



Keeping an Environmental Agenda

There is a lot of news to share about the multitude of exciting environmental activities occurring throughout EPA. In this issue of *Greening EPA*, find out about the keynote speaker at the upcoming Laboratories for the 21st Century conference; the Manchester, Washington, laboratory's green energy purchase and water reduction; the Ada, Oklahoma, laboratory's installation of a geothermal heat pump; and much, much more.

—Phil Wirdzek, FMSSD



The mission of the

U.S. Environmental
Protection Agency is

to protect human
health and to safe-

guard the natural
environment—air,

water, and land—upon
which life depends.



Laboratories for the 21st Century Conference Coming Soon

This year's Laboratories for the 21st Century (Labs21) conference in San Francisco, California, will feature David Gottfried, a nationally recognized green buildings expert, as the keynote speaker. The conference will take place September 6 to 8 at the Renaissance Parc Hotel.

David Gottfried is the founder and CEO of World-Build Technologies Inc. Worldbuild has served as the development consultant for many of the leading and award winning green building pro-

jects in the United States. Mr. Gottfried also is the founder of the U.S. and World Green Building Councils. He is a frequent speaker and author on green building and market transformation topics.

The conference will help private and public sector laboratory designers, engineers, owners, and operators collaborate to reduce costs and increase laboratory design and operation efficiency. It will feature presentations on energy and water efficiency; renewable energy; and designing, building, and operating low-

energy, resource-efficient laboratory buildings.

During the conference, plans for the Labs 21 Initiative will be announced. The initiative, launched at last year's conference, is a voluntary effort coordinated by EPA and the U.S. Department of Energy (DOE) to improve the environmental performance of U.S. laboratories. The initiative focuses on improving energy and water efficiency, encouraging use of renewable energy sources, and promoting environmental stewardship in U.S. laboratories.



Ada to Install Geothermal Heat Pump

In an effort to reduce energy consumption at its Ada, Oklahoma, laboratory, EPA expects to award an energy savings performance contract (ESPC) to Johnson Controls, Inc., by late summer 2000. In addition to other improvements, the ESPC will be used to finance a geothermal heat pump (GHP) that will replace the existing HVAC system. The GHP system also will be used to provide domestic hot water. Ada will be among the first laboratories to use this innovative technology.

The GHP technology uses the Earth's temperature as a heat source or sink depending on outside ambient temperatures. This system will utilize a geothermal field with over two hundred wells. Each well will be at least 250 feet deep and use water-to-water heat pumps. A series of pipes called "loops" are buried in the wells and circulate fluid to transfer heat. The pipes absorb heat from the ground when ambient temperatures are low and relinquish heat to the ground when ambient temperatures are high.

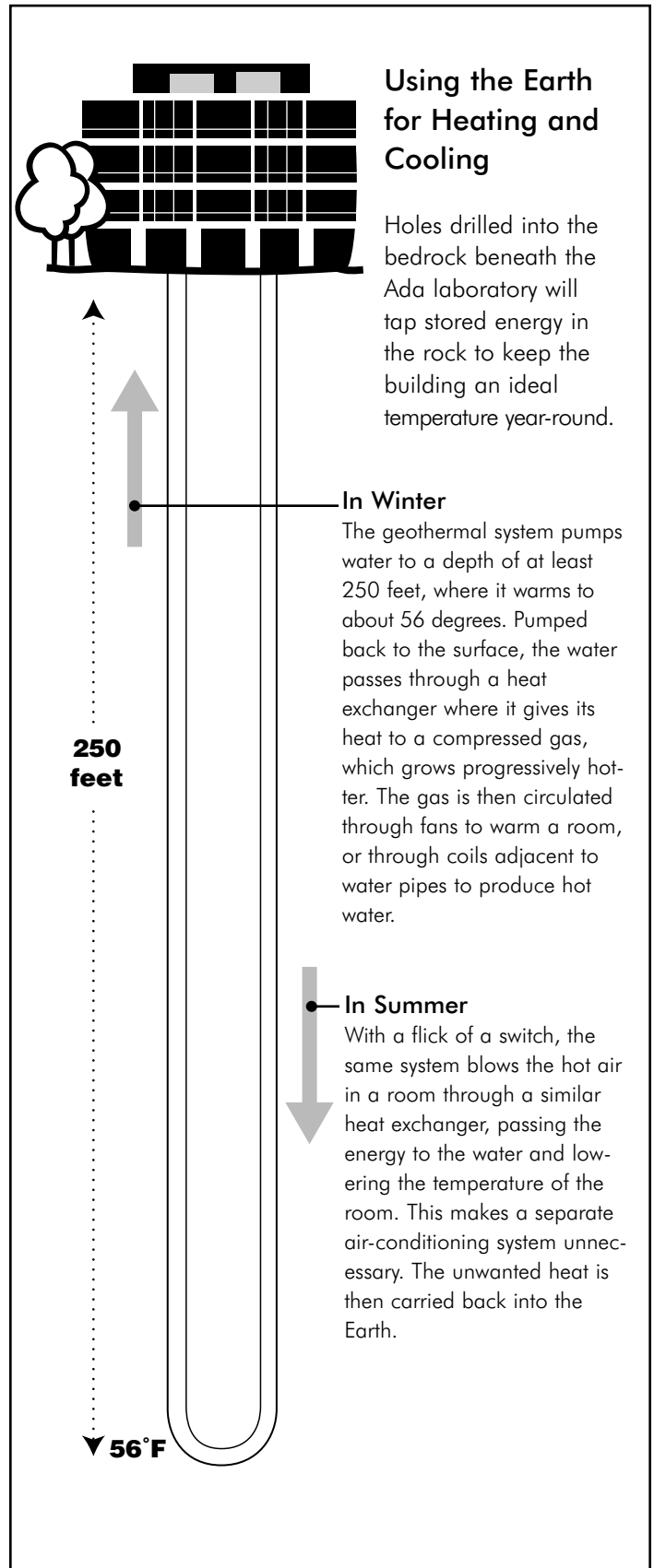
GHPs do not convert electricity to heat, but rather use electricity to move thermal energy between the building and the ground. Because GHPs only use electricity to transfer thermal energy, less electricity than conventional heating and cooling systems is required to power the system. This technology reduces electrical consumption between 30 percent and 60 percent. EPA expects the HVAC and

