



# Women in Renewables and Energy (WiRE) Queensland

Insights from the Ai Group WiRE QLD Survey  
2023

Ai Group Research & Economics  
September 2023

[www.aigroup.com.au/policy-and-research/economics/](http://www.aigroup.com.au/policy-and-research/economics/)



# The Queensland Women in Renewables and Energy (WiRE) project

---

## Women in Renewables and Energy in Queensland

As the energy transition gathers pace, the energy workforce in Australia is set to rapidly expand.

As a renewables energy hub, Queensland is likely to see significant energy workforce growth in the coming years.

The energy sector is a traditionally male-dominated industry, with women comprising only 35% of the Queensland energy workforce in 2022.

There is also significant occupational segregation in the Australian energy sector, with women occupying only 4% of technical and trades roles.

There are multiple barriers to growing women's participation in male-dominated industries like energy, including cultural, institutional and demographic factors.

Understanding the gender factors which influence the experience of women in the Queensland energy sector is key to improving gender equality as the industry grows with the renewables transition.

## The Ai Group Queensland WiRE Survey 2023

The Queensland Department of Energy and Public Works partnered with Ai Group to research the experience of Women in Renewables and Energy (WiRE).

A survey of female workers in Queensland energy – including the electricity industry and energy-related roles in other industries – was conducted in Jul/Aug 2023.

The survey collected information on the demographics, working arrangements, and barriers/enablers to career advancement, of the Queensland WiRE workforce.

It was distributed to women in energy-related roles by the Queensland energy Government-owned Corporations, and Ai Group industrial members participating in the Queensland energy supply chain.

It builds on and extends existing data on employment-related gender indicators, collected in ABS surveys.

The WiRE survey provides the highest resolution data ever collected on the gender factors shaping the experience of women in the Queensland energy sector.

# WiRE Data: What is the size of the Queensland WiRE workforce?

Using data collected in the Ai Group WiRE survey and ABS labour statistics, we estimate the current energy-related workforce in Queensland employs **approximately 10,000 women**.

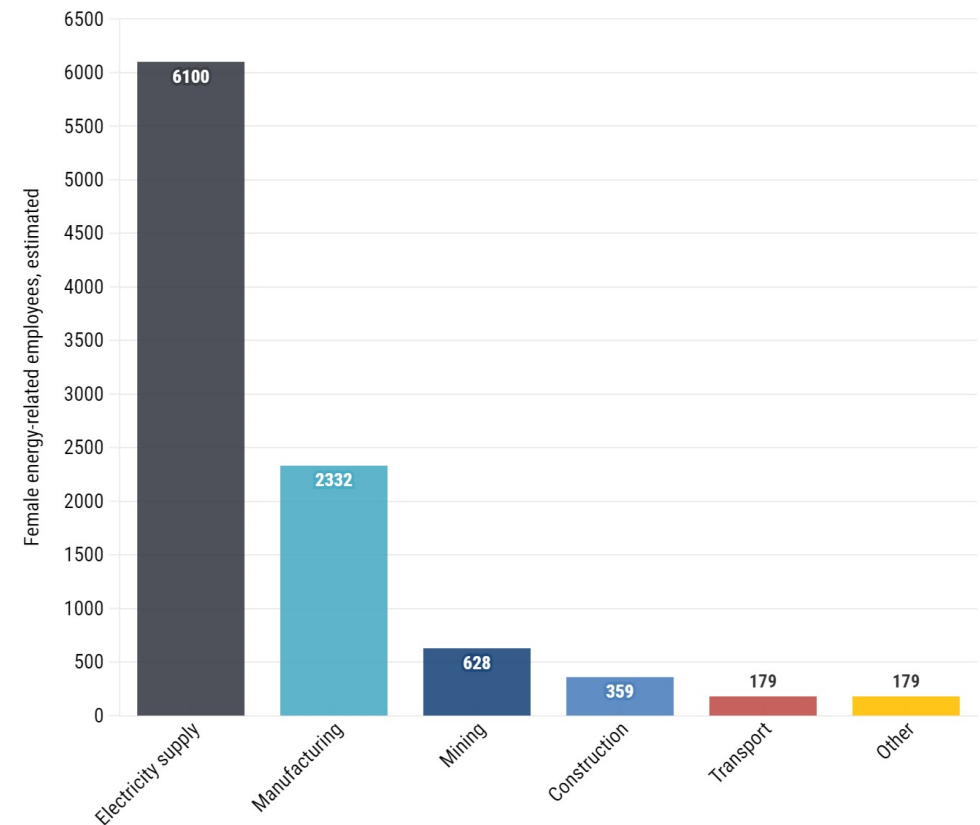
This workforce includes both women working in energy supply services, and those who self-identify as having energy-related roles in other industrial sectors.

