidiaries, creating favourable working conditions that allow employees to balance work with family life. Maternity and childcare leave frequently limit women's ability to work, which is why new mothers at some CNPC subsidiaries are offered flexible work hours and the option to work from home following maternity leave (subject to the requirements of the role).

In addition, CNPC provides financial support in excess of statutory requirements for women on maternity and childcare leave, as well as additional benefits for families with four and more children.

Cooperation with educational institutions to address the lack of qualified technical specialists

According to CNPC, there is a growing number of young motivated women who are studying technical professions at universities. Working with educational institutions in Kazakhstan and abroad, and the provision of grants for technical education, gives graduates an opportunity to pursue careers in the sector, while allowing energy companies to fill longstanding technical skills gaps. For instance, in 2019, CNPC subsidiary



“CNPC is proud to offer flexible work arrangements to support new mothers who wish to resume working after maternity leave, but cannot be away from home full time yet. For example, one of our software engineers was recently able to return to work just three months after having a child by telecommuting.”

Raikhan Abdrassilova, CNPC
Director of Human Resources

AktobeMunaiGas supported a project

to establish career centres at local universities and announced the introduction of an annual Open Day to allow graduates to familiarise themselves with the company. Recognising that young women represent an untapped source of talent, CNPC believes that such initiatives provide an opportunity to improve gender balance in the oil and gas sector.

Sources: Interview with CNPC Director of Human Resources Raikhan Abdrassilova, October 2019; City04.kz (March 6, 2019), “Выпускники актюбинских вузов имеют возможность трудоустроиться в крупные международные компании”, <https://www.city04.kz/news/2325089/vypuskniki-aktubinskih-vuzov-imeut-vozmoznost-trudoustroitsa-v-krupnye-mezhdunarodnye-kompanii>; CNPC Annual Report 2018, <https://www.cnpc.com.cn/en/2014enbvfg/201907/c9318a5301b1471dba8122de3a63f6d9/files/124e79a378e44857a392ccdee63af9c6.pdf>.

Kazakhstan Electricity Grid Operating Company JSC

electric power distribution

Company overview

The Kazakhstan Electricity Grid Operating Company (KEGOC) JSC is the national transmission grid operator in the Republic of Kazakhstan, recognised as the System Operator of the Unified Power System of the Republic of Kazakhstan. KEGOC’s operations cover the entirety of Kazakhstan and consist of 9 branches of intersystem electric networks and a National Dispatch Centre, as well as two subsidiary companies.

Women in the workforce

As of 2019, women make up 23% of KEGOC’s workforce of 3,914. Although there is only one woman on the company’s Board of Directors, women are well represented in senior and middle management. For instance, 12 out of KEGOC’s 32 structural units (37%) are currently headed by women. Women-led departments include the Strategic Planning Department, the Department for Planning and Economic Analysis, the Investor Relations Department, the Department for Internal Control and Risk Management, and the Department for Corporate Development.

Modernizing the workplace

KEGOC continues to implement an ambitious modernisation programme that includes recent updates to high-voltage equipment at substations, the transfer of telecommunications systems from analogue to digital technologies, and the implementation of target models of the company's business processes. These advances are expected to improve the appeal and accessibility of technical and operational roles for women and men alike, and may help reverse a long-term trend of declining numbers of women engaged in operational roles at KEGOC.

In recent years, the number of women in operational roles (in the qualified workers category) at KEGOC has decreased, primarily due to their preference for more intellectually stimulating forms of employment. In Kazakhstan, young women, including those working at KEGOC, tend to pursue higher education, including in technical professions, while operational jobs are mostly intended for specialists with secondary technical and vocational education.



"I've worked in the energy sector for over 30 years, 21 of which I've spent at KEGOC. When I first started at my substation in the 1990s, most operators were women but it's the other way round now: I am the only woman in a team of 11. I hope to see more women join the profession in the future."

Yelena Fux, Sixth Category Electrician at Karatau-220 substation of Zhambyl Thermal Power Plant, "Southern MES" Branch of KEGOC

Expanding mentoring programmes

KEGOC has sought to leverage its employees' experience to support younger specialists' professional development through mentoring programmes for technical (operations) personnel, including hosting a Best Mentor of the Year competition since 2012. KEGOC's mentoring programme allows experienced employees to pass their knowledge on to younger staff and it has been particularly valuable in improving their skills and ability to work independently, as well as facilitating new employees' adaptation to corporate culture. However, having noted a lack of female mentors, KEGOC's senior management is now seeking to expand its pool of technical mentors to include more women in operational roles. In addition, the company has implemented a successful mentoring programme, initiated by KAZENERGY's Women in Energy Club, that is specifically aimed at female employees.

Promoting an equal opportunity approach in the energy sector as a whole

KEGOC has played an active role in initiatives to support women in the energy sector in Kazakhstan and beyond, including work with USAID on the implementation of a regional "Power the Future" programme to support the deployment of renewable energy and energy efficiency across Central Asia. In the framework of this programme, KEGOC's representatives have taken part in a roundtable on women's engagement in the energy sector as well as a regional seminar on gender issues in the industry, organized as part of USAID's Gender Action Plan. The active participation of KEGOC's female employees and managers in numerous industry events (for example, in relation to the CIS Energy Council, the Eurasian Economic Commission of the Eurasian Economic Union, the Coordinating Commission of the Central Asia Energy Council, amongst others) contributes to the ongoing dialogue on women's employment in the energy sector.

Sources: Interview with KEGOC Head of Change Management Unit Aigul Baiturova, September 2019; KEGOC Annual Report 2018, <https://www.kegoc.kz/en/shareholders-and-investors/information-disclosure/annual-reports/2018>; KEGOC Sustainability Report 2018, <https://www.kegoc.kz/en/shareholders-and-investors/information-disclosure/annual-reports/2018>; Специальная сессия «Гендерная политика в энергетическом секторе» в рамках Всемирного Нефтяного Совета (October 1, 2018), "KEGOC: Успех женщин «неженской» профессии", <http://www.kazenergy.com/upload/document/development/zv1.pdf>; Вестник трансформации (2018), "Наставничество в меняющемся мире", Весенний выпуск №1, <https://www.kegoc.kz/vestnik/nastav.html>.

6. Challenges for women in the energy sector in Kazakhstan

Despite evidence of good practice, Kazakhstan's energy sector faces significant challenges that can undermine efforts to widen women's participation in employment. The principal challenges include:

- regulatory restrictions on women's employment in certain occupations and/or types of work;
- the low number of women who opt to study energy-related disciplines;
- internal career development and promotion processes do not adequately support women;
- sociocultural gender norms and stereotypes about the energy sector and women's and men's relative professional aptitudes and roles; and
- insufficient updates to production technologies.

These factors remain important constraints on achieving gender equality and ensuring equal opportunity in employment in the Kazakh energy sector.

6.1 Regulatory restrictions



Current legislation restricts women's access to and conditions of employment in the energy sector:

- Women are prohibited by law from employment in more than 200 specified professions that involve certain types of work or working conditions, including professions and types of work relevant to the energy sector
- Women face specific restrictions on night work, overtime work, and work-related travel

For a wider discussion of international experience and jurisprudence concerning prohibited jobs for women, as well as related labour market impacts, see section 4.1.6.

Current regulations prohibit women's employment in 212 occupations / types of work, which include specific professions and roles in the energy sector. Despite constitutional and legal guarantees of gender equality, the Labour Code (Art. 26) nevertheless provides for a ban on women's employment in occupations that involve 'harmful and/or hazardous conditions' for women. The Labour Code requires the relevant authorised state body to establish a list of jobs to which the prohibition should apply (Art. 16).

The original list included 287 prohibited occupations, most of which involved manual labour or exposure to hazardous conditions that are considered to pose a risk to women's reproductive health (Order No. 944 of the Minister of Health and Social Development of 8 December 2015). A 2018 revision removed 75 occupations from the prohibited list (Order No. 348 of the Minister of Labour and Social Protection of 13 August 2018) on the grounds that recent technological advances meant that such occupations were no longer detrimental to women's health.²⁴ The revision leaves a total of 212 occupations that remain

²⁴ According to the Ministry of Labour and Social Protection of the Republic of Kazakhstan, the removal of 75 occupational categories equates to the removal of approximately 85 specific professions (Information shared with Ergon by the Ministry of Labour and Social Protection of the Population of the Republic of Kazakhstan, 25-26 September 2019).

prohibited for women in 2019, including a number of jobs relevant to women's employment in the energy sector.²⁵

The existence of a prohibited list of jobs is a significant impediment to women's employment in the sector. The list of prohibited jobs:

- reduces the range of employment opportunities for women in the sector;
- exacerbates gender-based 'horizontal' (occupational) segregation in the workforce by reinforcing stereotypes about women's and men's relative professional aptitudes; and
- contributes to broader perception of the energy sector as inaccessible for women, thus deterring them from pursuing technical and engineering disciplines in education and seeking employment in the sector.

