INDUSTRIAL ASSESSMENT CENTERS

Success Story

SHARING A WEALTH OF KNOWLEDGE: INDUSTRIAL ASSESSMENT CENTER ALUMNI

JASON VASS—UNIVERSITY OF TENNESSEE IAC PROGRAM GRADUATE

SPOTLIGHT ON THE IAC PROGRAM

Originally created to focus on energy analysis only, all the centers in the Industrial Assessment Center network have now been trained to calculate energy costs as well as assess methods to reduce waste and increase the productivity of manufacturing facilities. Teams of students visit manufacturing plants with a faculty advisor and conduct a one-day assessment followed-up with a report to the company outlining their recommendations. On average, about 50% of those recommendations are adopted by the manufacturers and lead to an annual average savings of nearly $55,000.

The Department of Energy (DOE) has been investing in the U.S. manufacturing sector one student at a time. As sponsor of 26 Industrial Assessment Centers located at universities across the United States, DOE trains over 250 students a year in energy e ciency, productivity improvement and pollution prevention practices and technologies. A recent survey shows that one out of every four graduates of the IAC program stays in the field and continues to help manufacturers save energy and reduce costs. In 2000, it is estimated that all program graduates combined saved over 15 trillion Btus[1] for the year. Since the program's inception in 1982, it is estimated that 1,700 IAC graduates have generated a cumulative energy cost savings of $769 million and energy savings over 115 trillion Btus.

Jason Vass was involved with the IAC program at the University of Tennessee for three semesters prior to his graduation in 1997. The practical experience he gained by participating in nearly 30 manufacturing plant audits was instrumental in landing him a job with a top energy services company (ESCO) in Knoxville, Tennessee.

"My hands-on learning experiences at the IAC provided me with skills not commonly found among new engineering graduates," Vass explained. "The

A REWARDING, HANDS-ON LEARNING EXPERIENCE

Jason Vass credits the real-world skills he acquired as a participant of the UT IAC Program for helping him obtain his current position as a project engineer for an energy services company.

" The students themselves become assets DOE has invested in and the dividends are dispersed throughout the United States in a cleaner environment, heightened awareness of energy efficiency and pollution prevention, and a stronger more productive U.S. manufacturing sector."
— Bill Richardson, Former Secretary of Energy

[1] A Btu or British thermal unit is a quantity of heat needed to raise the temperature of 1 lb. of water by 1º Fahrenheit. Btus can be used to quantify the energy embedded in electricity, oil, and gas.

IAC program provides engineering students with an education that can not be obtained in the classroom, and gave me an edge over other engineering graduates."

Vass is currently employed by Systems Engineering and Management Corporation as a Project Engineer. His responsibilities include performing site surveys of existing buildings, installations and plants; calculating energy savings using whole building analysis; and generating life-cycle cost analysis of projects. However, his biggest duty is managing the Energy Awareness contract for the Department of the Army.

The services his company provides to the Army are very similar to the tasks Vass performed as part of the IAC program. However, instead of assessing manufacturing plants, he now assesses military installations that face many of the same energy conservation and waste minimization issues.

Since Vass has been with the company, he has facilitated over 20 seminars at Army installations all over the world. "The purpose of these seminars is to educate engineers, building managers, and the command sta of the importance of water and energy conservation." Vass said. "We provide solutions that involve the implementation of 'low cost/no cost' energy conservation opportunities. Although the contract does not follow through with the actual implementation, it is estimated that approximately 50% of our recommendations are implemented."

Vass estimates that his implemented energy saving recommendations save his clients over 350 billion Btus per year. If each year's savings is assumed to persist for ten years, then Vass helps to put into place new life-cycle energy savings of 3.5 trillion Btus each year. This means that during his first four years at Systems Engineering and Management Corporation, Vass has contributed to projects that may ultimately save close to 14 trillion Btus.

Vass is a firm believer that the IAC program is successful not only because it creates energy cost savings for manufacturers, but it also opens the door to better career options for its participants. "My IAC experience has given me greater career opportunities than would normally be a orded to an equivalent engineer without IAC experience," he added. By continuing his work in the field of energy conservation and management, the return on the investment made by the DOE continues to grow.

Industrial Assessment Center Program

The IACs serve a population that might otherwise miss out on the benefits energy efficiency, pollution prevention, and productivity improvements can yield small and mid-sized companies. There were 407,249 manufacturing establishments employing less than 500 employees in the United States in 1994. These companies used 8,552 trillion Btus annually.

The IAC Program provides energy, waste, and productivity assessments to help small and mid-sized manufacturers identify measures and plant and office designs to maximize energy efficiency, reduce waste, and improve productivity. The analyses are performed by local teams of engineering faculty and students from 26 participating universities across the country. The service is provided at no direct cost to participating companies which meet qualifying criteria:

- gross annual sales below $100 million;
- fewer than 500 employees at the plant site;
- annual utility bills of more than $100,000 but less than $2.0 million; and
- lack of in-house professional staff to perform the assessment.

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