Chapter 12. Sustainable Development: Gender

Mario Blázquez de Paz (NHH)

Spring 2022 - NHH

Outline

In this chapter we study the relation between **three different sustainable development goals**: Sustainable Development Goal 5: Gender Equality; Sustainable Development Goal 7: Affordable and Clean Energy; and Sustainable Development Goal 8: Decent Work and Economic Growth.
The chapter is **organized** as follows:

1. **Background**
2. Women in renewable energy: **Modern energy context**
    a. Status and trends
    b. Barriers to entry
    c. Retention and career advancement challenges
    d. Policies and solutions
3. Women in renewable energy: **Access content**
    a. Status and trends
    b. Barriers and challenges
    c. Policies and solutions

This chapter is based on the document "Renewable energy: A gender perspective"

Background

IRENA estimates that the number of jobs in the renewable energy sector could **increase from 10.3 million in 2017 to nearly 29 million in 2050**

Increased women's engagement expands the **talent pool** for the renewables sector

Greater gender diversity also brings substantial **co-benefits**:

- **Better performance overall** (Noland et al., 2016)
- Women are also likely to bring **new perspectives** into their work, are more likely to **act collaboratively** in the workplace and may contribute to **greater fairness** (Moodley et al., 2016)
- A better gender balance in male-dominated professions has been shown to contribute to the **improvement of working conditions** for both men and women, with positive effects on **well-being**, **work culture and productivity** (WISE, 2017)

Modern energy context. Status

1. Employment **classical energy sector**
   - The share of women in the worldwide **oil and gas workforce at** 22%
   - Women fill 27% **of entry-level jobs**
   - Women fill 25% **of midcareer-level jobs**
   - Their share is only 17% **in senior and executive roles**
   - **Only one in a hundred CEOs in the sector is a woman** (Rick et al., 2017)

Modern energy context. Status

2. Employment in the **renewable energy sector. Status**

- Reports from countries such as Canada, Germany, Italy, Spain and the United States suggest that typically less than 30% of jobs in the **renewable energy sector** are held by women
- This contrasts sharply with the fact that **women represent more than** 50% **of university students**, and **almost half the labour force in these countries**
- Women are more likely to be employed in **lower paid, non-technical, administrative and public relations positions** than in technical, managerial or policy making positions

Modern energy context. Barriers to entry

1. Perceptions of gender roles
   - **Social, cultural and gender norms and misperceptions** were identified as factors that erode girls' **confidence, interest and willingness** to engage in STEM (Science, technology, engineering and mathematics) subjects (UNESCO, 2017)
   - Girls are often brought up to believe that STEM subjects are **"masculine" topics** and that **women's ability is innately inferior to that of men**

Modern energy context. Barriers to entry

1. Perceptions of gender roles
   - **Only** 12% **of engineers** in the United Kingdom are women, compared with 47% of the overall workforce
   - Between 2015 and 2016, just 16% **of those who started an engineering or technology degree** in the United Kingdom were women
   - Only 25% **of girls aged 16–19** said in a survey they would ever consider a career in engineering
   - Similar barriers of perception or interest have been identified in Australia, Belgium, Finland, Poland, Spain and Sweden **(OECD Higher Education Programme, 2014)**

Modern energy context. Barriers to entry

2. Women's participation in **STEM fields**
   - The 20% share of women among engineering graduates in **Canada, Finland, Germany and the United States**
   - In **Japan** and the **Republic of Korea**, women represent an even lower proportion – just 5% and 10% of engineers, respectively
   - In **Cyprus** and in the **United Arab Emirates** (UAE) women represent 50% of engineering graduates, in **Denmark** 38%, and in the **Russian Federation** 36%

STEM positions in **energy renewable industry**

- Women occupy 28% of **STEM positions**
- Women occupy the 45% of **administrative positions**

Modern energy context. Barriers to entry

3. **Lack of career information**

- An enduring disadvantage that women and girls face in comparison to their male counterparts is the lack of readily **accessible information about employment occupations** in the energy sector
- Technical occupations have been dominated by men for so long. Therefore, a significant amount of information about job opportunities continues to travel through **familial and professional networks that often are inaccessible to women**

Modern energy context. Barriers to entry

4. Prevailing hiring practices and **unequal access to career entry points**
   - Men tend to apply for jobs even when they meet only some of the requirements, but **women tend not to apply for jobs unless they meet all requirements**
   - Women are also **less likely to negotiate salaries and benefits**
   - In the countries of the Organisation for Economic Co-operation and Development (OECD), such as the United Kingdom, women comprise 94% of childcare apprentices but **under** 4% **of engineering trainees**

Modern energy context. Retention and career

1. **Glass ceiling**

The **lack of equal representation of women in decision-making roles is described as the "glass ceiling"**, where invisible barriers keep women from rising to influential positions, regardless of their qualifications

IRENA's survey responses indicate that men account for a majority of board members at 65% of participating **private sector firms**

In close to **half of all firms**, men represent at least **three-quarters of directors**

The distribution is also heavily male biased among **national agencies** and **intergovernmental organisations** in the sample, although almost a quarter of them have equal representation between the genders. In comparison, **non-governmental organisations** have a much better gender balance (figure below)

Modern energy context. Retention and career

Figure: Gender composition of board of directors in the renewable energy sector

Modern energy context. Retention and career

2. **Work schedules and mobility requirements**

Rigid work schedules were identified by survey respondents as one of the key barriers women face, given that, in many societies, they are expected not only to excel at work but also to reliably perform many tasks outside of work

