



ANNUAL CAREER-PLANNING ISSUE

FALL 2013

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Woman Engineer

THE CAREER MAGAZINE FOR ENTRY-LEVEL AND PROFESSIONAL WOMEN

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Emily Basiaga,
ConEdison Solutions

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Emily Basiaga, Engineer 1, ConEdison Solutions

ConEdison Solutions is a leading energy services company that provides competitive power supply, renewable energy, sustainability services, and cost-effective energy solutions for commercial, industrial, residential, and government customers. The energy firm's outreach program to ensure a diverse workforce includes posting jobs on sites for women and minority engineers and forming a strategic alliance with LinkedIn's Professional Diversity Network. Learn more at www.conedsolutions.com



Woman Engineer: *What is your educational background and what are your responsibilities at ConEdison Solutions?*

Emily Basiaga: I earned my bachelor's of science in engineering with a specialty in mechanical engineering from Mercer University in Georgia. I also performed graduate research and classwork in aerospace engineering with the U.S. Air Force and the University of Tennessee Space Institute before joining the manufacturing engineering staff at an automotive OEM airbag module supplier in Florida.

Later, as I settled down with my husband to start a family, I chose to leave the hectic, round-the-clock schedule of the manufacturing world to learn new skills in consulting engineering. After building my competence at small, local engineering firms and taking some personal time to have a child, I was pleased to find the opportunity that ConEdison Solutions afforded me. Not only could I employ my architectural engineering skills, but also my position blends design work with energy-savings projects. I evaluate applications for new energy-efficient technology to improve or replace existing equipment to reduce a facility's utility bills.

My responsibilities include performing load calculations; designing mechanical, plumbing, and fire protection systems; and preparing bid and construction documents. For clients that request a Leadership in Energy and Environmental Design (LEED) building certification, I perform additional analysis, coordinate the design to meet LEED standards, and submit detailed documentation to obtain LEED points. I also write investment grade audits and perform savings calculations for energy savings perform-

ance contracts with a team of engineers for a comprehensive exchange of ideas.

My job requires interaction with a wide variety of experienced personnel, including other mechanical, electrical, and sales engineers, as well as mechanical and electrical designers, project managers, upper management, vendors, contractors, architects, and clients.

I use many commonplace office software tools and several that are design specific. For example, I use an HVAC load analysis program to perform sizing calculations for new equipment designs. I use this same tool to model how an existing building operates on an annual basis to calibrate with the building's existing energy bills.

Using the baseline model, I evaluate the savings potential an energy conservation measure would provide the client. I use this same tool to perform LEED calculations and energy code compliance calculations. While I had used this tool before working at ConEdison Solutions, I have significantly expanded my knowledge and expertise in how to apply it.

The range of assignments keeps me stimulated and engaged. For existing buildings, I take data from site visits, not only for audit purposes, but also to determine if new equipment will fit into existing limited spaces. The challenge can sometimes feel like making the pieces fit into a complex puzzle. Overall, my responsibilities are varied, and I take on new ones, as needed, to get the job done.

Woman Engineer: *How does ConEdison Solutions reach out to recruit a diversified workforce?*

Emily Basiaga: ConEdison Solutions engages in a strategic alliance with the career and professional networking site, LinkedIn, to post all career opportunities on the Professional Diversity Network (PDN). The PDN has 2.5 million members and is engaged with 4,000 employers across the United States.

The PDN includes the following diversity sites: the Asian Career Network, Women's Career Channel, Pro Able, Professional Diversity Network, Out Professional Network, Military 2 Career, A Mighty River, and iHispano.

ConEdison Solutions's in-house recruiters also encourage agencies to source a diverse roster of candidates. Our in-house recruiters belong to a large number of affinity groups existing within LinkedIn and we actively post our opportunities on sites dedicated to female and minority engineers as well as general sites catering to female, minority, disabled, and LGBT professionals.

Woman Engineer: *What advice do you have for college students when making the transition from campus to workplace?*

Emily Basiaga: While engineering school may prepare students with problem solving skills required in the workplace, it doesn't necessarily prepare them with the interpersonal skills necessary to work with others in a corporate structure or the communication skills required to interact effectively with colleagues and clients. These skills are necessary to get hired, fit in with co-workers, and earn the trust of employers and

clients, regardless of college grade point average or rank in class. Valuing others for who they are, as much as what they have to offer, is important to make a good first impression and to receive cooperation in the future.