By impeding women's access to technical and operational roles, these factors may also combine to restrict women's representation in more senior roles within the sector. Training and experience in technical and operational fields are frequently considered prerequisites for promotion to management and senior leadership roles (Equal Rights Trust et al., 2019). More generally, the government's own *Family and Gender Policy Concept* acknowledges that legislative restrictions on women's employment adversely affects women's access to high-paying technical occupations and contributes to the national gender wage gap.

Labour laws place exceptional restrictions on working hours and work-related travel for pregnant women as well as women who have children under the age of seven and have not agreed to it in writing. The Labour Code prohibits night work, work on days off and holidays, and overtime work for pregnant women (Arts. 76, 77, 85). It also requires any female employee with a child under the age of seven to provide explicit, written consent to their employer in order to engage in night work (Art. 76).

Although these provisions are intended to provide additional protections for pregnant women and mothers, they nevertheless derive from the discriminatory assumption that women's primary responsibility relates to maternity and childcare. Indeed, the additional conditions on night work for women with young children apply to fathers only in cases where the mother is not present (Labour Code, Art. 76).

Additional restrictions on women's working hours and conditions (compared to men) is a further constraint on women's equal opportunity in employment. Such differentiation may:

Women are prohibited from work that may involve, *inter alia*:

- underground oil production
- installation, maintenance, repair of oil field equipment
- work in areas with high hydrogen sulphide levels
- repair of high-voltage overhead power lines
- repair of lead cables

²⁵ For example, women are still prohibited from employment as "workers, managers, and specialists routinely engaged in underground oil production"; as "workers engaged in the installation, maintenance, and repair of oil field equipment"; or as "workers engaged in maintenance work in gas-explosion hazardous areas with high hydrogen sulphide content". Similarly, women prohibited from employment as "electricians repairing high-voltage overhead power lines at elevation" and "electricians repairing lead cables".

- impede women’s employment by making employers reluctant to hire or promote women who are more likely to require more flexible working hours and/or impose additional obligations on employers;
- limit women’s involvement in specific work-related activities or roles (for example, participation in business trips) that puts women at a disadvantage in terms of career progression.

Research elsewhere has found that legislative restrictions on women’s working time and conditions is associated with a decrease in both the number of hours actually worked by women and female employment rates overall across multiple sectors of the economy (e.g., Zveglích and van der Meulen Rodgers, 2003).

6.2 Under-representation of women in technical studies: Enrolment and graduation rates

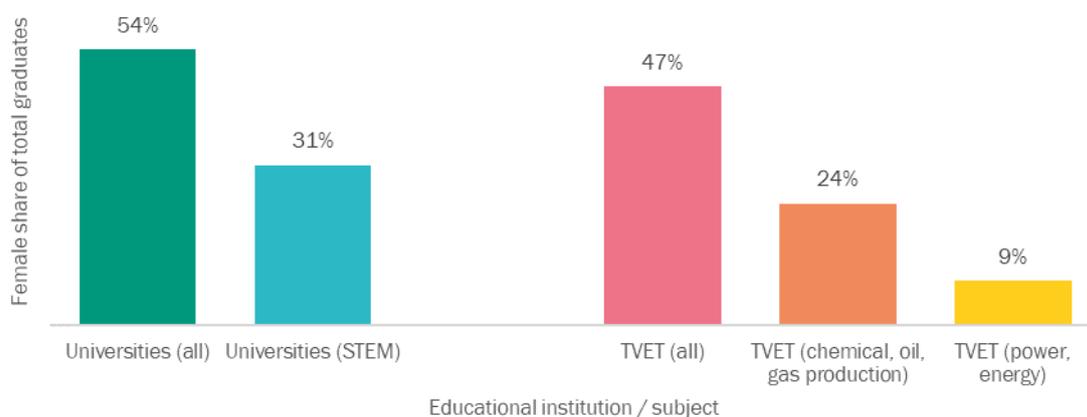


Women are under-represented in STEM subjects overall in energy-related technical study fields in particular:

- Women account for more than half of all students in higher education institutions, but less than one-third of students in STEM subjects
- Women are particularly under-represented among students in technical disciplines relevant to the energy sector (in both universities and TVET institutions)

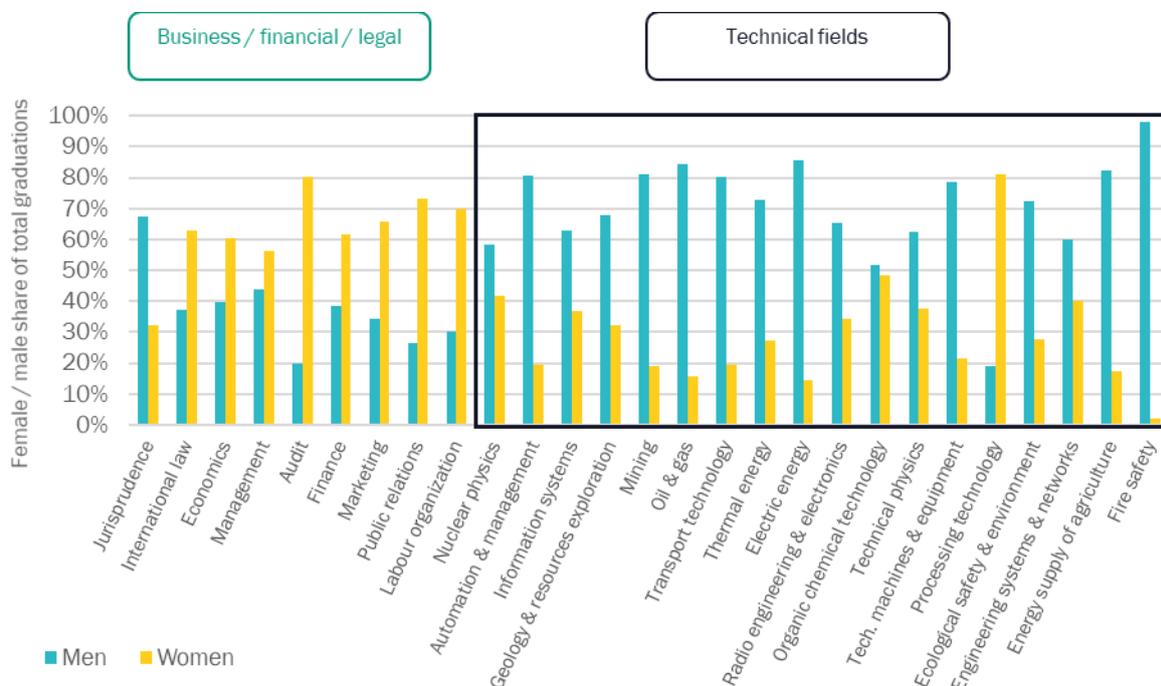
Women account for less than one-third of all students enrolled in STEM subjects at university, and less than one-quarter of students enrolled in energy-related courses at TVET institutions (Figure 22). Although women account for more than half (54%) of all university students in 2018 (292,231 out of 542,458), they represent just 31% of newly enrolled students in STEM subjects (37,758 out of 120,272). Similarly, women account for almost half (47%) of all graduates from TVET institutions (229,044 out of 489,818), but just 24% of students enrolled in programmes on chemical, oil, and gas production (756 out of 3,166), and just 9% of students enrolled in programmes on power and energy (483 out of 5,456).

Figure 22: Higher education enrolment rates of women (2018)



Source: Committee on Statistics, 2018d.

Figure 23: University graduation rates of women in all disciplines relevant to the energy sector (2018)



Source: Committee on Statistics, 2018d.

Among university graduates in energy-related fields, women are concentrated in business, financial, and legal disciplines; fewer women graduate from technical programmes (Figure 23). In 2018, women represented more than half of all graduates from business, financial, and legal fields relevant to the energy sector (with the exception of the ‘jurisprudence’ programme). In contrast, women are under-represented among graduates from energy-related technical study programmes, with significantly more male than female graduates in 2018 in all but one energy-related discipline.

Women are particularly under-represented among graduates from programmes on *electrical energy* (14%), *oil and gas* (16%), *mining* (19%), *transport technology* (20%), and *technology, machines, and equipment* (22%). However, women are relatively better represented among graduates in *chemical engineering* (48%), *nuclear physics* (42%), *engineering systems and environment* (40%), and *technical physics* (38%).

