



How women's networks and mentoring can  
address occupational segregation:  
What policymakers can learn from WiRES



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## Women and the renewable energy sector

Renewables is identified as one of the key growth sectors in the Scottish Government's 2011 Economic Strategy. Scotland has committed to meet a number of renewable energy targets by 2020, which support the UK's commitments under the European Renewable Energy Directive. The Scottish Government's strategy for the sector, the *2020 Routemap for Renewable Energy in Scotland*, explicitly links the targets for Scotland's energy consumption to be generated from renewable sources with the growth of the Scottish renewables sector.

There is very limited information about the composition of the renewables workforce. However, like many other sectors that have a large proportion of engineering and technology roles, employment in the sector appears to be very gender segregated. Surveys of renewables employers by ClimateXChange and Scottish Renewables suggest women make up 28 per cent of the renewables workforce (ClimateXChange, 2013; Scottish Renewables, 2013). Available labour market data on the wider energy sector suggests that women account for only 23 per cent of employees (UK Commission for Employment and Skills, 2012), and the majority tend to work in administration (Energy and Utility Skills, 2010). This gender segregation means that, without targeted activity to increase the gender balance of its workforce, investment in the sector will have the impact of exacerbating gendered inequalities (Close the Gap, 2012). If the proportion of women who are working in the sector does not increase, then, all other things being equal, the growth of the renewables sector will increase the gap between men's and women's average pay across the Scottish labour market.

Table 1: Per centage of women in the UK energy sector, by occupational group		
	Energy production and utilities	
	No of women	% of women
Managers and Senior Officials	14,280	15
Professional Occupations	67,000	7
Associate Professional and Technical	20,060	22
Administrative and Secretarial	31,740	34
Skilled Trades Occupations	640	1
Personal Service Occupations	*	*
Sales and Customer Service Occupations	13,770	15
Process, Plant and Machine Operatives	1600	2
Elementary Occupations	36,000	4
All occupations	92,390	100

Source: adapted from UK Commission for Employment and Skills (2012) *Sector Skills Insights: Energy, Evidence Report 51, July 2012* \*sample size too small to be reliable

There are also long run impacts of gender segregation that may yet play out in the renewable energy sector. STEM careers are often characterised as a ‘leaky pipeline’, with women detaching at each stage (Royal Society of Edinburgh, 2012). If this pattern holds true within the renewable energy sector then companies within it may find themselves struggling to recruit and retain senior and experienced staff.

The Scottish Government is clear that action must be taken to address this gendered segregation, and its ambition to do so is set out in the equality statement attached to the 2015-16 *Draft Budget* (Scottish Government, 2014), in *Scotland’s Economic Strategy* (Scottish Government, 2015), and in the *2020 Routemap for Renewable Energy in Scotland - Update* (Scottish Government, 2013). The drivers for this are fairness, in widening access to this developing sector to women in a way that has not been the case in the broader energy sector (Close the Gap, 2012), and economic, in that an undersupply of talent to the sector is currently a constraint on growth (Energy and Utility Skills, 2009; Close the Gap, 2012; Scottish Government, 2013).

The imperative to facilitate women's access to renewables careers aligns with broader work taking place around women's participation in STEM careers. This has been the subject of a range of studies over the past ten years, with the most recent Scottish analysis being undertaken by the Royal Society of Edinburgh (Royal Society of Edinburgh, 2012). This work around non-traditional careers provides a clear sense of methodologies and interventions that work, and have worked, to support women to access stereotypically male areas of employment, and to shape policy to achieve this outcome.

The recommendations of its report, *Tapping All Our Talents*, were principally targeted at the academy, and research councils, universities, learned and professional bodies, and individual employers. Women's economic equality is structural, so demand-side solutions are significantly more likely to be effective across economic sectors, organisations, and institutions than supply-side solutions.

The Royal Society of Edinburgh (RSE) does make a number of recommendations to women about ways that they might develop their own careers. It also considers ways that women might be enabled to do this, and recommends to employers, universities, and professional and learned bodies practical steps that they might take to highlight the work of female role models, enable mentoring, and provide women with a sense of the possibilities open to them within specific disciplines.

Supply side approaches to the challenges that women experience in the workplace include building women's capacity to overcome barriers. One mechanism for building women's capacity in male-dominated sectors is the establishment of women-only networks, and this is one of the recommendations of the recent RSE work (Royal Society of Edinburgh, 2012). These can fulfil a variety of functions, including offering formal and informal networking; a non-judgmental environment in which to gain information and skills; and providing role models in occupational areas in which women are scarce.