An added burden is found in mobility requirements, particularly among those in the renewable energy sector who hold field jobs (project planners, installers, operators) and may thus be subject to frequent travel requirements

However, **assumptions about women's willingness or ability to work in certain occupations** or working conditions can themselves become barriers to women's employment

Modern energy context. Retention and career

3. **Wage inequities**

Existing research on women's employment in renewable energy in OECD countries reveals that although average wages in the industry may be higher than in other sectors, **women continue to earn less than men across occupational categories**

As in other sectors, the causes of the gender wage gap in renewable energy appear to be **multifaceted**:

- Women's greater concentration in lower-paying, **non-technical** and **administrative jobs** and in **junior positions**
- Women's comparatively **weaker negotiating positions**
- Their greater likelihood of taking time off from their careers for **parenting and care-giving**
- **Attitudes and values of employers**

Modern energy context. Policies and solutions

1. **Mainstreaming gender perspectives**

To promote gender equality in renewable energy employment, it is important to assess whether gender perspectives enter into decision making. **Gender audits** can help to achieve that objective

A **gender audit** studies legislation, regulations, taxation and specific projects and analyzes their effect on the status of women in society

The basic assumption of gender audits is that public policy affects men and women differentially, stemming from the different roles women and men in the family and their status in the economy

They are essential for constructing more **gender-sensitive policy frameworks**, for providing **support services** and other **incentives to increase gender equity**, and ultimately for increasing **gender equality**

Gender audits of energy sector policy have been implemented in several developing countries, mainly with support from **ENERGIA, the International Network on Gender and Sustainable Energy**

Modern energy context. Policies and solutions

2. **Creating networks and supporting mentorship**

A range of **measures can help create greater awareness of career opportunities**, including:

1. Ensuring that information about renewable energy jobs and careers is **publicly available** through online bulletin boards and other measures.
2. Supporting the establishment of **mentorship programmes**.
3. Working with educational institutions to reach out to women by publicising **training opportunities**, including **apprenticeships**.

Modern energy context. Policies and solutions

GWNET: Offering online mentoring

The Global Women's Network for the Energy Transition (GWNET) began in early 2018 to offer a global **online mentoring programme for women** in junior and middle-management positions.

The 12-month cycle emphasises suitable match-ups between mentors and mentees.

The programme is set up to **run remotely**; however, several mentees have managed to meet with their mentors in person. Each duo establishes an agreement on the frequency of interactions and the mode of communication.

Beside the bilateral interaction, mentees have access to tailored knowledge **webinars** to assist in personal and professional growth. Webinars focus on the development of the energy sector, women's entrepreneurship and personal development. The programme concludes with an **interactive web-based graduation meeting**.

Modern energy context. Policies and solutions

The Pink to Green Toolkit: Wider Opportunities for Women

The Pink to Green Toolkit includes **presentations**, **trainings**, **webinars**, **curriculum guides and modules**, **briefs**, **templates**, **tip sheets**, and planning documents designed to maximise capacity building in recruiting, assessing, placing and retaining women in green occupations.

The toolkit is organised into **five categories**:

- Outreach and **recruitment** of women
- Assessment and case management for women
- Building critical skills of **job readiness**
- G**ender-inclusive** and gender-focused training design
- **Sexual harassment**

Modern energy context. Policies and solutions

New job entrants can be **inspired by**, and **learn from**, those women who already have established a career in the sector

Showcasing their accomplishments not only recognises their trail-blazing work, but also highlights opportunities for women joining the renewable energy workforce

Several **dedicated awards** have been instituted to recognise women's accomplishments in the renewable energy sector (boxes below)

Modern energy context. Policies and solutions

C3E Women of Distinction Award

The Clean Energy Education and Empowerment (C3E) Initiative was launched in 2010 by the Clean Energy Ministerial, a global consortium with representation from **24 countries**.

The C3E initiative seeks to increase women's participation and leadership in clean energy, especially in the **STEM fields**.

The US C3E programme, initiated in 2012, is led by the **US Department of Energy** and **three university partners**: the MIT Energy Initiative, the Stanford Precourt Institute for Energy, and the Texas AM Energy Institute.

Annual symposium that provides **networking opportunities** for professional women, students and government representatives, and awards for outstanding mid-career women in education, research, business, entrepreneurship, advocacy, government, law and finance, among others.

Modern energy context. Policies and solutions

WiRE Women of Distinction Award

Woman in Energy Renewable (WiRE) was launched in 2013 in Canada and is now active internationally.

To advance the role and recognition of women in the renewable energy sector, it **offers** mentoring, provides networking opportunities in partnership with government agencies and renewable energy associations, and organises capacity-building field trips.

WiRE also supports the **Equal by 30 Campaign** for equal pay, equal leadership and equal opportunities for women by 2030.

The awards recognise accomplishments in a variety of areas, including leadership, policy and advocacy, technical advancement and R&D, project development, community adoption of renewable energy technologies, and contributing to the advancement of women in the energy sector by volunteering or serving as a role model.

Modern energy context. Policies and solutions

3. **Access to education and training**

a. **University curricula** can be adapted to be more open to women.

- At the University of California, **Berkeley**, 2014 was the first year that more women than men enrolled in an introductory computer science course. An important factor was that the curriculum had begun to **emphasise group projects and creative thinking in addition to programming**
- At the **Massachusetts Institute of Technology**, female enrolment in the Department of Electrical Engineering and Computer Science and the Department of Mechanical Engineering increased markedly following **changes in the curriculum**, **content** and **pedagogy**.