other upgrades at Ada to reduce energy consumption in excess of 60 percent, a reduction of 1.7 million kilowatt hours per year.

The installation of the GHP will eliminate the use of natural gas and significantly lower energy consumption in the Ada laboratory, thereby reducing carbon dioxide production by 68.6 million pounds, sulfur oxides by 11 million pounds, nitrogen oxides by 17.3 million pounds, and carbon monoxide by 84 million pounds over the useful life of the system. In addition, geothermal systems require lower maintenance than conventional systems. EPA estimates the energy costs for operating the laboratory with the GHP will be less than \$1 per square foot compared to the \$2.72 per square foot spent in fiscal year 1999.

The GHP system eliminates the need for a boiler or cooling tower. The Ada laboratory currently has a cooling tower, which consumes more than 51,000 gallons annually of domestic potable water as an HVAC heat transfer medium. By eliminating the need for a cooling tower, the geothermal system will reduce the lab's water consumption by more than 80 percent. This reduction in water usage will save more than 938,000 gallons of cooling tower water over the estimated life of the system.

For more information, contact Phil Wirdzek at 202 564-2094 or <wirdzek.phil@epa.gov>.





Conference *continued from page 1*

The initiative currently consists of three components:

- **Labs21 Partnership Program:** EPA and DOE will establish voluntary partnerships with interested public and private sector labs.
- **Training:** The Labs21 team will provide training or other opportunities to exchange technical information with initiative participants.
- **Best Practices:** EPA and DOE will create an Internet-accessible compendium of best practices, case studies, and energy and water data documenting innovations in laboratory design and operation.

The overall goal of Labs21 is to create environmental showcase laboratories by encouraging laboratory owners, operators, and designers to adopt the "Labs21

approach." This approach involves an initial evaluation of a laboratory's energy use from a holistic or comprehensive perspective when considering efficiency improvements. This requires examining all of a laboratory's energy systems and wastes, including HVAC and electrical power supply, rather than focusing on specific building components.

Using the dynamic Labs21 approach, EPA and DOE believe laboratories can realize significant cost savings and environmental benefits. Assuming only 25 percent of U.S. laboratories achieve a 60 percent reduction in energy consumption, the country could reduce its annual energy consumption by 84

trillion Btus. An efficiency improvement of this magnitude would save \$1.25 billion annually. It would also decrease carbon emissions by 16.4 million tons, which is equivalent to removing

3 million automobiles from U.S. highways.

The conference's registration deadline is August 25, but interested participants are encouraged to register early because of limited seating. To register for the conference or to learn more about the Labs21 initiative, visit www.epa.gov/labs21century.

Additional conference sponsors include: National Renewable Energy Laboratory, Lawrence Berkeley National Laboratory, American Institute of Architects Committee on the Environment, National Association of Physicians for the Environment, Pacific Gas and Electric Co., and U.S. Green Building Council. ■



EPA Maintains its Leading Role in Green Power

Maintaining its role as a "green power" leader, EPA has committed to increase its green power electricity purchases from 17 percent to 100 percent in its Golden, Colorado, laboratory. This commitment was made as part of the Denver Wind Purchase Initiative. The initiative encourages agencies in the Greater Denver area to purchase 25 percent of their electricity from wind power; large agencies, such as EPA, were requested to purchase

10 percent of their electricity from wind.

