MAY 2008

UTILITIES WORKING WITH INDUSTRY

ACTION PLAN

Executive Summary

The Industrial Technologies Program (ITP) of the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy (DOE-EERE) has the single objective of improving the energy efficiency of the U.S. industrial sector. Partnering with the U.S. industry, academia, and other stakeholders, ITP is invested in research, development and deployment of energy-efficient technologies and practices. A major element of ITP's strategy to impact sizeable energy reductions has been its *Save Energy Now* initiative (SEN). With a mission of driving a 25 percent reduction in industrial energy intensity in 10 years (*25 in 10* goal), SEN provides U.S. manufacturing plants with resources and tools to deploy energy-efficient technologies and best practices.

In a major step forward, ITP is now establishing a partnership with the utility sector to expand its outreach and escalate efforts toward reaching its *25 in 10* goal. As determined unanimously by ITP's stakeholders, utilities provide a powerful means to reach their industrial customers and impact greater energy reductions across the U.S. manufacturing sector.

ITP hosted the *Utilities Working with Industry Workshop* in Laurel, Maryland on February 14-15, 2008 to discuss with utility stakeholders the possible joint activities for ITP and the utilities (the Partnership) that will benefit and propagate interests of both. The *Utilities Working with Industry Action Plan* is an outcome of this workshop and details implementation of the Partnership and activities as proposed by the workshop participants.

The ITP-Utility Sector Partnership

Partnership Purpose

ITP and the utility sector partnership has the potential to bring immense value to both ITP, in accomplishing its *25 in 10* goal, and to the utilities, in securing their bottom lines in today's changing scenario of rising energy costs, growing environmental movement, and emerging regulations. Bringing ITP, utilities, national utility associations, and other utility stakeholders together, the Partnership will have two primary objectives:

- Provide ITP with the opportunity to conduct outreach and energy assessment activities for industrial plants through their power suppliers. This will provide ITP with access to the entire industrial customer base of utilities, thus expanding ITP's outreach several-fold; and
- Scope out opportunities and implement energy savings within the utilities and possibly, their supply chains.

While ITP will leverage its outreach to wider industrial audiences, the utilities also stand to benefit directly by this Partnership. Helping their industrial customers improve their energy efficiency will reduce their electricity loads, voiding the need for investing capital in additional generation capacity and allowing better management of demand response during peak energy use periods. Further, efforts to improve energy efficiency of utilities will translate to increased bottom lines for the utilities.

Roles and Resources

With significant gains at stake for the utilities, the Partnership is visualized with an increasingly growing role for the utilities, where ITP will equip the utilities with tools and resources to independently disseminate to their industrial customers. Sharing a direct and continual relationship with their industrial customers, utilities are best placed to help increase their customers' energy efficiency. For example, utilities could eventually manage ESAs for their industrial customers, SEN's key provision in implementing energy savings—doing so will be more effective in impacting energy reductions, bringing in improved results for both ITP and the utilities.

In an effort to accomplish its *25 in 10* goal, ITP's SEN initiative is creating a flexible, non-binding agreement for industrial companies to voluntarily sign to commit to being an outreach ally. Sample outreach activities include promoting/distributing SEN materials to customers; promoting benefits and opportunities at meetings, events, forums, or trade shows; supplementing SEN resources with an organization's resources; and providing members/stakeholders with increased access to SEN opportunities. The Partnership would seek similar commitment from the utility leaders as far as improving the energy efficiency of their industrial customers. This agreement must be structured to keep the interests of utilities in mind and provide utilities with access to a broad range of SEN tools and resources for their industrial customers to cost-effectively implement energy reductions. The SEN agreement would also bring value-added engagements to the utilities/industrials that are unique compared to other national efficiency efforts, such as the *National Action Plan for Energy Efficiency*.

SEN Resources & Tools:

- Free/cost-shared onsite Energy Savings Assessments (ESAs)
- 26 Industrial Assessment Centers across the U.S.
- Consultations with energy experts
- Training in a suite of software tools and practices to improve energy efficiency
- Informative CD-ROMs, tip sheets, case studies, etc.

Expanding the Partnership

The workshop participants recommended also including energy service companies (ESCOs) in energy reduction efforts of the Partnership. ESCOs develop and install energy efficiency projects, receiving compensation based on actual energy savings. At a regional level, the Partnership could also be expanded to include regional carbon initiatives and state energy offices and associations. Including these entities would enhance the effectiveness of the Partnership's efforts.

Industrial Customer Outreach and Education

Themes identified during the workshop included the need to improve outreach efforts, and that a "one-size-fits-all" approach is of limited value in actually impacting energy reductions across the industrial sector. For example, workshop participants agreed that the most effective means of ITP outreach is through case studies on plants that have received ESAs and achieved energy savings as a result. Recommendations included having the Partnership author case studies on smaller facilities or tailoring a case study to focus on a plant's return on investment after becoming energy efficient.

The attendees also emphasized the need for more energy efficiency education throughout the industrial sector. Workforce education can be expanded by the Partnership through dissemination of information to high schools and universities through career fairs, guidance counselors, and offering continuing education credits to those employed in energy-related jobs. Educational media can be diversified to include Webinars, Webcasts, classes, and "how-to" guides. Further, providing multilevel training for users of all skill sets to learn how to use the ITP BestPractices tools would also be helpful, including broad training geared toward high school students. Lastly, the utilities and ITP could work with plants to help them with energy efficiency planning.

The next category for outreach deals with working with the management, or employing the "boiler room to the board room" strategy. This involves the Partnership educating management through meetings, workshops,

and trainings on the benefits of participating in programs to increase their plant's energy efficiency. This also involves ITP becoming more involved with utility association CEO committees and explaining the strategy of energy efficiency as an alternative solution to demand response. Finally, outreach to management could include building the business case for energy efficiency projects, including discussing rebates, tax incentives, and other financial options.

Workshop participants also emphasized the importance of working with regulators to ensure they understand the need for industrial energy efficiency. However, organizations such as the National Association of State Energy Officials (NASEO) are already in the process of working to educate regulators on industrial efficiency and renewable energy options. The Partnership can provide NASEO or other state energy organizations with information to support these efforts.

Several opportunities for joint online resource projects were also suggested at the workshop. For example, the SEN States Incentives and Resources Database, which includes state-specific incentives for industrial energy efficiency, could be expanded to include federal incentives. Another activity would be for ITP to provide links to its partners on its Web site that lead to partner endorsements. The onus would be on the utilities to ensure that the information they provide is correct. Equipment suppliers could also be added to the site once they meet or complete DOE requirements for certification. ITP could also provide plants with an option to participate in an Energy Savings Assessment (ESA) either with an Energy Expert at its facility or online at a utility association-sponsored site. Utilities, in turn, would be tasked with providing ITP with internal updates to be posted to the site, such as adding energy efficiency incentive programs or new partners. Additionally, ITP could create printed tip sheets listing the top 10 BestPractices energy efficiency improvements for plants. Utilities would then have the option of co-branding these documents prior to distribution.