An engineering career requires a lifetime of learning. It is important to be humble enough to accept guidance from personnel with more or different experiences and not be shy about asking questions or admitting when there is a lack of knowledge on a given topic. I have found that most co-workers and bosses are honored to share their knowledge.

It is also important to admit mistakes promptly. While professionalism and high standards of performance are expected by employers, most recognize that no one is perfect and mistakes can happen. Taking ownership shows integrity and goes a long way toward building trust. There will also be times when it is equally important to assert a position regarding safety, performance, quality, or financial impact. When it is necessary to challenge another's position, demonstrating respect for the other person will reduce the chances for conflict.

At ConEdison Solutions, I have the support of a wonderful team of co-workers and management personnel. The exchange of information is open with the goal to produce a quality product for the client. When a deadline looms, our team members are ready to pitch in and help one another. Training opportunities are regularly provided to keep all members updated on the latest technology and are used as a platform to share

ideas. I appreciate this environment that fosters growth, continuous improvement, and learning.

The company also allows some flexibility in work schedules. I can arrange my hours around my daughter's preschool and aftercare schedule. If I need to travel to a job site, I am given the opportunity to plan ahead to make other arrangements for her when needed. Management makes an effort to respect and work with my home responsibilities.

Woman Engineer: *Do you belong to a professional organization or other affinity group, and has that experience been helpful?*

Emily Basiaga: I am a lifelong member of Tau Beta Pi, the engineering honor society, which provides scholarship opportunities for college students. As a past recipient of scholarship money, I appreciate the value to provide opportunities for others.

Typically, ConEdison Solutions sends a designated representative to meetings for industry appropriate professional societies. The representative communicates relevant information to the rest of the team. However, all associates in the appropriate discipline are given the opportunity to attend training seminars. I have attended several American Society of Heating, Refrigerating and Air Conditioning Engineer training seminars where topics are presented without the bias of a single manufacturer. I have found that these seminars have more substantial content and provide instruction to a wider audience than a manufacturer-sponsored training seminar.

In former positions, I held a membership in American Society of Mechanical Engineers (ASME) sponsored by my employer. This organization covers all segments of mechanical engineering, so it makes sense for engineers to focus on their individual areas of interest. Training seminars are often costly, so it is important to only attend the sessions that have a direct benefit to you. Classes are more academic in nature with fewer practical examples. Some groups within ASME have more intimate gatherings that are specific to an industry. When I was an engineer for a juice manufacturer, I attended an annual citrus conference that provided training on technologies specific to the industry along with networking between vendors and manufacturers.

Woman Engineer: *What is your outlook for the energy industry?*

Emily Basiaga: The energy industry is certainly impacted by the political climate and the governmental policies and regulations that are generated by it. The demand for energy continues to climb, so new ways to use existing resources are needed to avoid the costly expansion of generation facilities. The way we use energy is changing, including customer use. While history has seen the industrial revolution and the computer revolution, I believe the changes in energy use and management are more of an evolution than a revolution. Much of the change is driven by a desire to be "green" and to conserve our natural resources. Going "green" still has added costs associated with it, so the

challenge is to find ways to make energy management strategies financially viable.

With our current knowledge of the limits of natural resources and concern for clean power, I anticipate that energy-saving projects and technology upgrades, like those I undertake that involve energy saving performance contracts and LEED projects, are here to stay. Using utility savings and rebates from energy providers and sometimes the government, customers can afford to upgrade energy consuming equipment that might otherwise require capital funding. As with many new technologies, I believe some energy improvement opportunities will become more cost-effective over time as lessons learned are applied and the volume of application increases. If costs of implementation can be reduced, more upgrades can be afforded. Continuous improvement and new ideas will allow the industry to continue to mature and add value.

Woman Engineer: *What specific jobs are available at ConEdison Solutions and how can our readers post their resumes online?*

Emily Basiaga: All available positions at ConEdison Solutions are posted in the Career Section of our company website, <https://careersconedcss.icims.com/jobs/intro>. Readers can also post their resumes to our career site for future consideration if preferred roles are not currently available. All our positions are also visible on LinkedIn.com and Indeed.com, as well as on other career boards.