THE OIT TIMES

"Turning Industry Visions into Reality"

States Issue

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Demand for energy efficiency spurring growth of OIT-State partnerships

For the past several years, the innovative Industries of the Future (IOF) strategy has guided OIT. Focusing on the country s nine most energy intensive industries–**agriculture, aluminum, chemicals, forest products, glass, metal casting, mining, steel and petroleum refining**–OIT brings together major players in each and asks them to envision their future, and then work together to help achieve that vision with support from OIT. One successful outgrowth of OIT's national IOF effort has been a counterpart initiative targeting individual states.

"We began working on the 'States Industries of the Future' concept a few years ago, and it's proven to be a very successful catalyst on a number of fronts," explained OIT's Deputy Assistant Secretary Denise Swink. "It's helped us reach a great many more firms and individuals with useful information about how they can improve industrial energy efficiency."

"We seem to have struck a nerve. Among folks that work in these traditional, energy-intensive basic industries, there's been building out there an awareness that to survive and prosper–not only must they compete–but they must also cooperate and work together, too. We've stepped in and provided a mechanism to help them do this," said Swink.

Basic Industries Back on Radar Screen

"At dozens of sites all over the country we've facilitated the assembly of folks from these industries to discuss their common interests in cutting energy use and other areas, too. Almost always these sessions have been attended by local and state government representatives who've taken back to their state capitols a greater awareness about the economic and employment importance of these industries and the challenges they face," she said.

"The concept of States IOF is simple," said OIT's States IOF Team Leader Sandy Glatt. OIT works with State Energy Offices, universities with extension missions, or other entities within a State that have pre-existing relationships with the local industrial base, providing them with

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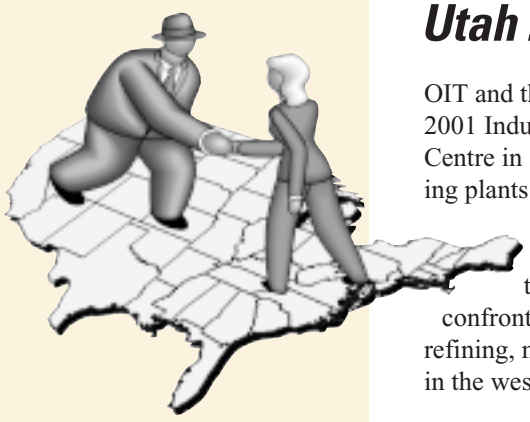

Utah 2001 'industry showcase' spells....SUCCESS!

OIT and the State of Utah hosted the Utah 2001 Industry Showcase at the Sheraton City Centre in Salt Lake City, Utah and surrounding plants in the region on August 27-30. The showcase provided about 400 attendees with a range of solutions to energy problems recently confronting the aluminum, petroleum refining, metal casting, and mining industries in the west.

The Utah 2001 Industry Showcase opened with plant tours highlighting industrial energy efficiency best practices and advanced technologies. Plant tours were conducted by six companies, including Alcoa, Spanish Fork, UT (aluminum); MagCorp, Rowley Junction, UT (mining); Kennecott, Bingham Canyon, UT (mining); Flying J, North Salt Lake City, UT (petroleum refining); Silver Eagle, Woods Cross, UT (petroleum refining); Chevron, Salt Lake City, UT (petroleum refining).

Utah s Governor Michael Leavitt and OIT s Denise Swink signed a Memorandum of Understanding in an opening ceremony. The memorandum signifies Utah (including the state, state agencies, universities, and local industry) as an official partner with DOE and OIT in the Industries of the Future strategy.

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seed money (through a State Energy Program grant) to implement the IOF strategy in their state. From this starting point, however, there are as many implementation plans as there are states in the program.

"It was obvious from the beginning that one size wouldn't fit all–and that's fine," explained Swink. "Some states begin by focusing on one or two energy-intensive industries while others focus on several industries at once. Some focus on roadmapping and forming teams to develop R&D proposals for OIT or other potential funding sources. Others get the industries together to make them aware of the broad range of near-term Best Practices tools and opportunities that are available. We leave it up to the local experts to apply the IOF model in the way that best suits local needs."

Many New Players to 'Industries of the Future'

"One of the great things about the program is that we reach a lot of people and companies that would not otherwise become involved in Industry of the Future partnerships," said Glatt. "People from small- and medium-sized firms or plants far from corporate headquarters might not be aware of IOF programs or how they can participate or benefit. But, when it's brought to the State level, State industry leaders are more likely to take part. In addition, with prestigious entities like state universities doing the outreach, we can more effectively reach local industry," she said.

