

Partner Update

March—April 1998

Your Choice For Success

Profile

Chamberlin Helps 'Rebuild Nebraska'

She didn't start out to build an "incredibly flexible program," she said. It just happened. Luckily though, Lynn Chamberlin, architect for the Nebraska Energy Office and program contact for **Rebuild Nebraska**, knows how to make the most of a good thing.

Now in its second year, Rebuild Nebraska has 65 local partners with a total of 224 buildings. Ten are marketing partners, like Nebraska Public Power District (a statewide wholesale and retail electric utility) and the City of Beatrice, who encourage their own customers and clients to join [Summer 1997 *Partner Update*].

The other 55 are building owners, for whom Rebuild Nebraska conducts free energy audits and provides reports detailing energy-saving opportunities.

"We provide building owners with options, information and financing opportunities," Chamberlin said, "and they make the decisions."

Rebuild Nebraska's partners include traditional main street "mom & pops," housing authorities and small-building owners all across the state. They aim for 25 percent cost savings per building, depending on the building's condition.

"We're right in there," Chamberlin said, adding she expects to work on long-term savings and data compilation this year.

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Using Old Schools In New Ways Pays Off

They say you can't change history, but you can bring down its energy costs.

Historic buildings can be expensive to run. Older windows, outdated heating and cooling systems, and inefficient lighting are all common problems of landmark architecture.

While many would agree these buildings are worth saving, the thought of dealing with historic district councils and architectural approval boards can be daunting.

Special regulations regarding the appearance of historic landmarks are often created to preserve the integrity of entire neighborhoods.

But as two Rebuild America partnerships have discovered, the combination of historic restoration and energy efficiency can result in powerful transformations.

Citizen Involvement

The town of **Woodland, North Carolina**, hopes to reap the benefits of energy efficiency when the Woodland-Olney School is renovated for use as low-income housing for senior citizens.



The Woodland-Olney school will soon be senior housing

After the Interior Department designated the building a historic landmark, the non-profit Choanoke Area Development Association secured special tax credits. These and low-income housing credits were used to obtain loans, according to Sallie Surface, the Association's executive director.

"This building is integral to this little community," she said, and the town's 1,000 citizens are actively involved.

Seniors will be able to come to the school for meal programs, adult day care services and recreation programs. Many were once students in the school.

Designation did have its drawbacks. The process of securing funds took two years, for instance. "Because it is historic...and low income, we have had to jump through certain hoops," she said.

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NEW TECHNICAL GUIDES

Rebuild America is proud to add these **5** new partnerships to the many communities and businesses nationwide that are saving money through energy efficiency.

Piscataway, NJ, School Board

Tarrytown, NY, Fortview Foundation

Cottkill, NY, Hudson Valley

Sustainable Community Network

San Francisco, CA, Presidio Alliance

Clemson, SC, South Carolina Energy

Research and Development Center

Rebuild America
162 partnerships and counting...

To learn more about Rebuild America, call 1-800-DOE-EREC or visit www.eren.doe.gov/buildings/rebuild.



Communities Help Save History

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There were also design challenges, including high ceilings and unusually large classroom windows. "It is delightful to look out and see life going on around you but we have some concerns about heat retention," she said.

Now, the design team is looking for window coverings that are efficient and attractive. These changes, plus system replacements, will create a building that combines the best of new building technologies with the nicest features of old architecture.

Improved Learning

The City of Little Rock, Arkansas, is preparing to retrofit the high profile Central High School [January-February 1998 *Partner Update*]. The school, the scene of civil rights battles in 1957, has been the backdrop of numerous movies.

Built in 1927, it is listed on the National Historic Registry and is noted by architectural fans for its grand Gothic exterior. Lighting upgrades will highlight the school's decorative interior features while addressing energy efficiency issues.

Douglas Eaton, the Little Rock School District's director of facility services, said historic status has not been a big problem during the retrofit process. "I'm not sure we'll have any sensitive issues," he said.

The Little Rock partnership has targeted the school's lighting because other major improvements were made in the 1980s. Better lighting will save money and provide a better atmosphere for learning. It will also provide Little Rock with a unique, high-profile chance to market energy efficiency.

"This is a good opportunity for us to show it can be done," said Eaton. "If anybody's thinking about it, here's a way for us to show it can be done for their schools."