The majority of the Queensland WiRE workforce (62%) is employed in the electricity supply industry. This industry includes electricity generation, transmission and distribution.

A further quarter (23%) are employed in energy-related roles in the manufacturing industry.

Smaller numbers of WiRE workers are also employed in mining, construction and transport.

Estimates of the WiRE workforce in Queensland



Source: Ai Group WiRE QLD Survey 2023, ABS Characteristics of Employment Survey 2022 • Ai Group population estimates.

**Ai**GROUP

# Forms of employment and flexibility



# WiRE Data: How is the Queensland WiRE workforce employed?

The Queensland WiRE workforce is predominantly employed in more secure forms of employment.

89% of the WiRE workforce is employed on a permanent full-time basis, and 5% are employed permanent part-time.

Only 6% are employed on a casual basis.

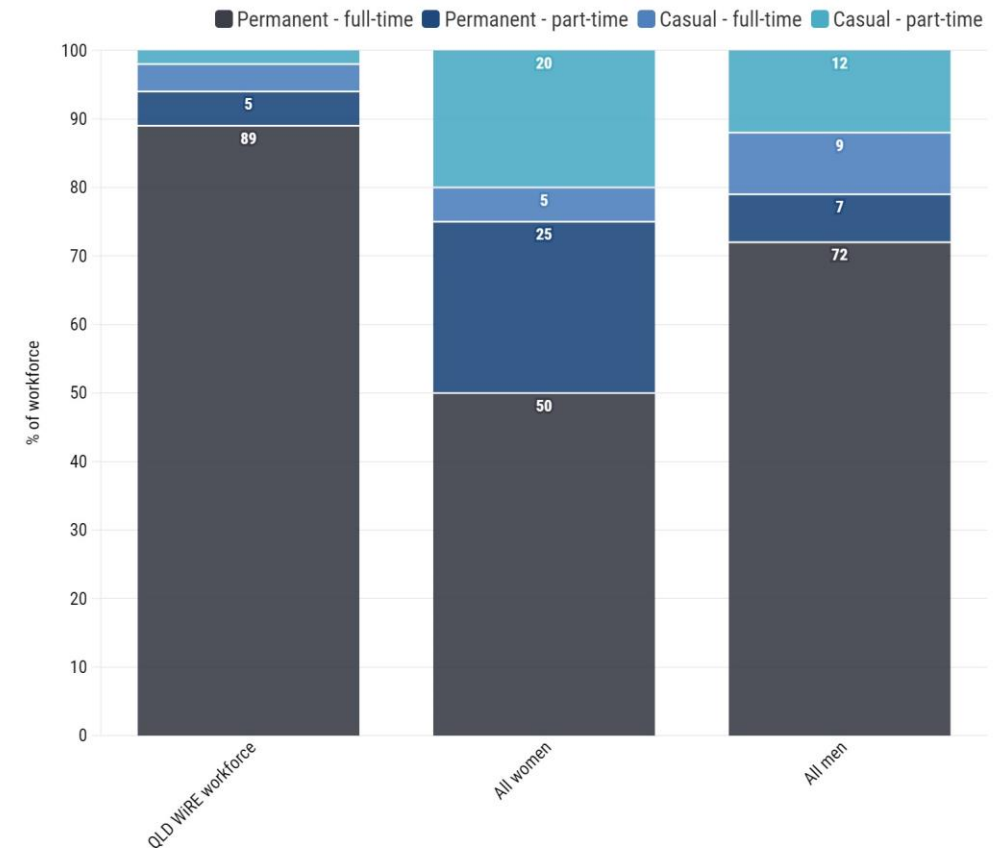
This is significantly higher than the broader female workforce, where 25% of employees are casual and only 50% are permanent full-time.

It is also higher than for the broader male workforce.

This indicates that WiRE roles in Queensland provide a very high level of employment security.

It also demonstrates employees achieve flexibility through within-role practices, rather than the use of part-time or casual forms of employment.

Employment status of Queensland WiRE workforce



# WiRE Data: How does the Queensland WiRE workforce use flexible work?

The Queensland WiRE workforce has very high rates of access to flexible forms of employment.