Low female enrolment and graduation rates in STEM subjects and other technical disciplines relevant to the energy sector remain significant constraints on increasing women’s employment. The comparatively low number of female graduates with the technical qualifications required for employment in the energy sector is especially significant because:

- most jobs in the sector are in technical and operational roles (see 3.3); and
- qualification and experience in technical and operational roles is often considered a prerequisite for advancing to management positions and senior leadership roles in many companies.²⁶

²⁶ For example, Beck and Pánczél (2018) found a positive relationship between women’s participation in technical engineering programmes and female share of company boards at the national level, based on analysis of large oil and gas companies across 10 central and eastern European countries.

6.3 Stereotypes and misperceptions about work in the energy sector



Stereotypes about work in the energy sector and about the professional aptitudes of women and men limit women's employment opportunities:

- The energy sector is still perceived by many as providing 'jobs for men', deterring female graduates from pursuing energy-sector careers
- Gender stereotypes also impede women's access to technical jobs and senior roles

Stereotypes about employment in the energy sector can deter female graduates from pursuing careers in energy or applying for technical positions typically viewed as 'jobs for men'. These stereotypes about work in the sector pose a challenge to companies' efforts to ensure equal opportunity in recruitment. For example, jobs in the extractive industry are often assumed to involve 'serious physical exertion' and 'require great physical strength' (Beck and Pánczél, 2018; HeadHunter, 2016).

However, many of these stereotyped views about work in the energy sector are increasingly out-dated as technological advances widen the range of roles available women and men. A lack of general awareness about the scope of career opportunities in the energy sector remains a prominent constraint on increasing women's employment in the sector.

The low number of women in the senior management roles reinforces misperceptions of the energy sector as 'unsuitable' for women. The lack of female leadership in the sector means more junior employees have few female role models as sources of inspiration or to function as templates for career success in the sector. As a result, many talented women may become discouraged and may choose to build their careers in alternative industries and sectors. Beyond the energy sector, previous research has consistently indicated that the presence of women in leadership is positively associated with greater gender diversity at all levels of management (ILO, 2019a). Thus, increasing women's representation in senior leadership teams is vital to promoting gender equality and equal opportunity in the sector more broadly.

Stereotypes about women's and men's relatively aptitudes for specific jobs and tasks place an additional burden on women employed in the sector. For example, female employees report feeling the need continuously to 'prove themselves' to peers and supervisors (unlike male employees), especially women in more technical roles. As a result, some female specialists report that they left operational jobs for in departments considered more 'suitable' for women, such as business administration or human resources.

6.4 Family and care responsibilities



Women's disproportionate share of family and care responsibilities may impede career development:

- Family and care responsibilities reduce the time for paid employment and result in long career breaks
- Assumptions about women's future family / care responsibilities may bias employers towards male over female candidates in hiring and promotion decisions

Although employment requirements and conditions may be comparable for women and men in the workplace, women face ‘double burdens’ in the home and private sphere. Specifically, prevalent sociocultural norms mean that women typically bear a disproportionate share of household tasks and family responsibilities. In this context, women are estimated to perform more than twice as much unpaid labour as men in Kazakhstan (EBRD and ICRW, 2019). Moreover, the lack of widespread availability of state social and childcare support since 1991, combined with the rising cost of private childcare, has led many mothers to take on the full burden of childcare themselves, resulting in a decrease in women’s labour force participation (EBRD and ICRW, 2019).

For women employed in the energy sector, family responsibilities may present an obstacle to professional advancement, particularly if the role requires frequent travel or overtime work (ILO, 2019a). For instance, working mothers may be reluctant to apply for promotion if they feel it would negatively affect their family life. ‘Democratising’ childcare responsibilities as a means of increasing women’s labour force participation is an important focus of both national policy instruments and internal company policies. For example, the *Family and Gender Policy Concept to 2030* emphasizes that the responsibility for raising children and housekeeping must lie with both parents, while the accompanying *Action Plan* identifies the need to encourage fathers to contribute more to childcare.

Many energy companies in Kazakhstan have also introduced policies to support working parents that offer more flexibility and help both male and female employees improve their work-life balance (see Chapter 5). Nevertheless, there is little indication that significant numbers of men in Kazakhstan take advantage of benefits such as parental leave, and thus the challenge of balancing career with family responsibilities remains one that disproportionately affects women.

Misplaced assumptions that women are unwilling or unable to take on senior management positions due to family responsibilities remains a significant barrier to women’s career development. Some women may prefer to focus primarily on family life, especially while children are young. However, many women with children are just as interested and willing as men to take on senior roles, to relocate, and to work overtime, and to balance these career responsibilities with family life (Beck and Pánczél, 2018).²⁷ Misplaced assumptions that women with children lack flexibility or are unwilling to fulfil the responsibilities associated with senior roles may at times lead qualified female candidates to be overlooked for promotions.

6.5 Lack of access to leadership opportunities and sponsorship

Qualified women often lack ‘visibility’ among senior decision-makers and are therefore overlooked for promotion. Recent international research has highlighted how women often receive less support than men internally to promote their professional advancement, with the result that qualified women are routinely overlooked for consideration for promotion (Beck and Pánczél, 2018). For example, promotions to management positions often require support from senior leadership, yet women are less likely to be on the ‘radar’ of key decision-makers who are overwhelmingly male.

Women’s relative lack of access to professional networks and contacts, which are often dominated by men and established through activities that take place outside the workplace, is a key contributing factor. Such

²⁷ In fact, a global survey of the oil and gas industry found that women expressed a greater willingness to be flexible with respect to work responsibilities compared to men. More women than men expressed a willingness to spend time or money to gain additional qualifications, to take an assignment in a different functional area or country, to accept a lower-paying job to gain experience, and to have their spouse or partner relocate with them if they were transferred (Beck and Pánczél, 2018).

lack of access makes it more difficult for women to build the professional relationships that facilitate career progression and may leave many women unaware of upcoming promotion opportunities.

6.6 Sexual harassment and gender-based violence

Worldwide, workplace sexual harassment is particularly prevalent in male-dominated industries such as the energy sector (Willness et al, 2007; Fitzgerald et al, 1997).²⁸ Workplace sexual harassment and other forms of gender-based violence create a hostile working environment that contributes to higher female turnover and/or women's self-withdrawal from the labour market. As a form of discrimination, workplace sexual harassment is also associated with lower individual and team productivity overall (McLaughlin et al, 2017).

According to government figures, one out of three Kazakhstani women are victims of sexual or other forms of violence during their lifetime (Government of Kazakhstan, 2016). A recent study for UN Women also found widespread evidence of routine sexual harassment in Kazakh workplaces (Kavasa and Rupenheite, 2017). The prevalence of sexual harassment and other forms of gender-based violence, including within workplaces, remains a significant challenge in efforts to increase women's participation in employment – and especially in attracting women to pursue careers in traditionally male-dominated sectors.

²⁸ According to the ILO, 'gender-based violence and harassment' (including sexual harassment) means violence and harassment directed at persons because of their sex or gender or affecting persons of a particular sex or gender disproportionately. 'Violence and harassment' in the world of work refers to 'a range of unacceptable behaviours and practices, or threats thereof, that aim at, result in, or are likely to result in physical, psychological, sexual or economic harm' (ILO Convention No. 190).

7. Recommendations

Based on the results of the EBRD/KAZENERGY company survey, it is clear that women already play a significant role in the energy sector in Kazakhstan, but there is substantial scope to increase the depth and breadth of their participation. Importantly, women continue to be under-represented in senior management and technical and operational roles.

The survey data indicates that without proactive measures from companies and national government, women's participation in the sector will remain static and may possibly decline, as recruitment and promotion rates are not changing over time. As such, it is necessary for policy-makers and companies to identify effective measures for promoting women's entry and progression in the sector, including in technical and operational roles, in order to realise the potential gains from increased gender diversity.

The following sections set out a series of recommendations targeted at attracting more women into the energy sector, including in operational and technical roles, and supporting their retention and development.

7.1 Recommendations for policy-makers

National policy and legislation is a crucial lever for strengthening women's participation in the energy sector, as it influences how companies approach issues of gender equality, and shapes women's educational and employment choices. The design and implementation of national policies and legislation will play a pivotal role in bolstering women's employment and leadership in the energy sector.

Recommendation 1: Continue the work started in 2018 on the gradual removal of statutory restrictions on women's employment in the energy sector, with a focus on reducing the list of prohibited jobs.

The Government of Kazakhstan has taken positive steps to reduce the list of occupations that are prohibited for women by law. However, the list of prohibited jobs remains substantial and continues to impede women's equal participation in the energy sector and in the economy more broadly. Such regulatory restrictions not only reduce the range of employment opportunities accessible to women (especially in technical roles where women's share of employment is particularly low), but they also exacerbate gender-based occupational segregation in the workforce by reinforcing stereotypes about women's and men's relative professional aptitudes. In this way, such legislation contributes to a broader perception of the energy sector as 'inaccessible' to women. It is crucial, therefore, that policymakers review carefully and periodically the requirements and working conditions associated with specific occupations – in consultation with employers – to assess whether more jobs can be removed from the prohibited list.