  The most rapid period of growth in female students also coincided with the **department being headed for the first time by a woman**.

Modern energy context. Policies and solutions

b. **Scholarships, internships and enrolment targets** can attract women into clean energy careers.

- Supported by several governments, the **C3E initiative** provides opportunities for scholarships, internships and academic and industry research appointments.
- Another example is the Women in Science Initiative established at **King's College London** in 2013 to address the imbalance of women working and studying in in STEM fields. The initiative established Women in Science **Scholarships** for undergraduates in mathematics, physics, computer science and chemistry.

  Further, a **gender equality student fund** was established to support innovative projects, activities and events that promote gender equality in STEM.

Modern energy context. Policies and solutions

c. Widen opportunities for women in **vocational training**.

- An application scorecard developed by the **South African Renewable Energy Technology Centre**, for example, allocates double points for female applicants.
- In Kenya, the **Strathmore Energy Research Centre (SERC**) has conducted training courses for solar PV technicians with the express purpose of enlarging the pool of female solar PV technicians.

Modern energy context. Policies and solutions

4. **Gender targets and quotas**

Several **OECD countries** have adopted nationwide **goals or targets** to increase the number of women in engineering and technical fields.

Countries that have instituted mandatory quotas **have achieved** a high er level of representation of women in the boardroom, and done so more rapidly

- In **France**,women held 37.6% of the board seats, representing substantial progress toward the country's mandatory 40% quota to be met by 2017.
- In **Germany**, which has implemented a quota of 30% by 2017, women held 26.7% of board seats in 2016.
- In **Norway**, which requires that women make up 40% of the board, 39% of the board seats were held by women.

Modern energy context. Policies and solutions

5. **Workplace practices, policies and regulations**
   1. Fair and transparent internal processes governing **employee appraisal and promotion**, and establishment of **appropriate systems to measure and track progress**.
   2. **Mentorship programmes** can help make the workplace more welcoming to women and supportive of their career development by helping them to overcome hesitations in the face of traditional perceptions and stereotypes and, once hired, allowing them to thrive with the support of experienced colleagues and peers.
   3. Understanding and addressing **wage gaps** is another important issue. This chapter has already pointed to the perception of inequities. To some extent, wage differentials reflect the general gender bias in the workforce structure, i.e., women predominantly occupying non-technical and lower paid positions. However, there is also a need to ensure that **equal work receives equal pay**.

Modern energy context. Policies and solutions

4. All publicly and privately held renewable energy employers should be encouraged to adopt policies to make **wage information more transparent**. Even anonymised salary data grouped by qualifications, skills and years of experience would enable applicants to understand what fair salaries are like at specific career stages.

   All entry-level workers should be able to understand the **career trajectories** and possibilities for advancement specific to their sector. This would help level the playing field for women who, as explained earlier, are more likely to lack the familial and social connections that often provide men with information about **career and salary trajectories**.

