

Ryan Esch, Bradley University

IAC Roots

Ryan Esch was a member of the Industrial Assessment Center (IAC) at Bradley University while he was working toward a Master of Science in Mechanical Engineering. Over the course of three semesters, between January 2009 and June 2010, Mr. Esch participated in 22 client site visits and audits. In addition to contributing significant work to eight final assessment reports, Mr. Esch was able to provide on-site support for students and employees during the site visits. His skill in recognizing opportunities for energy savings proved to be a valuable teaching tool for other IAC members. In Mr. Esch's experience, energy efficiency opportunities varied from site to site, but common assessment recommendations included efficient lighting fixtures, high efficiency motor upgrades, and radiant heating.



Ryan Esch, Bradley University IAC Alumnus

Courtesy of ERS

Throughout his work with the IAC, Mr. Esch noticed time and time again that the benefits of the IAC program extend beyond the students being trained to include the clients receiving the energy, waste, and productivity assessments. He observes that “especially with the current state of the economy, helping companies lower their overall operating costs by installing energy efficient equipment can be the difference between keeping an employee hired or letting him go, or possibly the difference between keeping the facility open and shutting down.” While conducting IAC assessments for small- to medium-sized manufacturing facilities in the Midwest, Mr. Esch quickly recognized the need for services provided by programs such as the IAC to assist facilities in identifying areas where low-cost energy efficient improvements can be made. Mr. Esch recalls, “I visited a number of sites that were using equipment that was at the end of its useful life. I was able to show plant managers how cost effective it was to pursue energy efficient alternatives.” Seeing the long-term benefits of an IAC audit was a hugely beneficial part of Ryan's IAC experience, ultimately helping him shape his future career path.

Career Highlights

Currently, Mr. Esch is working as a project engineer for Energy and Resource Solutions (ERS), a progressive energy engineering and consulting firm based in North Andover, Massachusetts.

The energy efficiency skills Ryan developed while working at the IAC are particularly well suited for the geographic location in which he works. Due to the high population density of the Northeast, reducing energy demand is one of the top priorities for utility companies in the region. At ERS, Mr. Esch regularly performs energy audits and calculates project savings that could be generated by installing energy efficient equipment. Projected energy savings are then used by utilities to design reward programs for customers who qualify to install efficiency measures. Mr. Esch describes his role at ERS as an evaluator who “essentially benchmarks the success of the measures after they have been installed for the utility company, so the program can be improved for the next year.”



Courtesy of ERS

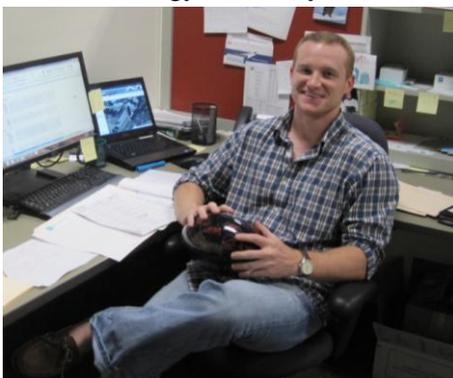
His role at ERS also gave Mr. Esch the opportunity to assist with a study estimating the potential capacity for

combined heat and power (CHP) in the state of Massachusetts. The study analyzed the billing for every large commercial and industrial end-user in the state and utilized census data and NAICS codes to estimate the hourly energy consumption and the full load hours a CHP system would experience for each site. The goal of the study was to find candidates with enough generating capacity to afford a payback of less than five years.

Through the course of his work at ERS, Mr. Esch has realized the various ways in which the IAC experience prepared him as an energy engineer, both in terms of imparting a solid skill set and providing him with a confidence that can only come from hands-on, real world training. Mr. Esch reflected, "Working with the resources provided by the IAC and the Department of Energy, along with the guidance of the Bradley University IAC Director, Dr. Paul Mehta, I was able to develop the tools that prepared me for a future in the energy industry. By being exposed to multiple industrial processes through the many IAC audits at manufacturing facilities, I was able to gain intimate field knowledge and training that could not be replicated in any classroom."

Focus on the Future

Mr. Esch remains excited about his career as an energy engineer. He views his job as one of the most desirable areas to work in today, given the growing recognition of energy efficiency as one of the most easily available resources—able to help displace demand for new power generation or even boost the bottom line for manufacturers.



Courtesy of ERS

While Mr. Esch has not yet officially joined ASHRAE,* he has been attending the Boston chapter meetings regularly. He was a student member of the ASHRAE chapter in central Illinois at Bradley University. Mr. Esch also actively attends Association of Energy Engineers meetings to stay abreast of the latest developments on energy efficiency topics. Mr. Esch plans to enhance his qualifications as an energy engineer with a Certification in Energy Management (CEM), as well as the Professional Engineer (PE) certification. He is also considering the merits of an MBA degree. In his career pursuits, Mr. Esch embraces the innate challenge in his profession—for good engineers to become better engineers, so energy solutions are even easier to implement.

* American Society of Heating, Refrigerating and Air-Conditioning Engineers

"Ryan's experience with the IAC has allowed him to make an immediate impact at ERS. His knowledge of building energy systems and his experience working with facility staff have provided Ryan with the skillset needed to advance quickly into leading site visits and performing advanced technical analyses. We couldn't be happier with the preparation he received at the IAC..."—Betsy Ricker, Energy and Resource Solutions, Inc.

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

ABOUT ITP:

The Industrial Technologies Program (ITP) is part of the DOE's Office of Energy Efficiency and Renewable Energy. A program area of ITP, the Industrial Assessment Centers provide eligible small- and medium-sized manufacturers with no-cost energy assessments. Additionally, the IACs serve as a training ground for the next-generation of energy savvy engineers.

ADDITIONAL INFORMATION:

EERE website:
www.eere.energy.gov

ITP website:
www.eere.energy.gov/industry/

IAC student forum website:
www.iacforum.org

EERE Information Center:
1-877-EERE-INFO
(1-877-337-3463)

August 2011