"New ideas are emerging that are causing OIT's industry teams to revisit their national roadmaps and rethink some priority areas. For example, some of the ideas that came out of Pennsylvania's specialty steel roadmap are now being reviewed to see how they might fit into the national steel agenda," explained Glatt. "It's a great way to ensure that the national roadmaps remain fresh and vital."

Like their national counterparts, state-level industries set their technology priorities, and form teams to address them. However, since state industry priorities sometimes differ from national industry priorities, a new program–"Initiative on Cooperative Programs with States for R&D"–has been created to fund state-level R&D programs directly. Glatt offered an example.

"Because of their widespread presence, pulp and paper interests tend to dominate the national forest products industry roadmap," she explained. "In some states, though, hardwood issues loom larger. So this is a great way to identify new technologies needed by sawmills and get R&D projects underway to help this critical segment of the forest products industry."

California offers another example. Its recent energy crisis led the state to reach out to OIT's States Team to access energy-saving 'Best Practice' solutions that local firms could implement quickly. OIT and its Allied Partners stepped forward with three Energy Fairs to help California's manufacturers become more aware of successful energy-saving case studies, software tools and other new products and assistance resources.

The States IOF program is becoming a centerpiece for many states' energy efficiency programs. In fact, Governors of several states have signed a formal "Memorandum of Understanding" with DOE committing to the effort at the highest levels. "We hope that all states that have a concentration of energy-intensive industries within their borders will choose to participate," said Swink.

This special issue of *The OIT Times* describes IOF efforts underway in 11 states. It shows the diversity of approaches they are taking to meeting their common goals of reducing energy use and environmental impacts while improving productivity and competitiveness.

Maine

Governor signs MOU, "Energy Expo" planned

Maine was one of the first states to sign a Memorandum of Understanding with DOE. The MOU was signed in April by Governor Angus King, representatives from Maine's forest products industry, the Maine Chamber of Business Alliance, the state's offices of Economic and Community Development and Environmental Protection, and OIT. The MOU commits all parties to collaborating to maximize opportunities to reduce Maine's industrial energy use.

Maine's State IOF effort is initially focusing on its large **forest products** industry that employs 21,000 people. Led by the Maine Manufacturing Extension Partnership (MMEP), the state's IOF program held a roadmap workshop last year, with a team of industry representatives and university researchers working to prioritize Maine's technology needs. A followup workshop is scheduled for the Fall.

In addition, recent energy concerns have led to a state-wide acceleration in interest in OIT **Best Practices** tools and technologies. "As the cost of energy has risen, we're getting a lot of calls from people interested in plant assessments, combined heat and power, and ways to optimize motors and other systems," said Maine State IOF project manager Joan Saxe. "We want our Maine IOF office to ultimately be a 'one-stop' resource for local industry to access this valuable information."

With its second SEP grant, Maine plans to hold an "Energy Expo" this Fall. New energy-saving technologies for the forest products industry will be featured on tours of Maine plants where OIT-supported technologies are in use. For example, NICE3 is supporting a demonstration of an energy saving biolysis system at a Maine paper mill.

"Once we move forest products further ahead, we'll be putting more energies into **metals** as well. And, we'll likely spread the effort to other industries in the future," said Shirley Bartlett of the Maine Dept. of Economic and Community Development.

New Hampshire

MOU signed, several roadmaps underway

We tend to have very high energy costs in New Hampshire, and it's a major business issue here," said Jim Taylor of the Governor's Office of Energy and Community Services. "So when OIT explained the opportunities available through States IOF, we were very interested."

Indeed, New Hampshire Governor Jeanne Shaheen got involved early and signed a Memorandum of Understanding with OIT. State university researchers and more than a dozen CEOs from local manufacturing companies also signed up.

New Hampshire's State IOF effort is run by WasteCap, a nonprofit organization affiliated with the Business and Industry Association of New Hampshire. Together with the Governor's Office, they have begun to build intrastate alliances for the state's **aluminum, steel, metal casting**, **chemical, forest products** industries.

"Most of New Hampshire's manufacturing firms are very small," said Barbara Bernstein of WasteCap. "State IOF is especially well-suited to our needs because it brings a lot of smaller entities together to create a critical mass."

Most of the industry consortia have participated in roadmap sessions, and are drafting state-specific documents. The program's active listserv and its interactive website help maximize participation. According to Bernstein, a symposium in October will bring together industry representatives and researchers from the Univ. of New Hampshire to discuss roadmapping and how they can best work together.

"New Hampshire is very environmentally conscious. Many of our companies see that States IOF can play a critical role in helping them employ environmental management practices and achieve and maintain ISO 14000 certification," said Taylor.

The State IOF program also contributed to a partnership between New Hampshire and nearby Massachusetts. The **Industrial Assessment Center** at Univ. of Massachusetts is planning a number of assessments at New Hampshire sawmills which need to improve operating methods.