Modern energy context. Policies and solutions

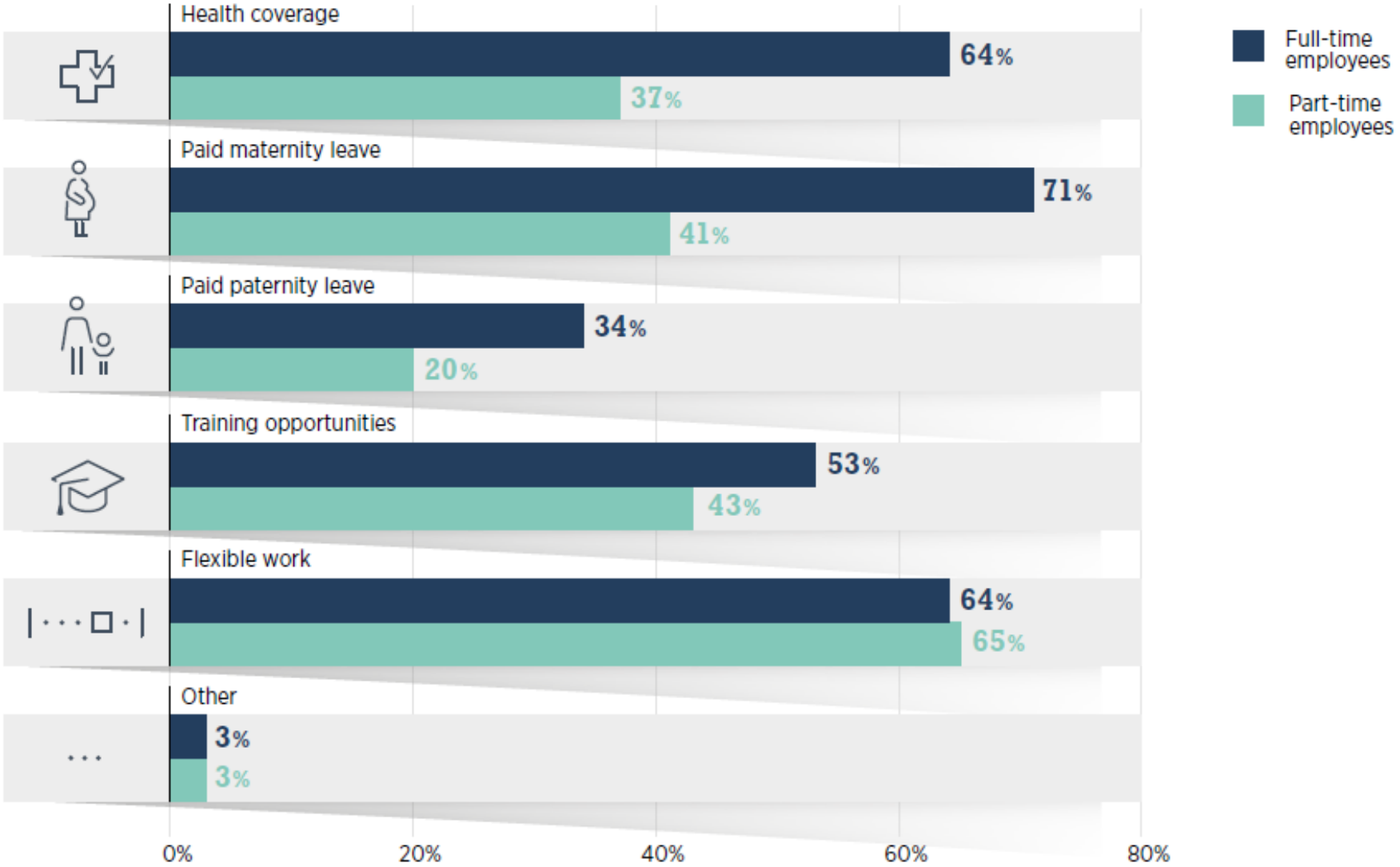
6. Work-life balance

a. **Part-time employment**, **flexi-time** are among the most-favoured options among survey respondents to guarantee work-life balance

However, part-time work offers less work and social benefits (figure below)

Modern energy context. Policies and solutions

Figure: Comparison of benefits among full- and part-time employees



Modern energy context. Policies and solutions

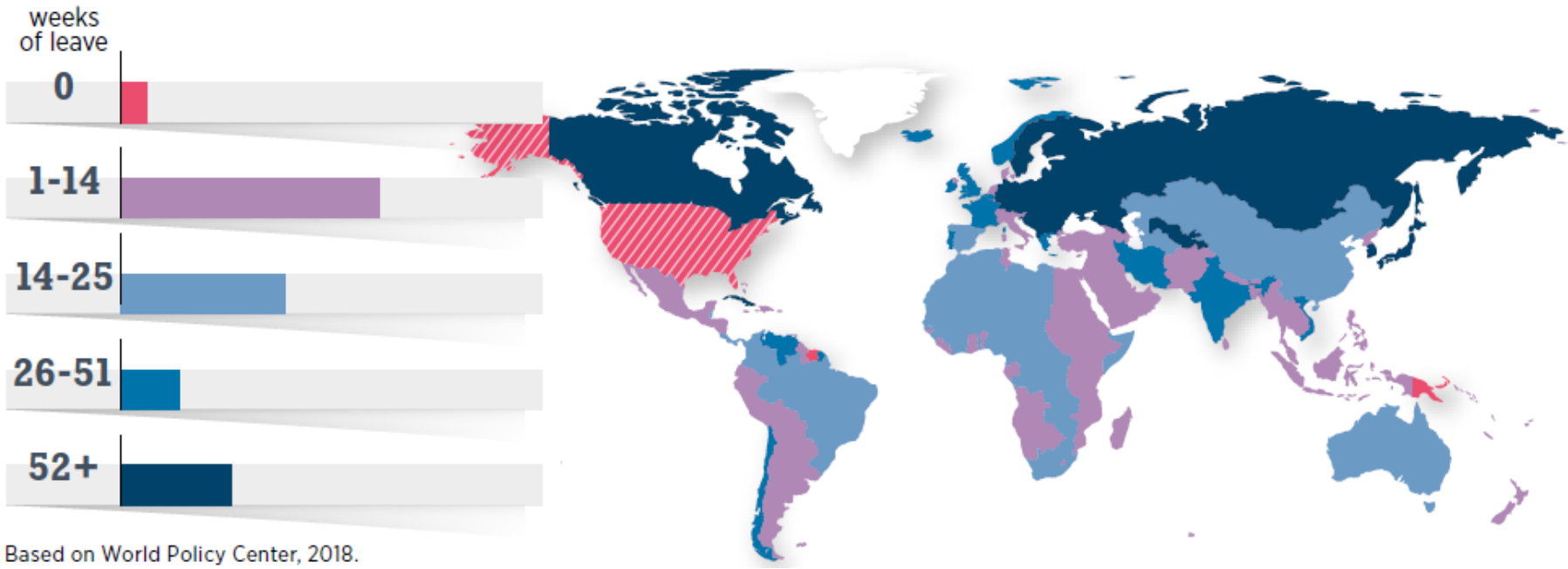
b. **Adequate paid parental leave policies** can help to ensure that women do not incur unfair disadvantages from childbirth and child-rearing. Such leave should not be limited to women; **paternal leave can help parents** share the burden of child rearing

As of 2014, a total of 83 countries offer paid maternity leave of up to 14 weeks; another 53 provide 14-25 weeks, 18 offer 26-51 weeks, while 36 offer 52 weeks or more (figure below)

Some 70 countries worldwide also offer **paid paternity leave**

Modern energy context. Policies and solutions

Figure: Paid maternal leave, in weeks



Access context. Background

Globally, the number of **people without access to electricity fell below 1 billion** for the first time in 2016.

The number without access to clean cooking facilities has been gradually declining, but still accounted for nearly 3 billion globally in 2016.

The lack of access to modern energy **affects women and children disproportionately**.

