



GWNET
Global Women's Network
for the Energy Transition

Technical Working Document

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1. More Gender Study Context

Unconscious Bias

Unconscious Bias as a concept is the lay interpretation of ‘implicit bias’, a theorem of social psychology which postulates that all humans have learned associations, stereotyping and discrimination. Implicit bias is a natural part of brain development and fulfils the evolutionary function to keep us safe in a dangerous world during the beginnings of human development. While implicit bias is the technical term, unconscious bias is the term most commonly used in the business literature and we will refer to both as unconscious bias in this document. **Importantly, women and men are not condemned to act out unconscious bias throughout their lives. Adults can unlearn negative stereotyping by layering more positive learning over these biases through social interaction.**

However, those unconscious biases will still be there and if we do not understand and acknowledge them, they might unconsciously drive our adult behaviour. We need to be aware of their presence and take steps to ensure we have effective ways to deal with them. For example, by participating in cross-cultural competence training which is available online.¹ Such training should be coupled with structured measures to avoid unconscious bias in the workplace.

Evidence demonstrates that it is gender stereotyping and structural discrimination that makes a woman question her own abilities, thereby reducing the likelihood that she will contribute ideas and diminishing her self-confidence.²

Anecdotal Gender Bias Example in the Energy Sector: Two successful married people with similar business development roles in the sustainable energy industry, raising capital for RE investment attending a conference. “I knew everyone in the business, banks, lawyers, consultants, I’m here, I have my teaser, my pitch, and think about raising capital, and the first question from eight people was ‘who’s looking after your kids, while you are away?’”. The husband is asked about business and around the tenth question, “How’s the family?” The experience results in self-doubt as she questions herself, “should I not be here, am I a bad mom?” – and she takes a hit on her confidence which resulted in a decision to move into advisory and consulting, where it feels more acceptable to perform her work duties. (Women, Advisory and Investment, South Africa)

Our biases run deep, yet largely remain unchallenged. Many of the notions of what is a ‘natural’ quality of men and women, routinely related without evidence whatsoever to genetics, is in fact completely learned behaviour that is mediated by gender roles in our cultures. In one of the many studies³ devoted to the topic, Uri Gneezy and his colleagues demonstrated that e.g. ‘**competitiveness**’, which we are told within our culture is related to testosterone levels in men, is **completely unrelated to sex**. Their study comparing the competitiveness of peoples within traditional matriarchal and patriarchal societies demonstrated that women in matriarchal societies were far more competitive than men within patriarchal cultures.⁴ This fact calls into question all of our cultural assumptions about the ‘natural’ qualities of men and women and shows them for what they truly are: rather than biological fact, they are culturally constructed gender norms that support and drive our unconscious biases.

Notions of Leadership

Our unconscious biases show us, based on our experiences as children, what leadership looks like and, possibly more importantly, what it does not look like. Mostly, regardless of the country, leadership and authority looks like a man of the dominant culture and, in a globalised culture, that is a white man. This bias dictates our choice of leaders to this day.

¹ <https://www.sbs.com.au/learn/cultural-competence-program>

² Coffman, K., 2014. Evidence on Self-Stereotyping and the Contribution of Ideas. Quarterly Journal of Economics. Vol 129(4), November, pp. 1625–1660.

³ For a comprehensive literature research see journals ‘Sex Roles or Gender in Work and Organizations’, or ‘Gender in Society’.

⁴ Gneezy, U., Kenneth, L. & List, J., 2009. Gender Differences in Competition: Evidence from a Matrilineal and a Patriarchal Society. Econometrica. Vol 77(5), September, pp. 1637–1664.

In 2015, the New York Times published an article demonstrating that of the S&P1500 companies in the US, there were more CEOs and Chairs of the Board who were men with the given name of either John or David than there were women.⁵

In Australia, at the same time, ASX 200 companies had more men named John, Peter or David than women with any name as CEO or Board Chair.⁶ If you are not lucky enough to be born in a body or culture like an ‘old school’ John, Peter or David, then it is likely that the business context feels less natural and less of a good fit. Most interestingly, it is possibly no longer a good fit for younger men either, as we will discuss later.

The thing that is most insidious about unconscious bias is that it usually does not match with our conscious experience or beliefs as adults. For example, a series of surveys of close to 3,000 people, with an equal number of men and women in business and the public, demonstrated that women are thought to be stronger in key areas of both politics and business⁷. Survey respondents believe that women are:

- 34% better at working out compromises than their male colleagues
- 34% more likely to be honest and ethical than their male colleagues
- 25% more likely to stand up for their beliefs than their male colleagues
- 30% more likely to provide fair pay and benefits than their male colleagues
- 25% better at mentoring than their male colleagues

This belief is backed by evidence from research into the qualities of good leadership. When examined objectively, women’s leadership skills are rated higher than men on 17 of the 19 core leadership skills, demonstrating that if not at least on a par with men, by objective measures, women are better leaders than men.

According to an analysis of thousands of 360-degree reviews, women outscored men on 17 of the 19 capabilities that differentiate excellent leaders from average or poor ones.

Capability	Women’s percentile	Men’s percentile
Takes initiative	55.6	48.2
Resilience	54.7	49.3
Practices self-development	54.8	49.6
Drives for results	53.9	48.8
Displays high integrity and honesty	54.0	49.1
Develops others	54.1	49.8
Inspires and motivates others	53.9	49.7
Bold leadership	53.2	49.8
Builds relationships	53.2	49.9
Champions change	53.1	49.8
Establishes stretch goals	52.6	49.7
Collaboration and teamwork	52.6	50.2
Connects to the outside world	51.6	50.3
Communicates powerfully and prolifically	51.8	50.7
Solves problems and analyzes issues	51.5	50.4
Leadership speed	51.5	50.5
Innovates	51.4	51
Technical or professional expertise	50.1	51.1
Develops strategic perspective	50.1	51.4

FIGURE 1: WOMEN ARE RATED BETTER THAN MEN ON KEY LEADERSHIP CAPABILITIES

Source: Zenger Folkman, 2019

5 Wolfer, J., 2015. Glass Ceiling: Fewer Women Run Big Companies Than Men Named John. New York Times. 2 March 2015.

6 Liveris, C., 2015. Academic, Curtin University on ABC News Breakfast following NYT article.

7 Pew, 2015. Women and Leadership: Public Says Women are Equally Qualified but Barriers Persist. The Pew Research Center.

This is not an isolated finding: similar results were found when investigating public perceptions of women's leadership prior to national elections in Fiji in 2014. Men and women agreed that women were underrepresented in parliament: they overwhelmingly agreed women were more community focused, more honest, dependable, less corrupt and yet they did not vote one woman into parliament because, put simply, leadership looks like a 'Chiefly'⁸ man.⁹

Both men and women are subject to the same unconscious biases when they grow up in the same culture. This then interferes with how women judge other women¹⁰ whom they judge with the same biases as a man, but also how they rate their self-confidence and how they judge themselves as leaders. On the other hand, men demonstrably have no such problems¹¹ (see Figure 3 and 4).

Women Rate Themselves as Less Confident Than Men Until Their Mid-40s

Data on 3,876 men and 4,779 women since 2016 shows that women's gains in confidence are more than three times that of men — but only because of a massive gap at the beginning of their careers.

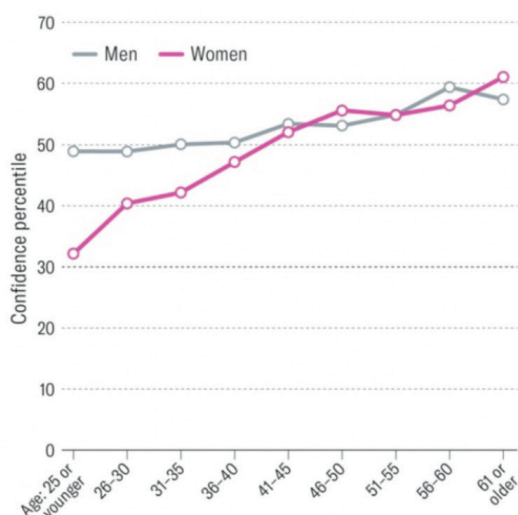


FIGURE 2: WOMEN RATE THEMSELVES LESS CONFIDENT THAN MEN UNTIL THEIR MID-40S
Source: Zenger Folkman, 2019

Women Rate Themselves as More Effective Leaders Later in Their Careers

Men's self-ratings decline over time.

