Final Technical Report

Award Number:	DE-FC36-02GO012076
Project Title:	*Louisiana Industrial Assessment Center*
Project Period:	9/1/2002 to 11/30/2006 *(or other dates if applicable)*
Recipient Organization:	University of Louisiana at Lafayette
Partners:	N/A
Technical Contact:	Dr. Theodore A. Kozman Rougeou Hall, Room 241 241 E. Lewis Street Lafayette, LA 70504 337-482-5717 Fax: 337-482-1235 tak1485@Louisiana.edu
Business Contact:	Dr. Ray Authement President University of Louisiana at Lafayette 337-482-6203 president@louisiana.edu
DOE Project Officer:	Bill Prymak US Department of Energy 1617 Cole Blvd., Golden, CO 80401 Phone: 303-275-4931 Fax: 303-275-4758 Email: bill.prymak@go.doe.gov

Executive Summary

This is the Final Report for the Louisiana Industrial Assessment Center for the period of 9/1/2002 through 11/30/2006, although we were still gathering data through 02/16/2007. During this period, our Industrial Assessment Center completed 109 energy assessments for manufacturing firms in our area, offered 3 Save Energy Workshops, taught 26 students (9 graduate and 17 undergraduate) energy management savings techniques and offered an Energy Management Graduate class three times.
These 109 energy assessments made a total of 738 energy savings recommendations, 33 waste reduction recommendations, and 108 productivity improvement recommendations. These combined recommendations would save client companies more than $87,741,221.16, annually at

the then current energy costs. If all of these recommendations were implemented separately, the implementation cost would have been $34,113,482.10 or a Simple Payback Period, SPP=4.7 months. Between 9 months and 12 months after the assessment, we surveyed the manufacturing firms to find out what they implemented. They had implemented approximately 50 percent of our recommendations at an annual saving of $25,867,613.18. The three Save Energy Workshops had an average attendance of twelve individuals. The three graduate Energy Management courses had an average attendance of eleven students.

Task Summary

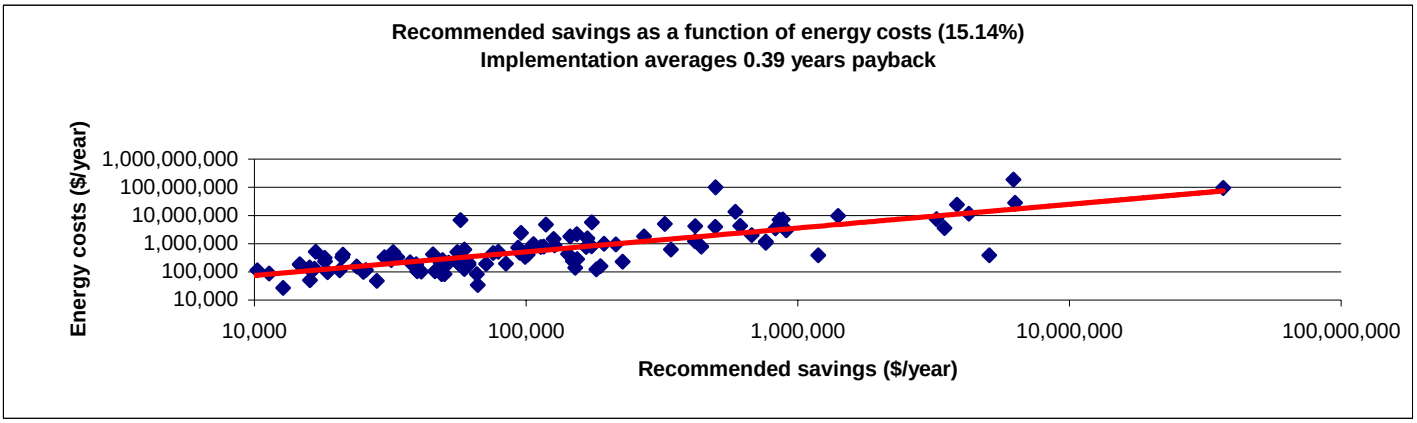
Summarize the IAC's activities by task for the entire period of funding.