The cost of purchasing 100 percent wind power will be approximately \$50,000 annually. The lab previously paid approximately \$9,600 a year for its wind electricity, as part of a 3-year contract with Public Service Company to purchase 320 "blocks" of green power. Wind turbines generate the electricity through a project called Windsourse.™

To offset the increased cost of purchasing 100 per-

cent renewable energy, the Golden laboratory is looking for money-saving projects. Purchasing natural gas through the General Services Administration's gas program has saved the lab approximately \$15,000 during the first half of fiscal year 2000. The laboratory estimates full-year savings of approximately \$20,000. Additional money-saving projects include taking a water audit and making the heating and cooling systems more efficient. There also are plans to look at successful

projects implemented at other EPA laboratories to determine if similar efforts could work at the Golden laboratory.

For more information on the Golden laboratory's 100 percent green power purchase, please contact Sue Datson at 303 312-7087 or Dianne Thiel at 303 312-6389. ■



EPA's Manchester Laboratory Goes Totally Green

Through a grant agreement with the Bonneville Environmental Foundation (BEF), EPA's laboratory in Manchester, Washington, will be the first federal facility in the Northwest United States credited with using 100 percent "green" power. Already using power generated by an onsite solar cell array, the lab is going a step further by contracting for 100 percent wind power. As a result, BEF, working with Bonneville Power, will develop a 700-kilowatt wind turbine in either Eastern Oregon or Wyoming. BEF is an independent non-profit foundation coordinating with utilities and customers in the region to develop renewable energy resources.

The Manchester lab's green power "purchase" is unique because Washington has not deregulated its electric industry, unlike other states where EPA is buying green power. This means the lab is required to purchase electricity from its traditional utility company, Puget Sound Energy. Based on current market prices, the Manchester lab determined that purchasing green power would cost approximately 2.2 cents more per kilowatt hour, representing an additional \$50,000 annually. EPA decided to issue an equivalent amount to BEF in the form of a 10-year grant to build the wind turbine.

The turbine, scheduled to go on line in October 2000, will produce approximately 2.1 million kilowatt hours of electricity annually. That is enough energy to power the Manchester lab, although the turbine will not power the lab directly. As with other power suppliers, the BEF wind turbine will produce power available to everyone using the regional electrical grid. The additional generating capacity will be significantly cleaner and will offset traditional electricity sources, such as burning fossil fuels.

Working with BEF, the Manchester lab is contributing to a national effort to decrease greenhouse gas emissions, thereby slowing

the rate of global climate change. Although the Northwest already produces green energy with large hydroelectric dams, most of these dams adversely affect river ecosystems and produce carbon dioxide emissions. Using electricity generated by the wind turbine will reduce carbon dioxide emissions, one of the primary polluting greenhouse gases, by approximately 1,500 tons annually. This is equivalent to taking approximately 260 cars off the road each year.

For more information about the Manchester lab's green power agreement, contact Carolyn Gangmark at 206 553-4072. ■

Reducing Water and Saving Money in Manchester

EPA's Manchester lab is saving water and money. After completing two water efficiency upgrade projects, lab personnel report a 66 percent reduction in water consumption. The resulting savings have dropped the facility's average water bill from \$596 to \$203 per month. Average water consumption rates have also dropped significantly, from 204,000 to 70,000 gallons per month.

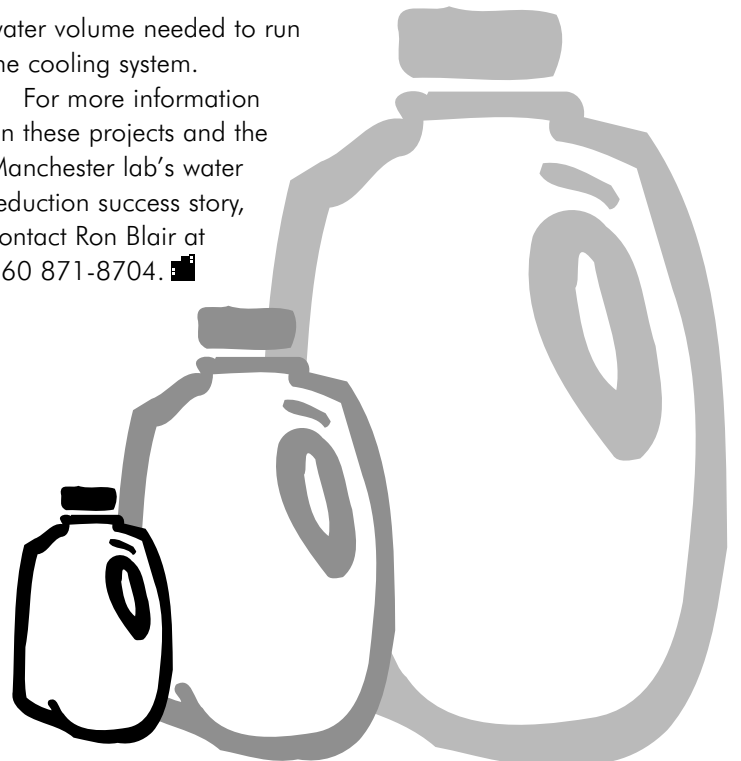
To realize these savings, the lab first replaced its 4-inch PVC water lines, which lead to the lab's outlying buildings, with new 6-inch ductile iron water lines. Previously,

