The Silver Tsunami:
Attracting the next generation of district energy professionals

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Editor’s Note: The need to attract, train and retain the next generation of district energy professionals is among the most pressing issues currently facing the industry. It will be a topic addressed at IDEA’s 2015 Annual Conference and Trade Show in Boston. In advance of the conference, District Energy presents this article to help jump-start the discussion.

It has been called the “silver tsunami.” It’s the baby boomer retirement wave, and it has been shrinking the American workforce since the oldest boomers hit age 65 on Jan. 1, 2011. Since then, each day 10,000 people – those born between 1946 and 1964 – have been reaching that milestone and will continue to do so for the next 14 years.

The impact of this seismic demographic change is felt across most industries, in some more than others. PricewaterhouseCoopers says that the power and utilities sector has a higher-than-average proportion of workers able to retire, with 62 percent of the workforce eligible to do so in the next five years and 52 percent of skilled engineers needing to be replaced by 2020. Utility executives, in a survey commissioned by Siemens, ranked the aging workforce as their third most pressing issue (fig. 1). Many district energy businesses are already seeing an exodus of aging and experienced employees; and with them may leave a significant portion of industry knowledge.

But demographic challenges are just part of what’s ahead, and it’s not all bad news. It turns out there are also some promising opportunities to attract younger workers to the industry talent pool, and many district energy companies are already taking steps to do just that.

COMPETING FOR TALENT

While a huge issue, boomer retirements are not the only dynamic affecting our employment picture. In the middle of the 2000s, competition for talent in the industry reached a fever pitch. As the Great Recession set in, these pressures began to recede. Many older existing employees held onto their jobs longer due to shrunken retirement accounts. It also became easier to find new employees, as many organizations shed labor costs to stay

![Figure 1. Siemens Survey: Top Challenges Facing Electricity Executives in 2014.](image)

Q. What are the three most pressing challenges for your utility?

- Old Infrastructure: 48%
- Current Regulatory Model: 32%
- Aging Workforce: 31%
- Distributed Generation: 30%
- Flat Demand Growth: 28%
- Smart Grid Deployment: 23%
- Grid Reliability: 21%
- Coal Plant Retirements: 17%
- Renewable Portfolio Standards: 17%
- Energy Efficiency Mandates: 16%
- Emission Standards: 12%
- Cyber Security: 11%

Although their organizations’ particular staffing needs may vary. Thermal Energy Corp.’s (TECO’s) Steve Swinson says that 40 percent of his maintenance staff could retire in the next three years. The University of Texas at Austin’s Juan Ontiveros reports a jump in employee turnover from 4 percent to 10 percent over the past three to four years, with immediate and long-term hiring needs in operations, maintenance, administration and planning. Cathy Hart of EverGreen Energy sees both a future community-wide shortage of skilled workers for trades positions, with many in her company near retirement over the next five to 10 years, plus a tight regional market for engineers. While Enwave Energy Corp. has no problem attracting young engineers, Dennis Fotinos says his greatest challenge is recruiting trained stationary engineers, who are responsible for operating and maintaining the plants. Canadian companies, he points out, face the additional challenges of a smaller national population to draw from than their U.S. counterparts, as well as difficulties getting work permits when trying to tap expertise from across the border.

**CRACKING THE MILLENNIAL CODE**

Enough with the challenges. What about opportunities? While Generation X is smaller than its predecessor boom wave, the millennials – that generation born between 1980 and 2000 – are expected to make up as much as 75 percent of the workforce by 2025, according to the Brookings Institution. Their sheer numbers present a significant opportunity for district energy companies to find the volume of talent they need to maintain and grow their organizations successfully.

So the numbers are there. Yet the question remains as to whether or not we will be successful in attracting the best and the brightest millennials. District energy is seen by many who know little about our business as an outdated, inefficient technology. We face the challenge of selling our value proposition to them. What recruitment strategies will work? This is a complex question that can’t be fully answered here; but some of the keys to “cracking the millennial code” are in our hands.

