

Save
ENERGY
Now



Industrial Utility Webinars

February 10, 2010

Areas Covered in this Webinar

- Working with public power utilities
- Designing programs specific to public power
- Working with state mandates
- Leveraging federal government resources

Speakers

- Ed Carroll, Franklin Energy
- Dean Laube, Franklin Energy
- Kevin Martin, Danville Utilities

Sponsors

- DOE Industrial Technologies Program
- American Public Power Association
- APPA, Demonstration of Energy-Efficient Developments
- Western Area Power Administration

Questions?

Email rharry@bcs-hq.com



Energy Efficiency &
Renewable Energy



Work with Municipal Utilities: Approaches to Field Aggressive Energy Efficiency Programs

Presented by:

Dean Laube, Franklin Energy

Ed Carroll, Franklin Energy

Industrial Utility Webinars: Public Power Open Session

FEBRUARY 10, 2010

Experience. Delivery. Results.



Our Objective Today

- ✦ Share practical information, and recommendations for designing and fielding common set of energy efficiency programs for municipal utilities
- ✦ Discuss some unique challenges to ramping up to more aggressive programs faced by small to mid sized utilities
- ✦ Some important lessons learned during the launch of programs, particularly as it affects municipal account managers and work with their largest customers in a community
- ✦ Share a model , be open to questions and discussion from other cooperative/municipal utilities and organizations as they plan for more aggressive energy efficiency programs

Minnesota's "1.5%" Goal

- ✦ Next Generation Energy Act – law as of 2007, official start 2010
- ✦ Utility must save 1.5% of gross retail kWh sales annually
- ✦ Minimum of 1.0% from end use customers, once that is met, up to .5% from approved utility supply side projects
- ✦ Key change: spending to a savings result goal

Efficiency Programs Pre 2008

- ✦ 20+ individual program offerings across 17 participating utilities
- ✦ Mix of municipal utilities, and cooperatives
- ✦ Driven by spending vs. saving result requirement
- ✦ No universal message or consistent outreach to trade allies
- ✦ Informal coordination...each utility ran own program

Minnesota's "1.5%" Goal

- ✦ Result: a goal 3.5 times greater than savings achieved to date!
- ✦ High degree of skepticism across many utility staff members that this aggressive goal could ever feasibly be met by individual utilities
- ✦ Doing more of the same (individual programs) would result in costly programs in terms of \$/kWh saved

Approach to Tackle this Goal

- ✦ Assemble a Design Team – representative from each utility
- ✦ Municipals and cooperatives at table
- ✦ In depth, bottoms up planning process over 9 months
- ✦ Agree the 1.5% goal is a collective goal across all member utilities for planning and implementation flexibility
- ✦ Results vs. Spending Orientation – establish savings and budget goals to work to up front

Approach to Tackle this Goal

- ✦ Develop, and agree on common set of objectives to use as measuring stick (e.g. \$.015/kWh saved)
- ✦ Balance: residential and business customer offerings
- ✦ Leverage: “Prescriptive” programs projected to deliver 50% of all savings....driven by local trade allies
- ✦ Be positive and outline what utilities WANT beyond just meeting regulatory goals
- ✦ Compromise – economies can only be achieved by reaching agreement....”You can’t always get what you want...”

Key Lessons Learned

- ✦ Always paint the big picture and economics of programs throughout planning. Make sure all participants see clearly the economics of joint/coordinated offerings as opposed to running small scale efforts
- ✦ For new services, go into the field and step participating utilities through first hand what is involved rather than just talking conceptually about it
- ✦ Make sure who pays for what is clear out of the gates. Particularly critical in a joint utility offering

Key Lessons Learned

- ✦ Make sure to have an internal, centralized, well respected leader who LISTENS to members, and can work toward consensus. Management skills are paramount over technical skills for such a position
- ✦ Work with allies (wholesalers, retail stores and contractors) during the planning process, and during launch of the aggressive programs. Listen to them, and lean on them for their outreach and support
- ✦ Don't wait....start launching programs and trying things, make adjustments prior to being on hook for regulatory goals
- ✦ Next frontier ... look to neighboring / overlapping utilities to partner with (e.g. natural gas utilities facing similar aggressive goals) Can this help you field more competitive \$/kW or \$/kWh programs?