Finally, ITP management could present information regarding the program at utility industry conferences and workshops. Likewise ITP would have utility representation during its events. Further, ITP could provide material to state energy offices to include in presentations at local conferences and workshops to expand the reach of this information. These activities will help both the utilities and ITP to develop a better understanding of the other's needs. However, ITP must continue to extend its outreach efforts through more one-on-one meetings with industry/utility associations and utilities. Doing so will provide the best overview of ITP to the utility management. Articles about ITP, its programs, trainings, and events could also be presented in the utility association periodicals to increase awareness.

Helping Utilities Improve Their Energy Efficiency

One section of the workshop was dedicated to exploring options for how to help utilities become more energy efficient. Although several ideas were discussed, the overall consensus was that the greatest opportunity to improve energy efficiency and sustainability existed in the industrial sector; therefore, the Partnership should focus solely on industrials, as opposed to providing support to improve utility energy efficiency.

Partnership Operations and Administration

Coordinating Group

A Partnership Coordinating Group should be formally established that will be responsible for planning and organizing joint activities, distributing ITP and Partnership information to members and customers, attracting new members, and informing other group members of emerging energy efficiency tools and technologies. The ITP management will confer with the subcommittees of attendee organizations that are pertinent to the Partnership's cause to establish the need, functions, and members for the Partnership Coordination Group (sample subcommittees are listed in Appendix C). Future subcommittee meetings hosted by organizations that attended the workshop will provide an excellent forum for ITP management to share its 25 in 10 goals and its efforts toward accomplishing them and receive feedback on the Partnership action plan and the logistics of its implementation.

Measurements and Verifications

A critical aspect of making the Partnership a success will be to establish a consistent method for measuring industrial energy efficiency and energy reductions. This will require all members to agree on a standard for determining whether or not a piece of equipment is operating efficiently and establishing energy savings benchmarks. In addition, when performing an ESA, Energy Experts should equate the energy efficiency improvement savings to a reduction in the company's carbon footprint or to savings calculated on a kWh or cubic foot basis by monetizing the recommended reductions. At the same time, the Partnership can develop smart controls to help measure energy consumption more accurately. These steps will help ensure that all data are measured using the same tools.

Implementing Activities

Utilities should become more involved in helping plants become energy efficient as states impose new and aggressive energy regulations for which utilities can comply. This includes participating in a plant's ESA or managing the entire assessment process. Aside from ESAs, energy efficiency training workshops can be held onsite at plants; these workshops can be sponsored by their power supplier, using the tools and resources provided by ITP. Further, if desired, utilities could purchase energy-efficient equipment and distributed energy generation sources and lease them to large industrial customers. Finally, it was suggested for the Partnership to develop a cost-share program to help utilities finance their members' research projects on methods to improve energy efficiency.

Effort Recognition

The Partnership will expand its award program to be more inclusive, recognizing contributions to energy efficiency by large and smaller plants, plant managers, and utilities if their efforts contributed to industrial customers becoming more energy efficient. The SEN agreement could include peer recognition activity among utilities to recognize and encourage further efforts.

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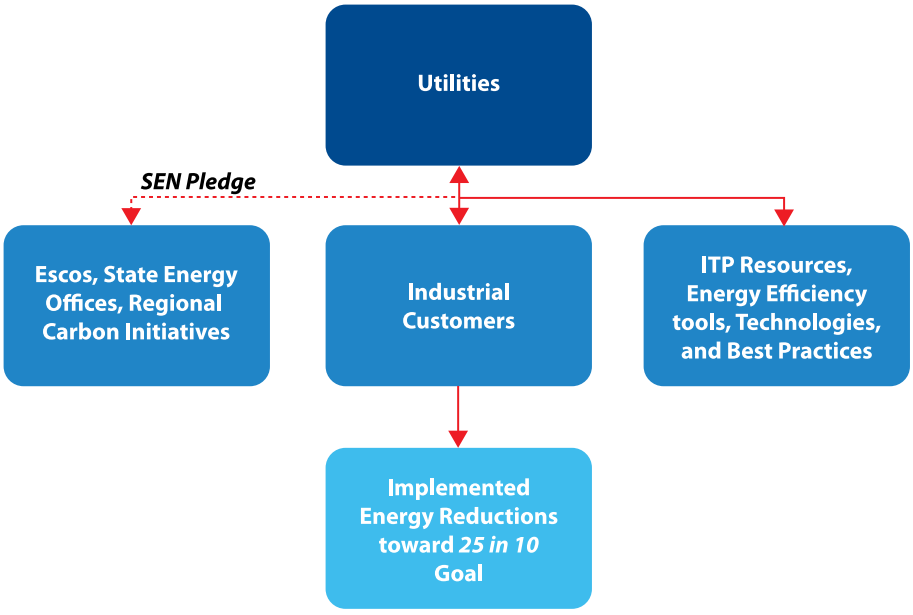
Introduction

The U.S. Department of Energy Office of Energy Efficiency and Renewable Energy's (DOE-EERE) Industrial Technologies Program (ITP)* mission is to improve the energy intensity of U.S. industry through coordinated research and development and validation and dissemination of energy efficiency technologies.[1] ITP works in partnership with the U.S. industry, academia and a variety of other stakeholders to improve energy efficiency and reduce the carbon footprint of the U.S. manufacturing sector. Since ITP's inception in 1977, the program's primary role has been to invest in high-risk, high-value research and development (R&D) that reduces the energy intensity of industry, thus enhancing its productivity and economic competitiveness. These R&D efforts have resulted in the development of numerous technologies and practices that can be readily implemented by manufacturing facilities to reduce their energy consumption and cut down on energy bills.[2]

In conjunction with funding R&D to develop new energy-efficient technologies and practices, ITP recognizes the need to deploy these technologies and practices to U.S. industry to actually impact the energy savings. ITP has been committed to a strategy of Partnerships that engages U.S. industry stakeholders in educational, deployment, and outreach activities to rapidly diffuse energy efficiency technologies across the manufacturing sector. This Partnership approach is based on creating a value-added chain that includes a myriad of stakeholders who can offer expertise to help the U.S. industrial base improve its energy efficiency. ITP also partners with other federal programs, state and local governments, non-profit energy efficiency organizations, and leading industrial associations in these efforts. The partnership approach has proven to be strategic to ITP's goal of increasing industrial deployment of energy-efficient technologies and practices since these organizations have the ability to reach a wide base of manufacturers through their existing networks, thus facilitating mass dissemination.