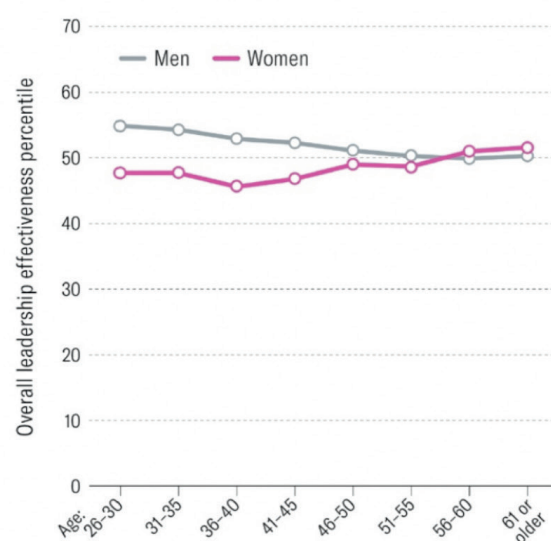


FIGURE 3: WOMEN RATE THEMSELVES AS MORE EFFECTIVE LEADERS LATE IN THEIR CAREERS
Source: Zenger Folkman, 2019

Women's willingness to advocate for their own worth as a candidate for more senior roles is therefore compromised relative to men's, making them appear less confident in terms of abilities and competence than their male cohort mates, with men only gaining a more realistic insight into the relative level of their own skill when they would already have achieved senior roles.¹²

The Myth of Merit

These unconscious biases therefore lead us to the concept of 'merit'. Women often resist the introduction of quotas, to their own detriment, because they want to be chosen on 'merit'. **And yet, the evidence above clearly demonstrates that women's merit is not the problem.**¹³ It is the unconscious bias we all carry that leads us to make decisions about leadership that contradict our own working experience, whether that is in the political, business or community sphere. **The 'Myth of Merit' is a phrase acknowledging the reality that the idea of recruitment or promotion based on merit** (qualifications, experience, skills and ability, etc.) as it

⁸ From Chief, or person of traditional authority within that culture.

⁹ Fiji Women's Forum & IWDA, 2014. Public Perceptions of Women's Leadership.

¹⁰ Snyder, K., 2014. The abrasiveness trap: High-achieving men and women are described differently in reviews. *Fortune* Aug 26, 2014.

¹¹ Zenger, J. & Folkman, J., 2019. Research: Women Score Higher than Men in Most Leadership Skills. *Harvard Business Review*. June 25, 2019.

¹² Zenger, J. & Folkman, J., 2019. Research: Women Score Higher than Men in Most Leadership Skills. *Harvard Business Review*. June 25, 2019.

¹³ For further reading: Bagilhole, B. & Goode, J., 2001. The Contradiction of the Myth of Individual Merit, and the Reality of a Patriarchal Support System in Academic Careers: A Feminist Investigation. *European Journal of Women's Studies*. Volume: 8 issue: 2, page(s): 161-180.

exists today, is a fallacy because of the overwhelming evidence of multiple levels of unconscious biases that create barriers for women and people of the non-dominant culture to have their qualifications, experience, skills and ability etc. judged on a 'level playing field' against those of men from the dominant culture.

The most famous example for the 'Myth of Merit' is that of the NY Philharmonic Orchestra 'Blind Audition Study'¹⁴ by Goldin & Rouse, in 1997. The unconscious assumption is that men are better musicians than women because there are more men in orchestras than women. Auditions are said to be based on merit and we have all grown up seeing orchestras full of mainly male musicians, so it must be true. **Researchers placed a screen between the examiners and the candidates so that they could not be seen** as they crossed the stage to play, with no change in result. Perhaps it truly is based on merit. **It was not until they added carpet to the wooden stage so that examiners could not hear whether the candidates were wearing high-heeled shoes** they found that blind auditions increased the likelihood that a woman would be hired by between 25 and 46 percent. **In fact, with blind auditions, women became slightly more likely to be hired than men.** To be clear, examiners were not being deliberately sexist; it is purely that their unconscious bias was unconsciously triggered by hearing women's shoes and their unconscious brains, without knowing it, judged that performance more harshly. Confident that they would be treated fairly, female musicians started applying in greater numbers.

You Can't Be What You Can't See

This last point about the impact of more women being visible in the NY Philharmonic is an important one. The old adage, 'you can't be what you can't see' is not entirely true: there is always a first, but sadly this first is often 'the only' and there is a cost to being 'the only'.¹⁵

Social theory tells us that much of our behaviour as human beings is learnt by seeing what other people do and hearing what other people say. Children are particularly funny at that age when they start to 'try out' adult 'scripts' and behaviours when they say things as an adult would. They have no understanding of age appropriateness, they are simply learning how people behave and what they say, and they know about gender roles by between the ages of 18 and 24 months.¹⁶ It is during this time that they start to lay down their unconscious biases about what leadership looks like. Role-modelling is therefore extremely important from a young age for both boys and girls. Role-modelling in the workplace is equally important, but it is challenging when women are the 'only' women in the company, in a meeting or in their workplace.

What should they do?

- Try to keep a low profile and not draw attention to their femininity?
- Try to act as a man would to be taken more seriously and risk the derogatory comments referring to their 'unfeminine' behaviour?
- Or simply present themselves as themselves and risk being assumed to be an unreliable workmate?

If there is no one to role model the gender role in that context, it can be extremely difficult for women and people of diverse gender identities to feel safe in the workplace. There are social sanctions for stepping outside the gender role and social norms, which can result in violence for women and anyone who does not conform to the heterosexual 'norm'.¹⁷

The complex interplay of gender inequality and unconscious bias in most countries of the world has therefore led to the myth of men having greater merit than women to occupy leadership roles on a global basis. For decades women have been told this is how business operates. The belief still persists that if women and others want to engage in business, they need to adapt themselves to fit the context, when perhaps, we should be asking whether the context is still 'fit for purpose'?

The Workplace Needs to Adapt to Suit Diverse Workers

The evidence demonstrated that diversity profits the business, so perhaps it is time to rethink the

14 Goldin, C. & Rouse, C., 1997. Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians. National Bureau of Economic Research Working Paper No. 5903.

15 McKinsey & Company, 2018. Women in the Workplace.

16 <https://www.mayoclinic.org/healthy-lifestyle/childrens-health/in-depth/children-and-gender-identity/art-20266811>

17 ICRW, 2019. Women's Economic Empowerment: Unintended Consequences.

workplace culture to make it more welcoming to diverse people. Is it perhaps that business leadership dominated by the Johns, Peters and Davids¹⁸ correlates with a business culture of 50 years ago where men had a wife at home to take care of the family sphere and came to an office in a suit and tie? This is – sadly – the predominant norm of business globally; established in the west by Western companies, with adaptations worldwide. Western workplaces and many others have moved in, but in some countries, totally male workplaces are still the norm.

Is it possible that the workforce has moved on, even if the Johns, Peters and Davids haven't?

In the comparably masculine dominant culture of the practice of medicine, researchers found that in a study of men and women medical students and their practice preferences, the 'old style', 'die with your boots on' doctor, available at all hours, does not fit with the image of the men they want to be.

They wanted:

- to be good husbands and share household and family care duties;
- to be good fathers who co-parented and had meaningful relationships with their children; and
- to be able to take time away from their practice to take holidays with their family.

They did not want:

- a wife to take care of all of this for them and assumed that their partners would also be working; and
- to work themselves to death with no life to show for it.¹⁹

These young men thought themselves to be typical of their generation in their expectations. They expected their partners to also work and felt that if their wives (or husbands) earned more, they would happily move to suit their role.

¹⁸ Sincere apologies to all of the gender competent and equitable Johns, Peters and Davids out there, of whom we know a few!

¹⁹ Wainer, J., Bryant, L., Strasser, R., Carson, D., & Stringer K., 1999. A Life Not A Wife. Keynote Presentation. 5th National Rural Health Conference. Adelaide. South Australia.

2. Interview Questions and Quotes

2.1 Interview Questions

Interviews were held with 34 participants, following the open questioning below. Interviewees were offered the questions in advance. Consent was agreed with each interviewee.

Question Guide for Semi-structured Interviews

1. Tell me about your career path into the renewable energy/energy efficiency sector?
2. Does your company have an Equal Opportunity or any Gender Equality policies?
3. If yes, 'Tell me how well you think they are implemented?'
4. If no/I don't know, probe around bias reduction strategies/quotas in recruitment/parental leave/carer leave/return from leave/pay gap/board diversity/management diversity etc.
5. Can you reflect on barriers or enablers of women working in the sustainable energy sector that we haven't spoken about?
6. What opportunities and strategies would you suggest be implemented for greater gender equality/participation?
7. What advice would you give women wanting to enter the sector?