Policymakers should also ensure that regulations designed to protect maternity do not disadvantage women in terms of employment opportunities and career progression. For example, ensure that all social protections and benefits for new parents are available to the both women and men, rather than limited only to (or differentially available for) mothers.

Recommendation 2: Work to encourage higher levels of enrolment by women in STEM disciplines that are relevant to the energy sector, particularly in relation to higher education and TVET, but also among secondary school children.

Policymakers should work with educational institutions and companies to encourage and enable more women to take up STEM subjects and technical training programmes, particularly areas of study relevant to the energy sector. Activities in this area should align with the specific objectives in the *Concept of Family*

and Gender Policy to increase women's participation in vocational training within high-value and technical sectors. They should also incorporate and align with recent efforts to develop public-private dialogue and involve employers in the TVET system. Wider efforts to address misplaced assumptions about the energy sector (and STEM professions more generally) should extend to secondary education; for example, through ensuring that national school curricula do not reproduce gender-based stereotypes about certain fields of study and professions and providing gender-awareness training for teachers.

Efforts could involve targeted communications and public information campaigns to raise awareness about career opportunities for women (and men) in the energy sector, with consideration given to future skills gaps in the sector, and to dispel prevalent stereotypes around the suitability of the energy sector for women and misperceptions about women's 'lack of aptitude' for STEM subjects and related careers. Policymakers might also consult with education providers and companies on providing financial and other direct support (such as co-funded scholarships) for women to study STEM subjects.

7.2 Recommendations for energy companies

The EBRD/KAZENERGY company survey indicates that women are under-represented in the energy sector, but only around a third of energy companies in Kazakhstan (32%) are taking proactive measures to address the situation and promote equal opportunity and gender equality in the sector. In reality, the proportion of energy companies taking proactive measures is likely to be even lower, as the survey sample is comprised of a self-selecting group of companies that already has some interest in women's participation in the sector.

This section sets out general recommendations to companies to guide strategies on strengthening women's participation in the sector, while Chapter 4 provides a more comprehensive range of ideas for implementing these recommendations and examples of good practice.

Recommendation 3: Seek out opportunities to collaborate and share experiences with other companies and industry platforms, such as KAZENERGY

Whilst it is crucial that individual energy companies develop their own policies and strategies on gender equality, companies can achieve much greater impact on women's representation in the energy sector if they also work collaboratively with other companies. This is because many of the obstacles to increasing women's participation in the energy sector, such as widespread gender stereotypes or legislative restrictions on women's employment, transcend the enterprise level and are difficult for companies to address in isolation. Collaboration can also provide companies with invaluable opportunities to learn from each other and share experiences about successful approaches and lessons learned on promoting equal opportunity.

KAZENERGY's Women in Energy Club is an important avenue for collaboration amongst energy companies in Kazakhstan, and can provide a platform for sharing examples of good practice, coordinate policy dialogue with all stakeholders on issues related to women's education and employment, and promote women's participation in the sector.

Recommendation 4: Demonstrate public commitment to increasing women's representation in their operations and the energy sector more widely.

Large energy companies in Kazakhstan with strong public profiles – including KAZENERGY members – can draw on their status and play a key role in drawing attention to the pressing need to increase women's representation in the sector. These companies can help to dispel myths and stereotypes about the

unsuitability of the energy sector for women, and create awareness of the exciting opportunities available for women (and men) in the sector.

Senior leaders in the industry have a very important role to play in leading change, by speaking out in support of gender equality and being seen to provide personal support for women's increased participation in the sector. Statements of support should be incorporated into general business discourse (not just events focused on women), and should highlight that equal opportunity and gender equality are fundamental corporate values and central to their business model.

Recommendation 5: Adopt measures to increase the proportion of women in senior leadership roles and develop the pipeline of female talent in the industry (for example, through the inclusion of practical measures to support women's advancement among key performance indicators for technical specialists and managers at different levels).

Building women's participation in senior leadership in the energy sector is a complex challenge that requires both short-term action and a longer-term strategic view.

The EBRD/KAZENERGY survey confirms that companies across the energy sector in Kazakhstan are missing out on female talent in their top leadership teams. Yet there are clear business benefits associated with greater gender diversity in senior leadership, supported by international research: the presence of more women in senior management is associated with improvements in employee motivation, teamwork, and cooperation, and results in better performance and higher operating margins. These outcomes have positive financial, productivity, competitiveness, and employment implications for both companies and the national economy more generally. More female leaders can also have a positive transformative effect on women's participation in the sector, providing other women with role models and creating a more inclusive environment within individual companies and the sector more generally.

In the short-term, companies need to review their promotion and development processes to ensure that these are truly objective and merit-based, with no room for unconscious bias or misplaced assumptions about women's professional goals or family responsibilities. Sometimes these assumptions are well-meaning, but they are developed without consultation with women candidates. Some companies choose to adopt a policy to ensure that at least one woman is systematically included on all shortlists for recruitment and promotion (to the extent that there are qualified candidates). Companies might also consider whether it is possible to expand traditional selection criteria so that more women can be included on shortlists, without compromising on the core requirements of the job.

In the longer term, companies need to introduce measures that build their pipeline of female talent. This includes measures to attract more women into the sector (see Recommendation 6) as well as ensuring that women have equal access to professional development, mentoring and training opportunities. In some cases, this means introducing dedicated leadership programmes for women. Some companies have also chosen to introduce internal professional networks for women, which can provide both networking opportunities and act as consultative bodies.

Recommendation 6: Develop new strategies for attracting women into the sector, with a focus on dispelling myths about the “unsuitability” of the sector for women and increasing women’s representation in technical and operational roles (for example, through strengthening company outreach and messaging to young girls and women, as well as highlighting how technological advances are changing the nature of work in the sector and opening up potential new employment opportunities for women and men).

Energy companies in Kazakhstan need to become more innovative to strengthen their outreach and messaging to young girls and women, particularly with respect to technical and operational roles. This is not a question of companies suggesting that girls or young women should take up roles in which they have no interest, but rather raising awareness of the rewarding career opportunities available in the energy sector, projecting a positive image of the employment prospects for women in the sector, and making it clear that they have a positive interest in recruiting women.

One of the main obstacles to increasing women’s participation in the energy sector is that women’s enrolment and graduation rates in energy-related fields remain stubbornly low compared to equivalent rates for men, especially with respect to TVET. One of the issues is that young girls and women are often not exposed to positive messaging about careers in the energy sector, particularly those in technical and operational fields. In this respect, some of the strategies adopted by energy companies include scholarships and internships targeted at women (particularly in technical roles), partnerships with universities or TVET colleges to publicise opportunities for women, or outreach programmes to primary and secondary schools with an equal opportunity element.

At the same time, companies need to ensure that their recruitment processes promote equal opportunity and counter stereotypes about the sector. This should include giving particular attention to all external communications concerning recruitment (such as job ads or careers pages on company websites) to ensure that materials clearly state the company’s commitment to equal opportunity, celebrate and highlight female role models, and do not inadvertently discourage women from applying (for example, by using gendered language or including images only of men). Changes to working conditions as a result of modernisation should be clearly reflected in job descriptions and other recruitment materials to correct misperceptions about certain jobs in the sector, especially in relation to technical / operational roles.

Recommendation 7: Invest in creating safer and more inclusive working environments that respond to the needs of women and men alike.

Recommendation 8: Introduce new technologies and techniques, modernize and automate production processes, and increase the number of jobs available to women as a result of favourable conditions in the workplace.

In order to attract and retain more women, energy companies need to make sure that they create and maintain safe and inclusive working environments that respond to the needs of women and men alike.

Establishing company policies that support equal opportunity for women and men is an important part of establishing women’s employment and leadership as an organisational priority. The EBRD/KAZENERGY survey indicates that company policies are currently focused on meeting statutory requirements (including non-discrimination and parental leave entitlements), rather than going beyond national legislation to support more inclusive working environments. Less than half (41%) of the companies had express equal opportunity policies, only 16% had policies expressly dedicated to preventing and addressing gender-based violence, including sexual harassment, and only 11% had policies to go beyond statutory requirements to support workers’ care responsibilities. This suggests that there is an important gap in HR policy frameworks.

All energy companies should have measures in place to ensure a respectful workplace, including a zero-tolerance environment for discrimination and gender-based violence, and gender-sensitive mechanisms for women workers to lodge grievances and seek support. While discrimination and sexual harassment can be extremely sensitive subjects to address, they can arise in all sectors, countries and occupations and should not be ignored or underestimated, as they create a hostile working environment for women.