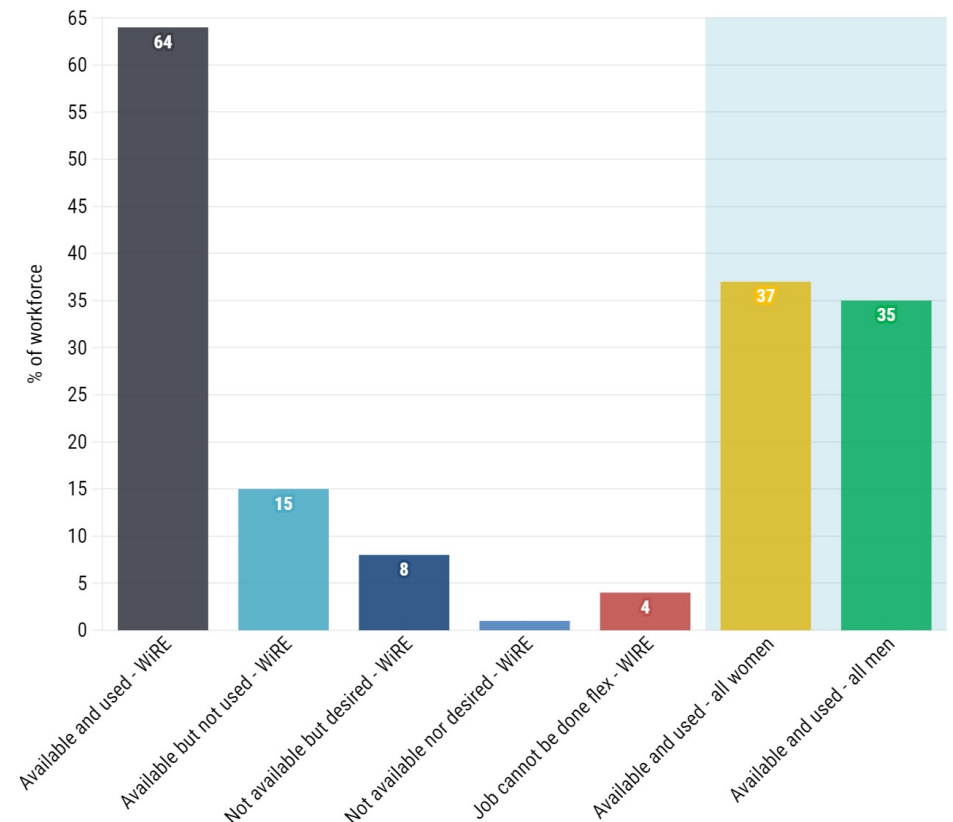
64% of the WiRE workforce have access to and use various flexible working arrangements. Another 15% have access but do not currently use flexible work.

This is considerably higher than flexible work rates for the general workforce, which are 37% for women and 35% for men.

Only 8% of the WiRE workforce desire but do not have access to flexible work, while another 4% are employed in roles which cannot be performed flexibly (for example, maintenance technicians).

This indicates the flexible working arrangements are well-established for Queensland WiRE employees, and the industry leads in flexible work implementation.

Flexible work status of Queensland WiRE workforce



Source: Ai Group WiRE QLD survey 2023, ABS Characteristics of Employment Survey 2022

# WiRE DATA: What are the shiftwork obligations of the Queensland WiRE workforce?

Only 6% of WiRE employees usually work shiftwork, and 5% are usually required to be on call at non-standard hours.

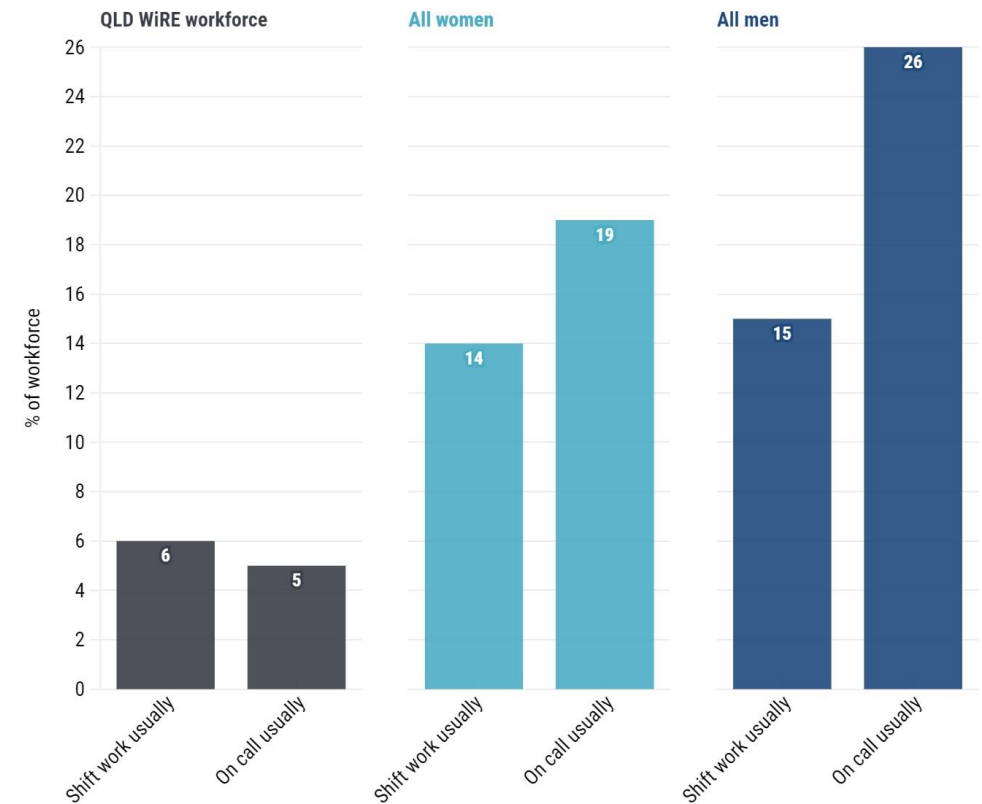
These rates are considerably lower than for the broader female or male workforces.