* The Industrial Technologies Program was formerly known as the Office of Industrial Technologies until 2000, when the name was changed.

ITP's Save Energy Now Initiative

Partnerships are playing an integral role to the implementation of *Save Energy Now* (SEN), a national ITP initiative to drive a 25 percent reduction in industrial energy intensity over a 10-year period (*25 in 10*). This initiative was created in November 2005 when Secretary of Energy Samuel Bodman launched the *Easy Ways to Save Energy* campaign in the aftermath of the devastating hurricane season that left significant portions of the U.S. refining capacity offline. This national campaign was designed to promote energy-saving activities for residential, commercial, and industrial uses due to the increases in natural gas prices.[3]

25 in 10

A voluntary agreement to reduce energy intensity by 25 percent or more over 10 years

A key element of SEN is its Energy Savings Assessments (ESAs) that have strategically been made available to U.S. industry through an application process that focused on the nation's most energy-intensive plants. Aiming to impact large reductions in industrial energy intensity, the program initially provided ESAs only for plants with an intensity of at least 1.0 trillion Btu and focused on natural gas applications. This requirement was, however, reduced to 0.3 trillion Btu in 2007 to expand the initiative's reach.[4] ESAs are now available to concentrate on electrical processes such as compressed air systems, pump systems, and fans. For plants that do not meet this provision, assessments are made available from one of the 26 university-based Industrial Assessment Centers (IACs). In addition, plant personnel can utilize a technical consultation hotline that answers questions regarding natural gas intensity reduction. ITP also provides a variety of technical materials, software tools, and other resources through the EERE Information Center and the ITP Web site.[5]

After almost three years of the SEN initiative, ITP partnerships are playing more important roles in implementing and delivering energy solutions to the U.S. manufacturing sector. ITP has begun to engage various organizations to scope out further opportunities for ITP to expand its reach and bring energy and environmental savings to more U.S. industrial manufacturers. As an outcome, certain SEN activities, such as ESAs, are being transitioned to entities that are deemed more appropriate for resource and tool delivery. These entities will be provided with the tools and resources to help their stakeholders expand the reach of ITP to more U.S. industrial manufacturers. This action will also create a platform to disseminate more energy-efficient technologies.

Expanding ITP Stakeholders: Partnering with the Utility Sector

During the *ITP Stakeholders Forum* in October 2007, it was concluded that ITP needs to further expand its partnerships. Since the program's inception, ITP has been engaged with the nation's leading industrial associations, state energy offices, universities, and leading non-profit energy efficiency organizations. Forum participants identified a gap and emphasized ITP's need to engage the utility community into its educational, deployment, and outreach activities.[6] Acting on this stakeholder recommendation, ITP has begun to engage the nation's natural gas and electric utility industries to formulate a partnership that will equip utilities with tools and resources so they can help their industrial customers lower their energy intensity.

ITP recognizes that when a manu facturer experiences an increase in its electric or natural gas bill, the first place it seeks assistance from is its local utility. ITP plans to leverage this unique utility-customer relationship to reach out to manufacturers through their energy suppliers. As part of this newly formulated partnership, ITP will engage utilities, national utility associations, and other utility stakeholders

to implement this action plan aiming to increase implementation of energy savings across the U.S. manufacturing sector.

Drivers for Utility Participation

The Partnership program to promote energy efficiency among industrial customers responds to several drivers for utility participation. These drivers include:

Key Customer Base

Utilities want to ensure that their key industrial customers remain economically healthy so as to keep long-term customers within their service areas. By assisting these customers in lowering their energy bills in the wake of rising fuel and electricity costs, utilities can help improve the bottom line of these important customers, ensuring their economic viability and continued business in the utilities' service areas.

Reduced Electric Utility Loads

Promoting energy efficiency among industrial customers can reduce electric utility loads making more electricity available for other customers without the utilities having to spend excess capital to increase generation capacity. These energy efficiency programs also help electric utilities prevent load instability during peak energy use periods because it reduces the amount of electricity that must be delivered to large industrial customers.

Climate Change Mitigation

Another driver for the utility sector is the need to reduce carbon emissions within the United States. Through effective energy efficiency programs that help industrial customers reduce their energy intensity, utilities are able to implement actions that help mitigate and reduce these customers' carbon footprints and in turn, reduce their carbon footprint by reducing the need for additional generation. The driver becomes more important as the U.S. begins to regulate carbon emissions in the near future, particularly if carbon emissions become monetized through market-based mechanisms.

Customer Relations

In today's deregulated utility market, industrial customers have more choices as to who their providers are. Strengthening customer relations therefore becomes a priority for utilities as part of good business practice. Providing its customers with free energy audits and tools to help reduce energy costs offers an excellent opportunity for a utility to foster goodwill with its customers. Such value-added service will help solidify the utility's customer base.

Utility Workshop

This action plan was an outcome of the *Utilities Working with Industry Workshop* held in Laurel, Maryland on February 14-15, 2008, organized under the aegis of ITP's SEN initiative. The workshop was a facilitated session where various utilities, leading utility associations, states, and other utility stakeholders shared ideas on joint activities the utility sector and ITP could implement to help more manufacturers improve their energy efficiency. In addition, the group explored what resources and activities were needed to help utilities operate more efficiently toward that goal. (See Appendix A for list of workshop participants).

Developed based on the discussions at the workshop, this action plan lays a framework for implementing the utility sector-ITP partnership, referred to as the Partnership from here on out. The action plan identifies how the Partnership can work together to help improve the energy efficiency of the utilities' industrial customers and thus contribute toward the achievement of the *25 in 10* goal. The workshop group identified the highest priorities and benefits for the utilities, methods for enabling ITP to communicate more effectively and activities that ITP can do for the utility sector, and pathways for getting industry and additional utilities to support these efforts. These activities are listed by order of significance in Appendix B. Stakeholders also shared their opinions on the feasibility of outreach to industrial and utility supply chains.

Key Elements of the Partnership

The workshop group identified some key elements that will underlie and bolster the ITP and utility sector partnership, while propagating interests of both.

National Effort

Utilities have an ongoing relationship with their energy customers and are, therefore, in a good position to assist industrial manufacturers in improving their energy efficiency while reducing their carbon footprints. Engaging utilities into ITP's national efforts will expand the reach of ITP and provide assistance to more industrial manufacturers in improving their energy efficiency and environmental stewardship. Workshop participants identified elements that must be part of this national effort if it is to succeed.

For example, many industrial manufactures choose to opt out of paying into public benefit accounts which are used to fund local energy efficiency programs. The Partnership must be structured in a way that makes it easy for an industrial plant to participate. The Partnership must also be robust in delivering value to industrial customers to ensure that they actively participate. The national effort needs to include a mechanism to measure the results of individual utilities' contributions. Utilities must also be given credit for energy reductions that they help identify and implement at their industrial customer locations.