water surges would push the water lines beyond their pressure per square inch (psi) capacities, causing leaks that released as much as 250,000 gallons of water before being detected and repaired. Using larger lines made of stronger material has significantly reduced the number of water line breaks and reduced the lab's overall water consumption rate.

The second project involved installing a new water cooling tower. Replacing the former water cooling tower, which was approximately 20 years old, with a new, more efficient tower, reduced the

water volume needed to run the cooling system.

For more information on these projects and the Manchester lab's water reduction success story, contact Ron Blair at 360 871-8704. ■





Fort Meade Facility to Pursue ISO 14001 Certification

It's official! EPA's Environmental Service Center (ESC) at Fort Meade, Maryland, will be the first Agency facility to pursue certification of its environmental management system (EMS) under the international ISO 14001 standard.

While the timing of the announcement coincides with the signing of Executive Order 13148, *Greening the Government Through Leadership in Environmental Management* (April 26, 2000), the idea was actually born back in 1996, when plans for the facility were still on the drawing board. Greg Allen, the facility's Quality Assurance Director and EMS Implementation Team Leader, pitched the idea to Patricia Krantz (Director, EPA Region III Office of Analytical Services Quality Assurance) and Mary McKiel (EPA Standards Executive).

"Patricia Krantz endorsed the concept from the start and helped solidify management support for the project here," Allen explains.

McKiel, who at the time was co-chair of the U.S. delegation to the ISO committee developing the 14001 standard, was also very enthusiastic. "She helped us understand what was involved in building an EMS and to see the potential benefits," Allen says.

The Fort Meade EMS is unusual in that it will


encompass several labs operated by different organizations in EPA. The two main tenants in the 140,000-square-foot facility are the Region III Office of Analytical Services and Quality Assurance (OASQA), which operates the Region III analytical lab, and the Office of Prevention, Pesticides, and Toxic Substances (OPPTS), which runs the Analytical Chemistry Branch

cally a regulatory and enforcement lab that supports all of the EPA programs, while on the OPPTS side, they do a number of things that are vital to the national pesticide and disinfectant programs. Very different types of labs, but all under one roof. And soon to be all under one EMS. We felt that it was important to have the EMS cover the

steering committee consisting of representatives from the facility's Board of Directors was also convened to draft an environmental policy for the facility. The policy statement is the cornerstone of most EMS efforts and guides the entire EMS development effort. The policy was finalized after employees at ESC were given an opportunity to comment.

The implementation schedule calls for EMS development work to begin shortly and run through next February. A consulting team consisting of Marasco Newton Group LTD, International Resources Group, and Global Environment and Technology Foundation, has been selected to provide implementation training, internal auditor training, and a certification readiness assessment. If all goes well, the facility should be ready for certification toward the end of 2001.

The ESC participants hope to learn from the EMS implementation at Fort Meade and become a resource to other EPA facilities and federal agencies implementing the EMS requirements of Executive Order 13148.

For more information, contact Howard Wilson at 202 564-1646 or <wilson.howard@epa.gov>. 

We felt that it was important to have the EMS cover the entire facility. We could have limited it to just one lab, but then we would have our stakeholders wondering about what goes on in the other part of the building."

Laboratory and the Anti-microbial and Plant Pathogen Branch Laboratory. Other occupants include the EPA Criminal Investigation Division, the EPA interagency Mid-Atlantic Integrated Assessment Team, the EPA Region III Facility Inspection Program, the EPA Region III Office of Policy Management, the District of Columbia government, and various contractors.

"That's the challenge and the thing that should make this quite an interesting process," says Skip Weisberg, facility Environmental Health & Safety manager. "On the OASQA side, they are basi-

entire facility. We could have limited it to just one lab, but then we would have our stakeholders wondering about what goes on in the other part of the building."

To coordinate the effort, Allen formed a 9-person implementation team with representatives from across the facility. There is one at-large position that will be filled at a later date, possibly by a community representative.

