



U.S. Department of Energy
**Energy Efficiency
and Renewable Energy**

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Industrial Technologies Program

~~Student Activities Update~~

IAC Student Meeting
February 2006

Michaela Martin

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The History of the IAC
AND
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IAC Student Meeting – February 2006



You've Come a Long Way...

- Energy Analysis and Diagnostics Centers (EADC); 1976-1994
 - Started in Dept. of Commerce, moved to the NEW Dept. of Energy in late 1970's
 - Handful of centers located at engineering schools conducted energy "audits"
 - 14 centers operated in the 1980's
 - Managed by two Field Management organizations: University City Science Center, Rutgers
 - Michaela was an EADC student at Texas A&M 1992/1993



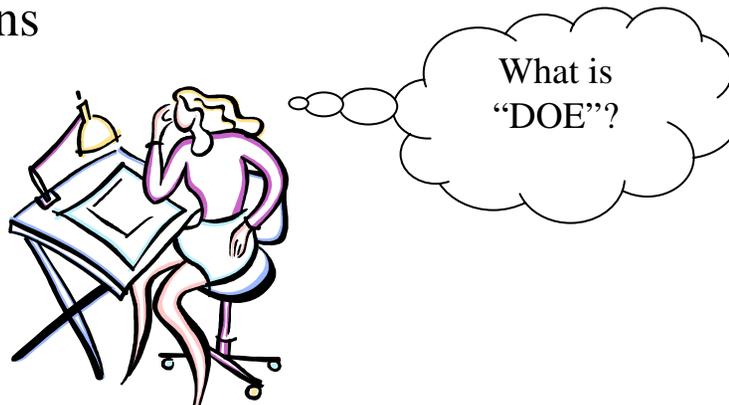
You've Come a Long Way...

- **Industrial Assessment Centers (IAC); 1994 - Present**
 - Through a partnership with EPA, waste minimization assessments were added in 1994-1996
 - Evolved from EADC's; provided energy, waste and productivity "assessments" (1994/1995)
 - Operates with 20-30 centers at engineering schools across the U.S.
 - Conducts anywhere from 550 to 900 assessments per year
 - Small, medium AND large manufacturing plants
 - Some federal industrial sites
 - "First Responders" for DOE initiatives such as Save Energy Now
 - Partners with state energy offices, utilities and other energy organizations



Evolution of the Student Experience

- **EADC Students**
 - Conducted audits and wrote detailed ECO's and audit reports
 - Wrote theses and dissertations based on EADC projects
 - Benefited from working with a full spectrum of manufacturing clients
 - Had strong skills in teamwork, and in written and verbal communications





Evolution of the Student Experience

- **IAC Students**
 - Author publications on their IAC work
 - Conduct presentations at national engineering conferences; also attend, contribute and learn
 - Develop, test and demonstrate software
 - Interact with students and alumni from other centers
 - Participate in annual meetings of IAC students
 - Receive recognition from DOE through IAC certificates
 - Provide feedback to IAC management
 - Disseminate DOE Initiatives to IAC clients; contribute and participate in these initiatives



Evolution of the Student Experience

- **IAC students (continued)**
 - Learn to work in an engineering office environment (Project Managers, Project Engineers; role and task-based compensation)
 - Seek professional growth as PEs and CEMs soon after graduation
 - Embrace energy efficiency and apply knowledge and skills in their careers
 - Have an awesome reputation with recruiters for their skills and experience
 - Are part of a network of over 2,300 IAC graduates



Major Accomplishments and Contributions

- IAC assessment reports are the “**Gold Standard**” in the industry
- IAC database
 - The one and only comprehensive source for assessment recommendations AND implementation data (12,000 assessments, 96,000 recommendations)
 - Provides near real-time data on assessments and center performance for program managers
- IACs are hubs for energy expertise in their region
 - Active in State Industries of the Future – W. Virginia, Texas
 - Many IACs are the foundation for university-based energy centers or extension services (UIC-Energy Resource Center, UMass Center for Energy Efficiency and Renewable Energy, Texas A&M Energy Systems Lab, Georgia Tech Economic Development and Technology Ventures)
 - Many IACs are CHP Application Centers for DOE (UIC, UMass)
 - Centers maintain relationships with utilities and state energy offices



Major Accomplishments and Contributions

- IAC Directors and Alumni are Active in the Association of Energy Engineers
 - Barney Capehart (Florida), Wayne Turner (OK State), Warren Heffington (Texas A&M)
- Centers have developed and tested software tools
 - Cogen Pro: San Diego State
 - Chilled Water System Analysis Tool: U Mass
 - Energy Simulation Tools: U Dayton
- IACs are often the backbone of DOE Initiatives
 - Established Industries of the Future Partnerships
 - Participated in showcase events at large industrial plants – Utah, Texas
 - Support BestPractices as Qualified Specialists, conduct Plant-Wide assessments, software development, and delivery of publications and software to IAC clients
 - Conduct assessments for DOE's Federal Energy Management Program