This approach is supported by a substantial body of international evidence, including that produced by Catalyst, global leaders on women's private sector labour market participation. They describe women's professional networks and mentoring programmes as helpfully disruptive of male-dominated industries and organisations (Catalyst, 2003).



## Women in Renewable Energy Scotland

WiRES was established in 2010 by a group of women working in the renewable energy sector who were concerned about the skills shortages facing the industry, and the lack of participation of women at all levels across the sector. The co-founding group sought to provide a forum, delivering local members events through which like-minded women working in, or aspiring to work in, the renewables industry could share information, ideas and experience on overcoming barriers to their success in the workplace, while also addressing the gender imbalance. The membership initiative officially launched in 2011 with support from Close the Gap through the delivery of networking events in Aberdeen and Edinburgh, and a Scottish Parliament reception in 2012 which was attended by over 150 women.

A survey was administered to women attending the inaugural WiRES event in Aberdeen, which asked questions about the types of services and activity they would like to see WiRES deliver. They were positive about the opportunity to be mentored, and to receive technical coaching, with 60 per cent expressing an interest in one or both. Existing structures did not meet the need of the women who attended the event; 70 per cent said that their professional body was not a useful source of career development information or other services.

Close the Gap then embarked upon more detailed development work with women in the sector, gathering information about the barriers that they perceived to their progression, and finding out more about their needs. At this point, there was no specific provision for women in the renewable energy sector. The WiRES co-founders, all women who worked in the sector, developed the network in the early stages because of a lack of other resources. Although the supply of skills to the sector has received some attention in the *Renewables Routemap*, there is marked fluidity in progression pathways that present specific gendered challenges. In other sectors where this is the case progression appears to be related to how well an individual can navigate existing networks. Some of this fluidity was noted by survey respondents:

*The types of jobs available [in the sector] are quite specific to disciplines, e.g. engineering, legal and more geared to people graduating with some of the new masters degrees etc. I am cross-disciplinary and more niche therefore opportunities tend to be self-created rather than advertised on job sites.*

*It is easy for experienced people to find work, but very difficult for people from other industries or new graduates to enter in.*

*[As] a Director of a company we struggle to get skilled and able staff with the right skillset. We are too small to train up all our staff. At the moment we cannot keep up with our current clients demands and cannot grow our business due to lack of skilled staff with the expertise to deliver technically competent work for our clients.*



## Close the Gap development of WiRES

Working with the WiRES founders, and drawing on more than a decade of experience in delivering programmes around women's labour market participation and occupational segregation, Close the Gap developed a proposal for Big Lottery Fund funding of WiRES.

Close the Gap proposed to host WiRES for an eighteen month phase of rapid development, which would create robust membership systems, the delivery of a series of networking and knowledge transfer events, and the implementation of a mentoring programme. This latter element involved Women's Enterprise Scotland, which has significant expertise on mentoring and gender.

The outcome that the project was working to was **250 women in the renewables sector, or who are qualified to work in the sector and wish to do so, have increased capacity to progress within the renewables sector.**

The funding bid was successful, and Close the Gap recruited a development officer and administrator to support the delivery of activity.

This activity has now been evaluated through a series of surveys, focus groups, and evaluation interviews with mentoring programme participants.