Energy-related roles are frequently associated with non-standard working arrangements (particularly in technical and trades roles).

This data suggests that the WiRE workforce are preferentially selecting into more flexible roles that do not require non-standard working arrangements.

As non-standard working arrangements typically command a wage premium, this is likely to contribute to the gender pay gap in the Queensland energy sector.

## Shiftwork and on-call status of Queensland WiRE workforce



Source: Ai Group WiRE QLD survey 2023, ABS Characteristics of Employment Survey 2022

# WiRE feedback: Forms of employment and workplace flexibility themes

---

## Work-life balance and increased flexibility

WiRE respondents emphasised the need for a shift in cultural norms and expectations, recognising that women often perform other social roles and that this should not hinder professional advancement.

Respondents would like to see an environment where women can pursue both their career aspirations and family commitments without compromise.

*"Achieving gender equity involves creating an environment where women can excel without compromising their personal lives. We need support systems that ensure equal opportunities and fair treatment for women in all aspects of their careers."*

## Family-friendly policies for women and men

WiRE respondents advocated for a workplace culture that values family responsibilities for both genders, and emphasise that family-friendly policies should extend beyond traditional boundaries.

This addresses not only childcare needs but also broader aspects of work-life balance.

*"Wouldn't it be great to get to a point where we could treat everyone equally? Offer some of the same caring benefits to men, make it less of a 'women's issue' and more of a 'family issue'. Make it socially and workplace acceptable for them to take time out or work flexibly to care for children, parents as well."*



**Ai**GROUP

# Family and work



# WiRE Data: What is the age profile of the Queensland WiRE workforce?

The Queensland WiRE workforce has a broadly similar age profile to the broader Australian workforce.

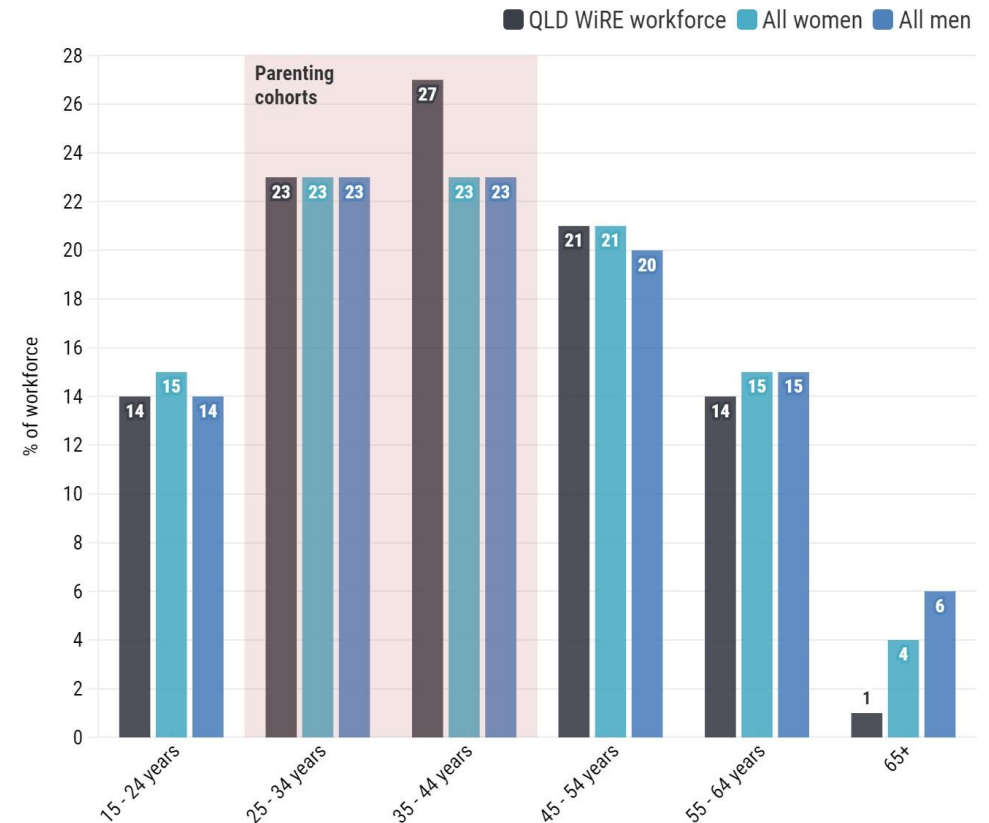
A slightly larger share of the WiRE workforce is 35-44 years when compared to all employed women (27% vs 23%), and a slightly smaller share is 65+ years (1% vs 4%).