Another element to include would be energy service companies, more commonly referred to as ESCOs. ESCOs are businesses that develop, install, and finance projects that improve energy efficiency. ESCOs are unique because of the performance-based contracting these entities employ, in which they help develop and install a project and then are compensated based on the actual savings achieved. In addition, ESCOs must be part of the national effort for the Partnership to increase the implementation of energy efficiency technologies and practices.

Save Energy Now Agreement

ITP is in the process of developing a standard *Save Energy Now* Voluntary Agreement for Outreach Allies through which leaders from industrial companies can commit to become an outreach ally. In this agreement, sample outreach activities include promoting/distributing SEN materials to customers; promoting benefits and opportunities at meetings, events, forums, or trade shows; supplementing SEN resources with an organization's resources; and providing members/stakeholders with increased access to SEN opportunities.

A similar agreement would be made available for utility leaders to commit to helping their industrial customers improve energy efficiency. The terms of this agreement should be flexible to entice utility leaders to sign. As part of this non-binding agreement, ITP will make available to utilities a broad range of tools and resources to help industrials in their service areas cost-effectively implement energy and environmentally sustainable technologies and practices. The workshop participants identified elements of the agreement that would entice utilities to sign and determined how utilities would best fit into the process. These elements are discussed throughout this action plan.

The *Save Energy Now* Voluntary Agreement for Utilities must also be structured in a way for utilities to receive credit for working with their industrial customers to lower energy intensity. In order to achieve the *25 in 10* goal, there will need to be commercially available energy-efficient technologies that utilities can recommend to their industrial customers. These technologies must be proven to save an industrial customer energy and money through field demonstrations and must be applicable in a variety of industrial applications. Providing assessments and recommendations on how to optimize existing industrial process systems will not achieve the 25 percent reduction alone. The Save Energy Now Agreement for Utilities should complement existing national efforts of the utility/industrial community including the *National*

Action Plan for Energy Efficiency with DOE and the Environmental Protection Agency (EPA). The SEN Agreement for Utilities must provide a value-added element that is not duplicative and should recognize the contribution that utilities make in reducing the energy load of industrial customers.

Peer recognition is always a powerful way to reward a utility for its efforts. The SEN Agreement for Utilities can include a utility peer recognition activity. This could be an award presented at a national conference or a public event. In addition to awarding the utilities' efforts, ITP can recognize some of the activities that utilities engaged in to help industrial efficiency prior to the signing of the agreement. This will capture the existing activities and further contribute to obtaining the 25 percent reduction in industrial energy intensity over the next decade.

Regional Cooperation

ITP and the utilities should partner with regional carbon initiatives to stay informed on a regional level. An example would be meeting to discuss new energy efficiency or climate change legislations mandated or being considered for their state. Partnering with these initiatives will help to keep the dialogue going and to find ways to reduce plant carbon emissions through energy-efficient technology implementation.

In addition, although ITP has established relationships with state energy offices and associations, the Partnership could be extended to include these organizations. Joint activities could include state organizations hosting or co-hosting energy efficiency training or other events for plants. ITP, utilities, and state energy offices could also work together to identify or certify local energy consultants and suppliers to help with plant energy efficiency projects in small and midsize plants. Finally, these organizations could help coordinate the activities for the utilities that are outlined in this action plan.

Customer Outreach and Education

A common theme throughout the workshop was the need for stronger outreach efforts. ITP has an abundance of information and resources on energy efficiency but is limited in the number of utilities it can reach through distribution and information dissemination. In addition, one of the strongest themes presented during the workshop was the need to focus attention regionally because a "one-size-fits-all" strategy is not effective for energy efficiency communications and activities. The Partnership can also take advantage of existing communications used by utilities to receive and send information.

The following activities were identified as having the greatest potential for the Partnership to improve ITP's outreach and educational efforts.

Case Studies

The most effective means of ITP outreach is through the publication of case studies on plants that have received an assessment where substantial energy saving recommendations were implemented. However, as with any program, there is always room for improvement. The following are recommendations from workshop participants on how the Partnership can refocus the case studies to be more impactful.

Return on Investment

Plants and utilities would be more likely to participate in an energy assessment if their manager reads a case study that has a strong emphasis on cost savings and paybacks. There needs to be a demonstrated return on investment before a plant manager will agree to participate in the program. If plant management reads about a similar plant receiving sizable energy savings with a simple payback period of less than two years, the case is much stronger for that plant to get involved in an ESA. In addition, these case studies should illustrate internal rates of return and net present value discounted at the annual risk-free rate.

Smaller Facilities

Case studies can be more effective if additional case studies highlight successes in small- to medium-sized plants as most of the approximately 200,000 industrial manufacturers in the United States are classified in this category.[7] More plant and utility managers will be interested in participating in an energy audit if they read about a plant of similar size that has experienced a substantial decrease in energy intensity.

Renewable and Distributed Energy Generation

The Partnership could also author case studies about plants that generate renewable energy and have dramatically lowered their electric or gas bills as a result. These case studies would highlight the renewable option as a favorable alternative to demand response because the plant would be exempt from reducing its workload during peak energy use periods if it generated its own electricity. Similarly, case studies can be authored about plants that have distributed energy sources, such as waste heat recovery, that produces electricity to supply other industrial processes, thus having the same exemption from mandatory load management.

Showcase Energy-Efficient Technologies

Another hands-on way for the Partnership to extend ITP's outreach efforts is through the identification of implemented energy-efficient technologies. Once identified, the essence of these technologies could be captured in case studies which would profile which technologies worked and which needed to be improved.

Education

What is appropriate for a plant in Wisconsin is not necessarily appropriate for a plant in Florida because different regions have different needs. The same is true for education. The following action items were identified by the workshop participants as having the highest priorities for educational activities by the Partnership.

Workforce Education

ITP and the utilities can partner to provide information on the benefits of pursuing an engineering degree and participating in the IAC program. This information could then be distributed to either plant personnel or local educational facilities through career fairs or guidance counselors. The Partnership could also coordinate outreach on available energy management scholarships, grants, and internships for high school and university students. However, education does not stop once a degree is obtained. Ongoing training for those already in engineering careers needs to become commonplace for energy efficiency. As technology improves and evolves, it is imperative to keep today's engineers informed of energy efficiency technologies and practices. The Partnership could work together to host continuing education trainings for plant operators and managers.

Educational Media

ITP and the utilities can partner to offer e-learning opportunities. Online education could be in the form of Webinars, Webcasts, classes, or online "how-to" guides. This will help reach more employees as resource-constrained utilities and plants with small travel budgets will be given the opportunity to learn about energy efficiency.