Companies should consider how they can introduce policies and practices to support work-life balance for women and men alike, including support for care responsibilities. Whilst recognising that women are most likely to be care-givers, interventions on work-life balance and family-friendly working arrangements should support both women and men in caring for dependents. This should include encouraging men to take up paternity leave entitlements.

Finally, energy companies need to continue to explore new technologies that can make the working environment, particularly technical and operational roles, safer and more appealing for women and men alike. Technological advances can open up new opportunities for women in particular to take on roles that may previously have been too physically demanding.

7.3 Recommendations for KAZENERGY

Recommendation 9: Continue to provide and expand opportunities for KAZENERGY members to collaborate, discuss challenges, and share good practices on women's employment and leadership.

KAZENERGY can play a crucial convening role in the energy sector, providing a space in which companies can collaborate and share experiences on strengthening women's participation in the energy sector. In this respect, KAZENERGY should continue to promote and coordinate the activities of the Women in Energy Club (WEC), and to seek increased participation from member companies that are not currently engaged with the WEC.

KAZENERGY is also well placed to support and advise companies on equal opportunity approaches. For example, the WEC could run events and develop guidance for member companies to improve their understanding of equal opportunity and to strengthen their outreach to and support for women in the energy sector (for example, the creation of a female personnel reserve for the industry).

Recommendation 10: Engage in dialogue with stakeholders on key issues related to gender equality in the industry, including regulatory restrictions on women's employment.

In coordination with member companies, KAZENERGY should continue to engage with stakeholders, including government, on regulatory issues that affect women's employment and opportunities in the energy sector, including advocacy on the further gradual reduction of the list of prohibited jobs for women and coordinated engagement with government, companies, and educational institutions to increase uptake of STEM and other energy-related disciplines among women.

Recommendation 11: Monitor, to the extent possible, women's representation in the sector through regular company surveys.

KAZENERGY should, subject to resource availability, repeat the company survey at three-year (five-year) intervals to continue to monitor the representation of women in the sector, and to identify trends in relation to gender equality over a longer period of time.

References

Legislation and policy documents (selected)

Action Plan to implement the Concept of Family and Gender Policy in the Republic of Kazakhstan to 2030 (2017-19). Retrieved from: <http://www.mz.gov.kz/ru/pages/ob-utverzhdanii-plana-meropriyatiy-po-realizacii-koncepcii-semeynoy-i-gendernoy-politiki-v-rk>

Concept of Family and Gender Policy in the Republic of Kazakhstan to 2030. Approved by Presidential Decree No. 384 of 6 December 2016. Retrieved from: http://online.zakon.kz/Document/?doc_id=37778759#pos=0;215

Constitution of the Republic of Kazakhstan (1995). Amended 3 March 2019. Retrieved from: https://online.zakon.kz/Document/?doc_id=1005029

Law on State Guarantees of Equal Rights and Opportunities for Men and Women (2009). № 223-IV, amended 3 July 2013. Retrieved from: http://online.zakon.kz/Document/?doc_id=30526983&search=0%20государственных%20гарантиях%20равных%20прав%20и%20равных%20возможностей%20мужчин%20и%20женщин&spos=1&tSynonym=1&tShort=1&tSuffix=1

Labour Code of the Republic of Kazakhstan (2015). № 414-V, amended 1 January 2019. Retrieved from: https://online.zakon.kz/Document/?doc_id=38910832#pos=1;-85

List of jobs in which the use of women's labour is prohibited, maximum standards for the lifting and manual moving of heavy loads by women (2015). Annex 2 to Order № 944 of the Ministry of Healthcare and Social Development of the Republic of Kazakhstan. Amended 13 August 2018. Retrieved from: <http://adilet.zan.kz/rus/docs/V1500012597>

Other sources

ADC Memorial. 2018. *Gender Discrimination – Jobs Banned for Women* [online]. Retrieved from: https://adcmemorial.org/wp-content/uploads/forbidden_2018ENG_www.pdf

Advocates for Human Rights (AHR). 2019. *Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive Industries*. Minneapolis: AHR. Retrieved from: https://www.unece.org/fileadmin/DAM/energy/images/CMM/CMM_CE/AHR_gender_diversity_report_FIN_AL.pdf

Asian Development Bank (ADB). 2018. *Kazakhstan Country Gender Assessment*. Manila: ADB. Retrieved from: <https://www.adb.org/documents/kazakhstan-country-gender-assessment-2018>

Barker, Gary, Margaret Greene, Eve Goldstein Siegel, Marcos Nascimento, Marcio Segundo, Christine Icardo, Juan Guillermo Figueroa, Josefina Franzoni, Jean Redpath, Robert Morrell, Rachel Jewkes, Dean Peacock, Francisco Aguayo, Michelle Sadler, Abhijit Das, Satish Kumar Singh, Anand Pawar, Peter Pawlak. 2016. *What men have to do with it: Public policies to promote gender equality*. Washington, D.C. and Rio de

- Janeiro: International Centre for Research on Women (ICRW) and Instituto Promundo. Retrieved from: <https://www.icrw.org/wp-content/uploads/2016/10/What-Men-Have-to-Do-With-It.pdf>
- Beck, Zsófia, and Andrea Pánczél. 2018. *Women in energy: Gender diversity in the CEE-SEE energy sector*. Budapest: BCG. Retrieved from: https://www.womeninenergy.eu/wp-content/uploads/2018/12/Women_in_Energy_in_the_CEE-SEE_Region_Dec2018_final.pdf
- BHP. 2019. BHP Maintains Gender Balance Target. *Mining News* [online]. 15 October. Retrieved from: <https://www.miningnews.net/leadership/news/1373545/bhp-maintains-gender-balance-target>
- British Gas. Nd-a. Making a Difference. *Britishgas.com* [website]. Accessed 20 December 2019. Retrieved from: <https://www.britishgas.co.uk/the-source/making-a-difference/building-future-skills/women-in-engineering-who-you-need-to-check-out-now2>
- British Gas. Nd-b. Women in apprenticeships - not just for the boys. *Britishgas.com* [website]. Accessed 20 December 2019. Retrieved from: <https://www.britishgas.co.uk/the-source/making-a-difference/building-future-skills/women-in-apprenticeships>
- British Petroleum (BP). Nd. *Our Code: It's What We Believe in*. London: British Petroleum. Retrieved from: https://www.bp.com/content/dam/bp-country/en_au/products-services/procurement/code-of-conduct.pdf
- British Petroleum (BP). 2019. *BP Statistical Review of World Energy 2019* (68th edition). London: British Petroleum. Retrieved from: <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2019-full-report.pdf>
- Brogan, Andy. 2019. *How diversity boosts performance in oil and gas* [online]. 23 January. Retrieved from: https://www.ey.com/en_gl/oil-gas/how-diversity-boosts-performance-in-oil-and-gas
- Brown, David, Debra Brown, and Vanessa Anastasopoulos. 2002. *Women on Boards: Not just the Right Thing . . . But the "Bright" Thing*. Toronto: The Conference Board of Canada. Retrieved from: <https://utsc.utoronto.ca/~phanira/WebResearchMethods/women-bod&fp-conference%20board.pdf>
- Centrica. 2018. Employee network empowers women to thrive. *Centrica.com* [website]. Accessed 20 December 2019. Retrieved from: <https://www.centrica.com/news/employee-network-empowers-women-thrive>
- Clancy, Joyce. 2019. *Women, Gender Equality and the Energy Transition in the EU*. Study requested by the FEMM committee of the European Parliament. Brussels: Policy Department for Citizens' Rights and Constitutional Affairs Directorate General for Internal Policies of the Union. Retrieved from: [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/608867/IPOL_STU\(2019\)608867_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/608867/IPOL_STU(2019)608867_EN.pdf)
- Clerkin, Cathleen. 2017. *What Women Want – and Why You Want Women – in the Workplace*. Greensboro, N.C.: Centre for Creative Leadership. Retrieved from: https://www.ccl.org/wp-content/uploads/2017/07/WhatWomenWant.FINAL_.pdf
- Close the Gap. 2013. Fixing the Leaking Pipeline: Securing a supply of skills in Scotland's renewable energy sector? *Close the Gap Working Paper No. 7* [online]. Retrieved from: https://www.closesthegap.org.uk/content/resources/1480883000_CTG-Working-Paper-7---Renewables.pdf

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018a. Основные индикаторы рынка труда в Республике Казахстан за 2018 год [Key indicators of the labor market in the Republic of Kazakhstan for 2018]. Retrieved from:

<http://old.stat.gov.kz/getImg?id=ESTAT301734>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018b. Число высших учебных заведений [Number of higher education institutions]. Retrieved from:

http://old.stat.gov.kz/faces/wcnav_externalId/homeNumbersEducation?_afLoop=15295285840762482#%40%3F_afLoop%3D15295285840762482%26_adf.ctrl-state%3Djfdueihhn_38