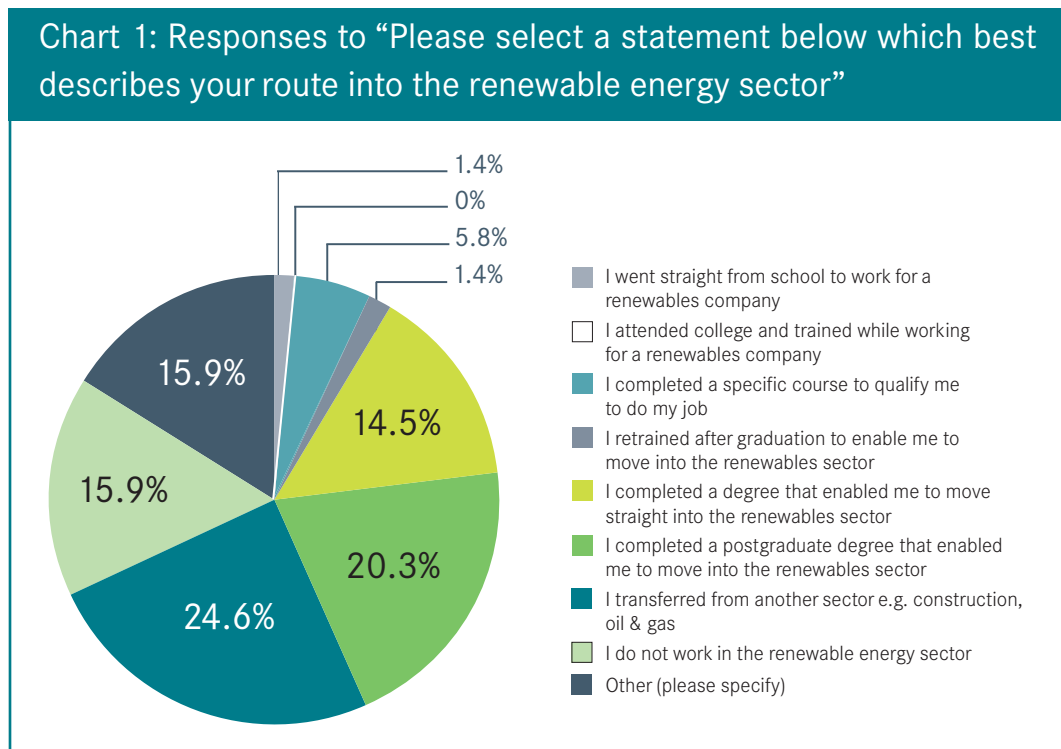


## Findings

Part of the reason that Close the Gap embarked upon the delivery of this supply-side initiative was its likelihood to yield information about women’s participation in the renewable energy sector. Some of this information emerged through the evaluation and survey data that was requested of participants. In addition, Close the Gap made a deliberate effort to gather some qualitative data about women’s experience of the industry by holding a series of focus groups.

### Barriers to women’s participation and progression

WiRES members entered the renewable energy sector at different points in their education and working career. Chart 1 indicates the proportions that accessed the sector through specific routes. 23 per cent of respondents (n=94) to the final evaluation survey transferred from another sector, and only 4 per cent completed a specific course that prepared them for their job in the sector.



Other women completed first or postgraduate degrees that enabled them to work in the sector (34 per cent). There is very limited data about the composition of the renewables workforce, but the final survey findings support the sense that education and career pathways into renewables jobs are still significantly more fluid than in more established sectors.

*I came into the sector in January and it was a conscious decision on my part that it was a really growing sector, one that Scotland is leading the way in in many respects. It seems like there was an enthusiasm in the sector that I wanted to get involved in. Those were the long term prospects coming from that in a growing industry.*

(WiRES member)

*I am a trained architect. I just completed a Masters in Advanced Energy and Environmental Studies and I am now looking to move into the renewable energy sector.*

(WiRES member)

## Male-dominated workplace

The renewable energy sector is male-dominated. Although Close the Gap's work represents the first attempts to gather information about women's experience of working in the sector, it is assumed that there will be parallels with women's experience of working in other fields that centre on STEM.

A combination of factors, including the cultures in male-dominated and private sector companies, means that these fields are less likely to have workplace policies and practices that support women to balance work and caring responsibilities, like flexible working, and are less likely to feel inclusive to female workers (Close the Gap, 2012; Royal Society of Edinburgh, 2012).

*Once you come back to work [from maternity leave] you can't work less than 90 per cent of your time, from middle management onwards. I know someone who was quite high up and then when she came back, and because she only wanted to work three days a week, she was an administrator for a project.*

(WiRES member)

*We are [on] statutory [maternity pay] as well, and so for that reason I feel no loyalty. If it were six months at full pay I would feel loyalty to them. As it is I would happily walk away tomorrow and not feel ashamed or shy about doing that.*

(WiRES member)

This was borne out in the responses to a question in the final survey that asked about WiRES members' experiences of the sector. Only 39 per cent (n=88) said that flexible working was available in their workplace. 25 per cent reported feeling out of the loop because of their gender, 20 per cent that their contributions were not valued as much as their male colleagues', and 11 per cent that they worked on fewer higher visibility major revenue projects.