It turns out that, more than previous generations, millennials are conscious of their impact on society. They prefer to have a job that helps make the world a better place, and they want to tell their friends and loved ones about it. They are concerned about the environment and their carbon footprint. This creates a significant opportunity for us. We can promote the many environmental benefits of well-designed and -operated district energy and combined heat and power systems, with their opportunities to integrate sustainable technologies and renewable fuel sources. Another message that appeals to millennials, says Ever-Green Energy’s Hart, is that there is ample opportunity for them to make their mark on our field. “The energy industry has been undergoing unprecedented rapid change – with the growth of distributed generation and more sophisticated building systems, for example. We see our engineers excited to be a part of this. The fact that they can help define and refine our evolving technology and business models is a selling point for district energy.”

Crafting and conveying effective recruitment messages are among the tasks ahead if we are to attract, retain and unleash the energy of the best of the millennial generation. It is key to remaining relevant in the future.

**TAKING ON THE TSUNAMI**

But replacing retiring boomers with millennials requires more than compelling marketing; it will also take some succession planning. As UT-Austin’s Ontiveros puts it, the silver tsunami “is turning into a business continuity issue.” This raises two challenges: filling the talent pipeline to meet current and future hiring needs and ensuring that critical job knowledge, often stored only in the heads of retiring workers, is passed along to the new recruits.

To develop and retain new hires and internal talent, UT-Austin has responded by “layering the organization” with positions in which employees can prepare for higher-level jobs as they open up. There are three levels each of operator, maintenance and mechanic positions in the plants. In addition, assistant supervisors also serve as supervisors in training, managers as associate directors in training and the ADs as directors in training.

Thermo Systems, which provides trained, experienced engineers to support clients’ energy installations, is taking similar measures to staff up. The company has developed a “farm system” to develop new talent needed in operations, maintenance, design and project management. “It takes a financial commitment and years to develop,” David Musto explains. “Hiring interns and college graduates today is not going to solve the problems for next year. However, the investments we made 10 years ago in hiring and
training grads are paying great dividends now. While they do not have the institutional knowledge of a 30- or 40-year retiring veteran, they do have 10 years’ experience working side by side with some of the retiring industry gurus. That combined with their zeal and knowledge of new technology makes them valuable contributors.”

For the past three years, TECO has also been filling the pipeline with a program of hiring people two or three years out from the anticipated retirements of specific employees. The new hires then shadow the retiring staffers to ensure the transfer of company knowledge.

In addition to pairing young and retiring workers on the job, companies are also putting other more formal processes in place for knowledge transfer. As David Wade, RDA Engineering, emphasized in his Fourth Quarter 2014 District Energy column (“Solving Our Aging Workforce Problem”), “Another strategy that will pay dividends is to document existing systems, operations and maintenance procedures, system design, etc., and make use of modern computer management systems…” He noted, “I never cease to be amazed at clients who are almost totally dependent on one or two individuals to know system specifics, a practice that is certainly dangerous to reliability and long-term enterprise success.”

COMBINATION OF TACTICS

So how are district energy companies like these finding and attracting young workers? Through a combination of tactics: recruiting at colleges, universities and technical schools; hosting summer, year-round or even spring break internships; providing co-op education arrangements in which students receive job training, curriculum credit and pay; offering plant tours to local schools; and even paying for employees’ post-graduate degrees.

UT-Austin has successfully added 10 new hires from tech schools and community colleges by bringing them in as temporary plant employees for six months, during which time they go through the campus system’s own training program. The approach allows both recruit and plant to test out a potential permanent arrangement. To retain those new and existing employees alike, UT-Austin does not fill its higher-level job openings in as temporary plant employees for six months, during which time they go through the campus system’s own training program. The approach allows both recruit and plant to test out a potential permanent arrangement. To retain those new and existing employees alike, UT-Austin does not fill its higher-level job openings from the outside but instead gives its workers the opportunity to move up and see a future in the organization.