Ohio

'Outreach Teams' focus on four industries

According to Robert Purgert of Energy Industries of Ohio, the nonprofit corporation leading that state's IOF efforts, Ohio is "#1 by the ton" in **metal casting**, **steel**, and **glass**, and is a major U.S. producer of **chemicals**. Hence, these four industries have been the focus in Ohio's early state IOF efforts.

To identify common, priority technology needs, Ohio has formed "Outreach Teams" to work with industrial organizations and visit plants in each industry. Outreach Teams are coordinated by Ohio universities: Kent State for steel and metal casting, Univ. of Akron for chemicals and polymers, and Cleveland State for glass.

Outreach Teams are also working closely with industry groups such as the American Foundry Society. "For example, if there's a problem with metal sticking in a die at one foundry and metal sticking in a ladle at another, we see the common need for a specialized coating solution," said Purgert. "These foundries wouldn't normally speak to each other, and may not have knowledge of available technologies. Our role, with help from OIT States IOF, is to bring these parties together and identify an available technology or formulate a proposal and help them find R&D support to address the need."

Ohio IOF plans to use its latest SEP grant to expand **Best Practices**-related outreach. This will facilitate Ohio companies' access to tools, case studies, technical assistance and similar resources that can help them improve their energy efficiency immediately. Working with American Municipal Power of Ohio, an association of power companies, Ohio's IOF group has helped organize several training sessions for members. In addition, a number of plant-wide assessments are underway.

West Virginia

Inaugural IOF state continues to lead the way

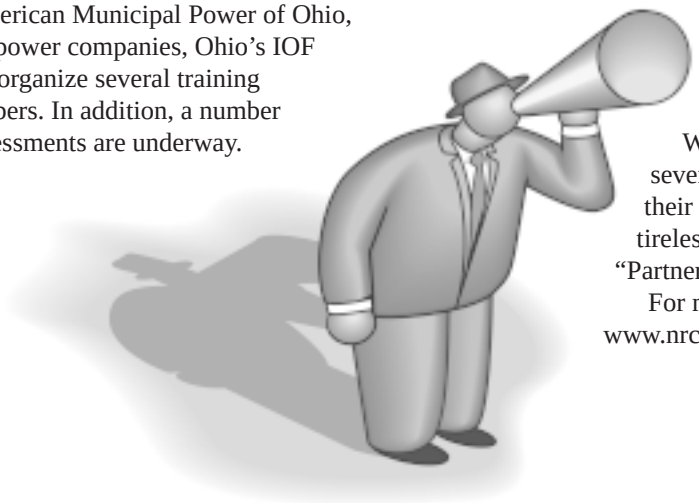
"With increasing global competition, we're very concerned with keeping industrial employers in our state," said Jeff Herholdt of the West Virginia Development Office. "Identifying and implementing new technologies are key to industrial retention, and state IOF is the foundation of all our technology-based industrial retention activities."

Herholdt is proud of the fact that West Virginia was the first state IOF participant, and his organization and West Virginia University worked closely with OIT to establish the program in 1997.

Since then the state's IOF program has helped bring more than $14 million in R&D funding to West Virginia companies in the **steel**, **aluminum**, **glass**, **chemical**, **forest products**, **mining** and **metal casting** industries.

Herholdt listed a few of West Virginia's many IOF successes. "The state's hand glass industry is doing a 'virtual showcase' over the internet to show West Virginia hand glass manufacturers how off-the-shelf technologies can reduce energy use and boost productivity," he said. "Another big success has been a joint project with the West Virginia Dept. of Environmental Protection to declassify spent foundry sand as hazardous waste, allowing its reuse. This will cut operating costs and provide West Virginia foundries more flexibility."

These and other efforts will be highlighted at the West Virginia IOF's Annual Symposium later this year which will also feature the signing of a Memorandum of Understanding by new Governor Bob Wise and DOE. Commensurate with its leadership role in the state IOF effort, West Virginia IOF will also sponsor outreach sessions to help other states learn from its experiences.

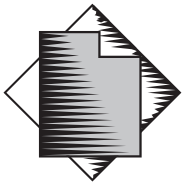


Key to this effort is Carl Irwin of West Virginia Univ. who has helped several other states implement and expand their own programs. In recognition of his tireless efforts, Irwin was named OIT's "Partner of the Year" at the 2001 Expo.

For more information, visit www.nrcce.wvu.edu/iof

Utah

Geographically dispersed plants drive innovative outreach measures



Utah is a large state with far-flung plants making the state IOF program s focus on outreach and communication especially valuable. (See related story on recent Utah showcase on page 1.)