2.2 Key Themes Emerging from Interviews

Little Understanding of Gender

It became clear that gender awareness cannot be assumed in the workplace. Many women and men interviewees had not been faced with gender issues themselves in the context of their employment and career progression or were not aware of how to recognise barriers and enablers, in terms of their gender. And if a problem is not perceived then there will be little done to engage in greater equality.

"We have not received dedicated training on gender discrimination in the workplace."
(Woman, Sustainable Energy Specialist, International)

[After being mentored in gender balance awareness], "now when I attend meetings and work trips to our [renewable energy] plants I have started looking at how many other women are around me, and I was amazed it is usually me and sometimes one other women. I was shocked [at the low numbers] once I started noticing."
(Woman, CSR Officer, Brazil)

It is important to also acknowledge that when discussing the issue of gender with women and men interviewees, the nuance was not one of 'women vs men' in the workplace, but rather a transition towards creating a diverse and inclusive work culture.

"[we] want to see more about 'fair' not just 'equal' with a focus on diversity not just gender"
(Woman, International Project Delivery/Board member, UK)

However, in some cases it was felt that possibly women are not aware of discrimination as a result of it being the norm and accepted for the workplace to be biased towards men. This unconscious bias impacts our understanding, decisions and actions.

Traditional Gender Roles Prevail

Preconceptions still prevail relating to social and gender norms defining women's role and potential. From an early age there is already the assumption that boys will enjoy tinkering with equipment and girls will lean towards creative activities or that culturally it is not accepted for girls to be smart.

"We need to get girls tinkering with PCBs [primary circuit boards] too!"

(Woman, Researcher, Rwanda)

This pattern perpetuates through to the energy sector workplace where interviewees confirmed that men take on most technical roles such as construction, hardware engineering, and installation, and the women tend to lead legal and marketing departments.

At decision-making levels (CEO or board level) there are typically more men, with few women represented. However, in some instances it is getting better.

"Not very long ago (5-10 years ago), a woman would never dream or think to be a CEO or Director [in our company] and now I think it is very possible."

(Woman, Private Sector, Brazil)

Yet where there were women CEO's of large-scale RE plants interviewed, they still reported a majority, if not all, male board.

"there are many bright ladies with high expertise who don't lack professionalism or hard work, but the system is oriented to men"

(Woman, Academic/Board member, Russia)

"Women in leadership and decision-making roles are not visible, for example, in India and Japan, it is automatically assumed you are the secretary or assistant when you enter the room rather than a decision maker. It is not culturally appropriate for women to be the boss."

(Woman, Executive, Asia)

This lack of visibility of women in technical roles or leadership positions inevitably means there is a lack of role models to inspire future generations and diversify the pipeline of people coming into the sustainable energy sector.

"I worked with all white men [investing in RE infrastructure], yet there was no one like me. Who is my role model?"

(Women, Advisory and Investment, South Africa)

That saying, there are changes that are happening among younger people and generational change is breaking down the sector's unconscious bias.

A Generational Change is Happening

Discussions with interviewees confirmed that the current pattern emerging is one where gender balance is typically better at a higher education and early graduate level, and then somewhere at a mid-career point the scales start tipping such that leadership and decision-making positions tend to be predominantly held by men. This pattern often continues as companies tend to hire for cultural fit instead of diversity (i.e. if more men are in the organisation, more men will be hired; like attracts like as it is easier to manage).

"It takes a gender conscious sensitive person to give a woman a leadership opportunity; I was lucky"

(Woman, Entrepreneur, MENA region)

It was felt by certain interviewees that younger generations do not carry gender role bias into work (especially in emerging sectors of the industry such as blockchain transactions and innovative investment mechanisms)

“Younger generations of women are possibly more ambitious and confident, which could be good for the sector.”
(Woman, Academic/Board member, Russia)

“The sector is naturally disruptive and gender equality is a social disruptor, together they support one another in what they are trying to achieve.”
(Woman, VP Executive, Asia)

A generational change is happening, but the challenge is to be aware of this decline in diversity that is apparent mid-career and address this imbalance by providing enabling environments to support women's career progression into senior positions.

Skills Diversity is Beneficial

The sense across interviewees was that there is significant merit in embracing a range of skills and shaking up business as usual in order to propel the sustainable energy sector forward; and diversifying the sector is the low hanging fruit to lead to this desirable outcome. Women and men were broadly perceived to have different natural abilities, **yet all abilities are found equally necessary to achieve effective energy transitions**. Many women 'stumble' into the sector through non-linear trajectories. Most women were not looking for a role in sustainable energy and were unaware of their transferable skills until much later in their career.

Interviewees pointed to women typically being located in legal, marketing and business development divisions of their organisations. They noted women naturally excel in collaboration, community perspective, behavioural change, sales, social issues, administration, communication, relationship building, and finance. Where men typically dominate across board management, engineering, technical, and trade occupations. More women are found in the public, policy, advocacy, academic and NGO sectors of the sector compared to private commercial entities, with the exception of energy access and community beneficiary entities. The issue of values-based career decisions was suggested as a reason for this.

Of course, there are also many men who are value-based, especially younger men. The sector loses valuable skills in the employment cycle (failing to retain expertise) as working environments and structures do not support the professional and personal goals of those that make value-based career choices. However, the sustainable energy sector offers a fresh breadth of opportunity that embraces a wider set of skills and working approaches.

“Technology is one thing, but without all the other aspects, how do we make people want to use it?”
(Woman, Researcher, Rwanda)

Masculine Dominance

Conferences and industry events continue to be predominantly male dominated; with 'Manels' (all-male speaker panels), and policy leaders and board members typically white and male ('Boys-club'). There is a strong message that this is still a male dominated industry:

“A ‘men’s club’ equivalent doesn’t yet exist [for the women’s energy sector]”
(Woman, Government, UK)

“This is a sector where a patriarchal DNA still exists”
(Woman, Independent, South Africa)

“[energy is] a sector where women aren’t very present”
(Woman, Sustainable Energy Specialist, International)

“Academia and private sector still male dominated”
(Woman, Academic, South Africa)

In the workplace, due to a lack of women in leadership positions, it is difficult for other women to visualise themselves in the industry and choose it as a viable career option. While many women work within the sector,

men hold the top leadership positions and are sometimes supported by a lot of women. Some interviewees reflected on scenarios where women are not always acknowledged as professional equals:

“In some cases, I can go into a meeting room full of men, and they think I’m bringing the coffee”
(Woman, Academic/Board Member, Russia)

“In meetings women may get interrupted if they don’t get to the right argument quickly”
(Woman, Sustainable Energy Specialist, International)

However, a positive shift was noted from earlier days often being the only woman at a conference. The emergence of newer sectors such as renewable energy is credited with attracting more women into the field of energy.

Extra Expectation of Women

Women who hold senior leadership positions in the sector exhibit **strong personalities and exceed performance expectations**. Nearly all women interviewees mentioned that it is typically those women with strong character who are willing to impose their views that are more likely to make it to the top.

“[we] must put on the suit and leave the ‘women’ at the door. Women who I know as empathetic and nurturing people, become hard, strict, and unforgiving in the boardroom”
(Woman, Executive, Asia)

“Women are expected to ‘over-perform’ and over deliver ‘like an octopus’ (i.e. multi-task)”
(Woman, Academic/Consultant, Brazil)

Especially in C-Suite roles, women often take a defensive strategy when dealing with critique at board level. Women only apply for a role when they meet every requirement, or they see the role being performed internally and know they are 100% capable.

“Applying for this job I went bullet by bullet on the requirements and deliberated for weeks with the one that didn’t fit, on how I could frame my experience”
(Woman, Executive of a Women’s Association, USA)

The issue of lack of confidence in one’s own ability came up regularly:

“Sometimes we have a fight with our own confidence, [and ask] can I really do this?”
(Woman, Researcher, Rwanda)

It is a triple challenge if you are a woman with:

“inherent lack of confidence, placed in a sector which is a) very technical b) very male dominated already!”
(Woman, Trade Association, China)

Some of these issues are due to environmental factors of the workplace, and others down to individual challenges with self-confidence; both need addressing in order to ensure the benefits of an effective workforce.

Gender Dynamics in the Workplace

Many day-to-day realities of the workplace depend on the interactions we have with our peers and managers. In the context of gender dynamics, interviewees agreed that they had encountered positive and negative experiences of both men and women as bosses and colleagues.