Work with a Utility's Largest Customer Accounts

Key Lessons Learned:

- ✦ Ensure that the local utility staff member(s) are always positioned as the go to, local energy expert
- ✦ Build strong trade ally relationships, and use those relationships to save you time and drive program volume
- ✦ Recognize the importance of the large customer relationship to the municipal utility, and just how local that relationship is
- ✦ Understand the big picture, savings are one thing and business is another animal

The Heavy Lifting Of Program Implementation

- ✦ Savings coupled with customer satisfaction
- ✦ Make it personal through relationship building
- ✦ Measure with short and long term goals
- ✦ Be objective
- ✦ Don't forget to prioritize
- ✦ Value must be based on multiple impacts
- ✦ Show case tracking and feedback
- ✦ Leverage outside resources

Case Study

- ✦ Largest customer on municipal system
- ✦ Sensitive relationship
- ✦ Very informed customer
- ✦ No second chance to make a first impression
- ✦ Multiple opportunities
- ✦ Plan the work and work the plan

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Follow Up Questions, Discussion

Thank You for Your Participation!

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Working with Large Customers to Implement Energy Efficiencies



Utilities Administration

Kevin Martin
Key Accounts Manager
Danville Utilities
Virginia

Welcome...



Introducing Danville, Virginia

Location - Southside Virginia on the Virginia – North Carolina border

Population - 45,400; metro area 107,000



Size - City of Danville 44 sq. mi.

Danville's service area: 500 sq. mi.

History - Founded in 1793, incorporated in 1830, initially a tobacco & textile manufacturing center

Government Structure - Council-Manager

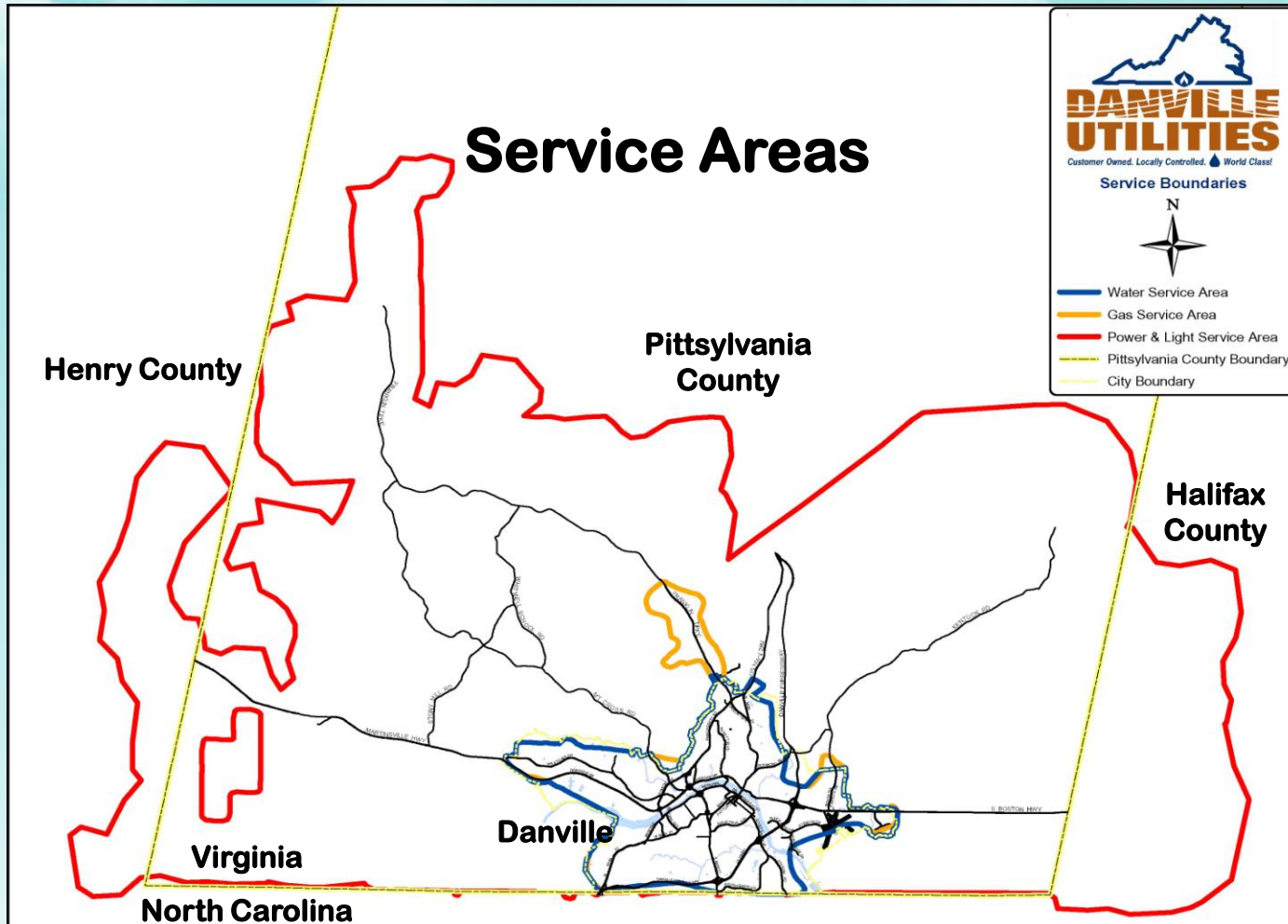
Municipal Utilities - Publicly owned and operated since 1876