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018c. Число организаций технического и профессионального, послесреднего образования [Number of institutions providing technical and vocational education]. Retrieved from:

http://old.stat.gov.kz/faces/wcnav_externalId/homeNumbersEducation?_afLoop=15295285840762482#%40%3F_afLoop%3D15295285840762482%26_adf.ctrl-state%3Djfdueihhn_38

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018d. Высшие учебные заведения Республики Казахстан на начало 2018/2019 учебного года. Retrieved from: <http://old.stat.gov.kz/getImg?id=ESTAT288904>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018e. Техническое и профессиональное, послесреднее образование в Республике Казахстан на начало 2018/2019 учебного года. Retrieved from: <http://old.stat.gov.kz/getImg?id=ESTAT290849>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018f. Заработная плата работников по профессиям (должностям) в отдельных видах экономической деятельности Республики Казахстан. Retrieved from: <http://stat.gov.kz/official/industry/25/statistic/5>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018g. Основные показатели по труду в Республике Казахстан [Key indicators on employment in the Republic of Kazakhstan]. Retrieved from: <http://stat.gov.kz/official/industry/25/statistic/5>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018h. О травматизме, связанном с трудовой деятельностью, и профессиональных заболеваниях в Республике Казахстан [On labour-related injuries and occupational diseases in the Republic of Kazakhstan]. Retrieved from: <http://stat.gov.kz/official/industry/63/statistic/5>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2018i. Численность работников, занятых во вредных и других неблагоприятных условиях труда по отдельным видам экономической деятельности в Республике Казахстан в 2018 году. Retrieved from: <http://stat.gov.kz/api/getFile/?docId=ESTAT302643>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2019a. On the labour market situation in the second quarter of 2019 (August 9, 2019). Retrieved from: <http://stat.gov.kz/official/industry/25/statistic/6>

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2019b. *Women and Men of Kazakhstan 2013-2018*.

Committee on Statistics under the Ministry of National Economy of the Republic of Kazakhstan. 2019c. Основные показатели количества юридических лиц, субъектов индивидуального предпринимательства, филиалов и филиалов иностранных юридических лиц в Республике Казахстан по состоянию на 1 октября 2019 года [Main indicators of the number of legal entities, individual enterprises, branches, and branches of foreign legal entities in the Republic of Kazakhstan as of October 1, 2019]. Retrieved from: <http://stat.gov.kz/official/industry/13/statistic/5>

Credit Suisse Research Institute. 2012. *Gender Diversity and Corporate Performance*. Zurich: Credit Suisse. Retrieved from: https://www.calstrs.com/sites/main/files/file-attachments/csr_gender_diversity_and_corporate_performance.pdf

Cuberes, David, Monique Newiak, and Marc Teignier. 2017. Gender Inequality and Macroeconomic Performance. In, Kalpana Kochhar, Sonali Jain-Chandra, and Monique Newiak (Eds.), *Women, Work and Economic Growth: Levelling the Playing Field*. Washington, D.C.: International Monetary Fund.

Díaz-García, Christina, Angela González-Moreno, and Francisco Sáez-Martínez. 2014. Gender diversity within R&D teams: Its impact on radicalness of innovation. *Innovation* 15(2), 149-160.

Donaldson, Susannah. 2018. *Gender Pay Gap Reporting: The International Perspective* [online]. 5 December. Retrieved from: <https://www.pinsentmasons.com/out-law/analysis/gender-pay-gap-international-perspective>

E.ON. Nd-a. Strength through Diversity. *Eon.com* [website]. Retrieved from: <https://www.eon.com/en/about-us/careers/work-environment/diversity.html>

E.ON. Nd-b. *Energise Anything* [online educational resource]. Retrieved from: <https://www.eonenergy.com/about-us/community-matters/energise-anything.html>

E.ON. 2018. *Can We Make Energy More Sustainable? The Challenge Is .On*. Essen: E.ON. Retrieved from: <https://www.eon.com/en/about-us/sustainability/sustainability-report.html>

Eastman, Meggin Thwing, Damion Rallis, and Gaia Mazzucchelli. 2016. *The Tipping Point: Women on Boards and Financial Performance*. New York: MSCI ESG Research LLC. Retrieved from: <https://www.msci.com/documents/10199/fd1f8228-cc07-4789-acee-3f9ed97ee8bb>

EDF Energy. Nd. International Women's Day. *EDFenergy.com* [website]. Retrieved from: <https://www.edfenergy.com/diversity/international-womens-day-case-studies>

Emelianova, Olga, and Christina Milhomem. 2019. *Women on Boards: 2019 Progress Report*. New York: MSCI ESG Research LLC. Retrieved from: <https://www.msci.com/documents/10199/29f5bf79-cf87-71a5-ac26-b435d3b6fc08>

Equal Rights Trust, Kazakhstan International Bureau for Human Rights and Rule of Law, Kazakhstan Feminist Initiative "Feminita", Anti-Discrimination Centre "Memorial", Union of Crisis Centres. 2019. *Suggestions for the list of issues to be adopted by the Committee on the Elimination of Discrimination Against Women at its 74th Session (Pre-Sessional Working Group)*. Submitted to the UN Committee on Elimination of Discrimination against Women (CEDAW) in relation to the fifth periodic report prepared by Kazakhstan. Retrieved from: https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/KAZ/INT_CEDAW_ICO_KAZ_34056_E.pdf

Ernst and Young (EY). 2016. *Women in Power and Utilities Index 2016* [online]. Retrieved from: [https://www.ey.com/Publication/vwLUAssets/ey-talent-at-the-table-women-in-power-and-utilities-index-2016/\\$FILE/ey-talent-at-the-table-women-in-power-and-utilities-index-2016.pdf](https://www.ey.com/Publication/vwLUAssets/ey-talent-at-the-table-women-in-power-and-utilities-index-2016/$FILE/ey-talent-at-the-table-women-in-power-and-utilities-index-2016.pdf)

European Bank for Reconstruction and Development (EBRD). 2016. *Life in Transition Survey III: A decade of measuring transition*. London: EBRD. Retrieved from: <https://www.ebrd.com/what-we-do/economic-research-and-data/data/lits.html>

European Bank for Reconstruction and Development (EBRD). 2017. *Kazakhstan diagnostic paper: Assessing progress and challenges in developing sustainable market economy*. London: EBRD. Retrieved from: <https://www.ebrd.com/where-we-are/kazakhstan/overview.html>

European Bank for Reconstruction and Development (EBRD), and International Centre for Research on Women (ICRW). 2019. *Policy Report: Making the Case for Care*. London: EBRD. Retrieved from: <https://www.ebrd.com/gender-tools-publications.html>

European Commission. 2012. *Women on Boards: Commission Proposes 40% Objectives* [press release]. 14 November. Retrieved from: https://ec.europa.eu/commission/presscorner/detail/en/IP_12_1205

European Parliament. 2019. *MEPs To Urge EU Ministers To Unblock the 'Women on Boards' Directive*. Briefing on the Plenary Session of the European Parliament, 30-31 January. Retrieved from: <https://www.europarl.europa.eu/news/en/agenda/briefing/2019-01-30/8/meps-to-urge-eu-ministers-to-unblock-the-women-on-boards-directive>

FINANCE.TUT.BY. 2019. В Беларуси хотят пересмотреть список запрещенных для женщин работ. Кем не могут работать белоруски? Retrieved from: <https://finance.tut.by/news651945.html>

Fitzgerald, Louise, Fritz Drasgow, Charles Hulin, Michele Gelfand, and Vicky Magley. 1997. Antecedents and Consequences of Sexual Harassment in Organizations: A Test of an Integrated Model. *Journal of Applied Psychology* 82(4), 578-89.

Gonzalez, Christian, Sonali Jain-Chandra, Kalpana Kochhar, and Monique Newiak. 2015. *Fair Play: More Equal Laws Boost Female Labour Force Participation*. IMF Staff Discussion Note. SDN/15/02. Retrieved from: <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1502.pdf>

Government of the Republic of Kazakhstan, 2018. *State party's report to CEDAW*. CEDAW/C/KAZ/5. https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=CEDAW%2fC%2fKAZ%2f5&Lang=en

Government of the Republic of Kazakhstan. 2019. Самые востребованные специальности [Most in-demand occupations]. Amended 20 June 2019. Retrieved from: https://egov.kz/cms/ru/articles/job_search/02207joblist

He, Joyce, and Sarah Kaplan. 2017. The Debate about Quotas. *Gender and the Economy* [website]. Retrieved from: <https://www.gendereconomy.org/the-debate-about-quotas/>

HeadHunter. 2016. Где предпочитают работать мужчины и женщины Казахстана [online]. 25 March. Retrieved from: <https://hh.kz/article/18503>

Herasymenko, Hanna. 2019. *Should We Strive to Reduce the Gender Gap in the Energy Sector?* Kyiv: Heinrich-Boll-Stiftung. Retrieved from: <https://ua.boell.org/en/2019/07/22/should-we-strive-reduce-gender-gap-energy-sector>

Hoogendorn, Sander, Hessel Oosterbeek, and Mirjam van Praag. 2013. The impact of gender diversity on the performance of business teams: evidence from a field experiment. *Management Science* 59(7), 1514-1528.

