

Improving gender balance in the nuclear sector

- The 38 nations of the OECD have committed to improving gender balance in the nuclear sector and have formally called on national authorities and the industry to increase the number of women in science, technology, engineering and mathematics (STEM) roles and leadership positions.
- More women are needed in the nuclear sector but many are discouraged from nuclear science and technology careers and then find obstacles to their retention and career advancement.
- If the impact of family responsibilities and gender-based harassment are properly addressed more women will progress towards leadership roles in the sector. Developing more women leaders requires removing unequal gender impacts on career advancement.
- Ongoing data collection and analysis are essential to measuring progress and establishing accountability.

What's the problem?

Despite progress in improving gender equality in education, employment, entrepreneurship, and public life in the member countries of the Nuclear Energy Agency (NEA), women are still substantially under-represented in the nuclear sector. Data collected and published by the NEA in 2023 highlights the scale of the challenge. While women such as Lise Meitner and Marie Skłodowska-Curie helped establish the field, only about 20% of the nuclear sector's science, technology, engineering and mathematics (STEM) workforce is female. The numbers fall dramatically at the leadership level.

Further, the current recruitment, retention and promotion rates of women are insufficient to improve this situation any time soon. The 8 000 women who participated in the NEA's international survey say that pregnancy and family responsibilities have negatively impacted their careers. They also report hostility in the workplace, stereotyping, micro-aggressions and unconscious bias in male-dominated work cultures.

Other STEM fields show similar trends, but in the case of the nuclear sector there are unique factors: some aspects of the sector's culture arise from the Cold War and its early ties to military programmes. Nuclear facilities are often sited in remote locations and characterised by shift work, both of which can hinder female participation.

The nuclear sector therefore requires specific policy interventions to remove any barriers to women entering the field and to enable their participation and advancement. Governments are uniquely placed to lead. This is because unlike most other high technology fields, governments have considerable ability to influence the culture of the nuclear sector due to their extensive funding of nuclear technology at all stages of its life cycle.

Why is this important?

Governments all over the world have committed to reach net zero carbon emissions by mid-century. Net zero is a generational challenge affecting every part of society to which nuclear energy can provide an important contribution – particularly now that energy security has risen to the top of policymaker agendas. The lack of gender balance is therefore a potentially critical problem for those countries that choose to use nuclear energy as part of their strategy. More professionals will be needed to research and develop new technologies, as well as to build new sites, operate plants and regulate a changing industry. Nuclear energy must be a part of society, not outside it as it was in its early days. The sector cannot expand as substantially as is needed if it does not reflect the wider society in its diversity and views.

After many years of discussion and promise, governments have now decided to take substantive action to bring more women into the nuclear sector, support them once they join, and to improve their opportunities to move into leadership roles.

The Framework: **Attract, Retain and Advance**



The three pillars of the NEA policy framework

What should policymakers do?

On 8 June 2023, the 38 nations of the OECD issued an historic Recommendation on 'Improving the Gender Balance in the Nuclear Sector'. These governments formally committed themselves to the 'Attract, Retain and Advance Plus Data' Framework developed by the NEA and to encourage, incentivise or direct the nuclear agencies, contractors and public funding recipients under their purview to implement it. The pillars of this Framework, described below, are undergirded by a reporting regime to measure progress and accountability.

Promote actions that attract women into the nuclear sector

Governments should attract women into nuclear science and technology careers through public communications, enhancing the educational pipeline, and more balanced recruitment and hiring.

Public communication campaigns are recommended to change gender-based perceptions of the nuclear sector. Nuclear science and technology needs to be incentivised as a field for women. Any campaign could highlight the social value and impact of the nuclear energy field, as well as the career opportunities available to women and girls.

Governments should also support efforts to plug the holes in the educational pipeline. Introducing students to role models and organising career days, mentoring workshops and other events to encourage students, particularly girls, to pursue STEM studies has proven effective.

Finally, gender-based barriers need to be identified and eliminated. This requires campaigns to attract women to the sector: using gender-neutral language in job announcements and hiring criteria; improving gender balance on selection panels; and regularly reviewing practices to ensure equal pay for all new employees.

Help retain and support women in the nuclear sector

Addressing the impacts related to family responsibilities can help women remain in the sector and build their careers. Flexible teleworking can help, as can developing alternate career pathways for work characterised by off-normal hours. Also important is to provide childcare, lactation facilities and other dependent care resources in the workplace as well as attractive parental or family leave. The impact on career progress of taking such leave should be mitigated.

To encourage action and accountability, performance measurement and compensation of executives should be linked to implementing measures to improve gender balance and an inclusive work culture.

Policymakers should promote research on the workplace experience, including on gender-based harassment and discrimination, unequal career advancement and compensation by gender, as well as support for parental and family leave.

Encourage policies that advance women in the nuclear sector

Unequal gender impacts on the advancement of women should be identified and addressed. This could include providing unconscious bias and inclusivity training for everyone involved in hiring and promoting staff. Leadership and career advocacy training can help empower employees, particularly women in STEM roles. Managers should be trained in supporting diversity in the workplace and removing any gender-based barriers to advancement. Organisational resource groups and support networks that include male allies can help promote gender equality and awareness of the work needed to reach it.

National level research on gender representation in the nuclear workforce is needed. Data collection can focus on salaries, disaggregated by gender, job function and management level; gender representation in job functions; participation in career development and training programmes; policies to improve gender balance, including pay equity and parental leave; and examples of success that can be shared as best practices.

Collect data and analysis to create accountability

Actors in the nuclear sector should, as appropriate, set and issue short- and long-term goals for actions to achieve gender balance. A senior executive in each nuclear organisation should be designated to oversee these actions with sufficient resources identified and allocated to achieve them.

It is important for organisations in the nuclear sector to participate in data collection efforts facilitated by the NEA in order to identify trends and effective solutions and to monitor progress in the participation and advancement of women in the nuclear sector.

Further reading

NEA (2023), *Gender Balance in the Nuclear Sector*, OECD Publishing, Paris, www.oecd-nea.org/gender-balance.

OECD (2022), "Report on the Implementation of the OECD Gender Recommendations", www.oecd.org/mcm/Implementation-OECD-Gender-Recommendations.pdf (accessed 15 May 2023).

OECD (2023), *Joining Forces for Gender Equality: What is Holding us Back?*, OECD Publishing, Paris, <https://doi.org/10.1787/67d48024-en>.

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