A Powerful Combination

For Woodland and Little Rock, the combination of historic restoration and energy efficiency has proven to be positive. The increased visibility of their historic buildings may also make energy efficiency highly visible, helping the partnerships interest others in taking on the challenge of retrofitting.

View from DC

by Mark Bailey

With the Rebuild America 1998 National Conference upon us, hundreds of partners from around the country are gathering in San Antonio to learn, share and explore.

National experts from government and private industry will present general and focused sessions on how to turn a commitment to improve the quality of life into building retrofits and dollar savings.

Numerous networking opportunities will allow partners to interact with their peers, exchange ideas and learn the secrets of award-winning partnerships.

Excursions into San Antonio and surrounding areas will show attendees the best of America's southwestern culture.

Helping to make all of this possible are the conference sponsors. As we go to print, they include Evantage, HL&P Energy Services, Koch Financial, Sycom, CEC Consultants and Viron Energy Services. We extend our thanks to them and our other sponsors.

Rebuild America is Growing

Everyone involved with Rebuild America is very excited by the program's growth. With 162 partnerships and over 500 million square feet of space committed, we are well on our way to meeting our national goals by the year 2003.

We encourage everyone to come to the national conference and meet the many faces of Rebuild America, from small towns to large cities, building owners to international corporations, professional engineers to community leaders. All of them make it happen. See you in San Antonio!

Mark Bailey is the Rebuild America program manager.

Partnership Briefs

The **City of San Diego** has completed energy retrofits in 2.3 million square feet of building space over the last three years, out of 6 million square feet overall [Summer 1997 *Partner Update*]. To date, the city has saved over 2.8 million kilowatt hours of electricity from the retrofits, according to Adam Saling, the city's sustainable building coordinator. He noted the city has applied for the Environmental Protection Agency's Energy Star Buildings and Green Lights Partner of the Year award. "We're considering doing a city-wide audit to find out in more detail what can be done. We're trying to concentrate on larger facilities where the potential is greatest to save energy," Saling said.

For more information, contact Adam Saling at (619) 492-5018.

Public housing authorities in **North Carolina**, already the lead partners in three Rebuild America partnerships, are now developing three regional partnerships that potentially could include more than 100 public housing agencies. Lawrence Wilson, director of the North Carolina Office of Economic Opportunity, said Rebuild America "is exactly the kind of initiative that we should be supporting with a local community block grant plan." In May, North Carolina's Rebuild America team will present a half-day course on building community partnerships at the Affordable Comfort '98 conference.

For more information, contact Jeff Brown, the North Carolina program representative, at (919) 478-4958.

Mayor Jeff Griffin and state Senator Randolph Townsend kicked off **Reno, Nevada's** partnership in December 1997. The program could cut the city's energy bill by 20 percent in 170 buildings by 2000. Reno currently spends about \$1.5 million a year for electricity alone. Alice Parsons, the city's building technical services manager, said a city-wide energy audit will commence soon, and retrofits will begin in September. "It's extremely important for us that Rebuild America has no proprietary interests and is a technical resource people can be confident in," Senator Townsend said.

For more information, contact Alice Parsons at (702) 334-2240.

Local Contacts Help Rebuild Nebraska Succeed

Continued from page 1

Finding Local Champions

At first, Chamberlin and her partner Kirk Conger, Energy Office staff engineer, didn't know who their partners would be. So they recruited champions like regional utilities and went around the state promoting the value of energy efficiency to small-building owners. What they found was the value of working directly with business owners.

"In one small town with four businesses on main street, one business owner called us and we went down to audit her building," Chamberlin said. "We ended up helping three of the four because she took us around and introduced us."

Now, Chamberlin said, she knows "it's incredibly helpful to have someone who knows the people and buildings – to have someone local."

Local partners are doing so much, in fact, that Chamberlin and Conger do very little marketing. After helping the Scottsbluff Housing Authority, for example, the Authority's



Lynn Chamberlin

director was invited to speak at a statewide meeting of housing authorities. Five joined Rebuild Nebraska in the next three days.

A Lifetime of Learning

Chamberlin has a background in architecture, which she practiced for six years before joining the Energy Office nine years ago. She's also a Certified Energy Manager and Certified Lighting Energy Professional. She puts those skills to work on her house, she said, when she's not taking care of her dogs Reao and Mimi or traveling to see her family.