Multilevel Operator Tools

The Partnership can offer a multilevel curriculum program for its energy efficiency tools. Currently, most of ITP's tools and resources are designed for industrial end-users that have an enhanced knowledge of certain specialized manufacturing systems. However, some operators have considered the tools to be "too complex."[8] To overcome this barrier, ITP and the utilities can work together to create basic or entry-level versions of the BestPractices tools. This will help users without a technical background comprehend the program's concept more easily. These tools would be helpful for general plant employees, marketers, and other employees in business-related fields. Users of these entry-level tools could eventually, if needed, "graduate" to the enhanced versions of the tools which will still be made available for plant engineers.

Operations Side of Equipment Training

Another suggestion is to make the workforce more knowledgeable of the operations side of equipment. A training program for high school students co-sponsored by ITP and the utilities can be the first step to understanding these resources. By starting earlier, people will be able to grasp the more complex versions of ITP tools. These tools will start to be incorporated into curriculum after students gain a general understanding of the program and its intended use. The resources will also help students have a better understanding of making a plant more efficient from the start.

Efficiency Planning

The last suggestion was for the Partnership to help plants with energy efficiency planning. ITP has an abundance of available resources that should be distributed to utilities that can be utilized to make their large industrial customers more energy efficient.

Management Outreach

The next important category is outreach to management, or the "boiler room to the board room" approach. It is one thing if plant operators are aware of different ITP and Partnership programs and another if the people making the business decisions are in the know. Unless management is onboard, the best projects do not get implemented.

Educating Management

If plant management recognizes the benefits of participating in programs to increase their plant's energy efficiency, they are more likely to have the plant participate in the program and will be inclined to implement suggested energy efficiency improvements. This could be achieved through Partnership-sponsored meetings, workshops, or trainings on a local level within a utility service territory. Energy efficiency information

must be sent to utilities from the Partnership on a regular basis to be forwarded to appropriate plant managers.

Leveraging CEO Committees

Direction from a CEO provides strong motivation and corporate commitment. Several of the utility associations have exclusive CEO committees that consist of upper management from their member utilities. ITP can work with the utility associations to become more involved with these committees so the CEOs can become aware of its tools, resources, and programs and ITP can learn about new and ongoing utility CEO initiatives.

Energy Efficiency as an Alternative to Demand Response

There is also a need to understand the connection between demand response and energy efficiency. Demand response is a load management program that requires large-scale customers to reduce their energy use during peak-use periods. Conversely, energy efficiency enables the same amount of work to be performed while using less energy to do so. The Partnership could work with plant managers to explain that energy efficiency is an attractive alternative to demand response because the plants will still be able to operate at full capacity during peak energy use periods.

Building Business Case for Energy Efficiency Projects

According to ITP, the average identified energy savings for plants participating in an ESA is $2.5 million annually,[9] while identified savings for plants taking part in an IAC average at $55,000 per year.[10] The reason for the difference in costs is two-fold. ESAs are system-specific where an Energy Expert spends three days trying to determine how to optimize that system. IACs occur in smaller plants over a single day and focus on the plant as a whole. Although the numbers almost speak for themselves, plant managers are often hesitant to implement or spend money toward energy efficiency improvements if the payback period is longer than two years.[11] The Partnership can provide tools and resources to help plant managers build the business case for energy efficiency projects, including discussing rebates, tax incentives, and other financial options.

Regulator Outreach

Regulators are starting to realize the benefits of energy efficiency and renewable energy. There are a number of pending legislations that would allocate money to fund energy conservation and renewable energy projects. Although a need exists to work with regulators to ensure that they are aware of the importance of industrial energy efficiency, organizations such as the National Association of State Energy Officials (NASEO) are already in place to address these issues. The Partnership should provide NASEO and other state energy organizations with accurate information to help them educate regulators.

Web-Based Communications and Tools

ITP has an extensive collection of online resources, articles, and other publications. However, these resources are not consolidated at one place—information on tools, trainings, and case studies, technical publications, e-magazines and news articles are all housed at separate Web sites. ITP has worked to mitigate this disconnect by providing links to all of this information on the program's homepage. This is intended to make it easier for industrial plant managers to navigate through the site. Workshop participants also made the following recommendations on improving ITP's Web site:

Financial Opportunities Database

Although there are thousands of energy efficiency incentive programs in the United States, a need still exists for a financial opportunities database to be housed in a central location. For example, some organizations provide a list of state-sponsored and federal programs on their Web sites, but do not include private or local financing opportunities. Most Web sites

only mention federal programs, if they even address incentives. There needs to be a central repository of this information. This will help time-constrained utility and plant personnel find the data easily, as opposed to sorting through multiple sites to find all of the information.

In a big step forward, the Web site for the ITP State Activities has been recently updated to feature the States Incentives and Resources database, which includes information at the state, county, and municipal levels, as well as from utilities and non-profits. The site features energy efficiency information about financial programs such as rebates, waived fees, tax credits, and loans. Although it does not currently provide information on the federal level, the site can be expanded to connect to federal programs not only in DOE, but in other federal agencies as well. ITP and the utility associations could work together to make utilities aware that this database exists. This, in turn, will connect utilities with ITP. The utilities will be given the opportunity to review the database entries that pertain to them and inform ITP when their information has been updated. This will help ensure that the database presents the most current and accurate information.

Access to Recommended Equipment, Suppliers, and Installers

Although ITP can make recommendations as to what type of equipment to purchase, it is outside ITP's scope of functions to recommend a particular brand or vendor. One way for ITP to help mitigate this problem is to have links to its partners on its Web site. Its partners, in return, can list vendors and products that they recommend. With this system in place, an Energy Expert could recommend a type of equipment and then provide the link to ITP's partners for their recommendations. ITP could also add an equipment supplier to its site once that supplier meets or completes DOE requirements for certification.

Online Energy Audits

Several utilities' Web sites contain links for residential customers to participate in no- or low-cost online energy audits, but relatively few offer this opportunity to industrial customers. As a cost-cutting measure, it was suggested that ITP provide plants with an option to participate in an energy savings assessment either with an Energy Expert at its facility or online at a utility association-sponsored site. This may be an attractive option to plants that have previously participated in an ESA and are hesitant to cost share a second assessment.

Top 10 Energy Efficiency Improvements and Tip Sheets

Plants would be receptive to a list of the top ten BestPractices energy efficiency improvements and tip sheets for plants. Both are helpful for plant managers because they provide technical information on improving their systems. ITP could create this list and develop additional tip sheets, including on how to utilize or generate renewable energy. Utilities would have the option of co-branding these documents prior to plant distribution.

Meetings and Conferences

Workshop participants agreed that ITP representatives should speak or present information regarding the program at utility industry conferences and workshops. As a result, ITP will be able to reach more utilities through its regional or national conference participation. Similarly, ITP would have utility representation during its workshops and conferences to share energy efficiency success stories. The utility community would also benefit from attending these events because they develop a better understanding of how ITP and SEN operate.