"We've found extraordinarily high interest in OIT opportunities once our companies learn about them," said Patti Case, manager of the Utah state IOF effort.

Case noted that **Best Practice** opportunities to cut near term energy use are of special interest, and her team has held several workshops and training sessions for its industrial customers. "Most of our plants are too small to have in-house engineering staffs, so many of the Best Practice tools are new and of immediate value to them," she said.

Outreach efforts that bring together geographically dispersed participants pay off in other ways, too. The Univ. of Utah's new **Industrial Assessment Center** has begun performing energy-saving audits for several Utah plants. New teams have won several grants from OIT's **NICE3** and **Inventions and Innovation** programs.

Utah IOF has put considerable emphasis on its website, as well. "We decided to make our site as content-rich as possible so people could use all the available tools and information immediately," said Case. Indeed, Utah won "Best State IOF Website" honors at OIT's 2001 Expo.

Utah's plans include boosting the number of Allied Partners in the state to help disseminate Best Practice methods even further. Other plans include expanding the Utah IOF effort to include Utah's **metal casting** industry, as well as industries that are not on OIT's 'IOF' list but that are important to the state. It s sometimes difficult to say what is IOF and what isn t because the program has so many synergies with everything related to energy efficiency in Utah, Case said.

For more information, visit www.uiof.org

Washington

MOU signed, technology exhibition coming

Washington held its state IOF kick-off event last September with a "Competitiveness Through Innovation" conference. Representatives from five industries–**forest products**, **mining**, **petroleum refining**, **agriculture** and **aluminum**–participated in breakout sessions to help prioritize local technology needs.

"Key to us was getting the word out about OIT's numerous R&D funding support programs so we could form partnerships to submit proposals," said John Ryan of the Washington State University Cooperative Extension Energy Program that manages the Washington IOF effort. Several forest products-related R&D proposals, he notes, have already been submitted.

The September event also featured the signing of a Memorandum of Understanding by representatives from the Governor's Office, local industry and trade associations, and OIT's Denise Swink.

Since September the state's effort has expanded. "The threat of power shortages has been of major concern on the west coast so, while our industries are still very interested in longer term R&D, they are especially interested in short term energy management **Best Practices**," said Ryan.

To meet this need, Washington's state IOF is letting firms know about OIT's cost-shared plantwide assessments. They're also promoting Best Practice training opportunities, tools and techniques. For example, they'll sponsor ASD training session at the TAPPI (a forest products trade group) convention in Seattle on November 7th.

Washington State IOF is also planning a Technology Exhibition in April 3, 2002 at Weyerhaeuser's Technology Center. Best Practice training and tools and energy saving technologies of interest to forest products and other industries in the state will be featured.

For more information, visit www.energy.wsu

States IOF website, 'Factbook' offer helpful assistance

OIT's States Industries of the Future program is intended to:

- Focus on implementation of Industries of the Future in individual states
- Leverage national visioning, roadmapping and partnership activities with the states, and
- Support state efforts with OIT products and services.

In an effort to increase support at the state level, OIT's States IOF Team provides an informative website that addresses topics such as:

- State IOF contact information
- Upcoming events
- State IOF factsheets
- Funding opportunities
- State IOF/SEP awards information
- State IOF listings.....

.....and much more! Visit www.oit.doe.gov/states.

The States IOF Team has also created a comprehensive, informative factbook. It provides state-by-state summaries of OIT activities and opportunities. Individual state factsheets contain economic and energy statistics for each state as well as a list of OIT sponsored activities in each state. To order a free copy, call the OIT Clearinghouse at 1-800-862-2086.

Massachusetts
Roadmap sessions help plot future directions

Two organizations at the Univ. of Massachusetts–the Center for Energy Efficiency and Renewable Energy (CEERE) and the National Environmental Technology Institute (NETI)–are leading the state IOF effort in Massachusetts. UMass is a long-standing OIT partner in the **IAC** program, and the state's IOF program is benefitting from the school's knowledge of local manufacturers and the strong relationships they've forged over the years, having performed more than 500 energy audits.

The state initially focused on its **chemical** and **forest products** industries, with strong attendance at workshops for both industries. In the chemical industry, five high priority R&D areas were identified led by "Water Use and Re-Use." A forest products roadmap meeting was held at a TAPPI session. Future roadmap meetings are planned for both industries, and then teams will develop R&D proposals for OIT.

The Massachusetts state IOF is also starting roadmap efforts for the **metal casting** industry, and they've begun outreach and coalition building with the state's substantial printing and publishing industry.

"States IOF is an excellent avenue to deliver energy-related services," said Eric Winkler of CEERE. "One way we hope to build on our success is to get some of our state's premier research universities involved."