Her familiarity with intensive studying also helps her interact with the students she works with. "We did an Energy Week in Chadron, Nebraska, and the people signing up

building owners were high school students. It was a busy week – we audited seven buildings, taught science classes and took students on field trips," she said.

Rebuild Nebraska also trains undergraduate architecture students in energy efficiency through a year-long internship, Chamberlin said. "Most of our graduates are architects who are getting hired because of their energy background."

Building Awareness

Chamberlin and Conger both expect Rebuild Nebraska to keep growing. They have already seen "a shift in the culture – a main-street awareness of reducing energy costs," they said.

"What amazes me about the program is it continues to evolve," Chamberlin said. "Our marketing partners all look at different angles and think, 'this is a good time for this.'"

Secrets of Partnership Promotion, Part 1

By Glen Kizer

You can't give away even a great product without marketing. And like anything else, energy efficiency is a product that has to be marketed.

Whether you call it marketing, education, outreach, publicity, advertising or promotion, it is one of the most important things you'll do.

If you've done retrofits, your clients may tell colleagues. But to get that first building – and then convince others – you need to create awareness of your program. Once people learn about the benefits of energy efficiency, it's an easy decision to make.

We focus below on some effective, yet low-cost, ways to get people's attention. Next time we'll take a look at how to close the deal.

Getting People's Attention

Think about all the information you get every day – phone calls, mail, faxes, e-mails. The building owners, facility managers and other decision-makers you're trying to reach are just as busy. Getting their attention is the first step in convincing them to retrofit their buildings.

There are many low-cost methods you can use to get the word out.

- Participate in community activities, such as Earth Day festivals. This allows you to talk to prospects, hand out your materials and establish your program's identity. Examine your action plan to determine the best events to attend, and if possible, develop materials (brochures, T-shirts, buttons) that reflect the theme of each event.

- Run public service announcements (PSAs) on local TV and radio stations. We've developed several you can get from the Department of Energy and use for free. You can also use them to open a presentation to a potential client.
- Write articles about the economic, environmental and operational benefits of energy efficiency, using your clients as examples, and offer them free of charge to community newspapers, business publications and trade journals. Then include them in the marketing package you send to potential clients.
- Take to the airwaves by appearing as a guest on local talk radio and TV programs. Stations may give you 15 minutes or two hours, which is all time you can use to promote your program.

Use Rebuild America's Network

Leverage the networks your partners and colleagues have by asking for recommendations and introductions to likely clients. Trade associations and chambers of commerce can be particularly helpful in this regard.

Also, find out if another partnership has served your target market and work through them. They are an invaluable resource because they already know the people, issues and background particular to that industry.

Glen Kizer is the executive director of 1500 Days: The Central Ohio Energy Efficiency Project. He can be reached at (614) 823-6243.

The 1998 National Conference is Now!

We've got a lot planned for everyone attending the Rebuild America 1998 National Conference in San Antonio on March 10-12. The agenda is packed with opportunities to learn how to reach your partnership's goals.

- Informative general sessions will discuss the latest developments in energy efficiency and how those developments could impact your projects. Other sessions address techniques for financing your projects and ideas for linking your Rebuild America efforts to other programs, such as the Million Solar Roofs Initiative [January-February 1998 *Partner Update*].
- You can choose from a variety of working sessions on special topics, such as gaining more knowledge on developing an action plan or sustaining a community partnership. Or you could learn more about performance contracting.
- You can get hands-on computer skills during a free primer on FEDS software. FEDS, which stands for Facility Energy Decision System, is a comprehensive method for quickly and objectively identifying energy improvements that offer maximum savings in buildings.

Be sure to stop by Tech City on Tuesday, March 10. This exhibit hall will host a number of interactive demonstrations on the latest in building energy efficiency from private industry, public programs and the Department of Energy's national laboratories.

Networking, Awards and Fun

The conference agenda also provides plenty of time for peer interaction. You'll have the chance to meet partners who are working on retrofitting buildings in communities from Atlanta to Alaska. Roundtable discussion sessions will provide time to discuss issues, obstacles and solutions in an interactive manner.