All other age ranges are the same as the broader workforce population.

Unlike some other male-dominated industries making a transition towards greater gender balance, there is no youth bias in the Queensland WiRE workforce.

50% of the WiRE workforce are in age cohorts typically associated with parenting responsibilities (25-34 and 35-44 years).

## Age profile of Queensland WiRE workforce



Source: Ai Group WiRE QLD survey, ABS Characteristics of Employment Survey 2022

# WiRE Data: What are the parenting responsibilities of the Queensland WiRE workforce?

The Queensland WiRE workforce has slightly higher rates of parenting responsibilities than the general workforce.

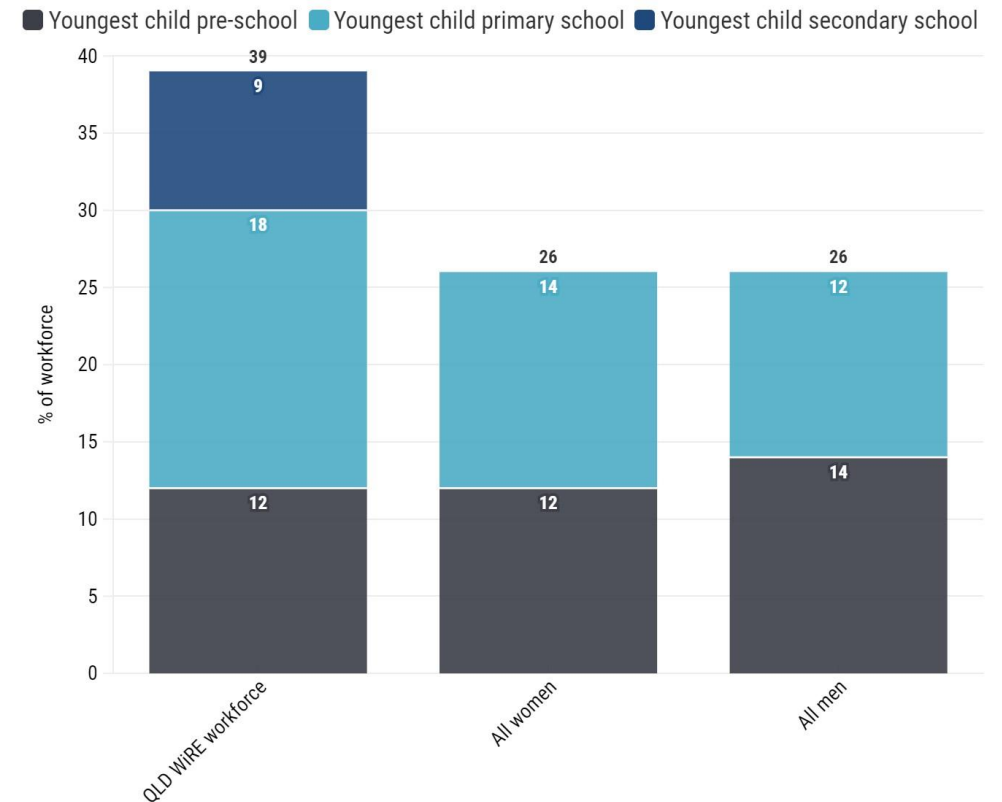
30% of WiRE employees have children in the pre-school or primary school age cohorts. These are the child cohorts most associated with constraints on women's labour market participation.

This rate is slightly higher than for the general female and male workforces (both 26%). It is accounted for by a slightly higher rate of school-aged children in the WiRE workforce.

Another 9% have children in secondary school. Data for the general workforce is not available.

This indicates that work flexibility to accommodate parenting responsibilities is important for a sizeable minority of the WiRE workforce.

## Parenting responsibilities of Queensland WiRE workforce



Source: Ai Group WiRE QLD survey 2023, ABS Characteristics of Employment Survey 2022

# WiRE Data: What is the employer PPL access of the Queensland WiRE workforce?

The Queensland WiRE workforce has comparable access to employer-provided Paid Parental Leave (PPL) schemes.

