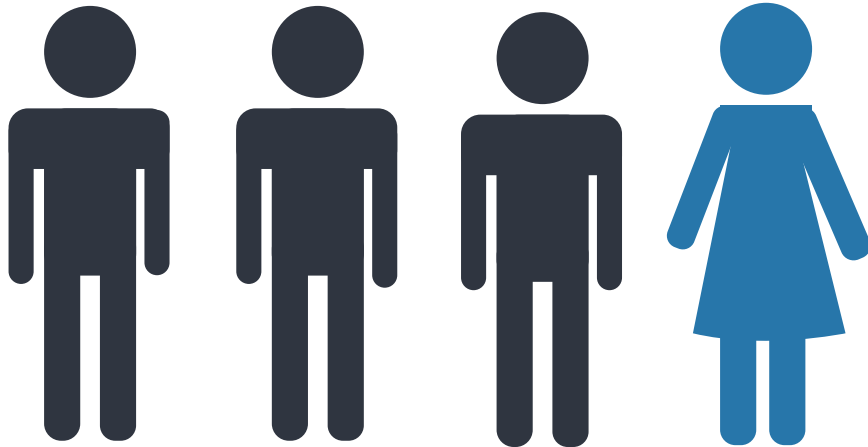


The Changing Role Of Women In The Heavy Industry



The Changing Role of Women in Heavy Industry

An industry can be classified as male dominated if women account for less than 25% of workers. Male-dominated



jobs are common across heavy industry, with on-site construction work being one of the most stereotypically male jobs. One of the main reasons women are unlikely to enter the industry is their belief that they don't 'belong' on a construction site. These feelings might be triggered by a lot of different issues. This could include anything from the lack of female role models in an industry, to the common 'Men at Work' signs often placed on-site.

Other industries, such as wind and solar power, are more popular among women. This could have a lot to do with their own concern for the global environment, or the attraction of working in a more modern industry.

There are new ideas and policies being introduced, aiming at making women feel that they are required in the heavy industry. Although there is a much higher percentage of women working in the renewable energy

sector, the number of women physically working on-site is still well below the percentage of men in all of these industries.

Popularity of Different Roles in Different Industries

While 94.6% of secretaries and administrative assistants are recorded to be female, the top five most male-dominated jobs recorded in the US in 2017 all involve physical labor in the heavy industry:

- Brickmasons, Blockmasons, Stonemasons: 0.5% women
- Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics: 0.5% women
- Electrical Power-line Installers and Repairers: 0.6% women
- Bus and Truck Mechanics and Diesel Engine Specialists: 0.8% women
- Crane and Tower Operators: 0.8% women

Construction is often portrayed as an old-fashioned, stereotypically male industry where women are not taken seriously. Roughly 11% of workers in the UK and only 9% of workers in the US are female, but it can still be seen that the number of on-site roles such as brickmasons and crane operators is still a lot less. Other heavy industries like wind and solar power are becoming more successful, with the number of projects, job opportunities and interested workers constantly growing. These industries are also a lot more popular among women.

Women in the Renewable Energy Industry

After an international survey of over 40 countries in 2016), women were found to account for 35% of the workforce in the renewable energy sector (wind, water, and solar power industries). As only 20-25% of workers in the overall energy industry are believed to be female, this is an interesting discovery. Figures are likely to continue growing as the number of women working in the US solar industry has risen from 19% in 2013 to 28% in 2016.

According to Jackie Brown, commercial leader with GE Renewable Energy (Australian wind-farm business):

People highlight renewable as quite a women-friendly industry. I think that's because it's quite modern, in comparison to the rest of the energy industries, which have been around forever.

Compared to construction, jobs in the renewable energy industry are a lot more popular among young women, but there are still reasons why they should be encouraged to enter different roles that are still unpopular.

The Importance of Encouraging More Women

There are specific reasons why more women are required to work in every sector of the heavy industry. This is especially true in on-site roles, where the level of female workers is a lot less.

Better as a Team

More diversity in those teams means that you are better problem solvers.

(Lucy Homer, Head of Design and Technical, Lendlease).

Research has shown that the overall intelligence and productivity of a team is likely to be better if there are an equal number of male and female workers onboard, who have different interests and priorities. Studies have revealed women to be more attentive to the risks involved in an unsafe working environment, asking questions about any issues they have with possible accidents and their prevention.

Companies in countries including Chile, Ghana and Papua New Guinea have observed that women operating heavy mining equipment such as trucks and excavators are more likely to carefully maintain the machinery, achieving lower operating costs.

Greater Interest and/or Better Qualifications

Due to some of the problems that certain companies consider when hiring women, men can sometimes be chosen, even if they have lower qualifications than any female applicants. Although certain jobs in these industries such as the climbing of wind-turbines could be seen as male work, there will always be women who are going to be interested and for different reasons.