During the Gallery of States and Regions, Rebuild America state and program representatives will be on hand to discuss your partnership's needs for direct assistance, training and information.

What to Consider When Selecting a Performance Contractor

By Monica Stone

Performance contracting can be an attractive option when your partnership is otherwise unable to come up with capital to undertake energy efficiency projects.

Broadly defined, a performance contract is a transaction in which an energy service company (ESCO) provides one or more of the following services: engineering, design and specifications, project financing, construction management, operations and maintenance of the improvements, and guarantee of energy savings.

Signing a performance contract legally binds you to the terms of the agreement. Therefore, you need to be knowledgeable about the details and be willing to ask questions.

The State of Iowa has had vast experience in the area of performance contracting and has developed the following list of things to consider when entering an agreement with an ESCO.

1. Request that all costs be unbundled in the contract.

By unbundling, you will be made aware of exactly what equipment, services and guarantees will be provided and what each will cost. Remember that there are interactive savings, and if you choose to forgo any part of a contract, your savings can be significantly diminished.

2. Request that the percentage of

savings guaranteed and the annual cost of the guarantee be written into the contract.

In some cases, the percentage of savings can be as low as 60 to 70 percent of the projected savings. It is important for the client to consider the cost of the guarantee versus the risk of not purchasing the guarantee.

3. Request that an independent third party, agreed upon by you and the ESCO, check and verify any baseline changes.

Baseline changes are typically made at specific times throughout the contract and are important for accurately assessing energy savings. The ESCO and the client should agree on when and how the changes will be made, what factors will be taken into consideration, and who is responsible for providing the information necessary for the change. Then, to ensure accuracy, any changes should be verified.

4. Request that any operation and maintenance savings result in actual budget reductions rather than budget reassignments.

There are operation and maintenance savings that can result in significant savings to your budget. However, if you are

shifting one expense for another, you will not net a savings in your budget. For example, if a staff person who currently is involved in boiler maintenance will have time freed up by equipment replacement (and therefore less maintenance), his/her time will likely be reassigned for other needs. His/her salary should not be considered a budget savings.

If that person will go from full-time to part-time because of the reduction in work, however, budget savings will occur and should be included. Be aware that stipulated savings are not necessarily budgetary savings and may not be available to retire your debt.

5. Consider hiring a consultant to assist with developing your contract.

Energy services contracts are generally high-dollar contracts. There is great value in hiring a consultant who is familiar with the business to help you understand the agreements involved. If you or your staff are unfamiliar with energy performance contracting, hiring assistance can prevent problems down the road for your organization and the ESCO you hire.

Monica Stone is the executive director of the Iowa Department of Natural Resources Energy Bureau. She can be reached at (515) 281-6361.

Partnerships that have excelled in Rebuild America will also be honored during the conference. Energy Champions will be awarded for their achievements, while partnerships implementing retrofit projects will be recognized for moving forward. Innovative state programs will also be commended for their exemplary work in promoting energy efficiency.

The City of San Antonio is also something to see. There will be plenty of opportunities for fun in Texas, so be sure to join us for a trip to the world-famous Riverwalk. A planned excursion to the Don Strange Dude Ranch will include cowboy entertainment and lots of southwestern food and flavor.

Registration for the National Conference is \$250, payable by check. You can register on-site or in advance by contacting Annie Peters of D&R International at (301) 589-0100, or e-mail AMPeters@drintl.com. You can also contact Annie or your program representative about the FEDS primer—there may still be time to register.

Energy Savings in Central Heat Plants

By James Cavallo, Ph.D.

Public housing authorities spend over \$1.26 billion every year on utilities (Figure 1). Reducing this amount is a major opportunity to reduce operating budgets and free up substantial dollars for other priorities.