A large amount of their time and labour is spent on unpaid care work, subsistence and productive tasks (e.g., **gathering fuelwood for cooking, fetching water, manually processing grain or other food**)

Access context. Background

Indoor air pollution resulting from the use of traditional fuels for cooking and limitations on the delivery of healthcare, education, water and other basic public services owing to the lack of modern energy also has a **far greater impact on women and children than on men**.

Access to affordable, reliable and sustainable modern energy can have a transformative **impact on productivity, incomes and overall well-being**.

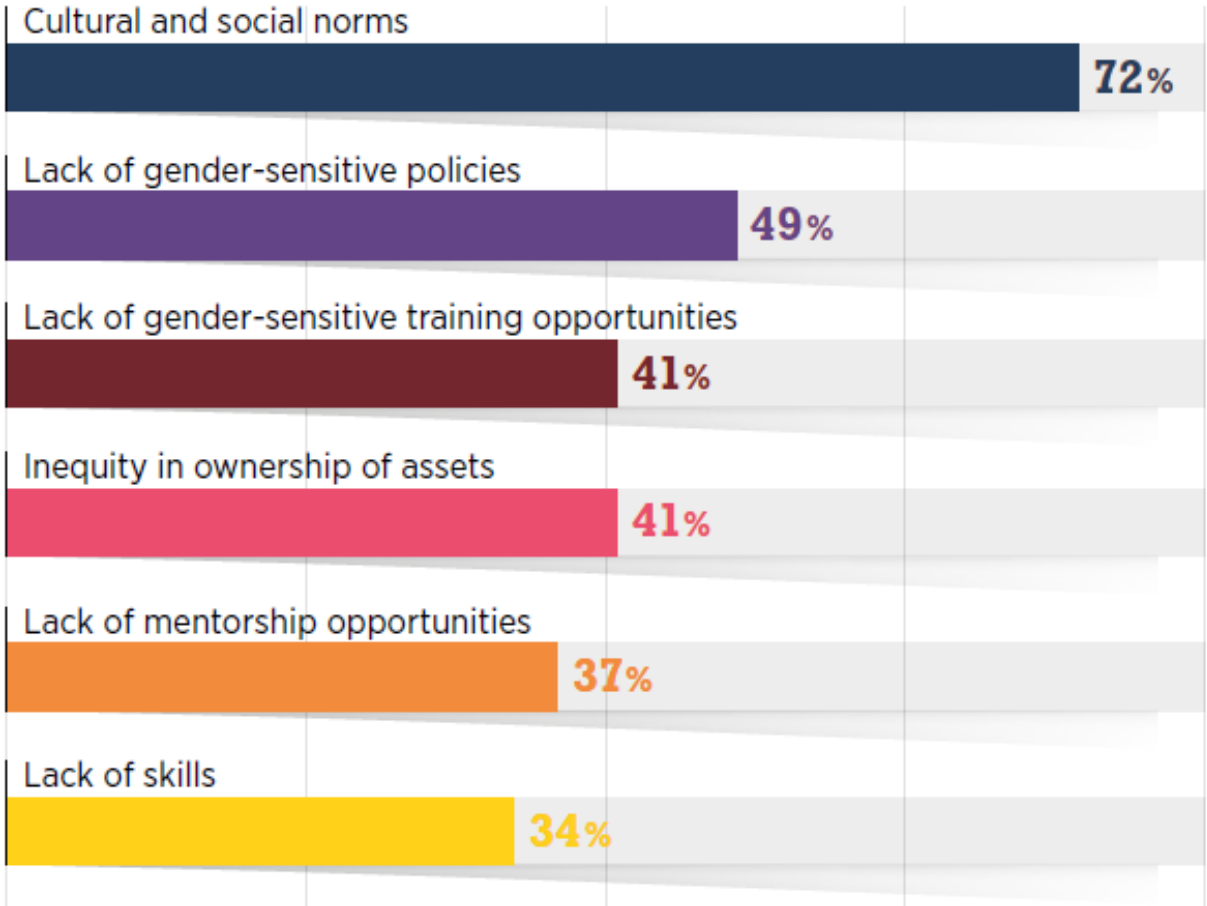
It frees up time for women collecting fuelwood and enables time-shifting of tasks with access to lighting, opening **new opportunities** for leisure, part time work and income-generating activities.

There are also strong cross cutting links to **other sectors**, including improved education opportunities for girls, safety, and access to media.

Access context. Barriers

Over **two-thirds (**66%**) of survey respondents** stated their belief that women working or seeking work in expanding access through renewable energy faced **barriers**.

Figure 3.3 Barriers to women's participation in deploying renewables to expand energy access



Access context. Barriers

1. **Cultural and social norms**

The gender division of labour results in women allotting a significant amount of their time to **household work and childcare (and elderly care)** responsibilities, and consequently having **limited skills and time to engage in formal, paid activities** that predominantly employ men.

Women also tend to have **less access to information, skills, training and labour markets, while facing greater risks of violence**.

This **influences their decision-making power** and exercise of voice and agency, and constrains their access to land and productive resources, technology and information, and education and health services.

Access context. Barriers

Understanding how **intra-household gender hierarchies influence technology access** is crucial for designing effective responses to address them.

Women may also use different communication and information channels than men, as they have lower literacy rates, less access to television and radio, and less time to attend public meetings.

Making normative assumptions about **women's nurturing roles perpetuates and deepens gender divides** through a feminisation of certain responsibilities and obligations.

Organisations in the renewable energy sector should avoid the rhetoric of cooking technologies as women's needs. They should describe and promote them as general human needs.