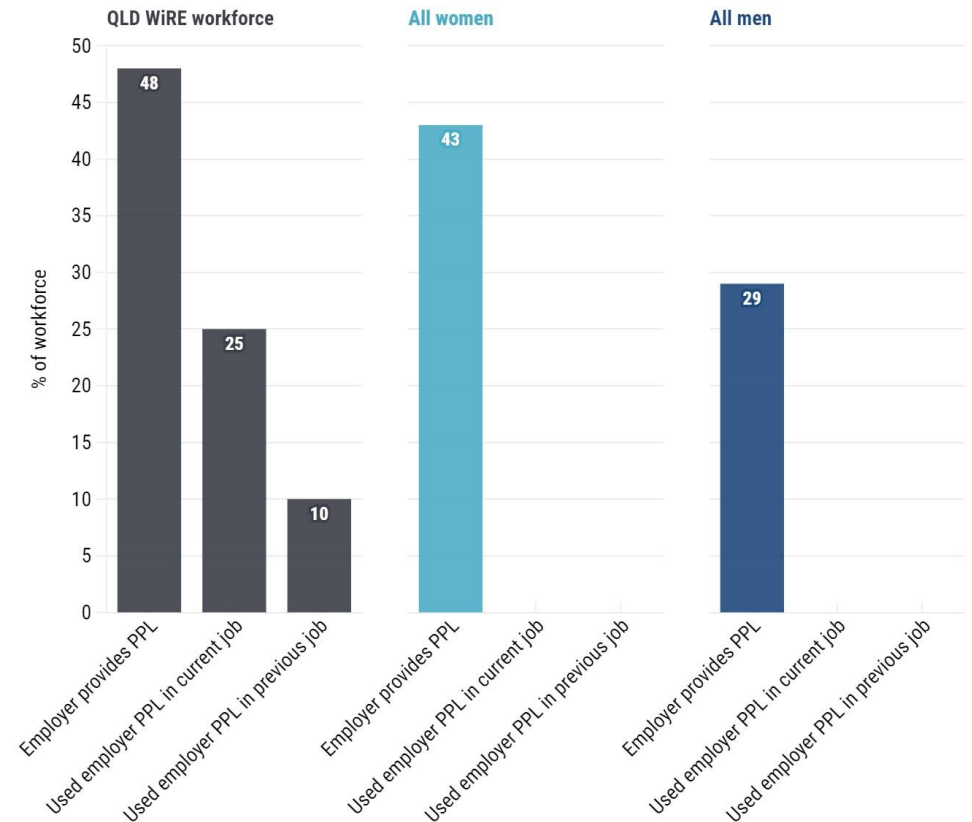
Around half (48%) of the WiRE workforce have access to employer PPL. This is slightly higher than for the general female workforce (43%), and higher than for the male workforce (29%).

Approximately one in three WiRE employees have utilised employer PPL – 25% in their current job, and 10% in a previous job.

PPL utilisation data for the general workforce is not available.

These employer PPL utilisation rates are consistent with the age profile of the WiRE workforce.

## Employer PPL status of Queensland WiRE workforce



# WiRE feedback: Family and work commitments themes

---

## Childcare and participation

While a minority of the WiRE workforce have child-caring responsibilities at any time, it is identified as a major barrier across employee life course.

They recognise that this support not only benefits individual women but also contributes to a more inclusive workforce, enabling all employees to perform at their best without compromising their family roles.

*"I know a lot of women that struggle to get childcare or simply can't afford it. This is someone that concerns me for the future as I plan to have children one day."*

*"[We need] the ability to have more flexibility with working from home arrangements and ability to still have great work life balance to look after younger children."*

## Employer PPL

WiRE respondents highlighted the significance of offering comprehensive parental leave policies that go beyond legal requirements.

By funding parental leave, companies acknowledge the unique challenges faced by both women and men during the crucial early stages of parenthood.

Employer-funded parental leave is seen as a powerful step towards establishing an inclusive workplace:

*"Employer-funded parental leave sends a powerful message: our organisation understands and supports the importance of family life. By offering this assistance, we create an environment where employees can confidently embrace their roles as parents without compromising their careers."*

**Ai**GROUP

# Barrier and enablers to career advancement



# WiRE Data: What are the barriers to career advancement of the Queensland WiRE workforce?

The Queensland WiRE workforce identifies a lack of flexibility as the leading barrier to career advancement.

Flexibility factors – around hours/location of work, and due to caring responsibilities – are identified as the top-ranked barriers, both at present and in future.