On the one hand, there was a perception that women bosses/colleagues can sometimes be more difficult to work with and that women put pressure on each other within the industry. Others mentioned an improved and innovative working environment with other women as leaders.

There were some differences noted in management style, with women seen as more focused on investing in employee leadership, management and development, not just STEM, but that their leadership depends on the cultural acceptance of their gender, which depended on previous leaders and their values.

“You often hear, ‘See – she has no kids, and that is why she can be the Director’”
(Woman, Private Sector Manager, Brazil)

Some frustrations were voiced about women, who have the same role as men, but get asked about “who’s taking care of the children” rather than about business and opportunities of a commercial nature.

Also, it was felt that the standard for company culture, work hours, socialising and work life balance stems from traditionally male-oriented work environments; something that needs to change.

The Value of Flexible and Supportive Working Conditions

The traditionally industrialised structure of work: working from 9am-5pm in an office 5 days a week- does not appeal to the emerging and current workforce, nor is it necessarily effective. Flexibility was a big issue that came up almost immediately in discussion, particularly relating to childcare, travel and working hours. There were interviewees (men and women) who had benefited from part time and flexible hours, and others who suffered by not having the opportunity to adapt their working patterns as necessary. This is key to retaining capable individuals. Many women have to choose between flexible working hours and a promotion, with the ‘you can’t have it all’ sentiment resonating strongly. It is challenging practically and is culturally regarded to be unacceptable– therefore many women give up the promotion and continued high-level professional responsibility if they have kids.

Very few examples exist of policies and opportunities to help those returning from parental leave or extended leave of absence to “ramp up” (i.e. return back onto a career path).

“[there is an] off-ramp (from working to having kids) but there isn’t an on-ramp”
(Woman, CEO, USA)

A few companies may offer flexible working hours (part-time benefits) but this often comes with a reduced salary or stunts potential future growth. This issue of innovative working resonated strongly for both, men and women, with whom we spoke, to enable a better work-life balance, maintain creativity and manage family commitments.

Enabling Individuals

The importance of key enablers such as supportive bosses or partners was a strong message from those women who were maintaining successful and upward-moving career progression. Positive stories were shared about supportive bosses who invested in individuals’ career, and partners who enabled their continued engagement in the workforce at a senior level – by working part time as well or taking a step back from their own careers.

Certain individuals can play an important role in encouraging and leveraging career progression:

“a key person is important for shaping a woman’s career in this sector”
(Woman, Trade Association, Asia)

“I believe it’s probably because my CEO is a female that she is that much more aggressive in taking steps to ensure gender and various demographics are properly represented. For example, she did a complete market related remuneration review of all roles and not just those occupied by females...and resulted in an increase”
(Woman, Private Sector Manager, South Africa)

It is essential to have support both at home and at work to enable women to participate effectively in the workforce.

“With every single one of us [successful in this industry], there’s been men surrounding us, that have helped us and put us in the position we find ourselves, no matter what we are due – we cannot underplay their position.”
(Woman, IPP Owner/Investor, USA)

Family

The realities of having a family inevitably have a large impact on women continuing to engage in the workforce at a high level. Having a family can be:

“a career disruptor’ for your progression, and there is a need to have attained seniority before going on parental leave or have a family very early before embarking on your career.”

(Woman, Trade Association, Asia)

There is a perception that women must choose between a ‘successful’ career and a healthy family life – or work twice as hard to have both, even if there is a dedicated husband for family activities:

“Women are typically more responsible for home-care, elder-care and child-care, which can be challenging when managing a career”

(Woman, CEO, USA)

The reality is, many women lose confidence when returning to work, and there is not always enough support given in terms of return-to-work policies, adapting working patterns or expectations of working hours. An interviewee mentioned that both her and her husband are required to travel professionally, and whilst she earns more money, she is the one who tends to step back from travel commitments due to family life.

Those women that have managed to retain senior level positions while raising a family attribute it to a combination of supportive partners, bosses and flexible working opportunities. This is a key learning for the sustainable energy sector going forward if it wants to be a leader in having a high representation of women in the workforce.

Policies vs Practice and Implementation

Organisations often put policies in place to address diversity and inclusion in the workplace. However, how these policies are implemented and operationalised is key to making progress. Many interviewees were aware of Gender or Equal Opportunity Practices but not familiar with them or how they were applied. Most were broadly aware of parental leave policies and how that might affect them. Policies relating to parental leave and flexible work hours were very well received by interviewees and contributed to a positive and progressive view of a company. It was felt that the political or public relations benefits of declaring diversity goals were a driver for some organisations.

Those working for smaller organisations suggested the practice (of diversity and inclusion) was strong and that no specific policies relating to diversity and inclusion had yet been prepared. The trickle down of policies set at a central organisational level may also not filter down to smaller satellite or in-country offices.

Recruitment was noted as a tool for addressing diversity within the workplace. Gender and inclusive-aware champions negate the need for top down policies – the company culture itself is gender conscious

Most companies respond to the minimum national and local legal requirements, while a few go beyond, offering ‘better’ policies for both women and men e.g. parental leave, flexible work hours.

2.3 Quotes

A selection of quotes from interviews (in no particular order). Additional quotes are provided from other sources, such as on-line literature, surveys through the network and peer review comments during the review. Some feature within the body of the report.

“Patriarchal DNA still exists”

(Woman, Independent, South Africa)

“There are considerably more women working on sustainable energy in industrialised countries than in developing countries. This is mostly due to the fact that women do not choose energy career paths as a priority in developing countries. There is a lack of expertise and I find it difficult to find women experts in our (sustainable energy energy) field in Africa, MENA and South East Asia.”

(Woman, Sustainable Energy Specialist, International)

“Gender indicators don’t alone work, need women to be the focus of a programme if you want it to work.”

(Woman, Sustainable Energy Specialist, International)

“Men motivated by Return on Investment not climate”

(Woman, Independent, South Africa)

“Equality is what we’re aiming for but until we’ve reached that we can only enable”

(Man, Network Coordinator, UK)

“Whilst top management think they’re being disruptive [by being in the renewable energy space] they are not (in terms of work patterns/approaches/innovation)”

(Man, Network Coordinator, UK)

“Academia and private sector still male dominated”

(Woman, Academic, South Africa)

“Wants to see more about ‘fair’ not just ‘equal’ “

(Woman, International Project Delivery/Board Member, UK)

“Focus on diversity not just gender”

(Woman, International Project Delivery/Board Member, UK)

“Never been trained to recognise gender issues (in the workplace)”

(Woman, Sustainable Energy Specialist, International)

“Women harming women and lowering the playing field”

(Woman, Sustainable Energy Specialist, International)

“[energy] a sector where women aren’t very present”

(Woman, Sustainable Energy Specialist, International)

“In meetings women may get interrupted if they don’t get to the right argument quickly”

(Woman, Sustainable Energy Specialist, International)

“Working on gender, the biggest enemy can be the women holding onto traditional values”

(Woman, Sustainable Energy Specialist, International)

“Having a PhD carries significance (in Africa) and possible protected me [from gender bias] vs other women working on energy”

(Woman, Researcher, Rwanda)

“Sometimes we have a fight with our own confidence, [and ask] can I really do this?”

(Woman, Researcher, Rwanda)

“[Gender] starts at school/uni. If girls also grew up tinkering with PCB’s, who knows...?”

(Woman, Researcher, Rwanda)

"Technology is one thing, but without all the other aspects, how do we make people want to use it?"

(Woman, Researcher, Rwanda)

"How do you best implement policies that give women the voice and a safe space without risking reputation?"

(Woman, Researcher, Rwanda)

(Woman, Researcher, Rwanda) referring to an unofficial Rwandan study on gender and energy

"Some women feared going to the field with men."

"A 'mens club' equivalent doesn't yet exist [for the women's energy sector]"

(Woman, Government, UK)

"There is still a tendency for women not to declare their technical background"

(Woman, Government, UK)

"I'm convinced there are many bright ladies with high expertise who don't lack professionalism or hard work, but the system is oriented to men"

(Woman, Academic/Board Member, Russia, talking about why women do not appear at senior levels in Russia)

"Energy business is not easy. Large CAPEX, huge cost of mistake, responsibility, risky, political, lots of negotiations. Lots of women don't want this"

(Woman, Academic/Board Member, Russia)

"In some cases I can go into a meeting room full of men, and they think I'm bringing the coffee"

(Woman, Academic/Board Member, Russia)

"Renewable energy is a new sector, less old school traditions, more opportunities for innovation and values"

(Man, Solar Consultant, France)

"[there is an] off-ramp (from working to having kids) but there isn't an on-ramp"

(Woman, CEO, USA)

"(In China) 'women's ability with language may benefit from engaging in the quite international sector of RE"

(Woman, Policy Expert, China)

"Wedding pictures in front of wind farms!"