Access context. Barriers

2. **Lack of gender sensitive programmes and policies**

When referring to themes on energy access and women's engagement in the sector, the policies often referred to gender issues through terms such as **"vulnerable", "recipients" and "beneficiaries"**.

The acknowledgement of women as **passive beneficiaries** does not make these programmes gender sensitive, although progress is being made to address such concerns.

For energy projects to have an effective gender-sensitive approach, it is essential that they **highlight the participatory and active role of women in programme implementation** and adequate budgetary provisions are in place within relevant ministries, programmes and schemes to support gender related activities.

Access context. Barriers

3. **Lack of skills and gender-specific training opportunities**

Social norms limit the training opportunities: Even if women have the enthusiasm and motivation to be engaged in the off-grid renewables supply chain (e.g., as distributors), **they may be discouraged by others in the household from attending/ continuing the training**, or from working after completing the training.

Social norms often also **broaden the gender gap** in measures of human capital such as financial literacy and entrepreneurial management.

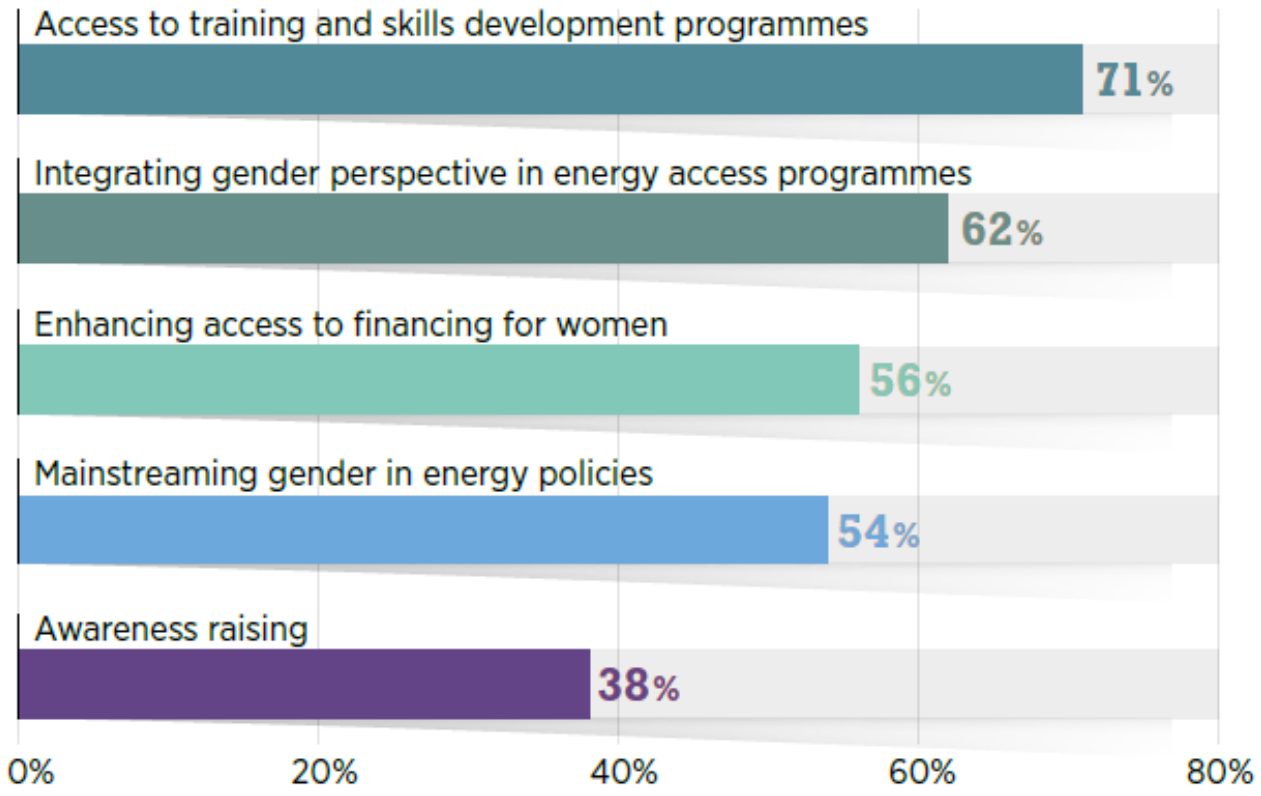
As such, women are more likely to partake in **minor income-generating activities in informal sectors related to cooking and sewing**, and less likely to participate in more technical sectors such as renewable energy.

The low profitability of these womenled businesses in the informal sector results in a **lower likelihood that households will invest in women's education and training**.

This creates a **vicious cycle** that relegates women to informal and unpaid work.

Access context. Policies

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**



Source: IRENA online gender survey, 2018.

Note: The respondents were asked to select three key measures to improve women's engagement

Access context. Policies

1. **Improving access to training and skills development programmes**

Cultural and social norms, and to the traditional roles fulfilled by women in rural communities need to be taken into account while conducting training programs.

For instance, training sessions must be scheduled around **women's childcare responsibilities** and be sensitive to mobility constraints and security concerns; programmes must consider social restrictions that may prohibit women from participating actively.

Broader training is needed in business, **financing and leadership skills, product standards, and quality control**, among other areas.

Marketing skills are especially needed for renewable energy technologies such as solar home systems and solar lanterns that are sold to households.

Access context. Policies

Training solar grandmothers: The case of Barefoot College

The "solar mama" programme at the Barefoot College is a well-documented example of the democratising power of **off-grid renewable energy solutions** and the transformative potential of training women in **rural areas**. The programme has trained over 1000 women from more than 80 countries, leading to the deployment of at least 18000 solar systems.

