

A Proposal to Expand the Industrial Assessment Center Program: Maximizing Energy Savings in the Industrial Sector

Prepared by ACEEE

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Background

For over 30 years, the U.S. Department of Energy's *Industrial Assessment Center* (IAC) program has provided small and medium-sized manufacturing firms with the technical assistance necessary to make important energy efficiency improvements in their facilities. The IAC program has relied on the ingenuity and dedication of its academic partners to provide manufacturing firms with cutting-edge energy guidance. The program has been among the most cost-effective and impactful of the federal energy efficiency programs: **in 2006 the program yielded a 90:1 return on federal dollars**. While the program has been targeted at smaller manufacturing firms, the expertise developed by the program was the basis for the *Save Energy Now* initiative for energy-intensive manufacturers, launched by DOE in response to the hurricanes of 2005. Both of these initiatives demonstrate the effectiveness of manufacturing assessment programs in achieving energy savings and productivity enhancements.

The program's university connections also provide a much-needed direct pipeline through which engineering students are prepared for careers focused on energy management and efficiency. It is this role that is so critical to the continued growth and strengthening of energy efficiency investments in the industrial sector. Though the IAC provides this direct pipeline to energy-related positions within the private sector, it is clear that the demand for well-educated, highly skilled and adept energy engineers far outstrips the supply. IAC graduates are highly sought, and for good reason. They are well-versed in the most up-to-date and cutting edge technologies and have a keen sense for improving energy efficiency in a wide range of applications including product design, project engineering and organizational/facility energy management.

We thus propose that the IAC program be expanded and enhanced to meet these two needs. This proposal takes a two-pronged approach:

1. Expanding the network of IAC centers to meet more of the needs for assessment services. We suggest that this expanded federal role should be complemented with state co-funding.
2. Introducing new program elements that explicitly enhance the workforce development aspects of the program.

Proposal

Expand the number of existing IAC centers and create multiple tiers of centers targeted to meet differing needs nationwide:

1. Many of the current IAC locations would become Centers of Excellence with expanded funding and an expanded scope. These centers would set local goals and help produce regionally-focused educational materials for their own staff as well as that of surrounding satellite centers (discussed below).

2. Develop satellite centers that serve similar purposes as Centers of Excellence, but require less administrative overhead and rely on each center's internal expertise. These satellite centers could serve as auditors for the local Center of Excellence in areas that may be underserved (or hard to serve geographically) by the Center of Excellence auditor staff. They would coordinate with other satellite centers to ensure regional needs are met. Satellite centers could be housed in other universities and colleges with four year ABET-accredited engineering programs.
3. Partner with local community colleges and trade schools to bring them into the larger network centered upon the local Center of Excellence. Provide training and materials and opportunities to join audits conducted by nearby satellite centers. Students within this tier of the network could be encouraged to continue their education or supplement existing education at a nearby satellite center or the local Center of Excellence.
4. Develop an internship program. After assessments are conducted, firms may have the option of bringing on a student to work with the firm long term, assisting in the implementation of the recommendations that the original (time-limited) IAC assessments produce. The local Center of Excellence or partner organization would provide training and the introduction to the work. Firms that wished to participate in the internship program would provide the student with an orientation to the firm, and would fund 50% of the entire cost of training and placing the intern. The internship would provide the firm an ideal opportunity to recruit a trained and talented engineer – one who could become a new internal champion for energy efficiency within the firm.

Budget

The Industrial Assessment Centers are currently funded at \$4 million annually. To fully expand the program into the better-serving Centers of Excellence network model, the program funding should be expanded over several years to the level of \$40 million annually. We suggest that a portion of this funding come from states or utility industrial programs. A portion of the federal funding could be conditioned on state-level matching funds. Breakdown of funding:

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| \$5-6 million: | Internship program. Requires 50% employer match, providing the whole program with a \$10-12 million annual budget |
| \$8-10 million: | Funding of existing IAC centers. These centers would be new Centers of Excellence, and funded at \$750,000 - \$1 million each annually. Funding would depend on size of program and size of region served. There are currently 10 centers that are positioned to become Centers of Excellence. |
| \$500,000 each: | Satellite centers |
| \$100-300,000 each: | Community colleges and trade schools |

States would be encouraged to co-fund the IACs, by offering a 1:1 match, maximizing the return on the investment for the federal government. Currently the IACs serve small and medium sized facilities. We suggest that the program continues to focus on small and medium sized facilities while expanding the scope to include large facilities as well.

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