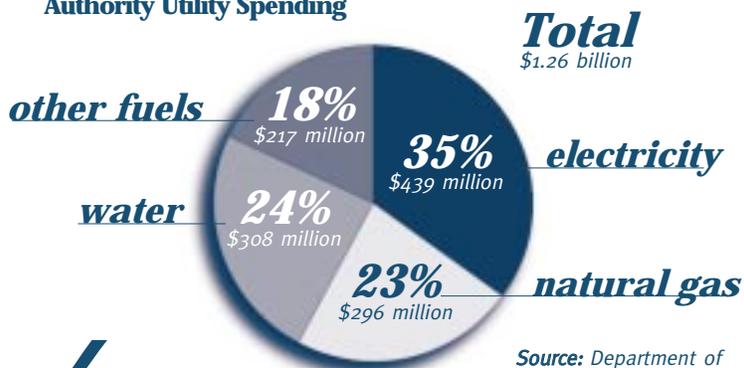
A good example is the **Chicago Housing Authority (CHA)**, which operates approximately 40,000 units of low-income housing. CHA has many opportunities for utility cost savings and a proactive approach to capturing those opportunities through Rebuild America.

Energy usage for space heating in CHA's units averages above 30 Btus per square foot per heating degree day. Each heating degree day represents 1°F that the average day's temperature is below 65°F (Table 1).

CHA's level of use is quite high compared to privately owned buildings but typical for housing authorities in northern states.

CHA set a goal of reducing energy usage by 30 percent in half of its housing stock (or 15 percent overall) by the end of the year 2000. They're pursuing this goal through energy performance contracting, the creation of weatherization and light maintenance jobs for public housing residents, and training to improve operations.

Figure 1. Public Housing Authority Utility Spending



Training Is Key

The engineering staff of CHA's central heat plants are the frontline to fight against energy waste. In a two-day workshop last May, engineers from CHA's 22 central heat plants met with experts from three of the U.S. Department of Energy's (DOE) national laboratories to:

- Learn technical information on energy issues and energy management opportunities.
- Receive training on methods to collect and track energy usage.
- Examine preventative maintenance practices.
- Discuss the opportunities of decentralized power systems.

Training was a major part of the workshop. DOE researchers have developed procedures for housing authorities to monitor critical indicators (such as fuel use and chemicals used) on a weekly basis.

Engineers were presented with real examples from a similar large housing authority and the progress that was made in increasing energy efficiency. Researchers also helped the group define realistic goals for this year's heating season (October through May).

Showing Success

The work with CHA is showing success. During the first four months of this heating season, CHA has reduced its natural gas usage by 6 percent over its previous three-year rolling average. And Rebuild America experts are helping CHA's engineers take the lessons of the workshop into the field.

"Finding good engineering solutions for buildings does not just involve looking at one factor at a time," said Dave Anderson, CHA's energy manager. "One needs to consider how the solution fits into the total needs of the building. We are doing that with DOE and its national labs."

James Cavallo, Ph.D., manages the Existing Buildings Efficiency Research Program at Argonne National Laboratory. He can be reached at (630) 252-8688, or e-mail cavallo@anl.gov.

Table 1. Energy Efficiency of Multifamily Buildings

These units (Btus/square foot/heating degree day) allow space heat energy usage to be accurately compared among buildings nationwide.

Very energy efficient	less than 5
Energy efficient	5 to 10
Moderately inefficient	10 to 20
Very energy inefficient	over 20

Source: Department of Housing and Urban Development

Source: Argonne National Laboratory

Tools

Three new Rebuild America technical guides are now available, providing technical information to those working on retrofit projects.

Developing Your Community's Action Plan

This guide provides details about each of the elements of an action plan. It will guide you through the process of setting priorities for your community's partnership. Chapters include information about choosing candidate buildings, assigning responsibilities and resources, methods for monitoring and evaluating your plan, and promoting or expanding your program.

Financing Energy Efficiency in Buildings

Financing often presents a big obstacle to those trying to retrofit buildings. By exploring alternative ways of funding your projects, you may enable your partnership to accomplish more. This guide outlines five key financing options in a clear, concise format and provides a decision matrix to assist partners in choosing their best financing alternative. Other issues affecting energy financing are addressed, including utility deregulation, emissions trading and secondary markets for energy efficiency.

Building Commissioning

The Key to Quality Assurance

Because commercial buildings in the United States undergo frequent operational and occupancy changes, the capability of a building's equipment to perform at an optimal level is often at odds with the building's actual operation. Rebuild America recommends that partnerships incorporate building commissioning into their projects to maximize building performance. This guide details the process to achieve such benefits in your buildings' systems.

Contact your program representative to get these guides or call 1-800-DOE-EREC.