IAC Alumni: Leaders in Energy Efficiency

- Gary Epstein, UMass EADC 1986, President, Energy & Resource Solutions, Boston, MA
- Eric Rueffel, Colorado State IAC 2001, Energy Engineer, Energy Management Services Team at URS, Inc. in Denver, CO
- Sieglinde Kinne, Colorado State IAC 2002, Energy Efficiency Specialist, KY Pollution Prevention Center, Louisville, KY





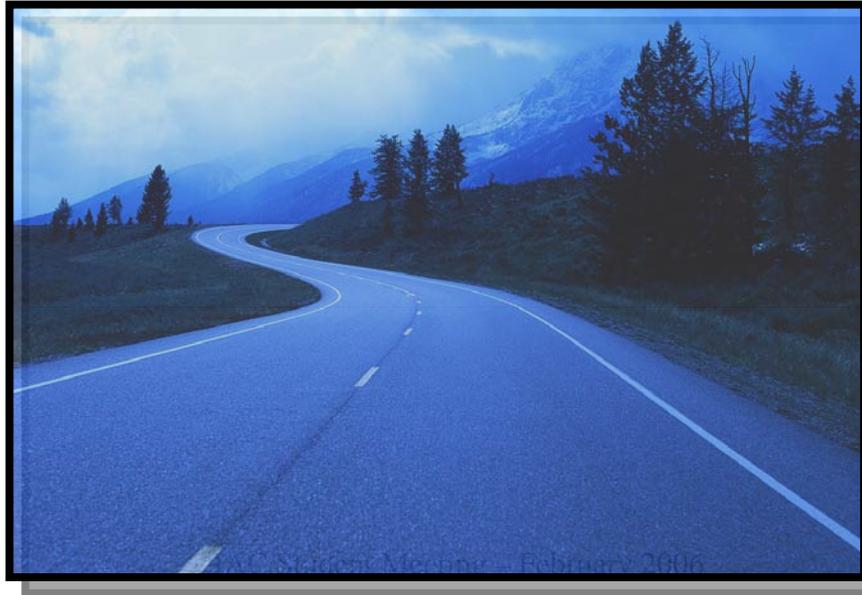
IAC Alumni: Leaders in Energy Efficiency

- Nasr Alkadi, West Virginia IAC 2003, Energy Engineer, General Motors/Detroit Edison
- Will Randall, Georgia Tech IAC 2003, BSME, J.D. Case Western Reserve (2008)
- Adam Knapp, Syracuse IAC 2004, MSEM, Consulting, C&S Companies, Syracuse, NY
- Jason Knight and Ben Erpelding, San Diego State IAC (2003, 2001), Energy Engineers, San Diego Regional Energy Office





**The road to the future may be uncertain,
but the past for the IAC is undeniably paved
with achievement and success. Be proud of
your accomplishments and continue to
pursue excellence in energy efficiency!**





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Student Activities Update



Student Registry and Exit Interviews

- Located at: <http://www.iacforum.org/>
- Lead Student Responsibilities
 - Ensure that all students complete the registry when entering the IAC
 - Ensure that all students complete the exit interview when departing the IAC
 - Ensure that lead/active/inactive status information on students is current
- Lead Student Query should be used to update status info each semester
 - Active/Inactive student status
 - New item: feedback info with deactivated students (without exit interviews) allows Lead to identify reason for departure and update contact information
 - Lead Student(s) appropriately identified
 - **PLEASE UPDATE CONTACT INFO FOR FORMER STUDENTS, WHENEVER YOU HEAR FROM THEM!!**



Student Travel and Professional Conferences

- We have FY2006 funds to cover travel costs for students to attend professional conferences, meetings and training
- Criteria:
 - 1 trips/school
 - Priority given to students continuing education in a major, relevant conferences
- BestPractices Q&A for the Analyst and End User training is eligible
- All IAC student travel arrangements will be handled by ORNL
- Most costs will be prepaid to reduce the financial burden on students

Cancelled



Annual Student Meeting - 2007

- At this time, we are still planning to hold the Student Meeting in February 2007
- The meeting may be sponsored and held at Oak Ridge National Lab and will focus on opportunities in engineering and science careers at ORNL



Student and Alumni Newsletter

- January 2006 edition
- Available on the student website
- Electronically delivered to current and former students
- IAC news briefs from all centers
- Focus stories from Syracuse, Dayton, Illinois-Chicago
- Currently soliciting articles for the next newsletter
- Susie Allen (allensusie@comcast.net) will be collecting newsletter materials from centers





IAC Student Forum Website

- New look!
- Important announcements are listed on the home page
- Discussion boards are again available, please use them
- Coming soon (by this summer): on-line IAC certificate requests
- **The Career section is VERY popular with employers who are interested in hiring IAC students**
 - Please have your students post resumes
 - Please remind your students to check the site frequently for job opportunities
- Other items: IAC contacts, brochures, newsletter, alumni case studies



Questions, Suggestions or Comments?

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