Additionally, state energy offices could receive information from ITP to include in presentations at local conferences and workshops to expand the reach of this information.

Conversely, a more personable approach to extending outreach efforts is through more one-on-one meetings, particularly with industry/utility associations and utilities. This approach is direct, and it gives management the best overview of the program because the information is coming from the source and not a third party.

Trade Publications

Workshop participants have several periodicals that they distribute to their customers/members on a regular basis. These publications can be utilized to effectively communicate the purpose and successes of SEN, as well as ITP in general. Articles about ITP, its programs, trainings, and events can be authored by the Partnership and presented in these periodicals.

Partnership Operations and Administration

This section pertains to the everyday details of the Partnership and how it operates, as well as how it will implement the activities identified in this action plan.

Coordinating Group

The utilities and ITP should work together to establish a coordinating committee to organize joint activities. This group, which would consist of workshop participants and additional members, would help to track progress toward achieving the *25 in 10* goal.

Responsibilities

The group would be responsible for the distribution of new ITP information to applicable members and customers. This would include sending e-mail updates or newsletters to applicable parties once a member of the coordinating committee is aware of the information. The coordinating committee would also meet on a regular basis. The meeting could be combined with another major conference or workshop where members of the coordinating committee are already participating. This will help coordinating committee members that have travel budget constraints.

Additional Members

Since the goal is to make industrial facilities more energy efficient, industrial customers must be added to the group, preferably customers that have several plants that have participated in the ESA process. Another recommendation is to enhance IAC participation by having additional IAC representatives on the coordinating committee. The group would also benefit from having representation from industry groups and subject matter experts including energy consultants, intellectual property experts, and technology experts. Supply chain associations would also be appropriate, as they represent both the industrial and non-governmental organization sectors. The coordinating group should also consider inviting additional utilities. By having wider representation from utilities, the group will have a better understanding of what other utilities are doing to increase industrial energy efficiency in their areas and what resources they need to continue their efforts.

Member Feedback

The last recommendation by the workshop participants was to have their customers provide feedback on what energy efficiency tools work and what need to be improved to make the tools more useful. After a Coordinating Committee association and its members have reviewed an energy efficiency tool, that association could bring it to the attention of the other Coordinating Committee members to keep everyone informed.

Committee Formulation

ITP will participate in energy efficiency subcommittee meetings hosted by workshop participant organizations. At these meetings, ITP will share information about its *25 in 10* initiative and other new or ongoing programs. ITP management will also walk through the *Action Plan* with those subcommittee members. In turn, each subcommittee member can share with ITP information on their activities and provide feedback on the *Action Plan*. Both can work to identify possible partnership opportunities, timelines, and ways to implement outlined activities in the plan. The Coordinating Committee will be formed only if deemed necessary by subcommittee members.

Effort Recognition

The Partnership should expand the ESA awards program. For example, a new component of the program could be similar to the R&D Top 100 Awards, which are given out each year by *R&D Magazine*. This award could be for energy equipment that the Partnership deems to be the most energy efficient or that contributes to the most energy efficiency. Other recommendations for expanding the program include:

Partner Recognition

The Partnership should continue to enhance the 7.5 percent recognition program to include partners such as utilities that have encouraged their industrial customers to participate in an energy assessment.

Plant Managers

The Partnership should also provide recognition to plant managers that have proactively made energy efficiency improvements. This recognition could either coincide with the energy awards program for plants that have achieved significant reductions in energy or be a stand-alone award.

Utilities

If a utility helps a plant undergo an ESA and install energy-efficient equipment, that utility deserves to be honored. The utility would also merit recognition if it achieved success in helping its industrial customers become more energy efficient. ITP or the Partnership could recognize those utilities which contributed the most effort to ITP or SEN during the previous year. Identifying actions that utilities have already undertaken, and promoting these successes to their peers will resonate with others in the industry and encourage them to take similar actions, especially if there are cost savings associated with the action.

Measurement and Verification Guidelines

The Partnership needs to work together to ensure that they are all measuring and recording data in the same way. There were several approaches recommended by the workshop group:

Energy Performance Rating System

A major step forward would be for the utilities and ITP to jointly develop a Leadership in Energy and Environmental Design (LEED) Standard or Energy Star equivalent for industry. The U.S. Green Building Council has established the LEED Standard to determine which buildings can claim to be high-performance green facilities. Energy Star is a joint program between DOE and EPA that determines which products (i.e. appliances, lighting, and windows) can be classified as energy efficient. The utilities and ITP can use these programs to set up a model on how to define a plant or its practices as energy efficient. Development of a measurement and verification standard for energy efficiency will enable utilities and industry to measure success in a uniform manner, and will level the playing field for these entities to show improvement.

Energy Reductions Benchmark

The Partnership can work to develop energy savings benchmarks. When conducting energy assessments, ITP and the utilities can focus on the plant's percentage of energy intensity reduction, as opposed to the overall reduction in kWh. This will help smaller plants achieve more recognition for their energy-saving efforts.

Carbon Reduction

If a carbon market is established, consumers that reduce their carbon footprint will have the option of exchanging those carbon reductions for financial compensation. Utility energy efficiency decision makers can work with ITP by gathering accurate information on carbon emissions to help regulators establish a carbon standard. By relating a plant's practices to its carbon footprint, plant managers can better visualize how its business practices are affecting the environment. The utilities and ITP can incorporate this in their post-energy assessment reports.

Calculated Savings

Energy savings identified by this national effort and the resultant monetary returns can be calculated based on kWh or cubic feet reduction in natural gas consumption per unit produced. Reporting the savings in this manner will help utilities communicate the benefit of participating in these assessments to their industrial manufacturing customers. Learning about reduced energy bills from participating in plant assessments will motivate plant managers to participate more in these efforts.

Smart Controls

Finally, ITP and the utilities can work together to develop or incorporate smart controls that accurately measure energy intensity. These smart controls are interactive technologies designed to optimize the

operation of equipment.[12] These tools will track an industrial system's energy usage and can be accessed simultaneously by both the plants and utilities. The Partnership needs to take a larger role as these tools develop and become commonplace.

End-User Training

Industry can complete a lot of activities onsite. In addition to participating in an ESA and implementing energy efficiency measures, plant facilities can host training sessions. Utilities can engage industry directly by hosting BestPractices workshops and trainings at industrial facilities in their service areas. ITP can help by providing the utilities the tools and resources for these training sessions. This localized approach will help plants learn about ITP and energy reducing opportunities in their area, as well as motivate them to participate in a SEN assessment. Finally, the utilities and ITP could work with the industrial facilities to improve their maintenance practices, which would increase their energy efficiency.