Services – Water, natural gas, electricity and telecommunications

Web Site

<http://www.danvilleutilities.com>





Water & Natural Gas – Primarily within city limits (44 sq. mi.)

Electric & Telecommunications – City plus parts of three surrounding counties (500 sq. mi.)



Major Utility Customers

	<u>E</u>	<u>G</u>	<u>W</u>
Severn Trent	X		
Danville Public Schools	X		
Columbia Flooring	X		
EBI	X	X	
Danville Regional Medical Center	X	X	X
Essel Propack	X	X	X
Goodyear Tire & Rubber		X	X
Hickson Danchem	X	X	X
Intertape Polymer	X	X	
Nestle Refrigerated Foods	X	X	X
Piedmont Mall	X		
Pittsylvania County Svc. Authority			X
Swedwood (IKEA)	X	X	
Shorewood Packaging	X		
Roman Eagle	X	X	X
Walmart	X		

Electric - Gas - Water





Background



In 2005:

We saw the effects of electric wholesale deregulation in Virginia

A very favorable electric supply contract ended

An 80% increase in energy costs

A 40% increase in customer electric rates



We needed help...

We learned about the US Department of Energy Industrial Technologies Program and Industrial Assessment Center at North Carolina State University.

We started working with the US DOE ITP IAC at NCSU and they continue to work with us and our industries today.



U.S. Department of Energy

Energy Efficiency and Renewable Energy



What is the IAC?

The Industrial Assessment Centers (IAC) perform energy conservation assessments for small and medium (and some large) sized manufacturers.

Funded by the US Dept of Energy's Energy Efficiency and Renewable Energy Program

*Assessments are **FREE** for qualifying manufacturers!!*



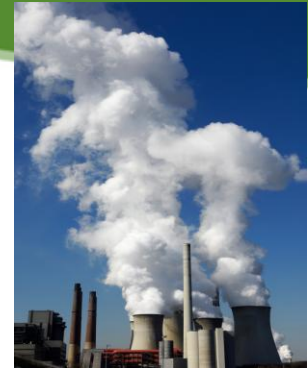
Who can get an IAC assessment?

IAC assessments are for manufacturers ONLY!

Plants must be:

- Gross Sales less than \$100 million on-site
- Less than 500 employees on-site
- Site annual energy costs between \$100,000 and \$2.5 mil.

Larger plants may also qualify for an Energy Savings Assessment under SAVE ENERGY NOW program.





Who are the IACs?

