The global energy transition offers an unprecedented opportunity to transform the energy sector in all aspects. The transition towards a renewable, distributed, decarbonised energy system is creating an array of social and economic benefits, including employment. Ensuring that the opportunities the transition creates are equally accessible and the benefits are equitably distributed is key.

*Renewable Energy: A Gender Perspective* seeks to improve the understanding of the interplay between renewable energy and gender. A review of the literature and insights from an online IRENA survey – gathered responses from around 1,500 women, men and organisations in the renewable energy sector representing more than 140 countries – are at the heart of this study. The responses shed light on the share of women in the workforce and in decision-making positions, as well as on barriers and solutions in both the modern energy and energy access contexts.

| 1,440 respondents to the IRENA Gender Survey | 1,155 responses from individuals | 285 responses from organisations | 144 countries represented in the responses |
Renewable energy offers a range of unprecedented opportunities. Because of its multi-disciplinary dimension, the renewable energy field exerts an appeal on women that the fossil fuel industry lacks. The survey revealed that women represent 32% of the full-time employees of responding organisations – substantially higher than the 22% average in the global oil and gas industry. Still, in renewables, women’s participation is much lower in science, technology, engineering and mathematics (STEM) jobs than in administration.

Despite the appeal of the sector, women face persistent barriers to entry, to remain in the workforce and to advance. Removing these barriers is essential to meet the growing demand for skills in an expanding industry.

### Barriers to entry

Perceptions of gender roles are seen as the most important barrier to entry into the sector. These are driven by cultural and social norms that influence many of the fundamental decisions people make. STEM skills are critical to many career paths in renewables, but because of prevailing views of women’s abilities, women continue to have a limited presence in these fields. Views about gender roles also translate into a lack of access to career information and to relevant networks for women. They also shape hiring practices as well as the degree to which women have access to such employment entry points as internships and apprenticeships.

### Barriers to retention and career advancement

The ability to stay in a given job and opportunities for professional growth are shaped by a number of factors. Survey respondents saw the glass ceiling as the most important of these, a reality confirmed by the fact that in close to half of all participating private sector firms, men represent at least 75% of board members.

Women frequently face the double burden of balancing work and family, especially during the childbearing years. Mobility requirements and difficult work schedules are demanding for women shouldering family and household duties. Wage inequities are also an issue. Close to two-thirds of IRENA survey respondents believe that women in renewable energy earn less than men in the same position. The existing literature also suggests the lack of a supportive environment in the form of flexible work hours, family-friendly measures, mentoring and networking, training opportunities, and gender equity targets.
According to survey respondents, ingrained social and cultural norms play a central role in the barriers to greater gender balance. The more these norms change – a process that inevitably takes time – the more effective other measures will be. A range of measures were identified by survey respondents as important for overcoming barriers. Most respondents (60-80%) expressed a preference for workplace policies that promote training, gender-sensitive policies, diversity targets, networking and mentoring. Governments and inter-governmental organisations seem more likely to offer such measures.

Women in Renewable Energy: Access Context

The distributed nature of off-grid renewable energy solutions offers tremendous opportunities for women’s engagement along multiple segments of the value chain. Many of the skills needed to take advantage of those opportunities can be developed locally and women are ideally placed to lead and support the delivery of off-grid renewable energy solutions.

Barriers to participation

Women in the access context (where energy access is still being established or expanded) face barriers to participation in the sector. Respondents to the survey noted cultural and social norms, lack of gender-sensitive programmes and policies, and lack of skills and training opportunities as key barriers. Interestingly, cultural and social norms was the barrier selected more often by respondents in Europe and North America, while respondents from other regions were much more likely to select the lack of skills and training.

Policies and solutions

In seeking solutions to improve women’s engagement in the renewables sector for energy access, survey respondents highlighted first the importance of access to training and skills-development programmes. Over half the respondents also cited improving access to finance and mainstreaming the gender perspective in energy access programmes as important to improve women’s engagement.
Conclusions and Way Forward

To advance gender equality in the renewable energy sector, several measures can be taken:

- **Attracting and retaining talent in the sector**: Through policies that allow for work life balance and equal opportunities for professional development. In the access context, efforts beyond skills and training are also needed to unlock new livelihood opportunities focusing on access to financing and markets.

- **Mainstreaming gender in energy sector frameworks** at all levels, including policy making, programme design and project implementation.

- **Tailoring training and skills development** in technical and non-technical subjects, and in broad business and leadership skills. Governments, educational institutions, industry associations, and other actors need to adapt curricula and strengthen mentoring opportunities for women.

- **Mainstreaming gender in energy sector frameworks**

- **Challenging cultural and social norms**: Strengthening the visibility of the diverse roles women are playing in the energy transition and helping them become agents of socio-economic transformation in their communities can exert a strong influence on perceptions of gender roles in any context.

Giving an equal voice to women will broaden perspectives in energy-related decisions from investment priorities to project design and ensure a more just sharing of socio-economic benefits that flow from the energy transition. In short, including women more fully in the renewable energy sector is critical to the success of making the energy system inclusive and sustainable.