So far, Allen has made presentations to OPPTS and OASQA management and led a half-day, all-hands meeting for OASQA to announce the program and help build awareness. A



EPA Builds on Sustainable Ground

To showcase EPA's wide-ranging efforts to protect human health and the environment, EPA's Office of Administration and Resources Management (OARM) designed and built a model green home. Under the direction of Jessie Ulin, Chief of Staff to OARM Assistant Administrator Romulo L. Diaz, Jr., the Office of Air, the Office of Pollution Prevention and Toxics, and the Office of Water worked closely with OARM to complete the project. The home features a wide variety of EPA initiatives promoting energy efficiency, indoor air quality, materials

reuse and recycling, and reduced exposure to toxic substances. It was unveiled as part of EPA's Earth Day display on the National Mall in Washington, DC, where it was seen by more than 280,000 people. An additional 80,000 people visited it 2 weeks later during Public Service Recognition Week. The 50-foot-long, 8-foot-high model blends reality and imagination by juxtaposing walls covered in blue print designs with actual household items. Featuring a garden, living room, kitchen, child's bedroom, and utility room, the Earth House

included products selected for their energy efficiency, recycled-content, increased durability, minimal chemical content, or other environmentally preferable features. Inside and out, the Earth House contains a broad assortment of green products and materials. More than 100 signs highlighted the environmental products, including interior walls coated with low-volatile organic compound (VOC) paint, Energy Star®-labeled electronics and appliances, recycled-content products, and organic clothing and linens.

Desks and tables made from salvaged packing crates, a chair manufactured from discarded seat belts, a child's "bean-bag" chair stuffed with plastic grocery bags, and certified sustainable-materials cabinetry are just a few of the additional features in the house. Accompanying the house was a 50-foot time line tracing thirty years of environmental improvements since President Nixon founded the Agency in 1970. EPA plans to display both the house and the time line at events around the country. ■





GREEN BUILDING MATERIALS

The following products and materials represent a few of the items highlighted in EPA's exhibit.

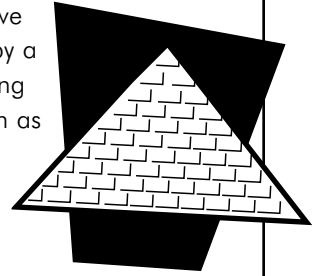
CONSTRUCTION MATERIALS

- **Recycled-Content Siding**—Made of recycled cellulose fibers and concrete, this durable siding does not need chemical treatments to protect against moisture or pest infestations.
- **Recycled-Content Paint**—Rather than landfilling or incinerating used paint, hazardous waste centers collect and blend used paint for reuse. Recycled-content paints are available in a wide variety of colors.
- **Recycled-Content Steel Studs**—Made of recycled scrap steel, steel studs are a strong, light weight and naturally flame retardant, eliminating the need to chemically treat wood to meet fire safety standards.
- **Low-VOC Paint**—Low-VOC paints do not contain the heavy metals or hazardous organic compounds found in traditional paints. The selected paint also reduces exposure to heavy metals such as cadmium and lead and substances such as formaldehyde, benzene, and toluene that threaten indoor air quality.
- **Strawboard Wall**—Pressed straw held together with a low-volatile organic compound, formaldehyde-free adhesive, provides a solid, durable alternative to traditional construction materials for interior walls.
- **Recycled-Content Insulation**—Offered in various forms, recycled content insulation improves energy efficiency. The Earth House featured recycled-content fiberglass insulation made from recycled glass and cellulose insulation made from recycled newspapers.



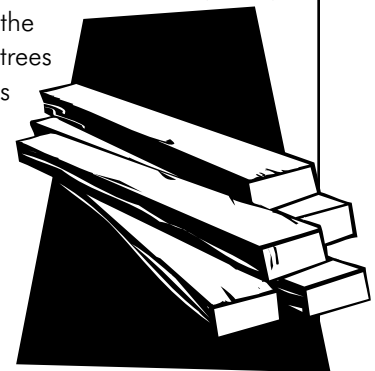
ROOFING MATERIALS

- **Photovoltaic Shingles**—By converting absorbed light into electricity, photovoltaic shingles reduce the need to depend on electricity derived from fossil fuels.
- **Highly Reflective, Recycled-Content Shingles**—Made from recycled aluminum, the reflective shingles reduce the heat absorbed by a traditional dark colored roof, reducing air conditioning demand by as much as 15 percent.
- **Passive Solar Roof**—Translucent shingles trap the heat generated by the sun's rays inside a passive solar roof. The trapped heat can be used to heat or cool homes.
- **Recycled-Content Paper Shingles**—Shingles made from recycled paper and asphalt provide a weather-resistant option to conventional roofing materials.