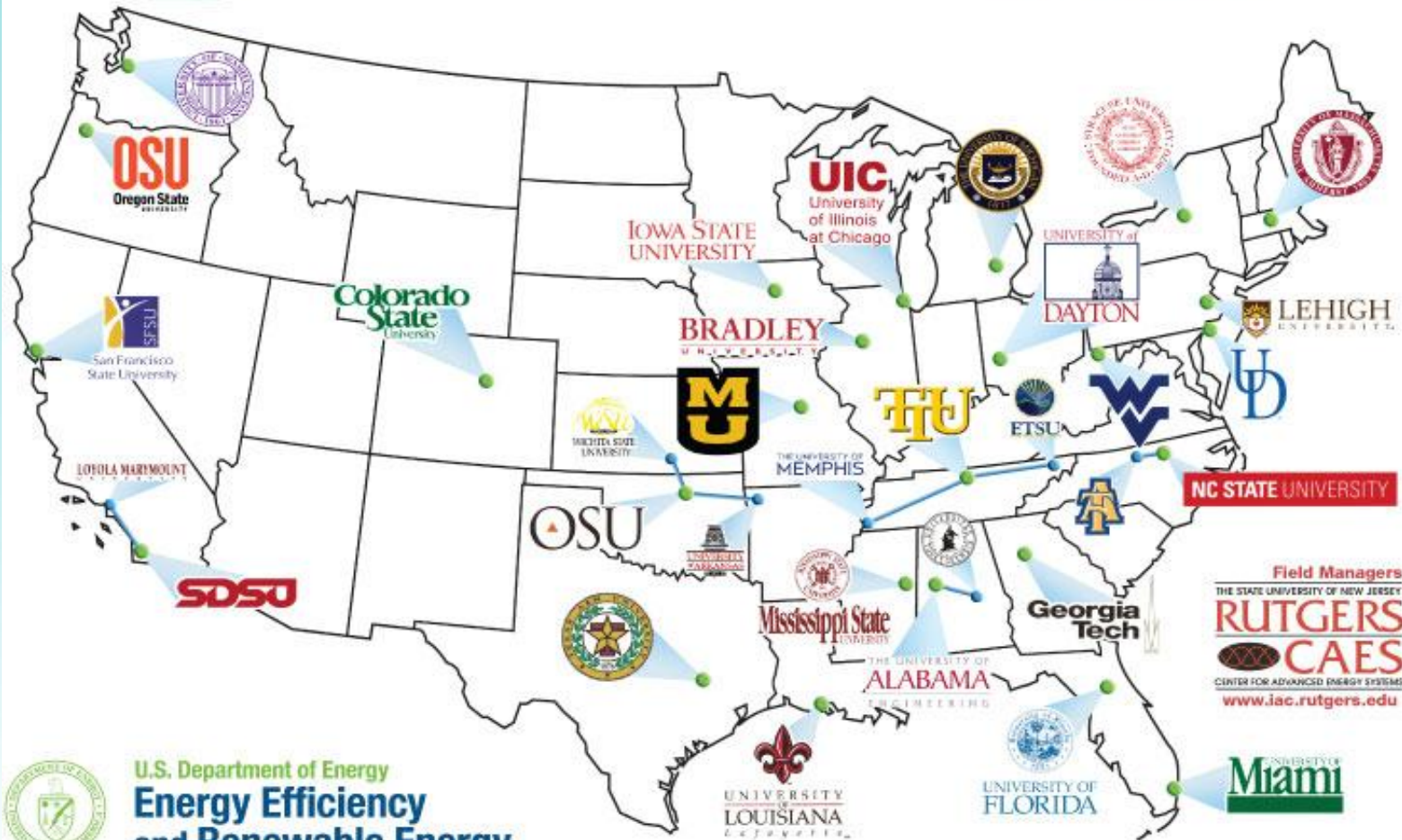
The IAC program:

- Is located at 26 universities around the country
- Has a director and assistant director that are on the faculty of the engineering school
- Employs graduate and advanced undergraduate students
- Has a goal to help train the next generation of engineers

Where are the IACs?



Industrial Assessment Centers 2006-2011



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

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

How does an IAC typically work?