For example, Marina Martin-Tretton, Global Head of Practice, Inspection Services for DNV-GL Seattle states:

One of the greatest motivators to really get into renewables was to be a positive role model in that you can pursue careers that may be outside of what is commonly seen as a woman's role. I have climbed over 2000 turbines and I love it.

Some women could even have a hobby that applies to the job involved. Jessica Kilroy, a wind turbine technician from the US, already had an interest in rock climbing and saw this kind of work as a way of being paid for something that she already loved to do.

When you're rock climbing you're not making any money, but rock climbing and blade repair require the same skills.

Improving the spirit of teamwork and better qualifications are some of the reasons why women should be encouraged to work in all areas of heavy industry. There are also reasons why specific industries such as construction, wind and solar power require a greater number of female workers.

The Importance of Women in Construction

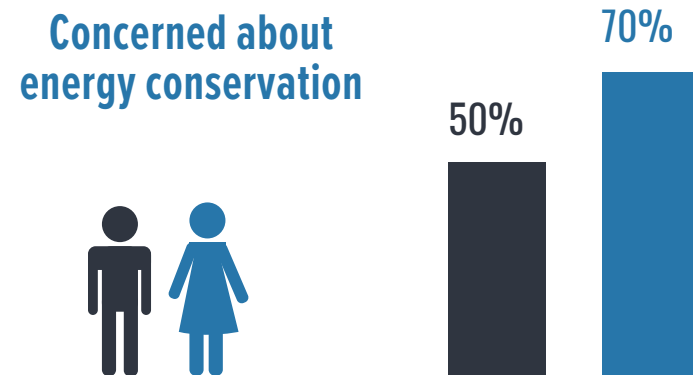
While the construction industry does not appear to be popular among women, it is also becoming less popular with young male students. During the recession (2006-2011) 40% of workers lost their jobs in construction and a lot of these people simply did not return. Many guided their children away from what was seen as an unreliable industry.

A post-war baby boom occurred in both the US and the UK after World War II. By 2023, 3.7 million workers in the US construction industry, born during this time will be entering retirement age. The number of workers entering this industry to replace them is not expected to reach the same level. This

is even more likely to occur if construction is not encouraged as a worthwhile industry to enter for young male and female workers of all ethnicities.

The Importance of Women in Renewable Energy Industry

Research has shown that women have a greater interest than men in jobs that will have a positive effect on the world and global environment. Of the six countries surveyed online by TIME in 2014 (US, Germany, India, Turkey, Brazil, South Korea), 70% of women reported feeling that energy conservation was a vital concern that needs to be concentrated on, while less than 50% of men surveyed said the same.



Evidence has also shown that environmental decision making has a more positive outcome when women form part of the team involved.

The 2011 Human Development Report supplied figures indicating that countries with a higher female parliamentary representation are more likely to:

- Reserve protected areas of land: based on a study of 90 countries
- Approve international environmental treaties: based on a study of 130 countries.

It is continuously becoming more obvious that more women are required to work in heavy industry. However, there are still a lot of reasons why it is seen as an unpopular industry for them to enter. This is especially true in male-dominated environments such as construction sites.

Problems Involved in Encouraging Women

Women are a lot more likely than men to leave heavy industry within their first year of work. Something as simple as a sign reading 'Men at Work', rather than 'People at Work' could make them feel like an outsider from the time that her job first begins. There are more serious problems such as sexual harassment which companies have been sued for. Other problems include:

Gender Stereotyping

A lot of work in the heavy industry, especially to do with on-site construction, is seen as a dangerous work that takes place in a male-dominated environment. UK-based construction worker Philippa Tuttiett has said:

We had Margaret Thatcher running our country, yet I tell people I'm a builder and they're gobsmacked. Unless people get more exposure to women in the industry things won't change.

Some of this work could be perceived as too physically demanding for a woman to carry out. Although 9% of workers in the US construction industry are female, less than 1% of them actually work on-site.

Lack of Female Role Models

Holly Porter, founder of the UK-based Chicks with Bricks, a networking group for female construction workers, states:

I was Googling around, trying to find people of interest that I could talk to as mentors. As I looked, I found that there were quite a lot of amazing women out there, but there just wasn't that much press. I thought, "Well if I want to meet these women then I'm sure there are others that want to meet these women too."

A lot of associations aimed to support women in the heavy industry have been set up, but many just in the past 10 years, e.g. Women in Solar Energy (2011, US-based).

Wage Gaps

Being paid less is one of the main reasons why women are less likely to stay at their job in the heavy industry. Available



data in the US reveals that women in the Science, Technology, Engineering, and Math (STEM) workforce only earn 86% of their male colleagues' wages, who hold similar positions (2014).