(Woman, Policy Expert, China, on how aspirational renewable energy is in China)

"It's been rewarding to join such a booming sector especially that it's relatively new in Egypt and the Arab Countries. Seeing more young women joining our internship programmes or studying STEM every year prove that things are moving. Yet, I still believe that a much bigger work is needed in the MENA region...especially on the regulatory level."

(Woman, HR Manager, MENA)

"The main obstacle facing implementation is that there are social and cultural barriers that discourage women to relocate outside their countries to pursue their career."

(Woman, HR Manager, MENA)

"[Fewer female applicants than male applicants] is noticeably less with junior jobs and that is a good indicator that more young females and joining and pursuing the field in the MENA region."

(Woman, HR Manager, MENA)

"Anyone who denies women's inequality is delusional or benefits from the inequality"

(Woman, Shareholder, USA)

“Women are loving and smart and they get it, [they] have never been afforded the opportunity to be delusional”

(Woman, Shareholder, USA)

“With every single one of us, there’s been men surrounding us, that have helped us and put us in the position we find ourselves, no matter what we are due – we cannot underplay their position.”

(Woman, Shareholder, USA)

“There is such an awareness of everyone’s peace in the world where we all have the right to clean air and water”

(Woman, Shareholder, USA)

“We women have to help other women and it helps us, when PV is installed it helps everyone, when a women gets to become a CEO it helps us all”

(Woman, Shareholder, USA)

“My industry is 95% male dominated in the conference circuit – being young, confident and having access to money gives you celebrity status”

(Woman, Executive, Asia)

“Why is it that you when you search for renewable energy images on-line it’s all hard hats, old men and transmission lines?”

(Woman, Executive, Asia)

“We have a vision for gender equality sure, but there is no accountability to bring women into the mix – there is always an out. There’s no consequence of not doing the work; to what extent is the vision translated into the strategy of business and into KPIs of key decision makers? If there is no accountability, how will we get there?”

(Woman, Executive, South Africa)

“There are not many women in business in general, therefore there’s not many women to pick from”

(Woman, Executive, South Africa)

“I worked with all white men – there was no one like me. Who is my role model?”

(Woman, Advisory and Investment, South Africa)

“As a female founder, must have a better track record than men, I’m scrutinised heavily and it’s difficult to find funding.”

(Woman, Advisory and Investment, South Africa)

“When I told my boss I got engaged – his response was, ‘OH NO! Now you’re going to leave and go have babies.’”

(Woman, Advisory and Investment, South Africa)

“The (sustainable energy) industry is itself more open for women, they are looking for women. There’s a recognition that women bring a fresh element, but they would not want to it to be majority women.”

(Woman, Executive, South Africa)

“You often hear, ‘See – she has no kids, and that is why she can be the Director’”

(Woman, Private Sector Manager, Brazil)

[Women's participation is moving in a positive direction] "...the African Energy Forum just started quantitatively starting tracking male/female participation, and looking to improve participation of women at events"

(Woman, Executive, South Africa)

"Some women feel that they do not need the training (for senior management) and will feel offended, they just need the opportunity. Training only women conveys that women are not prepared or qualified."

(Woman, Private Sector Manager, Brazil)

"Our willingness to let women and girls fail is becoming more open"

(Woman, Executive Industry Association, USA)

"Even though I see [increased participation] changing, and the societal views have shifted a bit – women still have to be empowered within a traditional masculine field – we still lift up men and are empowered in a masculine way. I don't think we will get to gender equality and inclusion until we allow/accept men and boys to go into historically women roles – however, this shift is way further behind than women inclusion. For example, my brother-in-law is training to be a midwife – his experience is no one wants him to be there, and gets no support from peers or professors. It's similar to how women were treated in the medical field in the 50s:'"

(Woman, Executive Industry Association, USA)

"Until we are willing, as a society, to break down the gender bias (both ways) we are not going to achieve anything."

(Woman, Executive Industry Association, USA)

"There is a shift, where men think this movement is important, however, 'we need to hire more women' is where it ends. There is no recognition regarding diversity within the levels of skills or how they are engaging their entire workforce."

(Woman, Executive Industry Association, USA)

"Not too many men are asking 'How do I use my manpower to be an ally and voice to stand behind this'"

(Woman, Executive Industry Association, USA)

"I had strong role models, a supportive family, and established a STEM connection prior to the age of 12, by age 12 the societal pressures of gender stereotypes start to shape your world and what is expected of you"

(Woman, Executive Industry Association, USA)

"In my experience, there are a lot of differences of policy development and implementation between male board versus female board; extreme differences also exist between foreign and local management."

(Woman, Executive, South Africa)

"It has been quite a an adjustment in terms of what I was exposed to at [my previous company]...but its been a good adjustment, and I've really enjoyed the transitions to be working with [a female executive leader], she's quite inspiring and a wonderful person to work with"

(Woman, Private Sector Manager, South Africa)

"I believe it is probably because my CEO is a female that she is that much more aggressive in taking steps to ensure gender and various demographics are properly represented. For example, she did a complete market related remuneration review of all roles and not just those occupied by females...and resulted in an increase"

(Woman, Private Sector Manager, South Africa)

"I'm very much encouraged with the my company and how they've recognised the importance of having females in management positions, and the way they've helped them transition to those positions, providing skills and mentorship to them"

(Woman, Private Sector Manager, South Africa)

"[A solution is to] 'ensure that the person in the HR role has the adequate skills and experience to drive transformation forward"

(Woman, Private Sector Manager, South Africa)

"It boils down to the values of the organisation, the code of conduct, the way we interactive with one another, if we are all there to respect the diverse views and options put forward it is a step in the right direction"

(Woman, Private Sector Manager, South Africa)

"When working in a team of males, (my colleague) has often had to portray herself in a more masculine and dominating way in order to get her point across"

(Woman, Private Sector Manager, South Africa)

"A couple of women and I were talking about how they don't want to have a one on one coffee or dinner with a male as they don't know where the boundary lies"

(Woman, Private Sector Manager, South Africa)

"Our diversity, skills sets, demeanour and attitudes, despite being different across the gender divide, has weight and needs to be recognised"

(Woman, Private Sector Manager, South Africa)

"The real assets of a company are its human resources, and we constantly need to up skill ourselves and the individuals in our teams"

(Woman, Private Sector Manager, South Africa)

Extended Quotes

Ratified policy does not always translate to implementation:

"Morocco signatories ratified policy but the practicalities of implementation are a huge problem, resulting increased sexual abuse and harassment – in the home, community or on the plantation (the later subjected to more violence). This is compounded by women's participation in agriculture and impacts of climate."

(Woman, Academic, Global)

A similar example was stated in Turkey, where

"gender policy is a political tool, but in reality this does not translate to more inclusion and less oppression."

(Woman, Executive, Turkey)

Governance and Accountability:

"Research and awareness of gender equality does not result in progress Companies and organisations need to implement full time senior hires (rather than consultants or junior appointees), individuals that can drive gender equality and inclusion forward. e.g. One major sustainable energy organisation completed a study on the gender equality gaps and problems across the sector but do not have a fulltime person to implement strategies, they don't know where to place the person that they hire, even though gender equality is cross cutting throughout the organisation. Further, the person will receive confrontation no matter which team they are placed, as the team views the person as a problem and barrier – a watchdog."

(Woman, Academic, Global).

Anecdotal Gender Bias Example:

Two successful married people with similar business development roles in the sustainable energy industry, raising capital for RE investment attending a conference. “I knew everyone in the business, banks, lawyers, consultants, I’m here, I have my teaser, my pitch, and think about raising capital, and the first question from 8 people was ‘who’s looking after your kids, while you are away?’”. The husband is asked about business and around the tenth question, “How’s the family?” The experience results in self-doubt she questions herself, “Should I not be here, am I a bad mom?” – and she takes a hit on her confidence which resulted in a decision to move into advisory and consulting, where it feels more acceptable to perform her work duties.

(Woman, Advisory and Investment, South Africa)

Quotes from On-line Sources:

Megan Schultz, Invenergy’s Senior Vice President of Structured Finance says²⁰

“I strongly believe in the value of an inclusive workforce and providing a culture where all voices are heard and valued. It leads to better decision-making, more innovation, and most importantly, a place where employees are excited about coming to work every day.