Global Warming

Several Rebuild America partnerships are working on the global warming issue with the International Council for Local Environmental Initiatives (ICLEI). Established in 1990, ICLEI works with national and international governments and agencies to increase their understanding and support of local environmental protection and sustainable development activities. Last fall, ICLEI addressed the connections between solid waste and global warming. ICLEI also provides training and publishes reports on state-of-the-art environmental management practices.

For more information, contact ICLEI at (510) 540-8843 or visit www.iclei.org.

21st Century Auditors

A concept paper discussing how to train undergraduate students in energy auditing as part of a Rebuild America partnership is now available. The paper, developed at Lawrence Berkeley National Laboratory, describes how partnerships can bring students into the community to intensively audit a building for one semester. According to author Doug Avery, building owners benefit from the energy audit, students gain practical skills and an appreciation of energy efficiency, and communities and colleges can work together to solve common problems. Currently the School of Hotel Management at the University of Nevada Las Vegas offers this course.

For more information, contact Doug Avery at (310) 798-6927 or e-mail dougavery@earthlink.net.

Retro-commissioning

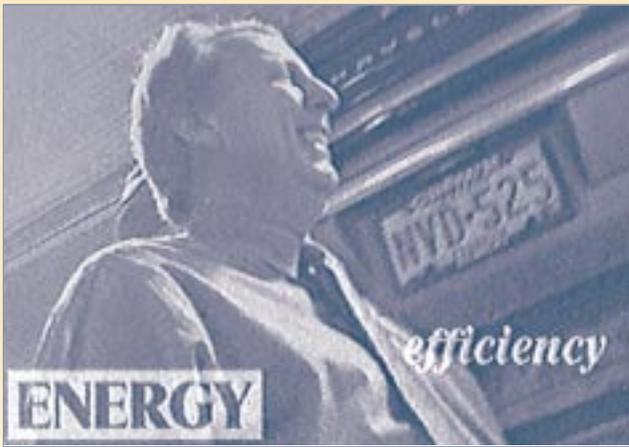
Montana's Department of Environmental Quality will host one-day workshops in April on retro-commissioning existing buildings. This tune-up of the HVAC system(s) and controls goes beyond an energy audit by having technicians/engineers make improvements per design specifications as they examine a building, such as adjusting controls and calibrating thermostats. This can provide immediate comfort and energy benefits. In the long term, facility managers can operate their buildings more efficiently, and the engineering report helps prioritize future work. Service providers and potential customers will attend, allowing them to network and learn the benefits and processes involved.

For more information, contact Toby Benson, program coordinator, at (406) 444-6758 or e-mail tbenson@mt.gov.

Upcoming Conferences:

Affordable Comfort '98. May 3-8, 1998 in Madison, WI. An annual residential renovation conference and trade show. Contact Jude Rutkowski of Affordable Comfort, Inc., at (800) 344-4866 or e-mail 102414.3425 at compuserve.com.

NAESCO Annual Midyear Conference. May 20-22, 1998 in San Diego, CA. The midyear meeting of the National Association of Energy Service Companies. Contact Mary Lee Beger-Hughes at (202) 822-0954 or visit www.naesco.org.



Get Some Attention!

Secrets of Partnership Promotion, the first of two parts. Page 4...

Share Your Success

Rebuild America Partner Update, the bimonthly newsletter about the Rebuild America community, covers partnership activities, industry trends, and program news.

Your ideas are welcome. Contact Jonathan T. Alloy, editor, at Potomac Communications Group, 2025 M Street, NW, Suite 350, Washington, DC 20036; or e-mail jalloy@pcgpr.com.

Learn More

Rebuild America is part of DOE's Buildings for the 21st Century. If you would like information about Rebuild America or the other energy efficiency and renewable energy programs and resources, call 1-800-DOE-EREC or visit www.eren.doe.gov.

U.S. DEPARTMENT OF Energy

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Rebuild America

Rebuild America is a voluntary program of the U.S. Department of Energy that helps community partnerships make profitable investments in existing buildings through energy-efficient technologies.

By the year 2003, 250 Rebuild America partnerships will be involved in over 2 billion square feet of building renovations, which will save \$650 million every year in energy costs, generate \$3 billion in private community investment, create 26,000 new private sector jobs, and reduce air pollution by 1.6 million tons of carbon dioxide a year.

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