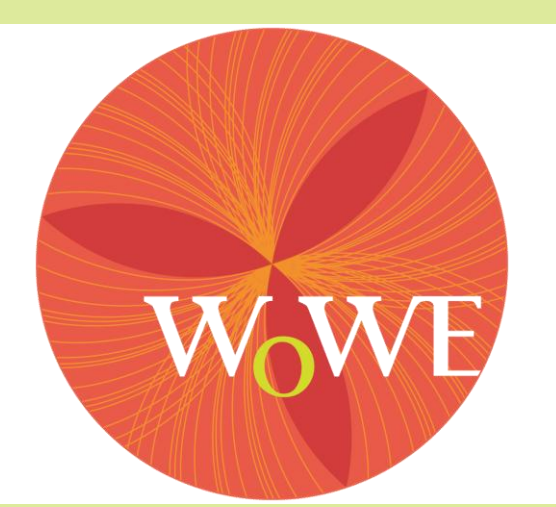




Moving Towards an Understanding of Women in the Wind Energy Workforce



Kristen Graf, Women of Wind Energy; Katy Briggs, DNV; Kim Comstock, DNV; Ellen Crivella, GL Garrad Hassan; Alice Orrell, Pacific Northwest National Laboratory; Suzanne Tegen, National Renewable Energy Laboratory; and Christina Mills, Institute for Energy and Environmental Research

Abstract

In 2009 women made up half of the workforce in the United States¹, and in the 2008-2009 academic year received more PhDs than men.² At the same time, women account for only 2.2% of Fortune 500 CEOs.³ And 52% of women in technology-related fields leave for reasons including workplace hostility and isolation.⁴

How are women faring in the workplace? In the renewable energy field? This is an early effort to better understand the demographics across the variety of sectors that make up the wind field through polling of the participants at WoWE events and surveying of the AWEA HR working group.

Reviews of recent studies and research on the topic of women in management make the business case for bringing more women and minorities on board and diversifying decision-making.

Case studies from businesses in other industries highlight best practices that could potentially be implemented by companies in the renewable energy field. As the Department of Energy seeks to create a roadmap for expanding the wind workforce to meet the potential of 20% wind by 2030 it will be critical to understand where we are starting and increase the conversation about how we can recruit and retain more women throughout the field.



WoWE's mission is to promote the education, professional development, and advancement of women to achieve a strong diversified workforce and support a robust renewable energy economy.

Context and Latest Research

"Well, if you're not fully utilizing half the talent in the country, you're not going to get too close to the top ten."