"We're working to get greater collaboration between local companies and local researchers on projects designed to solve local problems," added Chad Nelson of NETI. "Our manufacturers are smaller companies that tend not to do a lot of R&D, and researchers are anxious to direct their efforts toward the most in-demand areas, so States IOF is a perfect way to bring them together for mutual success."

For more information, visit www.maiof.org

'Memoranda of Understanding' formalize state, DOE energy efficiency partnerships

The State Industries of the Future (IOF) strategy helps deliver industrial energy efficiency technologies and best practices to businesses and organizations at the state level. It helps OIT reach a great many more customers who can not participate at the national level.

To help formalize the partnership, OIT and several of its partner states have signed Memoranda of Understanding. These provide a framework for identifying and pursuing technology, research, development, demonstration, and outreach efforts that satisfy the common goals of DOE and participating states.

The parties encourage collaborative relationships among industry, academia, and national labs to evaluate, develop, and demonstrate technologies that address the needs of a participating state s industries including energy and process efficiency, operational cost-effectiveness, and environmental stewardship. The parties also provide informative outreach to potential partners about the opportunities and benefits of the IOF program.

The memorandum does not create legal rights or obligations by either party or obligate, commit or transfer funds. Either party may unilaterally withdraw from the agreement without penalty or legal remedy. Seven states have signed MOU with DOE:

- Idaho
- Iowa
- Maine
- New Hampshire
- Pennsylvania
- Utah
- Washington

Additional MOU signings with Massachusetts, Wisconsin and West Virginia are anticipated by yearend.

Got a question? Call the OIT Clearinghouse 1-800-862-2086

DOE's Regional Offices: Your source for State IOF information

To become involved or learn more about State Industries of the Future, contact the Dept. of Energy employee for your state.

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Texas
NOx reduction through energy efficiency targeted

Since Texas is the largest energy using state, firms there are always very interested in how to cut energy use. More recently, says Texas State IOF Executive Director Jerry Matthews of the Texas Energy Coordination Council, firms in his state are also finding the related topic of NOx reduction to be very hot these days.

"Improving energy efficiency is a very cost-effective strategy for meeting NOx goals, and our firms want to learn all they can. That's a big part of our state IOF focus," he said. Texas IOF recently hosted a conference on how energy efficient methods can achieve NOx reduction goals. Proceedings from that event–and a host of other information and tools–are available at the program's website (http://texasiof.ces.utexas.edu).

The Texas IOF will also offer a series of workshops related to **Best Practices** for motors, steam and other energy-intensive plant systems. They will work more closely with the **Industrial Assessment Center** at Texas A&M to refer interested plants for energy audits. And they will be promoting opportunities for OIT's cost-shared plant-wide assessments strenuously throughout the state.

Texas IOF brought together representatives from industry and the Univ. of Texas-Austin to participate in a roadmap workshop to identify both short- and long-term technology needs. More than 70 participants from the **chemical**, **petroleum refining**, **forest products** and **agriculture** industries participated in the event.

"Once we finalize our priority list, we'll form teams to solicit R&D support from OIT and other energy-related state and national agencies," said Matthews.

He reports that Texas IOF will start its second SEP grant in January, and the state plans a technology showcase in June 2003. Technologies likely to be featured include robotic tank inspection and pipe analysis technology. In addition, Matthews said "there are a lot of demonstrations of low NOx burners going on, and those are sure to be of high interest."

State IOF's broad-based grant recipients announced

OIT s States Industries of the Future program recently announced seven recipients of the broad-based grants for 2001.

The broad-based solicitation provides funds for information dissemination and public outreach to facilitate state IOF efforts. Unlike the State SEP grants, broad-based grants are awarded to land-grant universities and other universities with similar extension programs.

2001 State Broad-based Outreach Grants

State	DOE Funding
Washington	$50,000
Utah	$62,500
Iowa	$50,000
New Mexico	$62,500
North Carolina	$62,500
Massachusetts	$62,500
West Virginia	$50,000

Wisconsin

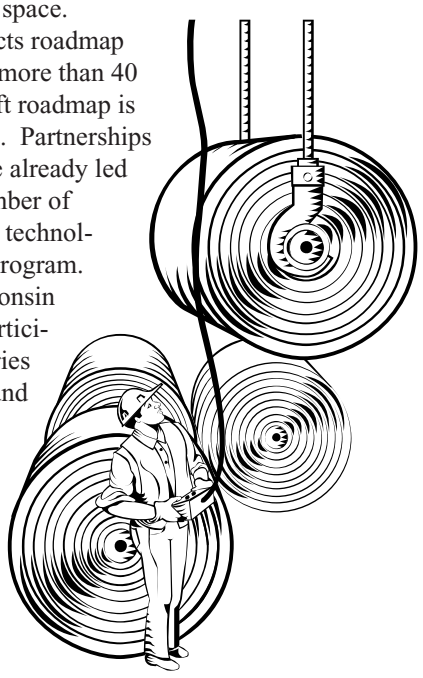
Bringing energy management Best Practices to metal casting, forest products and others

Shortly after Wisconsin became a State IOF , the state government was given the responsibility for promoting energy efficiency—a task usually performed by public utilities. The change was timely, according to Preston Schutt of the Wisconsin Division of Energy. IOF provided an outreach model to help us get our industrial programs off the ground quickly, he said.