The trainees are often **illiterate or semi-literate women** who maintain strong roots in their rural villages and have the potential to play a key role in bringing **off-grid solar solutions to remote, inaccessible villages**. The initiative works to demystify the technology and place it in the hands of local communities.

Access context. Policies

2. **Integrating gender in energy access programmes**

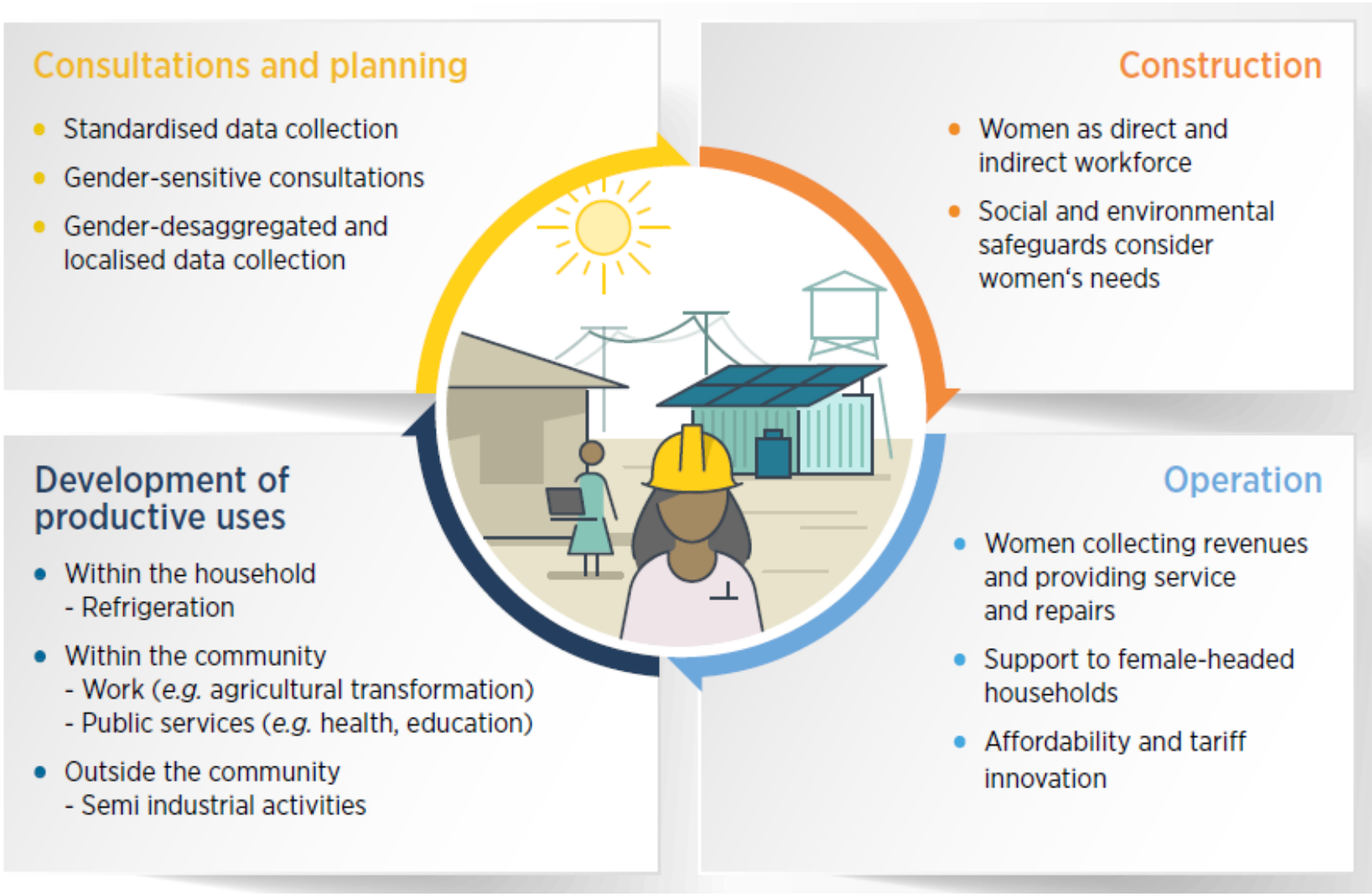
Promoting interaction between different sectors, such as primary health, education and water, is key for women's economic empowerment and advancement and can help formulate solutions that look at the entire ecosystem and maximise the benefits.

Development financing institutions and agencies that often design, manage, implement and finance energy access programmes strongly influence practices related to gender mainstreaming in the sector.

Training and skills-building are also effective means of engaging women in the construction and maintenance of off grid renewable energy technologies, as well as in promoting productive end-uses that support local socio economic development.

Access context. Policies

Figure below illustrates the different **entry points** for women's engagement in the development of a renewable energy mini-grid.



Access context. Policies

Gender mainstreaming at the programme level:

In 2011, Hivos, a Dutch development aid organisation, was engaged in eight domestic biogas and two **improved cookstove programmes** in Africa and Asia.

It called for a better understanding of gender issues in all programmes and **identified concrete opportunities for mainstreaming**.

Gender equality was integrated in the programme's planning, implementation, monitoring and institutional set-up from 2011 onwards.

For instance, **training approaches within biogas programmes have been adapted to address gender issues more effectively** to ensure that women and men are equally engaged.