Hume, Neil. 2017. Mining company BHP Billiton makes progress on gender balance. *Financial Times* (UK). 17 September. Retrieved from: <https://www.ft.com/content/fa7e610c-9a2c-11e7-a652-cde3f882dd7b>

Hunt, Vivian, Dennis Layton, and Sara Prince. 2018. *Delivering through Diversity*. London: McKinsey. Retrieved from: https://www.mckinsey.com/~media/McKinsey/Business%20Functions/Organization/Our%20Insights/Delivering%20through%20diversity/Delivering-through-diversity_full-report.ashx

Iberdrola. Nd. The Driving Ideas of the Corporate Governance System. *Iberdrola.com* [website]. Accessed 18 December 2019. Retrieved from: <https://www.iberdrola.com/corporate-governance/corporate-governance-system/driving-ideas#3>

International Energy Agency (IEA). 2018. *World Energy Outlook 2018* (online). Retrieved from: <https://webstore.iea.org/world-energy-outlook-2018>

International Finance Corporation (IFC). 2017. *Tackling Childcare: The Business Case for Employer-Supported Childcare*. Washington, D.C.: World Bank Group. Retrieved from: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/priorities/employment/tackling_childcare_the_business_case_for_employer_supported_childcare

International Labour Organisation (ILO). 2001. *Labour legislation guidelines*. Geneva: ILO. Retrieved from: <https://www.ilo.org/legacy/english/dialogue/ifpdial/llg/main.htm>

International Labour Organisation (ILO). 2012. *International Labour Conference: Giving Globalisation a Human Face*. ILO Doc. ILC.101/III/1B. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_174846.pdf

International Labour Organization. 2019a. *Women in Business and Management: A global survey of enterprises*. Geneva: ILO. Retrieved from: https://www.ilo.org/global/publications/WCMS_702196/lang-en/index.htm

International Labour Organization (ILO). 2019b. *A Quantum Leap for Gender Equality: For a Better Future of Work for All*. Geneva: ILO. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_674831.pdf

International Labour Organisation, Committee of Experts on the Application of Conventions and Recommendations (ILO CEACR). 2017. Observation – adopted 2016, Discrimination (Employment and Occupation) Convention, 1958 (No. 111) – Kazakhstan. Retrieved from: https://www.ilo.org/dyn/normlex/en/f?p=1000:13100:0::NO:13100:P13100_COMMENT_ID:3298729

International Labour Organisation, Committee of Experts on the Application of Conventions and Recommendations (ILO CEACR). 2019. Direct Request (CEACR) - adopted 2018, published 108th ILC session (2019). Discrimination (Employment and Occupation) Convention, 1958 (No. 111) – Ukraine. Retrieved from:

https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:13100:0::NO::P13100_COMMENT_ID:3959339

International Monetary Fund (IMF). 2015. *Fair Play: More Equal Laws Boost Female Labour Force Participation*. Washington, D.C.: IMF. Retrieved from:

<https://www.imf.org/external/pubs/ft/sdn/2015/sdn1502.pdf>

International Renewable Energy Agency (IRENA). 2019. *Renewable Energy: A Gender Perspective*. Abu Dhabi: IRENA. Retrieved from: https://irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Gender_perspective_2019.pdf

https://irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Gender_perspective_2019.pdf

Islam, Asif, Silvia Muzi, and Mohammad Amin. 2019. Unequal Laws and the Disempowerment of Women in the Labour Market: Evidence from Firm-Level Data. *Journal of Development Studies*, 55(5), 822-44.

Itaipu. Nd. Igualdade de oportunidades. *Itaipu.gov.br* [website]. Retrieved from:

<https://www.itaipu.gov.br/capa-responsabilidade-social>

Kavasa, Dace, and Gundega Rupenheite. 2017. *Sexual harassment at workplace: Legal and policy challenges in the Republic of Kazakhstan*. Almaty: UN Women. Retrieved from:

<https://eca.unwomen.org/en/digital-library/publications/2017/07/sexual-harassment-at-workplace-legal-and-policy-challenges-in-the-republic-of-kazakhstan>

KAZENERGY. Nd. Women in Energy Club. *Kazenergy.com* [website]. Retrieved from:

<http://www.kazenergy.com/ru/operation/the-development-of-human-capital/51/173/>

KAZENERGY. 2017. *The National Energy Report*. Nur-Sultan: KAZENERGY. Retrieved from:

http://www.kazenergy.com/upload/document/energy-report/National_Energy_Report-ENGLISH_03.09.pdf

KAZENERGY. 2019. *The National Energy Report*. Nur-Sultan: KAZENERGY. Retrieved from:

http://www.kazenergy.com/upload/document/energy-report/NationalReport19_en.pdf

KazMunayGas. 2017. *Sustainability Report* [online]. Retrieved from:

http://ir.kmg.kz/storage/files/b53c8ab83e604c91/KMG_NC_OUR_2017_EN.pdf

Kring, Sriani Ameratunga. 2017. Gender in Employment Policies and Programmes: What Works for Women? *Employment Working Paper No. 235*. Employment Policy Division, International Labour Organisation. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_613536.pdf

https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_613536.pdf

Kurshitashvili, Nato, and Godze Isik. 2018. Lifting legal barriers on women's employment: How it impacts Ukraine's logistics and transport sector. *Eurasian Perspectives* [World Bank blogs]. 12 January. Retrieved from: <https://blogs.worldbank.org/europeandcentralasia/lifting-legal-barriers-women-s-employment-how-it-impacts-ukraine-s-logistics-and-transport-sector>

Lee, Lind-Eling, Ric Marshall, Damion Rallis, and Matt Moscardi. 2015. *Women on Boards: Global Trends in Gender Diversity on Corporate Boards*. New York: MSCI ESG Research Inc. Retrieved from:

<https://www.msci.com/documents/10199/04b6f646-d638-4878-9c61-4eb91748a82b>

MacDougall, Andres, John M. Valley, Ramz Aziz, Marleigh Dick, Aly Kim, Bradley Lastman, Tiye Traore, and Cory Bettel. 2018. *Report: Diversity Disclosure Practices 2018: Women in Leadership Roles at TSX-listed Companies*. Toronto: Osler, Hosking, and Harcourt LLP. Retrieved from:

<https://www.osler.com/en/resources/governance/2018/report-diversity-disclosure-practices-2018-women-in-leadership-roles-at-tsx-listed-companies>

McLaughlin, Heather, Christopher Uggen, and Amy Blackstone. 2017. The Economic and Career Effects of Sexual Harassment on Working Women. *Gender and Society*, 31(3), 333-58.

MOL Group. 2019. Female Engineers MOL Programme. *MOLGroup.info* [website]. Accessed 20 December 2019. Retrieved from: <https://femp.molgroup.info/en/about>

Morgan, Elysse. 2018. Energy Australia Closes Gender Pay Gaps Overnight, Literally. *ABC News* [online]. 7 March. Retrieved from: <https://www.abc.net.au/news/2018-03-07/energy-australia-closes-gender-pay-gap-overnight/9524770>

National Grid. Nd. Responsibility and Sustainability. *Nationalgrid.com* [website]. Retrieved from: <https://www.nationalgrid.com/group/responsibility-and-sustainability/celebrating-inclusion-and-diversity-national-grid>

Noland, M., Moran, T. and Kotschwar, B. 2016. *Is gender diversity profitable? Evidence from a global survey*. Peterson Institute for International Economics Working Paper Series, 16-3: <https://piie.com/publications/wp/wp16-3.pdf>

Office for National Statistics (ONS). 2019. *EMP13: Employment by industry, January-March 2019*. London: ONS. Retrieved from: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/data-sets/employmentbyindustryemp13>

Organisation for Economic Cooperation and Development (OECD). Nd. *OECD Data* [database]. Accessed 20 November 2019. Retrieved from: <https://data.oecd.org/>

Organisation for Economic Cooperation and Development (OECD). 2017. *Better governance for gender equality* [flyer]. Retrieved from: <https://www.oecd.org/gov/gender-public-life-flyer.pdf>

Origin Energy. Nd. *Achieving Gender Diversity* [sustainability brief]. Retrieved from: <https://www.originenergy.com.au/content/dam/origin/about/our-approach/docs/sustainability-achieving-gender-diversity.pdf>

Orser, Barbara. 2001. *Chief Executive Commitment: The Key to Enhancing Women's Advancement*. Ottawa: Conference Board of Canada.