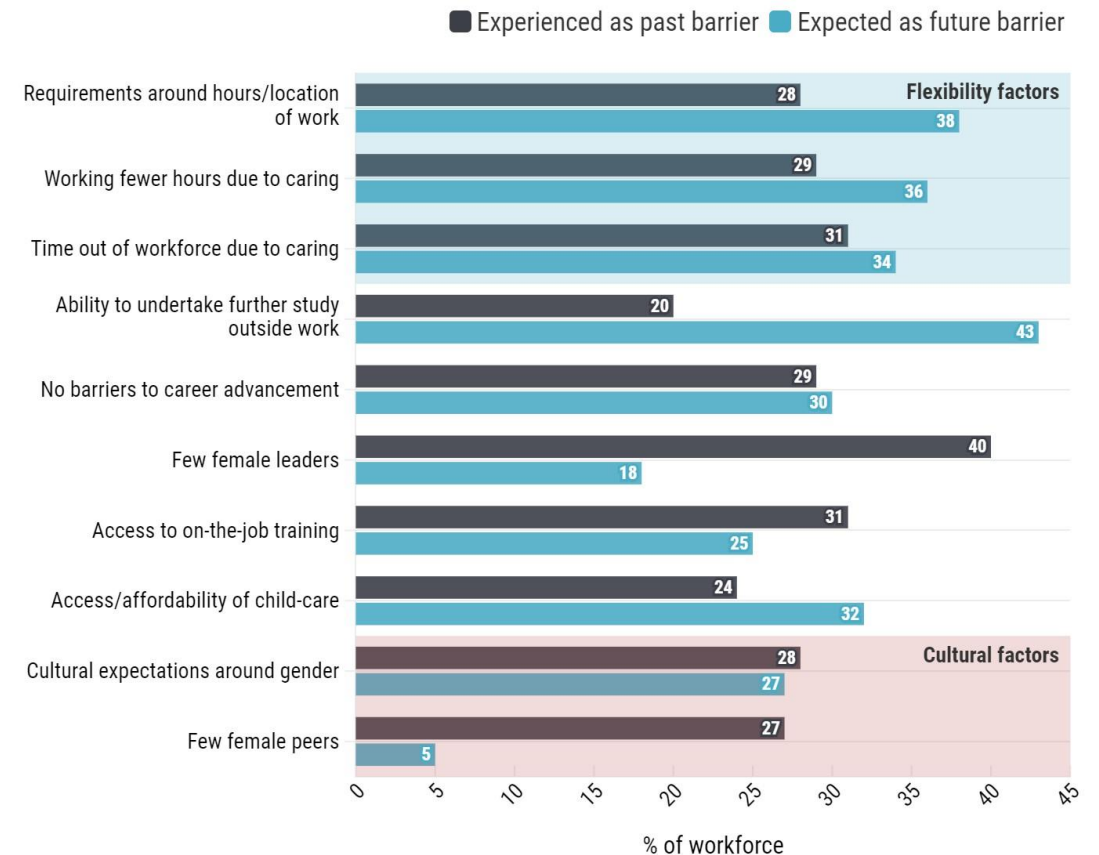
Cultural factors – expectations around gender roles and the presence of female peers - were the lowest ranked factors.

Childcare access was identified as important for a sizeable minority of WiRE employees, at number similar to those utilising employer PPL.

40% identify lack of female leaders as a past barrier, but only 18% expect it will be a barrier in future.

Just under one-in-three report experiencing no barriers to career advancement.

## Barriers to advancement of Queensland WiRE workforce



# WiRE feedback: Skills and advancement themes

---

## Education and training

WiRE respondents closely linked gender equality with education and training opportunities. Respondents recognise that equipping themselves with relevant skills and knowledge is key to bridging the gender gap.

Accessible and ongoing learning pathways are especially critical to enabling women to advance into more senior roles.

*“By using cadetships and training programmes, we can ensure women are given the tools to have stable footing in their position within the energy sector. Communication about these roles needs to be directed to young females (at high school and college) who may not understand that this is an option for them.”*

## Greater diversity in skills recognition

WiRE respondents note that traditional expectations over what constitutes the required ‘energy skills’ functions as an informal barrier to women’s advancement.

Recognising a greater range of relevant skillsets – in the same way that the mining sector has – will be essential for opening up advancement pathways for women.

*“A willingness to employ/promote women that may not have energy experience but that have transferrable skills and provide training to fill any gaps. Women are under-represented in energy so it is necessary to be open-minded as to the skills women have to increase numbers in the energy sector.”*



# WiRE Data: What are the enablers of career advancement of the Queensland WiRE workforce?

The Queensland WiRE workforce identifies access to on the job training as the most important past and future enabler of career advancement.

Cultural factors – around female leadership and changing gender expectation – were also identified as leading enablers.