We’ve made significant strides in hiring women at our company—in 2017, 48% of new hires at our headquarters office in Chicago were women—and we look forward to continuing work towards the advancement of women throughout the organisation.

IWN has been an important part of elevating our company’s culture by providing programming, resources and opportunities for both the women and the men at Invenergy to network and share strategies to help them become stronger employees and managers. IWN has worked to increase awareness about the unique issues that woman face in the workforce.

At a company level, Invenergy recently held training and workshops on inclusion, unconscious bias and growth mind-set as another important step. These are on-going efforts that I’m proud our company is embracing and building upon.

I am grateful to be part of a company that has not only provided me with tremendous professional growth opportunities, but has also allowed my voice to be heard. I want to make sure every current and future employee has the same opportunities.”

Yisha He, Chairwoman of UNISUN Energy Group²¹

“What’s the key driver of the renewable energy sector? Innovation. Innovation requires diversity. Women need to realise that they have so much to offer because they are a minority and different from men.

[Women’s] thought process, ideas, and feelings may be different from those of men. That is exactly what a workplace needs a wide range of views.

Women should feel free to be themselves. They don’t have to look or act like a man to earn their male colleagues’ respect. Women should feel more confident when facing challenges and don’t avoid promoting themselves and their achievements. Women can also be mentors for new-comers in the sector and not be afraid to be a pioneer.

Young female professionals in renewable energy often need to work harder than their male peers to earn recognition or praise. Few opportunities are given to women to prove themselves.

Women are deemed physically weaker than men and hence people think that they are less suitable for the jobs that require ferocity and physical power, such as working at renewable power plants. However, women in the field have already proved that they can perform as good as men if they are given the opportunity.

Women are limited by their mobility to take up jobs where they have to travel or relocate for a longer period, as the locations of large renewable energy construction projects are often in remote areas. This is especially disadvantageous for women, many of whom are expected to do chores and take care of their children.”

²⁰ Invenergy (2018). Promoting Women in Renewable Energy. Blog June 11, 2018.

²¹ Sorenson, R., 2019. How gender inclusiveness will change China’s renewable energy future: An interview with Yisha He, Chairwoman of UNISUN Energy Group. The Beam Magazine

Quotes from Brazilian PV Industry:

“Positive examples of women empowerment/gender inclusion”

“The ‘1 Encontro de Mulheres na Energia Solar’ event held in Florianópolis brought awareness to women’s perspective of the solar energy market in Brazil. Experiences and ideas were exchanged and a group was formed in order to start a network of women working with solar energy (industry and research, public and private sectors), aiming to give support to women in the segment and encourage the insertion of women in this majorly man-dominated field.”

(Woman, PV Researcher, Brazil)

“What it is like being a woman in the sustainable energy sector”

“Having to prove yourself every step of the way in order to be respected and valued as a woman professional in the area is challenging, and, to be honest, exhausting. At times I think to myself ‘Why can’t they just trust my opinion as a professional in the area, why do I still have to prove to them that I am capable? This would most definitely not be required of a man.’”

(Woman, PV Researcher, Brazil)

“I have already heard that I could not be head of a research group and a laboratory because I did not fit on the desired stereotype, which means , an older man or a woman (preferably without children). In addition, frequently when at an international congress/seminar, I hear from people that they do not believe that I could be developing technology as a Brazilian woman. I have heard things such ‘There is no way to match motherhood and research, right?’, ‘It would be much easier if you had no children, wouldn’t it?’, ‘Having to look good and make calculations is hard, right?’, ‘Does someone like you work with experimentation?’

(Woman, University Professor, Brazil)

“Once, when telling that I was invited to a roundtable on solar energy, a colleague commented that they invited me because I would ‘decorate the table’. I often give a technical report on some irradiation issue and my superiors do not consider it, only validating when a fellow male engineer makes the same statement. I’ve been told I am very sensitive or emotional or that I am very tough and should be calmer in dealing with people. It seems that the woman never behaves properly, her technical speech is always disregarded by gender bias. Tough men are seen as leaders, tough women are seen as rude. Sensible men are seen as ‘human and sensitive’ while sensible women are seen as weak.”

(Woman, University Professor, Brazil)

“In our sector, especially when working at construction sites, it is common that our technical skills are disrespected and disregarded. Men make comments about us believing that they are praising us, when they are in fact being disrespectful. Once, I was consulting at a PV power plant and a man who needed to get some technical information about a project came into a room full of men approaching me saying ‘Hey princess, come here and answer me a question’. I felt underestimated, after all, I’m sure he wouldn’t treat a man like that.”

(Woman, Electrical Engineer, Brazil)

Quotes from Peer Reviewers:

“As a young(ish) man, the traditional family structure and life-style of the often absent father ‘bringing home the bacon’, working late and missing out on children’s formative years isn’t necessarily something that my (millennial) generation seeks or desires.”

(Man, TITLE, COUNTRY)

“Gender inclusivity and diversity in general are important entry points into transforming working cultures to reflect modern liberal societal structures.”

(Man, TITLE, COUNTRY)

“If a successful energy transition means the fundamental transformation on how we supply, use, buy and sell energy at that scale points to far reaching and systemic societal change.”

(Man, TITLE, COUNTRY)

“Often more than half of an energy company’s employees are working in fields such as finance, human resources, administration and management, communications and publications, economic analysis, and other fields that do not require STEM qualifications and where women are already better represented but lack resources and opportunities. These non-STEM employees are often second-class citizens in the energy sector, with top management requiring STEM degrees. We have also seen donors to energy projects in developing countries ignore these non-STEM employees, in offering project training and travel opportunities only to STEM categories.”

(Woman, TITLE, COUNTRY)

3. Structural and Environmental Analysis

Participants in the interviews were asked to assist in filling out this framework to ensure that we engaged with all the change necessary to make women feel welcome in the sustainable energy sector. Their thoughts are captured in entirety within this document under Section 2 and summarised below.

This analysis was based on the question:

What can we do to increase women's employment in sustainable energy?

Definitions:

- Barrier = something blocks or prevents your desired goal (Equitable employment for women in sustainable energy)
- Enabler = something that facilitates or promotes your desired goal (Equitable employment for women in sustainable energy)
- Solution = deconstruct the barrier & promote the enabler to achieve the goal – practical actions.

Each response is colour coded across the analysis into generic (black), **STEM (orange)** and **sustainable energy (green)** specific items. However, all responses were specific to the sustainable energy sector and need to be taken into consideration with equal value. Further analysis can be conducted that was out of the scope and timeframe of this study.

INDIVIDUAL LEVEL (ATTITUDES, BELIEFS AND KNOWLEDGE, SKILLS AND TRAINING)

Barriers

- Gender role bias from a young age (dolls for girls/trucks for boys)
- Girls/women afraid to be 'nerds', to be 'smart', to like STEM and to do well²².
- Baggage around STEM subject difficulty; personal doubt in own abilities: e.g. not logical or technically "smart enough" – unable to compete with guys or relate to guys or be respected²³.
- Lack personal networks, family relationships and mentors to support entering the sustainable energy industry.
- Women often feel uncomfortable when they are outnumbered in the work environment
- Issues and fears around respect, safety, sexual harassment in the field, and being taken seriously, especially in a technical environment
- Perception of a job is that it is more 'masculine' in nature: e.g. lacks people engagement, cubicle/Dilbert/boring engineer, not strong enough, lack the physical strength to work on power plants
- General lack understanding of sustainable energy careers, unaware and unfamiliar with the technology and industry, as well as socio-economic impacts of the industry²⁴.
- The energy industry is not what women identify with²⁵
- Perceived concerns about taking on risk and responsibility of large capex projects
- Technically-trained women have a tendency to shy away from showcasing their background
- Language in job descriptions of the sustainable energy sector does not speak to women²⁶
- 'Fight with your own confidence, can I really do this?'
- Returning from maternity leave, many women return with lower confidence and a need to return in a different capacity, less travel etc.
- Seniority often needs to be achieved prior to having a family as it's difficult to obtain after
- No 'on-ramp' once women have taken the 'off-ramp' to have/support a family

22 Example: Interviewee – A career pathway as a SE engineer meant "I had strong role models, a supportive family, and established a STEM connection prior to the age of 12, by age 12 the societal pressures of gender stereotypes start to shape your world and what is expected of you".

23 Interviewee reported in her engineering department, a gender disaggregated study was completed analysing mid-performing students; where most women drop out if they are not performing well – they take the mediocre performance as a sign this wasn't meant for them. In contrast, men didn't drop out and continue the course and externalise the bad performance such as bad teaching methods.