– Bill Gates, speaking in Saudi Arabia⁵

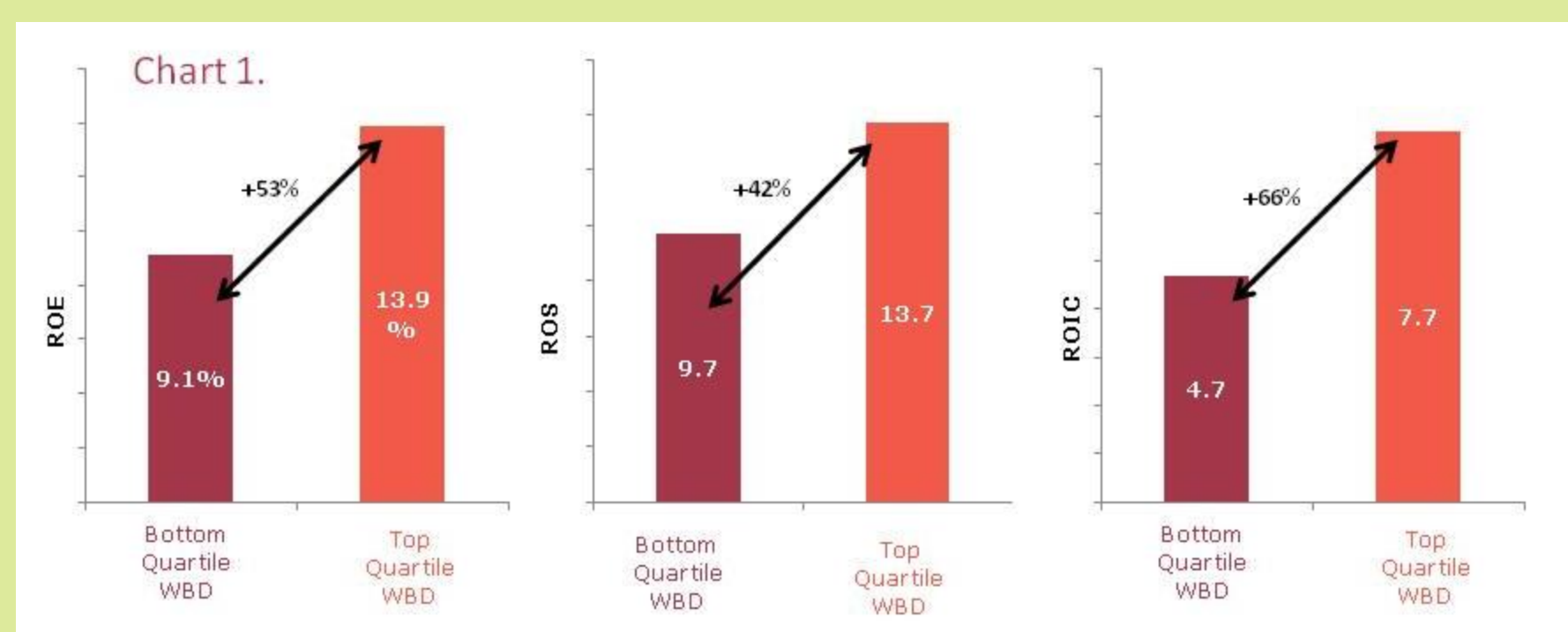
The World Economic Forum put the same idea in slightly different language. "The most important determinant of a country's competitiveness is its human talent—the skills, education and productivity of its workforce. Women account for one-half of the potential talent base throughout the world and therefore, over time, a nation's competitiveness depends significantly on whether and how it educates and utilizes its female talent."⁶

While many of us would like to believe that the story of the United States is different, and in many ways it is, the fact remains that we continue to under-utilize half of our workforce, even in the field of renewable energy. Data from the US Government Accountability Office (Table 1) shows this for sectors closely related to renewable energy.

Sector	% Women (2007) ⁷	
	Managers	Non-Managers
Transportation and Utilities	27%	25%
Manufacturing	23%	31%
Construction	12%	10%

Increasingly research is showing that it is not only the total percentage of women in a particular field that matters, but the number of women at decision making levels can be critical as well. Diversity on boards and executive teams has been correlated with financial performance.

In its 2007 report, *The Bottom Line: Corporate Performance and Women's Representation on Boards*, Catalyst found that Fortune 500 companies with more Women Board Directors (WBD in chart below) significantly out performed companies with the least Women Board Directors in Return on Equity, Return on Sales, and Return on Invested Capital. (Chart 1) Additionally companies with three or more women on the Board of Directors posted stronger than average results in those three same categories of financial performance.⁸