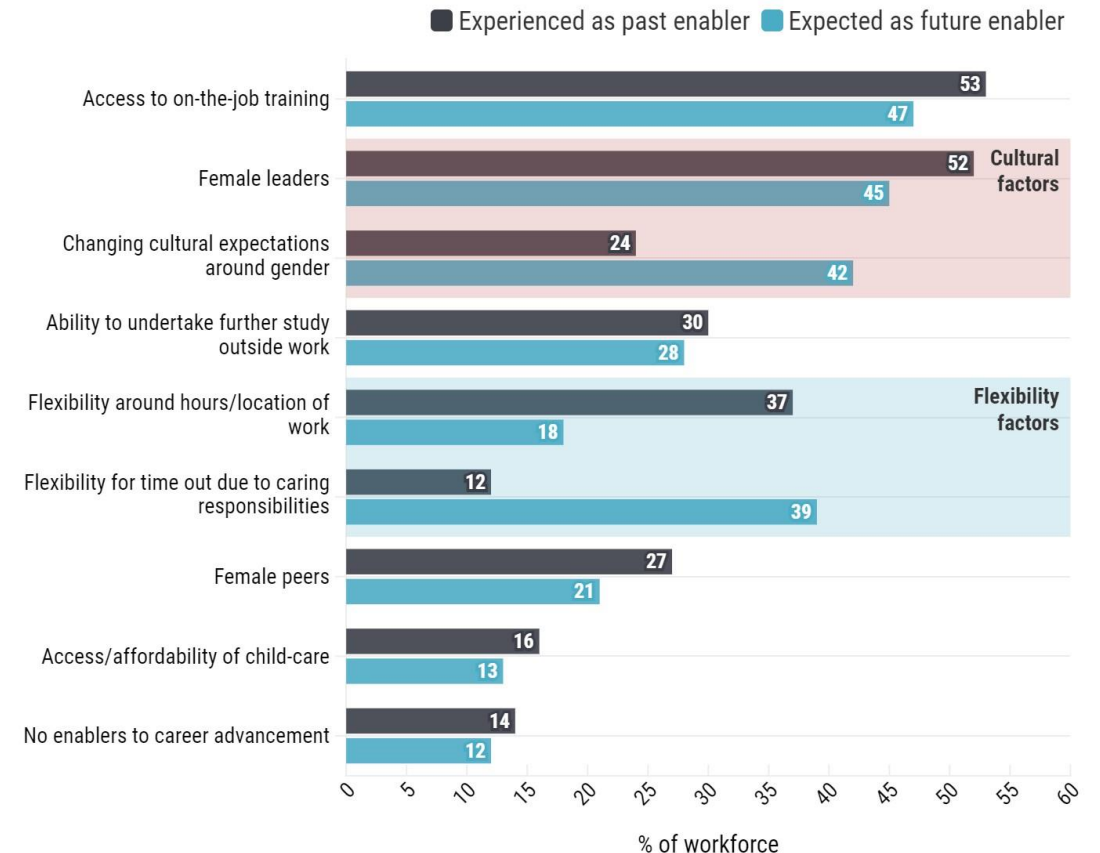
Flexibility factors were medium-ranked, likely reflecting high current levels of flexible working.

Only 24% identify changing cultural expectations around gender roles as an enabler in the past, but 42% expect it will be an enabler in future.

Childcare and the presence of female peers were the lowest-ranked factors.

Just under one-in-three report experiencing no enabler to career advancement.

## Enablers of advancement of Queensland WiRE workforce



# WiRE feedback: Culture and leadership themes

---

## Cultural change and gender norms

WiRE respondents express a commitment to fostering a work environment where all individuals, regardless of gender, have equal opportunities to succeed, grow, and contribute.

This theme encompasses multifaceted efforts, such as closing the gender pay gap, promoting women into leadership positions, and challenging systemic biases.

*"Improving equality outcomes means actively working towards a future where every individual, irrespective of their gender, has an equal chance to thrive. It involves challenging stereotypes, addressing imbalances, and creating a climate where everyone's contributions are acknowledged based on their capabilities."*

## Women in leadership

The aspiration for more women in leadership roles reflects a larger drive for representation. WiRE respondents indicate that visible female leaders not only pave the way for future generations but also reshape industry dynamics.

By advocating for accessible role models, respondents aim to create an environment where women's leadership potential is recognised and supported, fostering a culture of inclusion and opportunity.

*"We need to keep on the trajectory of women in leadership roles. I am seeing more and more women in leadership roles in the mining and energy sector. Its inspiring future girls and young women to aim from that and encouraging businesses and companies to not make gender a deciding factor."*

# About the Ai Group Queensland WiRE 2023 Survey

---

## Survey administration

The survey was administered online in July and August 2023 by the Australian Industry Group (Ai Group) with the support of the Queensland Department of Energy and Public Works (EPW).

Energy-related businesses were invited by Ai Group and EPW to distribute the survey to their female workforces.

Responses were received from 109 women employed in industries directly related to the energy and renewables sector.

The survey asked women about their demographic characteristics, their working arrangements, as well as some of their experience and expectations of employment.

## Data analysis

The Electricity, gas, water and waste sector contributed the highest proportion of respondents (62%).

Professional employees contributed the highest proportion of occupational responses (43%).

Data presented in this report is weighted by occupation, in order to adjust the characteristics of the sample to represent the underlying population.

Occupational weightings for the female workforce in the Australian energy sector were derived from the ABS estimates of Characteristics of Employment survey, August 2022.