FLOORING

- **Bamboo**—With the ability to grow up to 18 inches per day, sustainably harvested bamboo serves as an attractive, durable alternative to traditional oak or walnut floors.
- **Cork**—Obtained by stripping the bark of a cork tree, this sustainable material can be used as flooring for homes. Cork can be harvested every nine years without causing harm to the tree.
- **Salvaged wood**—Salvaged wood, recovered from the beams and timbers of old barns, mills, and factories, reduces the need to harvest viable trees for applications such as wood floors, trim, and molding.





Executive Order Promotes Use of Biobased Products and Bioenergy Technologies

On August 12, 1999, Executive Order (EO) 13134, *Developing and Promoting Biobased Products and Bioenergy*, was issued to accelerate the use and development of biobased products

food or feed that use biological products, or renewable domestic agriculture (plant, animal, and marine) or forestry materials. Bioenergy uses biomass—any organic matter available on a renewable or recurring basis—in the production of energy.

EO 13134 established an interagency council, an advisory committee, a working group within the Departments of Agriculture and Energy, and a National Biobased Product and Bioenergy Coordination Office to develop a strategy for making biobased products and bioenergy cost-competitive in national and international markets. The interagency council will prepare an annual strategic plan outlining national goals, including promoting economic growth, energy security, and environmental sustainability and protection, plus a strate-

gy for implementing them. The council will include the EPA administrator.

The advisory committee will provide information and advice to the council. The committee will comprise up to 20 members representing stakeholders from the farm, forestry, and chemical manufacturing industries; energy companies and electric utilities; environmental and conservation organizations; and university research communities.

The National Coordination Office will handle day-to-day coordination of the project. The office will implement the strategic plans, coordinate research of federal and non-federal facilities, and disseminate information about bioproducts and bioenergy to business sectors, the university community, and public interest groups.

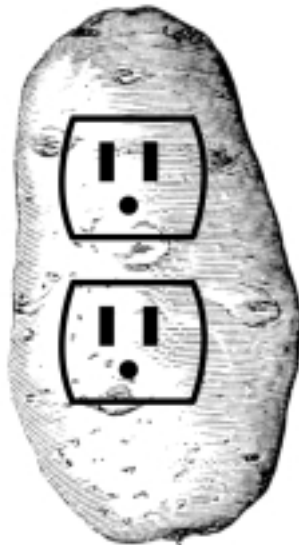
Developing biobased products and bioenergy technologies could create new economic opportunities, enhance energy security, and meet environmental challenges. Biobased products and bioenergy can potentially create major sources of electricity, fuel, and chemicals from renewable farm and forestry resources. In turn, employment opportunities for farmers, ranchers, and foresters could expand. Using biobased products and bioenergy also could reduce the nation's

dependence on foreign oil, help reduce greenhouse gas production, prevent erosion, and improve air and water quality.

To obtain a copy of the EO, go to www.pub.whitehouse.gov/retrieve-documents.html.



and bioenergy technologies. The EO emphasizes the economic and environmental importance of biobased products and bioenergy and develops a national strategy that includes research, development, and private sector incentives to stimulate creation and adoption of biobased technologies. As defined by the EO, biobased products are commercial or industrial products other than





Ann Arbor Leads the Way to Environmental Efficiency

EPA's National Vehicle and Fuel Emissions laboratory in Ann Arbor, Michigan, is truly a "Laboratory for the 21st Century." EPA is conducting a major energy efficiency upgrade at this 150,000-square-foot facility, which will be completed by September 2000.

"Right now things are moving along at a fast pace," said Dick Lawrence, director of facilities engineering. "The new cooling tower is in and new heater-chillers have been installed. We also are replacing three to four air handling units each month."

Prior to these efforts, the lab required 2.5 megawatts of electricity, consumed energy at a rate exceeding 700,000 Btus per gross-square-foot, and consumed

31 million gallons of water annually at a cost to taxpayers of more than \$1 million per year. The modifications being implemented are guaranteed to:

- Reduce annual electrical demand by 68 percent.
- Reduce energy use per gross-square-foot by 66 percent.
- Reduce annual water consumption by 80 percent.
- Reduce the annual utility bill by 74 percent (a savings of more than \$800,000 annually).
- Provide a simple payback on the contractor's capital expenditure in less than 10 years.

Electricity usage in the lab is already down, although exact figures are not yet available. "Over the summer we should be rid of all of the old peaks and be down from two megawatts to less than one," said Lawrence.

Despite the temporary inconveniences and disruptions during the retrofit, Lawrence believes the benefits will far exceed the unpleasanties. "Once it's done and running smoothly," he says, "the changes will be invisible to occupants."