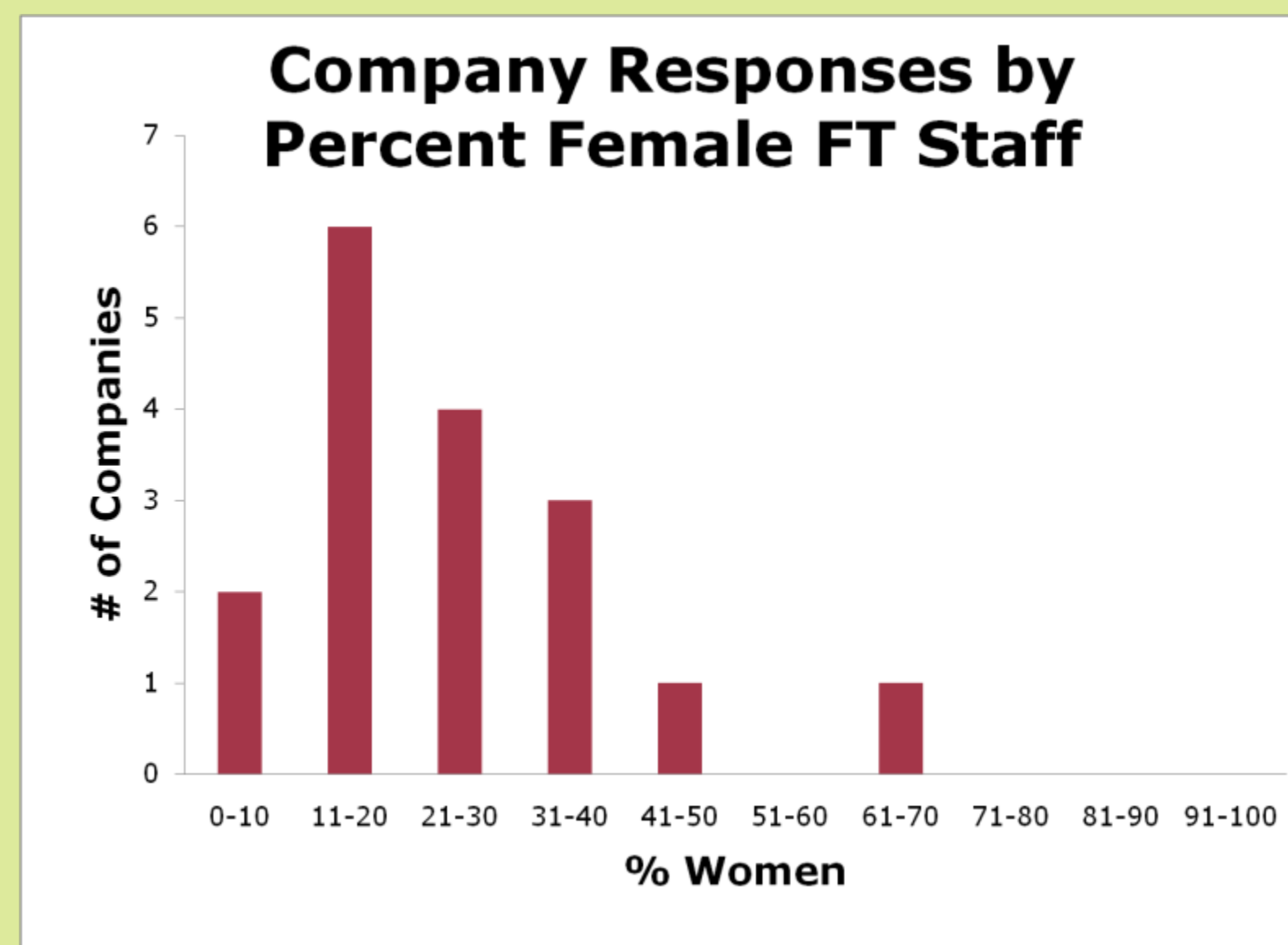
Our Approach

- Reviewed existing data and other global surveys
- Chose World Economic Forum Corporate Gender Gap survey and report as initial model survey
- Adapted survey questions as necessary for renewable energy and specific WoWE needs and interests
- Surveyed attendees of our Leadership Forum: Encouraging a New Leadership Model for Wind Industry Success held in November of 2010 alongside the AWEA Fall Symposium.
- Surveyed AWEA HR Working Group.
- To date we have received responses from 22 companies and those are the results relayed in this poster.