Utility Involvement with Energy Assessments

Energy assessments are the largest component of *Save Energy Now*. As more states make energy efficiency a requirement, utilities will have to be more involved with the energy assessment process. As it is now, a process should be established to ask a plant before participating in an ESA or IAC whether or not it wants the utility to be involved, or at least be aware of the energy assessment. If so, ITP could contact the utility and inform it of the upcoming assessment.

However, utilities should consider managing the assessments in the future because they have stronger relationships with plants and stand to be directly benefited by reduced demand for additional power generation capacity. Besides, as more states are mandating utility involvement with energy efficiency, the utilities will gain additional incentive to make plants energy efficient.

Another recommendation was for the utilities to take ownership of equipment. Since industrial equipment is designed to have a long life expectancy, many plant managers are likely to be waiting for returns on earlier equipment investments, deterring them from purchasing newer energy efficiency equipment. This problem would solve itself if the utility were to own the equipment. Some utilities currently offer grants for plants to become more energy efficient. Utilities that do not offer such financial incentives can consider "leasing" the equipment or distributed energy generation sources to a plant. The plant could either pay a monthly fee to the utility or could pay for the equipment through its increased energy supply.

Member Research Projects

Some utility associations offer financial incentives to their members for conducting research. This includes projects on energy efficiency and renewable energy generation. The Partnership could work to develop a cost-share program to help finance some of these projects.

ITP Helping Utilities

Part of the workshop's focus was to determine what ITP can do for the utilities to improve energy efficiency within a utility and to explore whether opportunities exist for ITP and the utility sector to work together to improve the energy efficiency of the utility supply chain. As noted by Edison Electric Institute during the meeting, electricity generation accounts for 32 percent of the nation's greenhouse gas emissions.[13] Reducing energy intensity of the utility sector could dramatically reduce these greenhouse gas emissions, while significantly contributing to ITP's *25 in 10* goal.

The workshop group discussed the role utilities could play in the *Save Energy Now* initiative, as well as needed elements for a voluntary agreement to get more utilities to participate in making industrial plants in their service areas more energy efficient. The group also explored how to publicize existing successes, taking a top-down approach to internal energy efficiency, including utilities in energy assessments, authoring case studies, and leading by example. However, the workshop participants agreed that the priority is to help the industrial customers because that is where the greatest load and potential for energy efficiency exists.

Utilities Section of ITP Web site

ITP should also add a dedicated utilities section to its Web site. Utilities typically do not have the time or resources to seek out the development of new energy efficiency programs or search for information on new programs, tools, or other resources that can help their industrial customers reduce their energy intensity. An easy-to-use utility-specific section of the ITP Web site that is similar to the States Resources Web pages would provide a central repository for utilities to learn about tools and resources they can use internally and for their industrial customers.

ITP Outreach Materials from the Utility Perspective

ITP can improve its outreach to utilities by tailoring publications and other communications to utility audiences. Instead of sending utilities information solely regarding industrial customers, utilities will be more receptive to obtaining information on energy efficiency that more closely pertains to the utility role in the process.

ITP Utility Newsletter

ITP should create a monthly e-newsletter to be sent to the utility associations that provides updates on Partnership activities. The e-newsletter must be tailored to a utility audience to announce upcoming events or trainings, completed or planned ESAs, assessment findings, energy savings since the program's inception, utilities in spotlight, and other information pertaining to the utilities and ITP in general. The utility associations will then forward the information to their members.

In addition, if the utility or plant so desires, the utility or plant could contact the local media after the assessment to discuss the identified savings potential and the process.

Smart Grid Technology

Cost-sharing research for the development of Supervisory Control and Data Acquisition (SCADA), or smart controls that can be tied into typical industrial processes such as compressed air, process heating, or steam would help utilities in the implementation of smart grid technologies. SCADA systems collect data from a network of sensors at a factory/plant and then send those data to a central computer at the utility which then manages and controls the data.[14] Improvements in these systems that enhance functionality will enable utilities to better manage energy-intensive processes.

Conclusion

In October 2007, the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy (DOE-EERE) Industrial Technologies Program (ITP) held a forum for its stakeholders to learn about department activities and to receive feedback from participants. This feedback led to the overwhelming recommendation that ITP should expand its partnerships to include utilities in order to reach its goal of reducing national industrial energy intensity by 25 percent of the next 10 years (*25 in 10)*.

In response, ITP hosted the *Utilities Working with Industry Workshop* the following February. Workshop attendees included representatives from utilities, utility associations, power administrations, and state energy associations. This group discussed ideas for activities utilities could conduct with ITP to reach the *25 in 10* goal. In addition, the group also discussed possible activities ITP could implement that would help utilities improve internal energy efficiency. This dialogue led to the creation of this action plan, which outlines the different activities.

These activities were placed under four categories: Key Elements of the Partnership, Customer Outreach and Education, Partnership Operations and Administration, and Helping Utilities. Activities categorized as "key elements" were critical components for the Partnership to operate successfully. Actions classified under Customer Outreach and Education emphasize the importance of a localized approach and establishing a more elaborate educational program. The next category is Partnership Operations and Administration. These activities are important for the Partnership to operate. The last set of activities is specifically for how ITP can help utilities become more energy efficient.

Because ITP recognizes the importance of diverse partnerships in promoting industrial energy efficiency, it has expanded its partnerships to include the utility sector. By working with utilities to complete the aforementioned projects, ITP will be in a better position to achieve its *25 in 10* goal.

Appendix A:
Workshop Participants

Name	Company
Bob Asdal	Pump Systems Matter
Joananne Bachmann	Pump Systems Matter
Paul Bautista	SENTECH, Incorporated
Lindsay Bixby	BCS, Incorporated
Ken Boras	BCS, Incorporated
Michael Chimack	University of Illinois at Chicago, Energy Resources Center
Michelle Davis	Duke Energy
Ben Deitchman	National Association of State Energy Officials
Melissa Eichner	Energetics Incorporated
Tracy Fisher	Energetics Incorporated
Sandy Glatt	DOE Industrial Technologies Program
Chris Goff	Southern California Gas Company
Bruce Hedman	Energy and Environmental Analysis, Incorporated
Ron Horstman	Western Area Power Administration
Ilona Johnson	BCS, Incorporated
Ted Jones	Consortium for Energy Efficiency
Doug Kaempf	DOE Industrial Technologies Program
Don Kazama	California Energy Commission
Steve Kiesner	Edison Electric Institute
Dan LeFevers	Gas Technology Institute
Sara Madugula	Tennessee Valley Authority
Larry Mansueti	DOE Office of Electricity Delivery and Energy Reliability
Mary Medeiros McEnroe	Silicon Valley Power
Rob Naranjo	BCS, Incorporated
Mike Nester	Dominion Power
Joseph Orlando	Mid-Atlantic CHP Application Center
Scott Poole	Georgia Power
Jim Quinn	DOE Industrial Technologies Program
Paul Scheihing	DOE Industrial Technologies Program
Ursula Schryver	American Public Power Association
Michele Suddleson	American Public Power Association
Roy Tiley	BCS, Incorporated
Bryan Warren	Southern California Gas Company
David Weiss	Energy Solutions Center
Tony Wright	Oak Ridge National Laboratory
Cherif Youssef	Sempra Energy Utilities