24 IRENA (2019:34) "Women may be less likely to choose occupations in engineering and technology because those fields may not appear as socially useful as other disciplines such as the medical and biological sciences."

25 E.g. Search for web images of people in energy, the result is mostly the technology, transmission lines, power plants, graphs, ratios, hard hats, men, construction, etc.

26 E.g. Women unlikely to apply to jobs if they do not meet 100% of the 'requirements'. – [Confirmed by several interviewees]

INDIVIDUAL LEVEL (ATTITUDES, BELIEFS AND KNOWLEDGE, SKILLS AND TRAINING)
Barriers
<ul style="list-style-type: none"> • Women harming other women if too much competition/territorial/hierarchy • Family and domestic duties and responsibilities; traditional gender role expectations. • Individual unconscious bias, unaware of gender discrimination
Enablers
<ul style="list-style-type: none"> • Initiatives that support girls interests in STEM and start ‘tinkering’ with kit at an earlier age; • Career fairs and counselling in high school and colleges, parental education²⁷ • Real world exposure to value adding internships and a variety of exposure across the sector (not admins, PA, copy making roles) • Girls and women see other women working and operating in the industry, whom they can identify with; to imagine and visualise themselves working in sustainable energy careers; and that the sector is appealing to their interests • Initiatives that demonstrate a wide variety of careers outside of STEM but needed for the sustainable energy industry • Awareness of more professions across the sector (including community engagement, advocacy, marketing, grant writing, policy, design, etc.) • Employers who make it the norm to adopt whichever working pattern is needed for the individual to continue to engage in the workforce at a high level. • Put women in place as the gatekeepers to information and education (career fairs) – far more likely to attract women²⁸ • Women led and facilitated leadership and mentorship programmes • Including and encouraging diversity during decision making for every phase of the project environment. • Family supportive working policies and rural travel environments (provide day care and family relocation/education support) • Gender sensitive/positive work environments
Solutions
<ul style="list-style-type: none"> • Parent training to support children’s interests in non-traditional roles, especially girls interested in STEM fields • Early childhood development support (especially within developing economies) to enhance growth and development from a young age. • Put women as the gate keepers (outside of HR) as the point of contact to speak with other women considering joining the industry and sector • sustainable energy career fairs within schools and mentorship programmes • Disseminate information about careers in sustainable energy as a social and economic solution not just a technical solution; to attract more women who choose careers for social betterment • Authentically build networks for women, highlighting a diverse sector for diverse attraction of entrants. • Visibly promote and celebrate women • Training women and girls for public speaking opportunities – providing small scale workshops or conference events specifically targeted at women in sustainable energy • Provide transparent pay scale data for men and women across roles • Seek out refresher/re-training modules specific to the sustainable energy sector (policy updates, technology trends etc.) • Rebrand the sustainable energy sector to identify with broader diversity and interests of the workforce –“like attracts like” • Change the language used during recruitment drives, e.g. on a job specs state that ‘only 50% of the requirements needed to be considered’ or ‘women encouraged to apply’

27 Example: Parents in India were educated on the higher potential of economic independence for girls in STEM, the response was greater investment into the child (better food, more support to attend school, support at home, more focused on the child’s education than chores and training to be a good wife.

28 Example: Interviewee exclaimed in a company that this was the primary barrier for recruitment. Women were not as interested in speaking with men about a role with the company and much more receptive to approaching and speaking with women.

ENVIRONMENTAL LEVEL (WORKPLACE, EDUCATIONAL ENVIRONMENT OR COMMUNITY)**Barriers**

- Project development roles perceived as not safe for single women because of need to visit unsecure places; require field visits
- Culturally, roles activities and responsibilities may not be accepted (driving, traveling, commuting, working around other men, communicating and negotiating with men)
- A career in sustainable energy is not visible as a career/employment option – especially non-technical roles. Opportunities exist through informal channels or family connections²⁹
- Women in leadership roles are limited and not visible – those that have leadership positions have to “embrace the suit/masculine power”
- **STEM education is expensive, too competitive and “not interesting” – too left brained – similar to doctor/lawyer – not enough women in STEM or business management to feel culturally accepted.**
- Men set the standards, make decisions, and the rules; they are traditionally the decision makers
- Women must choose between careers or family – can’t ‘have it all’ without taking a setback in the career indefinitely.
- Not included in decisions, unequal pay and need to work harder for recognition and promotion³⁰
- Women considered not strong enough for the physicality of power plant jobs and the long hours
- Women expected to be primary care takers of homes, families, elders etc. that limits long working hours and travel.
- Women’s ideas and perspective is different to men, there is no process to manage and integrate new ways of thinking
- Women assumed to be an administrative function instead of technical or a decision maker; automatically sunk.
- Lack of flexible working conditions (duration/compensation of parental leave, changing responsibilities, company culture/work ethic)
- Gender policies are often poorly implemented, and they are just a tick-box exercise or national imperative.
- Not enough women on sustainable energy conference panels – often get ‘manels’ (male only panels)
- Despite gender and inclusion policies, implementation and uptake falls short – there is no accountability within management and no consequence for underperformance on quotas.
- Lack of gender awareness in the workplace
- Job adverts often targeted to those with technological backgrounds, rather than attracting business/social science/legal professionals
- Recruitment decisions avoid women for on-site positions, as management “can’t trust the men” and do not want the liability of a sexual harassment case.
- Perceptions of what equality and inclusion mean and how they are measured and achieved³¹

Enablers

- Enabling environments where women and all people at the table have an equal voice and are heard.
- Company training outside of STEM e.g. leadership, management, business and personal development training³².
- Employment quotas and disaggregated policy for diversity and inclusion.
- Embracing diversity and innovation within companies and decision making; implementing process to tackle bias
- Relatively balanced learning environment when at Undergraduate/masters level
- Holding a PhD often adds kudos when working professionally, particularly overseas.
- Creating engagement and communication environments where women feel safe to express their views and one that is not harmful to their reputation
- Recognising women’s (and men’s) different perspectives and the commercial and intrinsic value.
- Gender equality accountability for managers and decisions makers; non-performance consequences.
- Campaigns such as Equal by 30 (www.equalby30.org)
- Inclusive boardroom and meeting process

²⁹ Informal channels and familial connections are referenced in IRENA (2019) Renewable Energy: A Gender Perspective as well as Baruah (2019).

³⁰ “Less access to decision-making spaces; discrimination by men in the workplace; and inequality in pay and promotions” and “Young female professionals in renewable energy often need to work harder than their male peers to earn recognition or praise. Few opportunities are given to women to prove themselves” – Yisha He, Chairwoman of UNISUN Energy Group, Interview URL <https://medium.com/thebeammagazine/how-gender-inclusiveness-will-change-chinas-renewable-energy-future-3d00e8db30cb>.

³¹ McKinsey study on men’s perception when there are 20-30% women in the room there is a perception of it being 50/50.

³² Investing in employees for the sake of the employee and not just for the improved benefit to the company e.g. growth and development versus technical skills specific to the company.

ENVIRONMENTAL LEVEL (WORKPLACE, EDUCATIONAL ENVIRONMENT OR COMMUNITY)

Enablers

- Leaders that practice and constantly communicate the messages and priority of gender equality and inclusiveness.
- Transparent pay scales for different positions and information regarding career choices and pathways.
- Education around the energy transition dialogue and the systemic solutions and contributions, which are more appealing than the technology itself.
- Socio-economic opportunity to economic independence – particularly in developing country context

Solutions

- Financially investing in employee personal development and career advancement that is not only valuable to the company, yet will create loyal employees
- Give women the opportunity and they will outperform
- Prioritise inclusion and diversity to enhance innovation as a business case; create space and input for different ways of thinking
- Return to work schemes (education, training, 'returnships', flexible parental working schedules, family support – day care, redefining roles and outputs)
- Retraining whilst on parental leave/prior to returning to work (e.g. training modules on changes in energy policy whilst on leave, technology shifts etc.
- Offer flexible working patterns/job sharing etc. for both men and women³³
- Policy and programmes that focus on women specific recruitment, retaining, and promotion/leadership; specific to each company context³⁴
- Company supported volunteer steering committees and working groups that focus on gender and inclusion strategies – addressing barriers specific to women, inclusion and diversity.
- Enforce accountability: Gender and inclusion goals are tangible and measurable within KPIs of managers, and leaders. Financial/commercial consequence for underperformance.
- Inclusive input strategies within boardrooms and meetings
- Promote and educate the importance of gender and inclusion at all levels of discrimination (family, social and workplace).
- Company training positions within leadership- zero tolerance for sexual harassment and discrimination. Strict consequence.
- C-Suite to consistently reiterate commitment to gender equality and diversity through communication and messaging.
- Hire a person or team to drive gender and inclusion vision forward, implement policy into practice.
- Company policies to procure from woman owned businesses.
- Rebrand sustainable energy to be more appealing to a variety of people: powerful, innovative, entrepreneurial, impactful, forward-thinking value based (rooted in the energy transition – socio-economic independence)
- Disarm myths around 'masculine' stereotypes (jobs are desk based, corporate, mechanised, project based, teamwork and collaborative, dynamic)
- Create financial incentives for achieving gender and inclusion targets e.g. reduced debt interest/cheaper project finance, bonuses linked to KPIs, etc.
- Allowing /enabling new mothers/fathers to bring their children to work
- Create flexible work opportunities

³³ Sweden, working fewer hours yet more productive.