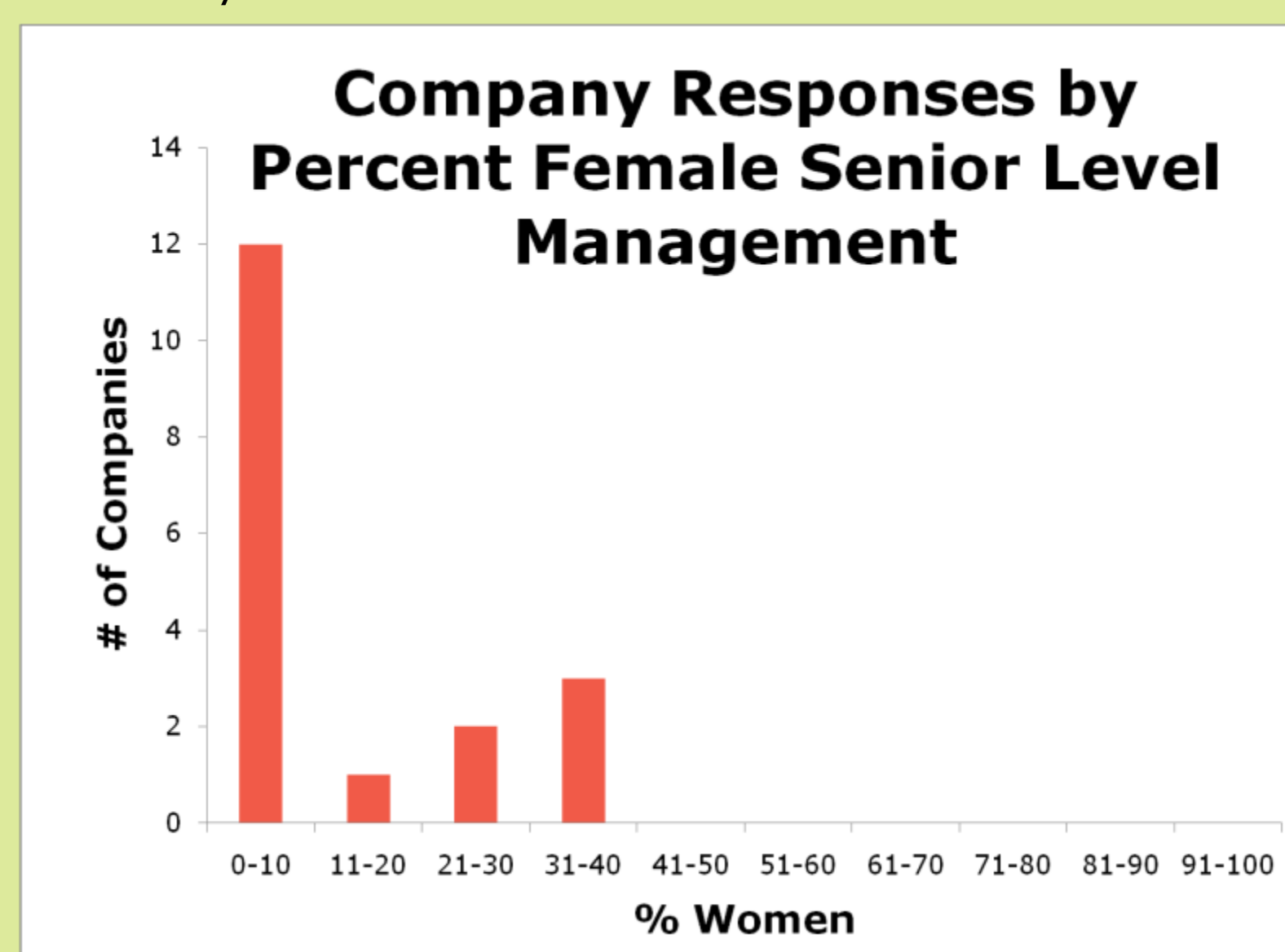
TO ADD YOUR COMPANY PLEASE CONTACT US!

Our Results

Across the companies that responded, 25% of all Full Time Employees are Women



Across the companies that responded, 11% of all Senior Level Management roles were held by Women



As noted in the case study flexible work arrangements can help keep talent in the pipeline and provide important value to women and men as well as the companies they work for.