Based on this project's expected environmental and economic successes, EPA is beginning to retrofit several other laboratories, including its Ada, Oklahoma, lab. ■



David Leiter (left), Bill Wise (middle), and Steve Dorer (right) winning an award for the Ann Arbor facility at the 1999 Federal Energy and Water Management Awards Ceremony

Federal Agencies Required to Phase Out ODSs

Executive Order 13148 (April 2000) mandates all federal agencies to phase out the use of Class 1 ozone-depleting substances (ODSs) by December 31, 2010. Each agency is required to submit an action plan to evaluate its current and future use of ODSs and to replace these substances with more environmentally preferable alternatives. Plans also should include information on an agency's recycling policies for ODSs, as well as targeted

refrigerants and halons. The Executive Order encourages agencies to develop exemplary practices and to disseminate information about successful phaseouts for other agencies and industries to follow.

EPA's Significant New Alternatives Policy (SNAP) program can help agencies determine what alternatives to use for their Class 1 ODSs. Class 1 substances are chemicals with an ozone-depleting potential (ODP) of 0.2 or greater. Alternatives should

be chosen based on safety of the substance, cost-effectiveness, and environmental attributes.

Substances required to run existing machinery whose life spans exceed the 2010 deadline are not subject to the phaseout. For example, motor vehicle air conditioning systems may still use R-134a, a common refrigerant. Such substances should be recovered and recycled, and not allowed to vent into the atmosphere.

For a list of Class 1 ODSs, visit <www.epa.gov/spdpublic/ods.html>. For more information about environmental alternative substances, visit SNAP's Web site at <www.epa.gov/spdpublic/title6/snap/>. ■



RTP Facility Wins GSA Award for Construction Waste

EPA's newest facility in Research Triangle Park (RTP), North Carolina, is a winner. And it is not even finished yet. The research and laboratory facility recently won the Demolition Derby Award presented by the General Services Administration (GSA). The award recognizes successful construction waste management plans.

"Construction and demolition waste accounts for about a quarter of all waste in this country," explained Chris Long of EPA's RTP team. "GSA is raising that issue with this award and recognizing efforts to reduce that figure."

So far, EPA's RTP facility has made great strides toward reducing waste, recycling more than 80 percent of its construction debris. That amounts to 18.6 million pounds diverted from the landfill. Waste items recycled include concrete, masonry, wood, metals, gypsum wall board, cardboard, and paper. Many of these materials are used elsewhere on the

construction site. Old bricks and cinder blocks are crushed and used as backfill around the site; wood pallets, crates, and forms are turned into mulch; and gypsum wall board is ground up and used as an amendment to the clay-like Carolina soil.

The RTP team received the award April 19 at GSA's Annual Environmental Awards Ceremony in Washington, DC. Team members are Mike Pope, Steve Smith, Buddy Hill, Helen Johnson, Linda Shaw, Freeman Randolph, Diane Brittain, Michelle Price, Chris Long, Pete Schubert, and Kay Lantrip.

Collaboration between all parties involved in the project is key to the success of EPA's construction waste management plan. EPA worked closely with GSA, the contractor, and local community groups. "Waste is a shared community problem—or resource, depending on how you look at it," Long said.

One example of the partnership between the contractor and EPA occurred with the

project's cement production. Instead of trucking mixed cement to the site, the contractor mixed the cement on site, avoiding nearly 75,000 miles of cement mixer truck trips, conserving fossil fuels, and preventing air pollution. Additionally, the contractor used a Roto-Reclaimer to separate residual cement back into sand, gravel, and portland mix. "We had a zero waste operation for concrete," Long said. "That project illustrates what you can do when you work [with the contractor]."

In addition to construction debris recycling, the RTP facility incorporates extensive environmental features into every aspect of the building and its surroundings. Low volatile organic compound paints, sealants, and adhesives improve indoor air quality; direct digital control and high-efficiency boilers and chillers ensure peak energy performance; recycled carpet and other building materials conserve virgin materials and divert waste from landfills.

Outside the building, EPA minimized ground clearing to preserve forests, streams, and wetlands, and a plant rescue saved thousands of native plants. Additionally, the campus will be designated and maintained as a Corporate Wildlife Habitat, offering a safe haven to indigenous wildlife and plant life. "We look for opportunities everywhere to do the environmentally correct thing," Long explained.

In an effort to help others achieve similar environmental results, the RTP team is drafting a book outlining the facility's design process. Once construction is completed, the team hopes to include lessons learned about waste management and product selection in the publication. For more information on the construction of this facility, read *Leading by Example* at www.epa.gov/rtirmd10/newbldg/envfeat/grnbldg.pdf.