Appendix B:
Activities Identified at Workshop

Workshop Results	
Activity	**Votes**
Case Studies	5
Focused Education	5
Workforce Education/Capture Systems Knowledge	4
Management Outreach	4
Member Research Projects	4
Top 10 Energy Efficiency Improvements List for Customers	3
Renewables	3
Educate Regulators	3
Multilevel Operator Tools	2
Conferences	1
Outreach to ESCOs to Discuss Possible Financial Partnerships	1
Utilize Existing Successes – Utility to Utility	1
More Local or Web-based Outreach	1
Efficiency Planning	1
Regulator Involvement	1
Increased Coverage of Energy Efficiency Audits	1
Measurement and Verification Guidelines	1

Appendix C:
Member Organization Pertinent Subcommittees

Member Subcommittees				
Forum	**Coordinating Organization**	**Function**	**Contact/ Web Site**	**Opportunity for ITP**
Energy Services Committee	American Public Power Association	Energy Services Including Energy Efficiency and Load Management Program	http://www.appanet.org/utility/index.cfm?ItemNumber=9612&navItemNumber=21017#CC	ITP will hear utility energy service programs to reduce energy use.
Key Accounts Committee	American Public Power Association	Helping Utilities Develop Relations with Key Commercial and Industrial Customers	http://www.appanet.org/utility/index.cfm?ItemNumber=9612&navItemNumber=21017#CC	ITP can hear what is currently being done to foster these relationships and receive feedback on how it can help incorporate energy efficiency into those relationships.
Industrial Program Planning Committee	Consortium for Energy Efficiency	Promotion of Innovative Industrial Approaches and Energy-Efficient Technologies	http://www.cee1.org/ind/industrial-program-planning/	ITP can learn about what additional industrials have done to reduce energy consumption.
Energy Delivery Public Policy Executive Advisory Committee	Edison Electric Institute	Electric Utility Issues from the Executive Perspective	http://www.eei.org/members/US_Shareholder_Owned_Electric_Companies/committees/nonav_Economics_and_PublicPolicyEAC/index.htm	ITP leadership and utility executives can share information regarding the investor-owned electricity generating community.
Industrial Committee	National Association of State Energy Officials	Industrial Efficiency and Sustainability	http://www.naseo.org/committees/industrial/default.htm	ITP can learn about current/ongoing issues from the state level.
Industrial Energy Efficiency	Energy Solutions Center	Energy Efficiency of Industrials	http://www.energysolutionscenter.org/consortia/ind-energy_eff.asp	ITP will hear the utility perspective on industrial energy efficiency.

Appendix D: *Workshop Agenda*

Utilities Working with Industry Workshop

February 14-15, 2008

BCS, Incorporated, 8920 Stephens Road, Laurel, MD 20723

Objective:

This workshop will provide a forum for the utility community to share ideas on how DOE's Industrial Technologies Program (ITP) and the utilities can work together to improve the energy efficiency and energy intensity of the utility sector, their supply chain and their industrial customers in support of the national goal to reduce industrial energy intensity 25 percent in 10 years (25 in 10). The output of this workshop will be an action plan that can be jointly implemented by DOE/ITP and the utility sector.

Workshop Agenda	
DAY ONE: February 14, 2008	
9:30 a.m. – 10:00 a.m.	Registration and Continental Breakfast
10:00 a.m. – 10:05 a.m.	Welcoming Remarks: Ken Boras, *Chief Executive Officer, BCS, Incorporated*
10:05 a.m. – 10:10 a.m.	Welcoming Remarks: Douglas E. Kaempf, *Program Manager, Industrial Technologies Program* *U.S. Department of Energy*
10:10 a.m. – 10:40 a.m.	Overview of Save Energy Now Initiative: • Review goal of 25 in 10 • Review goal of workshop; how will the results be used • States Resources and Incentives Database Sandy Glatt, *Project Manager, Industrial Technologies Program* *U.S. Department of Energy*
Utility Programs for Industrial Customers	
10:40 a.m. - 10:55 a.m.	Energy Solutions Center Incorporated – David Weiss, Executive Director
10:55 a.m. – 11:10 a.m.	American Public Power Association – Ursula Schryver, Director of Customer Programs

Workshop Agenda Cont.

Workshop Agenda	
DAY ONE: February 14, 2008	
11:10 a.m. – 11:25 a.m.	Edison Electric Institute – Steve Kiesner, *Director, National Customer Markets*
11:25 a.m. – 11:45 a.m.	Q&A
Success Stories: Strategies for Saving Energy in Industry	
1:00 p.m. – 1:20 p.m.	California Energy Commission – Don Kazama, *Energy Services Manager*
1:20 p.m. – 1:40 p.m.	Consortium for Energy Efficiency – Ted Jones, *Senior Program Manager*
1:40 p.m. – 2:00 p.m.	SoCal Gas – Bryan Warren, Senior Engineer and Chris Goff, *Principal Engineer*
2:00 p.m. – 2:15 p.m.	Break
2:15 p.m. – 2:30 p.m.	Overview of Day – Roy Tiley, *BCS, Incorporated*
2:30 p.m. – 4:30 p.m.	Facilitated Brainstorming Session: • How can ITP and the utility sector work together to improve the energy efficiency of utilities' industrial customers and help the nation achieve 25 in 10? • What are the utilities' highest priorities? • How can ITP and utilities communicate more effectively? • What are the benefits for utilities? • What will get additional utilities involved? • What will get industry involved?
4:30 p.m. – 4:45 p.m.	Day One Results
DAY TWO: February 15, 2008	
10:30 a.m. – 10:45 a.m.	Coffee Break
10:45 a.m. – 11:15 a.m.	Workshop Summary Roy Tiley, *BCS, Incorporated*
11:15 a.m. – 11:30 a.m.	Next Steps Roy Tiley, *BCS, Incorporated*

Points of Contact:

Sandy Glatt, *Project Manager, Industrial Technologies Program*
Phone: 303-275-4857 Email: sandy.glatt@go.doe.gov

Robert Naranjo, *Lead Research Analyst, BCS, Incorporated*
Phone: 303-425-6800 Email: rnaranjo@bcs-hq.com

Endnotes

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9 U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Industrial Technologies Program, Save Energy Now. "Save Energy Now: Energy Assessments."
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