Motherhood

The most significant reasons why you haven't got enough women in the senior side of the industry is the barriers they face re-entering the workplace after having children. (Bridget Bartlett, Chartered Institute of Building, UK)

The development of a better maternity leave policy is vital if women are expected to return to their roles after leaving or even enter the heavy industry in the first place. They must remain well-paid when they need to take time off. This could be longer than common office workers, especially if there is any physical labor involved.

Sexual Harassment

The National Association of Women in Construction (NAWIC) states that sexual harassment is one of the main obstacles preventing women from entering this industry.

A Construction Industry Training Board (CITB) survey of 1500 employers in the UK, showed that 73% viewed sexist culture as being the main reason that women didn't enter the construction industry. This could be the result of something as simple as leaving an obscene picture on the wall and not thinking about the importance of taking it down if a female colleague begins work there.

Personal Facilities and Equipment

Personal toilets and changing rooms are often unavailable for female workers and might not be seen as a necessity if there is only one woman working on-site.

In 2016, a UK-based survey carried out by the Union of Construction, Allied Trade, and Technicians (UCATT) revealed 15% of female construction workers found it difficult to locate properly fitting Personal Protective Equipment (PPE).

These issues are some of the reasons why women in the heavy industry are more likely than men to leave their job within the first year of work. There are now better measures being taken to try and make these roles and the work involved more suitable for women.

What is being Done to Encourage More Women?

Zero-tolerance Sexual Harassment Policy

If a female worker becomes the new member of a male-dominated team, it is crucial that the other workers are all aware of what sexual discrimination and harassment involves.



They should all be educated by the company they work for, being told that explicit pictures, offensive jokes or even referring to someone as ‘babe’ are all ways of denying women their right to work in a respectful environment.

This is one of the most common reasons that women are known to leave the industry, especially if their complaint is not taken seriously. If complaints are made, the company must make sure that the workers are all told about the problem, insisting that any required changes are made.

Female Personal Benefits

In April 2017, the Iron Workers Union became the first building trades union in the US to offer women and new mothers up to eight months of paid maternity leave. The union’s president Eric Dean stated:

The whole world is suffering the baby boomer retirement tsunami. All the construction trades are in competition for capable people. Wouldn’t it be a distinct advantage if we were the first?

With many of the jobs involving tough practical work, women will probably have to take more time off than a typical female office worker. In 2016, Bridget Booker, a journeywoman, spoke at a construction conference in Chicago, telling people how she had miscarried on-the-job. Booker said that she was too scared to tell her boss that she was pregnant because she didn’t want to leave and lose pay. This was the main reason that the Iron Works union first considered the introduction of paid maternity leave.

Encouraging Apprenticeships

The majority of sponsorship programs may not be set-up exclusively for men, but they are usually designed with a male audience in mind. Sponsoring an apprenticeship program for young women is a way of encouraging them to enter the industry, indicating that they are wanted and supported.

GRID Alternatives works across the US, installing solar panels exclusively to low-income families through volunteer work. This gives women and people with an interest in the industry the opportunity for hands-on experience with no former practice.

Whether you are a solar enthusiast, community activist, a volunteer with your company, or a college student looking for a meaningful way to spend your spring break, our licensed installers will teach you everything you need to know (Sidney Maduforo, Volunteer with GRID).

If women are looking for experience, followed by a job in the industry, GRID’s Solar Installation Training Programs can provide them with a relevant certificate.

Associations for Female Communication and Information

Women in these industries have fewer role models but new organizations are being set up to provide them with the latest news and information, along with communication with women holding similar interests. Hopefully, this will help them to realize that there is work available and other women who are involved in the same industry they’re interested in.

The US National Association for Women in Construction (NAWIC) was founded in Texas in 1953, as a support network for women already working in, or interested in a job in the construction industry. One of the founding members Alice Ashley states:

We were women with electricity in our veins, cement dust on our shoes, sawdust in our minds... busy, busy, busy, filthy things.

Similar associations in the construction and renewable energy industries have been set up since, but many only in the past 10 to 15 years:

- 2003: National Association for Women in Construction (joined by the UK and Ireland)
- 2005-2017: Women of Wind Energy (US)
- 2011: Women of Solar Energy (US)
- 2017: Women of Renewable Industries and Sustainable Energy (Women of Wind Energy was rebranded to serve other industries in the renewable energy sector).

Conclusion

While the number of women working in the heavy industry continues to grow, companies must become aware of the techniques used and the benefits of inviting more women into their workplace. They should understand any changes that have to be made and the reasons why, to make sure the environment new workers are entering meets all female requirements.

Although these specific requirements should all be provided, it is also important that women feel like a useful part of the team and are not left out. For example, female changing rooms are essential, but women should also be left to perform physically demanding work if they confirm that it is a job they can do.

More associations are now being set up, especially in the modern wind and solar power industries, making sure that all female workers have contact with other women holding similar interests in the work involved. Hopefully this will help women to feel more like part of an increasing team that is able to efficiently carry out the work involved, sometimes more skillfully than their male counterparts.





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