Key to the effort, he noted, is promoting OIT Best Practices to Wisconsin s industries. Our goal is to work with our firms to institutionalize energy efficiency best practices. We will also work with suppliers to ensure the marketplace provides those goods and services, said Schutt. W e re about to kick this effort into high gear.

Wisconsin began its state IOF program focusing on **metal casting** and **forest products**, two of its largest industries. About 80 of the state s 260 metal casters came together for the first time to create a roadmap with 14 action items. Enthusiasm was so high for one item that work began right away. About 10 small foundries are working to pool their waste foundry sand to attain sufficient volume and consistency for aftermarket uses. This pilot project could lead to other regional collaborations whereby several foundries band together to provide sand suitable for reuse in asphalt production. This could save significantly on disposal costs and landfill space.

The first forest products roadmap sessions brought together more than 40 representatives whose draft roadmap is currently out for comment. Partnerships forged at the meeting have already led to the submission of a number of proposals to OIT s **NICE³** technology demonstration grant program.



Future plans for Wisconsin IOF include expanding participation in other key industries such as **glass, chemicals** and **agriculture**. Biotechnology, a growing industry in the state with more than 3000 organizations in the Madison area alone, is another potential focus industry.

DOE's State Energy Program provides over $3 million in energy efficiency R&D grants

In cooperation with DOE s Office of Building Technology State and Community Programs, OIT s State Energy Program (SEP) awarded grants valued at over $3 million for 16 State Industry of the Future R&D projects in 2001.

SEP grants are cost-shared R&D projects for clean, energy-efficient technologies. The SEP funds projects that target state implementation of OIT s Industries of the Future strategy.

2001 State Energy Program R&D Grants

State	*DOE Funding*
Colorado	$200,000
Indiana	$200,000
Iowa	$200,000
Maine	$200,000
Maryland	$200,000
Massachusetts	$199,575
New Hampshire	$200,000
New Jersey	$200,000
North Carolina	$200,000
Ohio	$200,000
Oklahoma	$200,000
South Carolina	$178,425
Texas	$197,623
Utah	$53,000
West Virginia	$200,000
Wisconsin	$200,000

New OIT Employees

Bob Brewer is OIT s Associate Deputy Assistant Secretary. He assists Denise Swink, Deputy Assistant Secretary, in managing OIT s Industry of the Future programs. Bob has been a manage technical organizations in the areas of energy and facilities management in the Department of Defense, the General Services Administration, and DOE.

Isaac Chan is OIT s new Steel Team Leader. Prior to joining OIT, he was director of the Industrial Technology Center and manager of business development for the Gas Technology Institute in Chicago, IL. He served as manager in GRI s R&D programs, and a Senior Energy Engineer at Inland Steel Corp.

Dennis Lin, a Program Analyst, coordinates financial management in OIT. He s worked in DOE s Ohio Field Office where he was responsible for budget and project management in the decommissioning of a facility used for nuclear research. He s also been a nuclear engineer at DOE facilities in Idaho and New York.

Grace Ordaz is a Program Manager on OIT s Agriculture and Forest Products teams. Grace has performed process design in the petroleum industry and worked in the environmental field with the State of Maryland, Department of Energy—Ofc of Environmental Management, and EPA.

Dickson Enuma Ozokwelu is Process Leader for OIT s Chemical Team where he helps manage the team s R&D project portfolio. He also joins OIT s Petroleum Team. He s been a professor of chemical engineering at various universities around the world, and was a Senior Chemical Research Engineer at Eastman Chemicals and a Research Associate at BP Amoco.

Mark Paster is OIT s acting Agriculture Team Leader. Prior to joining OIT, Mark held a variety of R&D leadership positions at Monsanto Co. in St. Louis, MO, in such areas as plastics, specialty polymers, agricultural chemicals, and other specialty chemicals.

Peggy Podolak is OIT s new senior economist and provides economic and program analysis. No stranger to DOE, she was an economist in DOE s Policy Office for over 15 years analyzing industrial energy use issues and macroeconomic effects, climate change policies, and employment impacts.