The facility is expected to be completed by January 2001. ■





EPA's Energy Star-Rated Buildings

ENERGY STAR® is a voluntary partnership program established among EPA, the U.S. Department of Energy, product manufacturers, local utilities, and retailers. Products and buildings that receive the ENERGY STAR rating use less energy than other products, save money on utility bills, and help protect the environment. Each year, these partnerships save more than \$1 billion in energy costs while also decreasing air pollution. EPA's New York, New York; Chicago, Illinois; and Denver, Colorado, office buildings currently boast the prestigious ENERGY STAR label. There

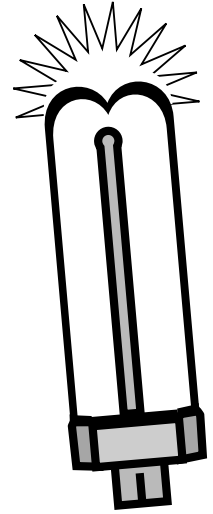
are currently 192 buildings recognized under this program.

Some might wonder why more EPA buildings have not received this distinction. According to Rose Odom at Aspen Systems (a contractor to EPA), other EPA buildings might not have applied yet to receive ENERGY STAR certification. According to Odom, it is the individual responsibility of each building to seek approval under the program.

Eligibility requirements for ENERGY STAR labeling are also quite stringent. Buildings must conform to strict area and usage restrictions and collect detailed energy data.

To find out if your building might qualify to participate in the ENERGY STAR benchmarking process and receive a label, visit <www.epa.gov/building/label>.

To obtain the ENERGY STAR label, buildings must complete the benchmarking process, receive a score of 75 or higher in the evaluation, and maintain an indoor environment consistent with industry standards. Once a building has done this, it receives an ENERGY STAR plaque to display on site. ■



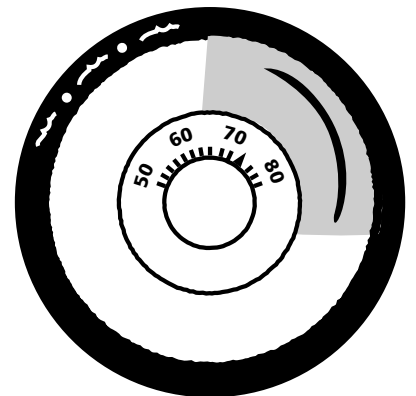
DOE Anticipates Summer Power Outages

With another hot summer approaching fast, the U.S. Department of Energy (DOE) is promoting energy-efficient practices and renewable energy sources to combat anticipated power outages. As the weather grows warmer, there is increased demand on regional power grids and an inadequate power supply. Utility companies have avoided increasing generating capacities to save money in anticipation of competition from upcoming deregulation. In growing urban areas, a greater

dependence on electricity for information technology and space-conditioning is placing greater demands on the power supply. In some cases, this demand exceeds the current generation capacities. As a result, electrical demand is expected to overwhelm the capacity of power grids and could produce power outages in densely populated regions of the country.

To alleviate strain on the power grid, DOE is urging consumers to reduce energy demands by using energy-efficient appliances and practicing energy conservation. In

addition, DOE is calling for lawmakers and regulators to lower market barriers for renewable energy technologies. DOE personnel hope that as deregulation spreads, "greener" generating facilities will be built to meet the country's growing energy needs. By removing obstacles to renewable energy technologies, green power can satisfy energy demand and help prevent power outages from recurring. ■





Events Calendar

ENERGY 2000

Where: Pittsburgh, Pennsylvania
When: August 21 to 23, 2000
Contact: FEMP Workshop Hotline, 703 243-8343
Web: www.energy2000.ee.doe.gov

Energy 2000 is an energy efficiency workshop and exposition sponsored by the U.S. Department of Energy's Federal Energy Management Program, the Department of Defense, and the General Services Administration. Energy 2000 will explore energy projects, energy issues, selling energy projects, and alternative financing. The conference also will have panel discussions, energy audits, new technology displays, and networking opportunities.

LABORATORIES FOR THE 21ST CENTURY

Where: San Francisco, California
When: September 6 to 8, 2000
Contact: FEMP Workshop Hotline, 703 243-8343
Web: www.epa.gov/labs21century

Sponsored by EPA and the U.S. Department of Energy, the Labs21 conference will help private and public sector laboratory designers, engineers, owners, and operators work together to reduce costs and increase laboratory design and operational efficiency. There will be presentations on environmental efficiency, renewable energy, and designing, building, and operating low-energy and resource-efficient laboratory buildings.

2000 WORLD ENERGY ENGINEERING CONGRESS

Where: Atlanta, Georgia
When: October 25 to 27, 2000
Contact: Association of Energy Engineers, 920 338-0950
Web: www.aeecenter.org/shows

The World Energy Engineering Congress is comprised of three companion programs: the Geoexchange 2000, Combined Heat & Power 2000/15th Cogeneration Congress, and the Energy Service & Power Marketing Center 2000. The total program covers leading edge technologies, efficiency improvement strategies, cogeneration, and on-site generation.



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