Burns & McDonnell finds that its status as an employee-owned firm helps to retain as well as attract its new hires. According to Scott Clark, young workers are motivated to be a part of the company as they have a stake in it from the start.

David Wade suggested in his Fourth Quarter 2014 column that we need to realistically review compensation, training and professional development, job stability and advancement opportunities if we are to compete with other industries for the limited labor pool.

Ever-Green Energy is working to expand that pool of prospects in a number of ways. The company is actively seeking partnerships with universities and technical colleges to develop curriculum content on district energy. It is also exploring potential collaborations with the trades and regional development organizations to promote district energy to skilled tradespersons already in high demand by other industries. Additionally, Ever-Green is evaluating how to build programs to draw more new candidates from diverse communities to our field.

Enwave, similarly, is reaching out to universities and community colleges to expose more students to district energy and do something about the skills gaps Fotinos sees in the labor market. To promote a better understanding of the business side of district energy operations, the
company is partnering with universities to offer scholarships to students in different business and engineering studies. Enwave also aims to get more students interested in operating and maintaining boiler and chiller plants. “We have to figure out how to make that cool again,” Fotinos says. Enwave currently has a co-op program with another university and community college through which two students per semester work for the company in stationary engineer positions.

For their part, campus energy systems are well-positioned to take advantage of their proximity and access to students as they seek to attract the next generation of workers for internships or employment. Oberlin College is aiming to interest not only prospective engineers in its campus energy system but also the student body at large. Meghan Riester explains that the college gets students from all academic disciplines thinking about campus energy with a three-week energy conservation competition between dorms. It not only introduces students to the industry but also teaches them how to be better global citizens.

While individual district energy organizations are determining how they can take on the silver tsunami, our association has also launched initiatives to attract the millennial generation. Since 2009, IDEA has awarded 10 John Gray Scholarships to college students wishing to pursue knowledge about energy in general and district energy specifically. For four years now, the association has also raised awareness with its campus energy system video contest for students of member institutions.

Although many organizations have already been contending with hiring challenges for some time now, others are just beginning to face them. We have yet to feel the full impact of these generational changes, and it is clear that collectively we need to do more. IDEA is increasing its focus on helping members navigate the tidal wave of boomer retirements and compete with other industries for the same young workers. As has always been the case, people are our greatest resource in the district energy industry. Through IDEA, we can work together to attract and retain talented people so that we can continue to respond to the competitive challenges of our business as well as to offer solutions to significant problems faced by our society.

Authors’ Note: Thank you to all IDEA members who contributed their hiring experiences and strategies to this article.

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More on Cracking the Millennial Code
Tim Griffin

Around 10 years ago, I became interested in how demographic issues were affecting engineering and district energy businesses, as well as how those issues would affect us in the future. At that time, nothing got our industry leaders’ blood boiling more than the topic of “the kids coming out of college these days.” They were found to be universally frustrating. However, the teams I was leading consisted of 75 percent millennials, and we were having tremendous success working together to solve our customers’ problems. I found these young workers’ passion, drive and intelligence, coupled with their problem-solving and teamwork skills, to be an ideal fit for our business.

Why was our experience different, I wondered? In trying to answer that question, I found a handful of other organizations that were also having significant success with their millennials. In essence, they had also begun to “crack the millennial code.”

So I began a study of the millennial generation as a whole, trying to understand the factors in their formative years that had influenced their behavior as well as their hopes, dreams and desires. The goal was to understand how to strategically attract the best and brightest of this generation to our businesses, how to create a “sticky” environment that would increase the likelihood they would want to stay there for their careers and, most importantly, how to release their tremendous power, intelligence and ingenuity to help drive our organizations to success.

This research eventually resulted in the book, Winning With Millennials, published in 2009. Through the process, I discovered why millennials think differently about work/life balance than previous generations. I also learned about many of the challenges they face in integrating with other age groups and identified the type of organizational culture that attracts them for the long term. As a result of the book, I have been given the opportunity to consult and train many organizations on the subject of the millennial generation. The research continues.