David Salem is Program Manager for OIT s Petroleum and Chemical teams. He has nine years experience with Exxon Mobil as a project engineer in which he managed various plant expansions, cogeneration, and energy management projects.

Mike Soboroff is a Program Manager for OIT s Industrial Materials of the Future program. Previously, Dr. Soboroff had been Washington Liaison for the Defense Production Act Office, where he directed planning and project selection. He also was head of the Secondary Resources Processing Group at the U.S. Bureau of Mines.

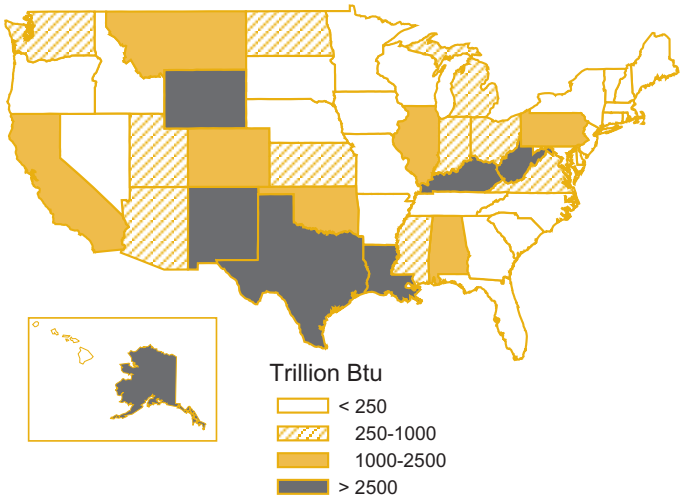
*Current OIT Solicitation Schedule**

Industry/Program	RFP	Proposals Due	Selections	Funding (approx.)	URL (www):
Agriculture	4/02	6/02	8/02	TBD	www.oit.doe.gov/agriculture
Aluminum	10/31/01 University Based Solicitation	1/11/02	3/02	$600,000	http://e-center.doe.gov
Aluminum	3/8/02 Aluminum IOF Partnership Solicitation	5/17/02	07/02	$2 million	http://e-center.doe.gov
Best Practices	TBD	TBD	TBD	TBD	TBD
Chemicals	1/02	4/02	7/02	$1.5 million	www.oit.doe.gov/chemicals
Forest Products	10/01	3/02	7/02	$2 million	www.oit.doe.gov/forest
Forest Products	10/01 - Lab Call	3/02	7/02	$1 million	www.oit.doe.gov/forest
Glass	2/02	4/02	9/02	TBD	www.oit.doe.gov/glass
Inventions & Innovation	TBD	TBD	TBD	TBD	TBD
NICE3	TBD	TBD	TBD	TBD	TBD
Petroleum refining	10/01	12/01	2/02	$1 million	www.oit.doe.gov/petroleum

* Information subject to change. Additional solicitations to be announced soon. Visit www.oit.doe.gov/working/solicitations.shtml for the latest information.