IAC Industrial Assessment Protocol

STEP 1: Pre-Assessment Information Gathering

STEP 2: Ensure that key plant personnel are involved

STEP 3: Pre-Assessment Analysis

STEP 4: Day of the Assessment

STEP 5: Post Assessment Activities

<http://iac.rutgers.edu/database/protocol.php>

Step 1: Pre-Assessment

Pre-assessment:

- Size of Plant and plant layout
- Industry type (SIC/ NAICS code)
- Questionnaire for equipment on-site
- Process description & operating hours
- Annual energy bills



Step 2: Key Plant Personnel

- Utility Rep.
- Plant manager
- Engineering manager
- Energy manager
- Environmental personnel
- Maintenance personnel



Step 3: Pre-Assessment Analysis

- Analyze the manufacturing process
- Chart and graph utility bills
- Utility bills for trend and cost analysis
- Identify key energy systems
- Review design and other technical documents
- Identify possible energy saving potential recommendations using IAC database



Step 4: Day of Assessment

- Introduction
- Description of process and operations
- Plant Tour
- Meeting room debriefing Q&A
- Review and Refine List of opportunities
- Data Gathering



Step 5: Post Assessment

Deliver report to client

- Develop estimates of implementation cost
- Major energy consuming equipment
- Description of individual recommendations
- ROI and simple payback

Follow-up to Report

- Two weeks to answer questions
- 6-9 months for implementation data



Here's where utility Key Accounts Managers come in

Existing relationship with company and key personnel

Introductions

Utility data and trend analysis assistance

Recognizes potential need

Coordinates and facilitates meetings

Ongoing communication with company

Verifies savings and implementations

Implementation can take years depending upon
budget cycles, costs and support



To improve support, we created “E2” Energy Efficiency Award

For Key Accounts, based E2 Award on:

Demonstrated Energy Savings

Significant Capital Projects Implemented

Focused on IAC Recommendations (Industrial Only)

Significant Power Quality Improvements

Leadership in Promoting Energy Efficiency



Partnered with Chamber of Commerce

Local Business Appreciation Dinner
Event Planning & Admin Support
Pre and Post Marketing Support
Banners and Signs
Local Media Coverage
250 Local Business Leaders Present
Great Venue and Community Visibility



DANVILLE PITTSYLVANIA COUNTY
CHAMBER OF COMMERCE, INC



Be Creative - What other APPA members have done

Segment recognition by industry, such as healthcare. This will help spur EE competitive spirit.

Highlight in the local media and website.

Host a Lunch & Learn event allowing the business to highlight their accomplishments.

Have an onsite reception to share the recognition of award with the employees.

Industry of the Year reception.

Highlight individuals responsible for EE ideas to their plant manager.

Involve schools and school boards.

Reward with dinner at the Mayor's or GM's house.

Invite to utility GM State of the Utility Address.



Quick Publicity Do's & Don'ts



Work with company:
Award presentation
Press & media attention
Good corp. citizen

Get approvals from:
Plant Management
Plant Engineering
Marketing



Don't surprise company
Not all companies like to be
recognized

Don't release data:
consumption data
competitive information

Don't use logos without
permission

Results: What Happened

Peer leaders had examples of other businesses who had performed positive cost/benefit analysis, ROI, and paybacks which showed value of EE projects.

Competition and professional pride
Marketable value of 'Green'



Success of NCSU IAC Program working with Danville Utilities

- Key Accounts Manager contacted the NCSU IAC to assist local industry to improve energy efficiency
- The IAC performed 10 assessments in Danville over the course of 3 years
- Proposed recommended annual savings of \$1.5 million in energy, waste, and productivity savings



IAC benefits

The IAC program can be a great benefit to the Public Power because they:

- Provide free Energy Surveys to qualifying plants
- Are independent and are not selling a product
- Practical results
- Keep manufacturing competitive
- Exposes engineering students to your industry
- Promote goodwill with your industrial base



Overall benefit of the Program?

- Manufacturers get a quality energy assessment (at no cost),
- Program often identifies areas for improvement and spurs additional ideas
- Keeps manufacturing competitive
- Working with your key accounts helps promote goodwill with your customers



What continues to happen?

New EE initiatives in other industries, institutions, government, commercial retailers, banks, and the community

A new regional collaborative of driven leaders focused on energy issues

Beginning to improve in construction design and practices due to customer request and code change



Questions?



For More Information

DOE Industrial Technologies Program (ITP) Utility Partnerships

www.eere.energy.gov/industry/utilities

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American Public Power Association (APPA)

Demonstration of Energy-Efficient Developments (DEED)

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To receive a flyer describing the remaining webinars in this series or for answers to additional questions, please email Ryan Harry at rharry@bcs-hq.com.

Questions?