³⁴ See Bipasha Baruah, 2019 and Example of Kiewit, USA (Box 17).

STRUCTURAL LEVEL (GOVERNMENT, LEGISLATION, INDUSTRY BODIES AND ASSOCIATIONS)**Barriers**

- Workforce migration from fossil fuel => sector sustainable energy became less about 'saving the world' and more corporatized – a 'hangover' effect of out-dated patriarchal hierarchies and systemic management structures
- Corporatisation of sustainable energy sector makes the culture more masculine
- Larger Gov project procurement pushes out small boutique companies (that may have more women and better policies/ but boutique might be women)
- Engagement of large infrastructure and project management companies (pre-established systems and process)
- Change in nature of social consultation from talking to people to spread sheets with 'indicators'
- Financial viability of employment in the sector – job security (RE is seen as volatile, everyone knows fossil fuel industry provides superior/secure salaries)
- Gender and diversity metrics/quotas that are not disaggregated e.g. disaggregate roles/skills level/profession (eg cleaner, PA, etc)³⁵
- The idea of 'gender indicators' in developing programmes are not effective
- A 'mens club' in the energy sector doesn't exist yet for women
- Industrial working patterns still hold, but are unnecessary in the modern flexible work patterns
- The energy sector is seen as a tough business at a high level, with high CAPEX and risks – woman seen as risk averse
- Low participation of women in start-up culture
- Start-up company culture does not have the same equality and inclusion expectations – however when they grow to bigger companies it's hard to undo.

Enablers

- Mentorship/leadership programmes across the industry
- Energy sector education that is integrated with sustainable energy and vice versa – embedding transferable skills
- Equal opportunity policy/law
- Gender audits: quotas, equal pay scales, disaggregated roles, policies versus practice
- Approaching women early in their career cycle: first-year university and/or high school/elementary school
- Academic scholarships and meaningful mentorships
- Focus on qualitative metrics and language
- Companies making a value-based decision, that gender diversity is the right thing to do (McKinsey, 2018)
- Pressure from clients to engage with more women: B2B want more W2W engagements.
- New generation of women seem to be ambitious and willing to take more risks; increased confidence; personalities conducive to the needs of the emerging sector.
- Renewable energy is regarded as a new and 'innovative' field and can attract a broader spectrum of people and not adopt the 'old school' traditions
- sustainable energy sector is an international/global sector, which requires good language skills – usually something women excel at, which broadens opportunities within the sector
- High level conservative men speaking about importance of gender and equality
- Women in leadership positions are authentically visible.
- Men are enabled to take on more family and home caretaking roles

Solutions

- In the UK, Employers with 250 or more employees must publish and report specific figures about their gender pay gap³⁶ annually.
- Actively recruit outside the conventional and fossil fuel sector
- Implement field and site visits for employees/create company and beneficiary programmes.
- Forming and supporting women in RE/EE associations (national and international networks) – financially supporting
- Create gender inclusive engagement platforms for commercial value-based discussions and networking (conferences, training, workshops)

³⁵ There are a few exceptions, South Africa for instance – the REIPPP, requires top management quarterly reporting of black women (not just women) and procurement from women owned entities.

³⁶ <https://www.gov.uk/guidance/gender-pay-gap-reporting-overview>.

STRUCTURAL LEVEL (GOVERNMENT, LEGISLATION, INDUSTRY BODIES AND ASSOCIATIONS)

Solutions

- Sector policies that require women owned business procurement; coupled with supplier development programmes.
- Associations to advocate to lenders for 'cheaper' debt/project finance (low interest) for gender and diversity inclusion compliance
- Financial institutions to require gender and diversity standards; invest in research on practical implementation of such standards to remain effective/impactful.
- Campaign to 'rebrand' sustainable energy sector image, e.g. highlighting the different roles, skills and talents in the sustainable energy sector; this is not just a job in STEM and STEM is not what you think it is, sustainable energy has a social component, focus on entrepreneurship and top management; and showcase women in ALL these roles.
- Use tools for focus areas for companies that are interested in spending more time thinking about their overall diversity, equity and inclusion recognise company bias³⁷ like Biasinterruptors.org

SUPER-STRUCTURAL LEVEL – UN/INTERNATIONAL AGREEMENTS/CONVENTIONS/GLOBAL ORGANISATIONS

Barriers

- Many orgs/agreements but some of them are perceived as gender blind or do not communicate the gender dimension adequately
- Gender policy is often a political statement, that does not translate to practice and output
- Language and understanding is quite shallow in some leading documents/organisations
- Gender incompetence and bias
- In the International climate discourse, the role of gender is better understood in the context of climate adaptation rather than mitigation (mitigation typically relevant for clean energy).
- Accountability of vision does not trickle down to practical implementation of the sustainable energy sector
- Women's role in transition: primarily seen as beneficiaries (see energy access arguments) to improve livelihoods within poverty (housework, protect health and take care of children) not as career advancement and pathway to economic independence; especially in the development aid language
- Perception that women are risk adverse

Enablers

- International/National platforms
- SDG 5, SDG7, UN Women
- CEDAW
- The Gender Action Plan agreed at COP 22 (decision 3/CP23) in Marrakech³⁸ seeks to advance women's full, equal and meaningful participation and promote gender-responsive climate policy
- The Gender Climate Tracker (genderclimatetracker.org) highlights women's participation on boards, and bodies of the UNFCCC
- National level 'Women in Energy Networks'
- Nationally Determined Contributions (NDCs) submitted under the Paris Agreement may offer opportunities to Incorporate gender Issues
- Gender parity in parliament/government seats³⁹

³⁷ Tool kits for having conversations in hiring practices, hiring committee, metrics to force conversations, recognise bias that comes up – empower team to call it out – create hyper awareness across all issues. Performance, hiring and recruitment, meeting structures, and compensation; how you start collecting data, tracking benchmarking progress, how you are setting goals, engaging top leadership, deepening your understanding of corporate culture.

³⁸ <https://unfccc.int/topics/gender/workstreams/the-gender-action-plan>.

³⁹ EXAMPLE: South Africa 46% parliament held by women; voluntary party quotas (ANC target of 50% women in local and national elections); Energy Department/Ministry was more than 50% women in 2014 – one could correlate that with the increase RE activity and support from government (future study recommendation).

SUPER-STRUCTURAL LEVEL – UN/INTERNATIONAL AGREEMENTS/CONVENTIONS/GLOBAL ORGANISATIONS

Enablers

- The International Energy Agency in collaboration with the Clean Energy Ministerial has launched the C3E (Clean Energy Education and Empowerment) TCP (Technology Collaboration Programme) www.iea.org/tcp/c3e/ focusing on women leadership in clean energy
- Perception that women are risk aware and need more information to make decisions (evidence they will take bigger risks if aligned with goals, they have the right tools)

Solutions

- Work with these organisations to gender up their documents or to communicate more clearly their gender commitments
- Use SDGs etc as leverage with government
- Using the 'energy transition' as a transition to a more diverse work force
- Structure financial incentives for gender inclusion initiatives and accountability (tax exclusions, cheaper project finance/debt)
- International development finance for gender inclusion and diversity performance
- Communicate realities of women's participation to drive the sector forward; that it is essential to the success of the industry; necessary to increase implementation and achieve ambitious international goals
- Lobby for greater consequence for domestic violence and sexual harassment in the workplace.
- Parliamentary gender quotas, promoting democratic governance and process; law/voluntary measures to increase women candidates and party officials⁴⁰
- Provide funding for women political campaigns and if achieve gender equality representation extend budget incentives.
- Enable men to take on more care responsibilities.

40 <https://www.idea.int/data-tools/data/gender-quotas/country-overview>.