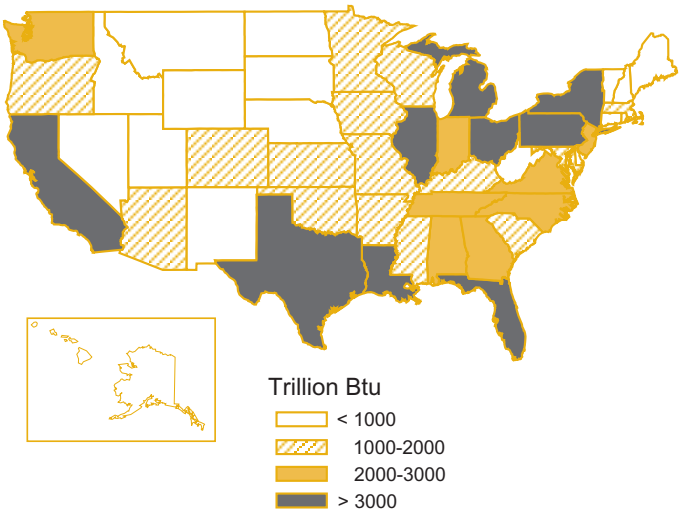
Industry Trends

Energy Production,* 1999

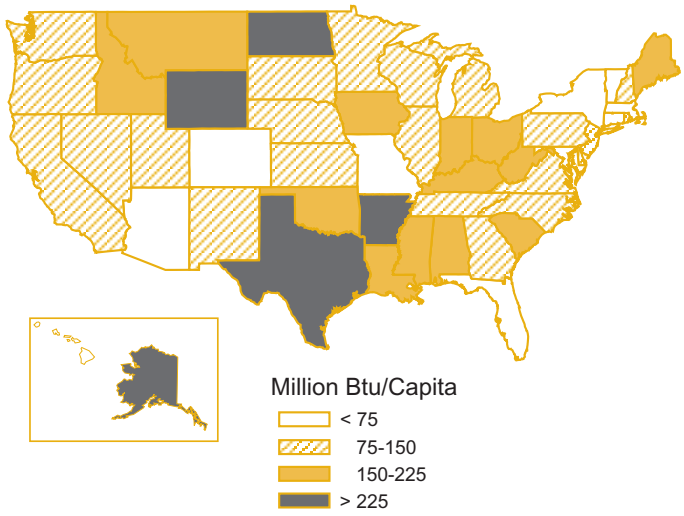


* Energy production includes oil, natural gas, coal, and primary electricity generated by other sources (nuclear, hydro, wood, etc.) but excludes distributed generation.

Energy Consumption, 1999



Per Capita Industrial Energy Consumption, 1999



Source: State Energy Data Report, 1999 (May 2001), Energy Information Administration, DOE

Guest Editorial

State Industries of the Future: A Collaboration

by Yolanda Frinks, OIT States Team

According to Webster, to collaborate means to work together, especially in a joint intellectual effort. That is exactly what the State Industries of the Future (SIOF) is all about—a close partnership among State and Federal government, industry, universities and national labs to extend the reach of energy efficiency technologies and best practices.

It s been exhilarating to see the growth of SIOF partnerships over the past year. DOE/OIT signed four new Memoranda of Understanding with Governors of Iowa, Maine, Utah, and New Hampshire bringing the total to seven. Additional MOU signings with Massachusetts, Wisconsin and West Virginia are anticipated by yearend.

Through the 2001 State Energy Program, OIT awarded $3 million to 16 states to further promote the ability of State Energy Offices, related agencies, and their university partners to pursue SIOF activities. These partnerships will help broaden the implementation of DOE s national Industries of the Future program—improving energy efficiency and productivity, and reducing waste and pollution in energy-intensive industries.

OIT s States Team awarded another $400,000 to seven universities through broad-based outreach grants. These will catalyze the development of state-led Industries of the Future programs. Also, they will contribute to university partnerships and shared experiences and expertise.

Finally, the first ever State Industries of the Future solicitation which targeted the highest priority R&D needs identified by states was released. This solicitation will fund cost-shared R&D projects that are essential to the target industries in our partnership states.

As you can see, OIT s States Team has been busy. The State IOF program has continued to grow through strong collaboration with industry, state government and universities. We re very excited!

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Utah Senator Orrin Hatch, keynote luncheon speaker, addressed the importance of Utah s aluminum, metalcasting, mining, and petroleum industries to the state and the nation. He also saluted OIT s efforts for a successful showcase.

Utah Congressmen James Hansen, Chris Cannon and James Matheson hosted a congressional field hearing at the showcase and heard from three expert panels about the recent energy crisis and efforts to ameliorate it. Panelists included:

Panel I, including OIT s Denise Swink, Mike Glenn, Program Manager for Utah Department of Natural Resources, and Lamont Tyler, Utah State Legislator, discussed the government s perspectives and their goals and how partnerships contribute to achieving them.

Panel II, including Randy Overbey, Energy President for Alcoa, Jeff Utley, Refinery Manager for Flying J, Inc., Wayne Hale, Vice President & General Manager, Kennecott Utah Copper Corp., and Michael Legge, President of MagCorp, provided testimony on the challenges confronting their companies and the role of OIT s Industries of the Future strategy in meeting those challenges.

Panel III, including J. Stephen Larkin, President of The Aluminum Association, Inc., Dwight Barnhard, Executive Vice President of the American Foundry Society, Red Cavaney, President and CEO of the American Petroleum Institute, discussed how OIT s Industries of the Future program benefits industry from the national industry perspective.

The showcase also offered breakout sessions that focused on technical issues and plant technologies, R&D, energy efficiency best practices, and state initiatives. The breakout sessions were organized into three tracks:

- Industry 'best practices' and emerging technologies in aluminum, metal casting, mining, and petroleum refining.
- Tools for energy efficient process optimization
- Utah state 'Industry of the Future' initiatives

Over 40 exhibitors, including both private and public sector organizations such as Alcoa, the Cast Metals Coalition, Utah Energy Office and Dow Chemical Co. set up booths describing their advanced technologies and practices.

The Utah 2001 Industry Showcase was co-sponsored by DOE, the State of Utah, the Univ. of Utah, Alcoa, Chevron, Flying J, Kennecott Utah Copper, MagCorp, and Silver Eagle Inland Refining, Inc.