Pearl-Martinez, Rebecca, and Jennie C. Stephens. 2017. Toward a Gender Diverse Workforce in the Renewable Energy Transition. *Sustainability: Science, Practice and Policy* 12(1): 8-15.

Pearl-Martinez, Rebecca. 2014. *Women at the Forefront of the Clean Energy Future*. A White Paper of the USAID/IUCN Initiative Gender Equality for Climate Change Opportunities (GECCO). Washington, D.C.: IUCN-USAID. Retrieved from: https://portals.iucn.org/union/sites/union/files/doc/women_at_the_forefront_of_the_clean_energy_future_1.20.15.pdf

Powerful Women (PFW). Nd. *Powerfulwomen.org.uk* [website]. Accessed 20 December 2019. Retrieved from: <http://powerfulwomen.org.uk/>

Rick, Katharina, Ivan Marten, and Ulrike von Lonski. 2017. *Untapped Reserves: Promoting Gender Balance in Oil and Gas*. London: World Petroleum Council / Boston Consulting Group. Retrieved from: <https://www.bcg.com/en-gb/publications/2017/energy-environment-people-organization-untapped-reserves.aspx>

Rock, David, and Heidi Grant. 2016. Why Diverse Teams Are Smarter. *Harvard Business Review*. 4 November. Retrieved from: <https://hbr.org/2016/11/why-diverse-teams-are-smarter>

Rojas, Ana, Maria Prebble, and Jackeline Siles. 2015. Flipping the switch: Ensuring the energy sector is sustainable and gender-responsive. In Lorena Aguilar, Margaux Granat, and Cate Owren (Eds.), *Roots for the Future: The Landscape and Way Forward on Gender and Climate Change*. Washington, D.C.: IUCN and GGCA. Retrieved from: <https://portals.iucn.org/library/sites/library/files/documents/2015-039.pdf>

Russian Federal State Statistics Service (Rosstat). 2018. *Women and Men of Russia* [online]. Retrieved from: http://www.gks.ru/free_doc/doc_2018/wo-man18.pdf

Sakhonchik, Alena. 2016. Remnants of the Soviet past: Restrictions on women's employment in the Commonwealth of Independent States. *Voices* [World Bank blogs]. 28 April. Retrieved from: <https://blogs.worldbank.org/voices/remnants-soviet-past-restrictions-womens-employment-commonwealth-independent-states>

Shell. 2016. *Diversity and inclusion at Shell: Driving progress through people* [webpage]. Retrieved from: https://www.shell.com/about-us/our-values/icr_content/par/textimage_1749705441.stream/1475835460355/bd201e98ae3d2de3691966458f98bdd43627b33bb4b211dc0afb144b90cdeaab/diversity-and-inclusiveness-at-shell-driving-progress-through-people.pdf

Shell. 2018. *Sustainability Report 2018* [online]. Retrieved from: <https://reports.shell.com/sustainability-report/2018/>

SSE. 2017. *Valuing Difference: Calculating the financial return from inclusion and diversity initiatives at SSE*. Perth: SSE. Retrieved from: https://sse.com/media/481527/DiversityReport_FINAL.pdf

State Statistical Committee of the Republic of Azerbaijan. 2017. *Gender Indicators: Women and men in Azerbaijan* [database]. Retrieved from: <https://www.stat.gov.az/source/gender/?lang=en>

Statistics Canada. 2018. *Labour force characteristics by industry* [online]. Retrieved from: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410002301>

STEMReturners.com. Nd. The Programme [online]. Accessed 20 December 2019. Retrieved from: <https://www.stemreturners.com/the-programme/>

The Economist. 2018. Skirting Boards: Why Board Quotas Are No Friend to Women Workers. 15 February. Retrieved from: <https://www.economist.com/leaders/2018/02/15/why-board-quotas-are-no-friend-to-women-workers>

The Moscow Times. 2019. Russia Opens 350 Banned Professions to Women, Stripping Soviet-Era Restrictions. 16 August. Retrieved from: <https://www.themoscowtimes.com/2019/08/16/russia-opens-350-banned-professions-to-women-stripping-soviet-era-restrictions-a66903>

Tsvetanova, Gergana. 2018. The impact of legal reforms on women and girls: Evidence from Bulgaria. *Jobs and Development* [World Bank blogs]. 10 December. Retrieved from: <https://blogs.worldbank.org/jobs/impact-legal-reforms-women-and-girls-evidence-bulgaria>

UK Resource Centre (UKRC). Nd. *UK Resource Centre for Women in Science, Engineering, and Technology* [website]. Accessed 18 December 2019. Retrieved from: <http://www.setwomenstats.org.uk/>

United Nations Committee for the Elimination of All Discrimination against Women (UN CEDAW). 2019. *Concluding observations on the fifth periodic report of Kazakhstan*. CEDAW/C/KAZ/CO/5. Retrieved from: https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=CEDAW%2FCO%2FKAZ%2FCO%2F5&Lang=en

United Nations Committee for the Elimination of All Discrimination Against Women (UN CEDAW). 2016. *Communication No. 60/2013: Views adopted by the Committee at its sixty-third session*. CEDAW/C/63/D/60/2013. Retrieved from: https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=CEDAW/C/63/D/60/2013&Lang=en

United Nations High Level Panel on Women's Economic Empowerment (UN HLP). 2016. *Leave no-one behind: A call to action for gender equality and women's economic empowerment*. New York: United Nations. Retrieved from: <https://www2.unwomen.org/-/media/hlp%20wee/attachments/reports-toolkits/hlp-wee-report-2016-09-call-to-action-en.pdf?la=en&vs=1028>

United Nations High Level Panel on Women's Economic Empowerment (UN HLP). 2017. *Leave no-one behind: Taking action for transformational change on women's economic empowerment*. New York: United Nations. Retrieved from: <https://www2.unwomen.org/-/media/hlp%20wee/attachments/reports-toolkits/hlp-wee-report-2017-03-taking-action-en.pdf?la=en&vs=5226>

United States Agency for International Development (USAID). 2018. *Women's Wage Employment in Developing Countries: Regulatory Barriers and Opportunities*. Leadership in Public Financial Management II (LPFMII-18-091). Washington, D.C.: USAID. Retrieved from: https://www.marketlinks.org/sites/marketlinks.org/files/resources/lpfm_ii-18-091_usaid_report_-_womens_wage_employment_in_developing_countries_final_june_2018.pdf

United States Department of Energy (US DOE). 2017. *Quadrennial Energy Review*. Washington, D.C.: US DOE. Retrieved from: <https://www.energy.gov/sites/prod/files/2017/02/f34/Quadrennial%20Energy%20Review--Second%20Installment%20%28Full%20Report%29.pdf>

Willness, Chelsea, Piers Steel, and Kibeom Lee. 2007. A Meta-Analysis of the Antecedents and Consequences of Workplace Sexual Harassment. *Personnel Psychology* 60(1), 127-62.

Women in Mining Canada (WIM-Canada). 2016. *Welcoming to Women: An Action Plan for Canada's Mining Employers*. Toronto: Women in Mining Canada. Retrieved from: <https://wimcanada.org/wp-content/uploads/2017/01/WIM-NAP-book-full.pdf>

World Bank. 2012. World Development Report 2012: Gender Equality and Development.

<https://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1315936222006/Complete-Report.pdf>

World Bank. 2018. *Women, Business and the Law 2018*. Washington, D.C.: World Bank Group. Retrieved from: <https://openknowledge.worldbank.org/bitstream/handle/10986/29498/9781464812521.pdf>

World Bank. 2019. *Women, Business and the Law 2019: A Decade of Reform*. Washington, D.C.: World Bank Group. Retrieved from:

<https://openknowledge.worldbank.org/bitstream/handle/10986/31327/WBL2019.pdf?sequence=4&isAllowed=y>

World Economic Forum (WEF). 2016. *The Industry Gender Gap: Women and Work in the Fourth Industrial Revolution*. Geneva: WEF. Retrieved from:

http://www3.weforum.org/docs/WEF_FOJ_Executive_Summary_GenderGap.pdf

Zveglich, Joseph, and Yana van der Meulen Rodgers. 2003. The Impact of Protective Measures for Female Workers. *Journal of Labour Economics*, 21(3), 533-55.

Газета.uz. 2019. Список запрещенных для женщин профессий отменяется. 7 March. Retrieved from:

<https://www.gazeta.uz/ru/2019/03/07/women/>