There were also worrying indications of further potentially unlawful behaviour on the part of employers. 15 per cent said that they had experienced sexual harassment in the workplace or onsite. 14 per cent reported being paid less than male colleagues for the same work.

*If I was going to apply for an internal vacancy in another country and they asked what I'm being paid, there would be an implicit calculation of how good I am. That's why I'm worried about salary, because I'm worried about progression and the reflection it has on how good I am.*

(WiRES member)

In male-dominated workplaces and industrial sectors, women's networks become a source of solidarity, support, and encouragement. They also provide women with critical information about opportunities for promotion and progression, sponsors who take an interest in individual women's careers, and mentors (Catalyst, 2003).

The WiRES project exceeded its first metric, that of membership, by more than 100 per cent. The membership of WiRES at the point of evaluation was 553 women. This figure does not include women who were in touch with activity through the LinkedIn group, Facebook page, or through Twitter.

When asked about the factors that motivated them to join WiRES, 86 per cent (n=91) said that they wanted to network with other women in the sector, 64 per cent wanted to develop their renewables skills or knowledge, 44 per cent wanted to develop their career planning skills or knowledge, and 32 per cent wanted to mentor or be mentored.

## Networking and knowledge transfer

WiRES offered a range of opt-in networking and knowledge transfer events to its members. At these, women heard from industry and renewable policy leaders. The second networking event was held in the Scottish Parliament, and its keynote speaker was John Swinney, Cabinet Secretary for Finance and Sustainable Growth.

Of the respondents to the final survey, 65 per cent (n=91) had attended networking events. These were the most common route of offline engagement with WiRES. The networking events were almost universally acclaimed by those who completed post-event evaluation forms. 99 per cent (n=78) agreed or strongly agreed that “the event helped me strengthen my professional networks”.

The WiRES knowledge transfer events involved visits to renewable energy generation sites, coupled with the inclusion of sessions around the specific form of energy in question. These had the additional outcome of building members’ knowledge and understanding of the sector. These also evaluated well, and delivered strongly against the outcomes they were designed to realise. Across the four site visits, 42 women completed evaluation forms. 98 per cent agreed or strongly agreed that “the event helped me strengthen my professional networks.” 100 per cent agreed or strongly agreed that “the event helped strengthen my knowledge of the renewables sector.”

## Mentoring

The mentoring programme drove participation in WiRES. In the final survey, 31 per cent of respondents said that the opportunity to participate in the mentoring programme had attracted them to WiRES (n=98).

The programme ran between July 2014 and January 2015, with an inception phase of sign-up, matching, and training of mentors and mentees. A baseline survey of mentees was carried out in July, with an interim survey in October, and a final survey in January.

### *Participant perspectives on the programme*

The final survey of mentees suggests that the majority of participants had a positive or very positive experience. 57 per cent considered it to be “excellent”, and 7 per cent considered it to be “good”.

### *Outcomes*

When Close the Gap was developing its indicators, it deliberately avoided outcomes related to progression, promotion, or employment. The timescales of

the project, which took a total of 18 months for inception, lead-in, execution, and evaluation, suggested that it was very unlikely that participants would see substantial changes in their work circumstances.

The in-depth interviews with mentoring participants, of which five were with mentors and four with mentees, suggest otherwise.

*[My mentee] was promoted twice during the programme.*

(WiRES mentor)

*After the second or third session she got a pay rise and more responsibility.*

(WiRES mentor)

The final survey of mentees also suggests that the programme prompted some considerable shifts in focus and ambition in participants. 50 per cent (n=14) reported making career changes as a result of taking part in the programme. This significantly exceeds the ambitions of the programme, and suggests that those who formed strong mentoring relationships benefited to a significant degree.

Programme-wide, the specific indicators that were identified as a measure of success related to career planning skills, and building networks.

## Career planning skills

A key measure of mentees' career planning skills acquisition is gained by analysing the results of the mentoring survey. This survey gathered baseline data about participants' skills in July 2014. The survey was then repeated in October 2014 and a final survey in January 2015. The challenges of using the data to assess trends is that the response rate for each survey was 50 per cent or less, and there is no way of knowing the extent to which the participants were the same or different each time. There are also a relatively small number of data points.

The survey asked women to self-evaluate against the statements listed below, using a ten point scale, where 1 indicated a lack of competence, clarity, or certainty, and 10 indicated complete competence, clarity, or certainty.

To get a sense of whether skills acquisition was taking place within the group, the mean average of the scores against each statement was calculated. This is set out in Table 2.