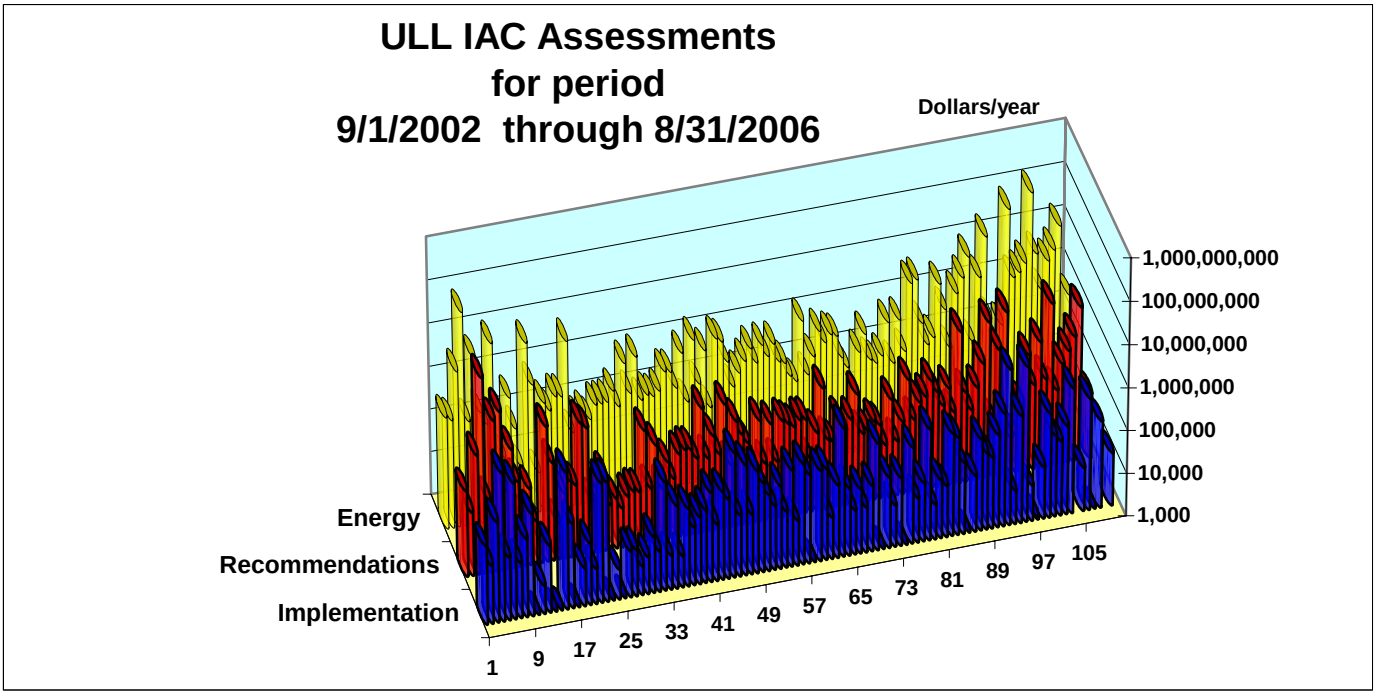
Task 1: Conduct Industrial Assessments, to include a variety of plant types and sizes and well as coverage of the geographic area defined in the Annual Work plan Industrial Assessments:

During this period, our Industrial Assessment Center completed 109 energy assessments for manufacturing firms in our area, offered 3 Save Energy Workshops, taught 26 students (9 graduate and 17 undergraduate) energy management savings techniques and offered an Energy Management Graduate class three times.

These 109 energy assessments made a total of 738 energy savings recommendations, 33 waste reduction recommendations, and 108 productivity improvement recommendations. These combined recommendations would save client companies more than $87,741,221.16, annually at the then current energy costs. If all of these recommendations were implemented separately, the implementation cost would have been $34,113,482.10 or a Simple Payback Period, SPP=4.7 months. Between 9 months and 12 months after the assessment, we surveyed the manufacturing firms to find out what they implemented. They had implemented approximately 50 percent of our recommendations at an annual saving of $25,867,613.18. The three Save Energy Workshops had an average attendance of twelve individuals. The three graduate Energy Management courses had an average attendance of eleven students.

The assessments with energy recommendations are shown below:





Below is a collage of some of our assessments:

Task 2: Promote and increase the adoption of assessment recommendations and employ innovative methods to assist in accomplishing these goals.
During the period after the assessment and before the implementation follow up we attempt to contact the client at least one time to see if they have any questions regarding the AR's. We also send each client a spread sheet on disk which has every recommendation with the energy saving estimate and our estimate for implementing the recommendation. The spread sheet is locked so that only the utility rates, tax rates, and facilities charges maybe changed. The spread sheet then calculates the savings, simple payback period (SPP), and rate of return for each recommendation. On this disk we also enclose a PDF version of the report, so they may refer back to the recommendations.

Task 3: Promote the IAC Program and enhance recruitment efforts for new clients and expanded geographic coverage.
During most years we offer several Save Energy Now Workshops, hosted by manufacturing associations or economic development-civic organizations. From these workshops, most of clients are now call-in.

Task 4: Provide educational opportunities, training, and other related activities for IAC students. Summarize education, training and other any other activities for the students. Include overall number of students that participated during the course of the award.
As stated above during the four years of the award, we trained 26 students (9 graduate students and 17 undergraduate students). All of these students are given the opportunity to participate in workshops and the IETC conference annually. Additionally, we offered and Energy Management graduate course three times during this period. This course averaged about eleven students, less than one-half were IAC students. When the students graduate from our center, most are capable of performing energy assessments for consulting firms. About 1/3 of our students have taken jobs doing this after graduation (one even in Canada).

Task 5: Coordinate and integrate Center activities with other Center and IAC Program activities, DOE's Industrial Technologies programs and other EERE programs.
One time during the four year period we had a student/director exchange program for two days with Oklahoma State University. During this time, we exchanged ideas and techniques employed while doing assessments. Both universities adopted some methods currently in use by the other school.
When we have assessed clients with plants in other IAC territories, we try to obtain a plant contact and information about that plant. This information is passed by our director to their director.
At the start of each assessment, we present the plant leader a pamphlet with the DOE tools and tips sheets, and recommend they visit the various web-sites for additional assistance through EERE and Industrial Technologies programs.

Task 6: Other tasks or special projects, as needed, and as determined by DOE to be advantageous to the program and in furtherance of IAC Program goals.

For several years we also ran the LIFT (Louisiana Industries of the Future Teams) through the state energy office. For this we held individual and team Air Tool Training and Steam Training. The director is a qualified steam specialist and did six ESA (Energy Saving Assessments) in Louisiana and Mississippi in 2006. He has just completed the training and is in the process of scheduling more ESAs in 2007.

We just received funding for and will offer two workshops entitled **CHP using non-traditional fuels** in the summer-fall of 2007. This is sponsored by the Gulf Coast CHP Regional Office with some funding from the state of Texas and the state of Louisiana energy offices.

We have a proposal outstanding to work with EPA's Methane to Markets Partners for recovering additional methane from oil and gas producing facilities and using this methane in the market place. The two countries we have targeted for this are specifically Brazil and China.