In all countries, the **proportion of women trainees has gone up significantly**, with positive outcomes for long-term sustainability and socio-economic benefits.

Access context. Policies

3. **Fostering women entrepreneurs and improving access to finance**

a. Women are more **easily able to reach out to and interact with female end-users**, especially in situations where women are primary users and also in areas where cultural and social norms inhibit public engagement with women.

As women become engaged in delivering energy solutions, they take on more **leadership in their communities** and consequently facilitate a gradual paradigm **shift in the social and cultural norms** that traditionally acted as barriers to their agency.

Active engagement further contributes to **women's economic and financial independence** by increasing income-generating opportunities and enhancing women's social and political status (box below).

Access context. Policies

Empowering women brewers in Burkina Faso through energy-efficient cookstoves

Burkina Faso's traditional small-scale beer-brewing sector is predominantly **led by women and is an important source of income for rural women**. But poorly designed, inefficient cookstoves cause health problems and require longer cooking times and higher fuel consumption.

In 2012, a programme to install over 500 energy-efficient cookstoves reached an estimated 800 women by helping them **build clusters** that **identify and promote their business development priorities** including financial management, technology upgrading and improving the hygiene of the production.

The women were **grouped together in associations and encouraged to use self-help groups to finance the purchase of improved cook stoves**.

Access context. Policies

The programme also establishes a **credit risk guarantee mechanism** to help women access additional financing.

They were also trained on how to **operate and maintain the energy-efficient cookstoves**.

The **high efficiency of the cookstoves** also reduced the amount of firewood required by over 40%, thus also reducing the health risks and physical or sexual assault risks to women collecting firewood.

Access context. Policies

b. In order to scale up women's engagement in entrepreneurship, **training and mentoring programmes** focusing on technical, financial and leadership skills are essential for developing stable energy businesses (box below).

Such programmes enable women to **identify viable business opportunities**, form **useful networks to expand their business** activities and **devise effective market strategies** to run successful businesses.

Mentorship and training opportunities ease women's inhibitions about taking on leadership roles and bridge the gap between women and the formal, more-male-dominated sector of the economy

Access context. Policies

Empowering women entrepreneurs to deliver off-grid renewable energy solutions: The case of Solar Sister

Solar Sister is a training and job creation initiative for women that distributes portable solar lights in rural Sub-Saharan Africa through female entrepreneurs.

Entrepreneurs are trained to **sell solar lanterns and are given the opportunity to build sales and a cash flow by earning a commission**, which they then re-invest in new inventory.

Solar Sister equips women to build **their own technology-driven businesses** and provides a holistic package of inputs (including business and technical training, a quality brand, access to world class products and service, marketing support and ongoing coaching).

As of 2018, it has benefitted 3554 entrepreneurs, of whom 83% are women.

Access context. Policies

c. **Access to finance** is another binding constraint women face in setting up small and medium-sized enterprises.

Although 48% of business owners in Kenya are women, only 7% **have access to formal credit**.

Women are also less likely to have **bank accounts** than men, particularly due to the lack of bank branches in rural areas

Access context. Policies

d. Various solutions are emerging, including **dedicated credit lines**, **crowdfunding** and **local community organisations and cooperatives**.

In **Kenya**, for instance, women-led enterprises unable to access funding from traditional financing institutions have **raised financing through crowdfunding platforms** that utilise mobile payments.

Despite the success enjoyed by some such innovations, **inadequate access to affordable financing remains a major impediment for women setting up small businesses in the energy access context**.

Access context. Policies

e. **Mentoring programmes** are essential in guiding women who are interested in the energy sector and encouraging them to overcome hesitations and barriers associated with traditional socio-cultural perceptions and stereotypes.

Access context. Policies

f. The **private sector** also has an important role to play in supporting women-led enterprises.

Partnering with women entrepreneurs is a mutually beneficial option, as women often have **extensive local networks**, **specialised skills** and an **in-depth understanding of local markets** that can help the private sector address market barriers.

IFC's Lighting Asia programme in India, for example, has facilitated partnerships and networking between **Indian solar distributors and women entrepreneurs in rural areas**.

Through the development of these networks and partnerships, distributors have been able to **overcome cost and market barriers in last-mile communities** and increase sales of solar lighting products by approximately 30%.

Access context. Policies

g. It is important to provide the **right type of support for women-led enterprises**, but it is also important to remember that entrepreneurship is often **not a realistic livelihood strategy for some women**.

Women from the **poorest households are generally averse to entrepreneurship**, often because they have no capital to invest and no collateral against which to borrow.

They are much more likely to pursue employment opportunities in renewable energy if they can earn incomes **without becoming indebted**.

Acquiring new skills – such as learning to build and repair renewable energy technologies – is often **better suited to their economic realities and limitations**.

Social enterprises and non-govern mental organisations (NGOs) that disseminate renewable energy technologies to low-income populations are aware of this fact and some have started to offer training in such skills.

Questions to summarize the chapter

1. Concerning the women in the **modern renewable energy sector**:
    a. Which is the **status and main trends** in that sector?
    b. Which are the main **barriers** that women face to enter in that sector?
    c. Which are the main **barriers** that women face in the **retention in the sector** and in their **careers advancement**?
    d. Which are the **policies** that could facilitate women's participation in the modern renewable energy sector?
2. Concerning the women in the **access to renewable energy**:
    a. Which is the **status and main trends**?
    b. Which are the main **barriers** that women face to access to renewable energy?
    c. Which are the **policies** that could facilitate women's access to renewable energy?