Table 2: Mean scores of respondents to the mentoring surveys on career skills			
	July (n=16)	October (n=11)	January (n=14)
I am clear about my work/career goals.	6.5	5.8	6.9
I am able to plan how to achieve my work/career goals.	6.6	6.4	6.9
I have identified a planned progression route for my career.	5.3	5.2	6.1
I have a plan to get to the next step in my career.	5.5	6.4	6.9
I know how to access learning and development support.	6.5	7.3	6.9
I know how to develop the skills needed for promotion.	5.8	6.7	6.2
I am confident about asking for a pay rise or promotion.	5.4	5.5	5.6
I know how to do job searches and make applications.	7.6	7.0	8.1

Across all of the statements January's scores are higher than July's. This suggests that the group had collectively acquired career planning skills through the course of the mentoring programme.

This is supported by responses to a question about career planning in the final survey administered to WiRES members. Of those who participated as mentees in the mentoring programme (n=14), 83 per cent felt better able to plan their career or professional development.

### *Building networks*

Women who attended networking events or site visits were much more likely than those who had taken part in the mentoring programme to perceive that they had built their networks. 99 per cent (n=78) of networking event participants reported in post-event evaluations that they agreed or strongly agreed that "the event helped me strengthen my professional networks".

Across the four site visits, 42 members completed evaluation forms. 98 per cent agreed or strongly agreed that “the event helped me strengthen my professional networks”.

Participants in the mentoring programme were less likely to perceive that their networks had developed. 67 per cent (n=14) of mentees who completed the final WiRES survey described themselves as having “built my networks”. This is still a very positive outcome, but the gap is perhaps attributable to the narrower focus of mentoring, which by design does not necessarily introduce the mentee to a wide range of other people.

### *Gender and WiRES*

The in-depth interviews revealed a range of opinions on the gender focus of WiRES. Some mentors and mentees were concerned that the sex-specificity of WiRES may prevent female participants from developing relationships with male industry leaders. Others clearly thrived in the “non-competitive” and “supportive” environment created by WiRES.

The evidence-base on mentoring strongly supports sex-specific networks and interventions as a way of redressing gender inequalities in individual workplaces and in industrial sectors (Catalyst, 2003; Royal Society of Edinburgh, 2012; Close the Gap, 2012). This does not reduce the anxiety that some women feel about participating in them, and it is worth considering how this issue might specifically be addressed by any future programme.



## Conclusions

WiRES was something of a departure for Close the Gap, which is an initiative principally focused at the policy level, and in delivering demonstration and pilot projects on the demand side of women's workplace inequality.

It has succeeded in developing and executing a programme of activity that has delivered against an ambitious set of targets. It has created a network of women that is double the size it had anticipated; enabled women to build their networks and career development skills; and created an evidence base for developing mentoring programmes in Scotland that are explicitly devised to tackle occupational segregation. In the words of a mentee:

*Considering that this is such a niche, it's surprising how many people have wanted to engage [with WiRES]. [...] It's demonstrated that there is an appetite for it to continue. It's all been really well organised, and the team at Close the Gap has been very effective. I hadn't heard of them before. They've managed to demonstrate that they've really learned about the sector, and pulled the right people in as speakers at events. They ran the programme really well.*

(WiRES mentee)

Supply side interventions can only ever be part of the solution to women's workplace inequality and occupational segregation. The WiRES experience suggests that employer and economic development engagement with mentoring, networking, and soft skills capacity building may have significant impact on women's capacity to progress within non-traditional occupations.





## Recommendations

- Scottish Government, economic development agencies, and Business Gateway services promote the value of mentoring programmes and women's networks, both within the renewable energy sector and across the labour market.
- Scottish Government and economic development agencies create seed funding solutions for women's professional networks within sectors in which occupational segregation is a drag on growth.
- Scottish Government create sustainable funding solutions for mentoring programmes within sectors in which occupational segregation persists.

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Building on the successes of the project to date, WiRES aims to continue to grow and deliver a programme of work under the stewardship of the existing steering group from April 2015.

For more information or to join, go to:  
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Close the Gap works in Scotland on women's participation in the labour market.

Partners include Scottish Government, Scottish Enterprise, Highlands and Islands Enterprise, Skills Development Scotland, Equality and Human Rights Commission, and Scottish Trades Union Congress.

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