Across the companies that responded to our survey:

- 59% offer flextime/flexible working hours
- 50% offer remote/distance working
- 14% offer Part-time work options

References

- Bureau of Labor Statistics. 2010. *Women in the Labor Force: A Databook (2010 Edition)*. Online at: <http://www.bls.gov/cps/wlf-databook2010.htm>
- Bell, Nathan E. 2010. *Graduate Enrollment and Degrees: 1999 to 2009*. Council of Graduate Schools. Online at: http://www.cgsnet.org/portals/0/pdf/R_ED2009.pdf
- Catalyst. 2011. *U.S. Women in Business*. March. Online at: <http://www.catalyst.org/publication/132/us-women-in-business>
- Hewlett, S.A., C.B. Luce, and L.J. Servon. 2008. *Stopping the Exodus of Women in Science*. Harvard Business Review. June.
- Kristof, Nicholas D. and Sheryl WuDunn. 2009. *Half the sky: turning oppression into opportunity for women worldwide*. Alfred A. Knopf, New York.
- Zahidi, Saadia and Herminia Ibarra. 2010. *The Corporate Gender Gap Report 2010*. The World Economic Forum.
- Sherrill, Andrew. 2010. *Women in Management: Analysis of Female Managers' Representation, Characteristics, and Pay*. United States Government Accountability Office. Letter to The Honorable Carolyn B. Maloney and The Honorable John D. Dingell. Washington, D.C. September.
- Joy, L.; N.Carter; Harvey Wagner; and Sriram Narayanan. 2007. *The Bottom Line: Corporate performance and women's representation on boards*. Catalyst.
- Pellegrino, Greg; Sally D'Amato; and Anne Weisberg. 2011. *The gender dividend: Making the business case for investing in women Global Public Sector*. Deloitte Touche Tohmats. Online at: http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Public%20Sector/dttl_ps_genderdividend_130111.pdf
- McCracken, Douglas M. 2000 *Winning the Talent War for Women: Sometimes it Takes a Revolution*. Harvard Business Review. November-December.

Case Study/Best Practices

In 1993, after noticing a high rate of attrition among female employees Deloitte started the Women's Initiative (WIN) to accelerate the retention and advancement of women. In the years since Deloitte has gone through a major cultural shift from what they call "ladder thinking to lattice thinking." This has resulted in some dramatic successes including an increase in women corporate officers from none in 1993 to 21 in 2009, an increase in women partners, principals, and directors from 97 in 1993 to 1,126 in 2009, and finally a drop in turnover among women from 7% to 0.5%.⁹

"Lessons from Deloitte's Women's Initiative:

- Make sure senior management is front and center.** To overcome the resistance of partners, the CEO actively led the Women's Initiative. He put his own reputation on the line.
- Make an airtight business case for cultural change.** Emotional appeals weren't going to be enough. We had to document the business imperative for change before we could justify the investment and effort that the initiative would require.
- Let the world watch you.** We appointed an external advisory council and told the press about our plans. They wouldn't let the initiative be another "program of the year" that led nowhere.
- Begin with dialogue as the platform for change.** We required everyone to attend intensive workshops to reveal and examine gender-based assumptions in mentoring and client assignments.
- Use a flexible system of accountability.** We first required local offices to measure their efforts with women professionals. Next, we worked with the office heads to select their focus areas for change under the initiative.
- Promote work-life balance for men and women.** Policies for flexible work arrangements and lighter travel schedules not only eased the strain on busy professionals but also helped open our corporate culture."¹⁰

Next Steps

This was our first attempt at collecting this information and working toward a better understanding of women in the renewable energy field. As we continue to collect this data and collect more of it some specific things that we would like to try to determine include:

- The total number of women working in the wind field as well as in other renewable energy sectors.**
- The total number of women at different levels as well as in different areas of expertise.**
- Trends over time to see how the roles and proportion of women in the field are changing.**
- Retention levels across sectors. As a field are we keeping the women we have recruited?**
- How wind and other renewable energy fields compare to the larger energy field in the US.**
- How does the US compare to the global renewable energy field.**

Contact Information

Kristen Graf
Executive Director, Women of Wind Energy
155 Water St., Brooklyn NY 11201
Direct Line: 718-210-3666
Email: kristen@womenofwindenergy.org