



*Bruce Tiedeman (center), acting manager of the rural energy group, accepts a "best practices" award from HUD representatives Gail West and Martin Knight. The award was presented during an AIDEA board meeting Dec. 15 in Anchorage.*

## Rural energy audits wrap up; lighting upgrades provide savings

Energy audits in more than 90 rural Alaska communities were concluded recently by the Alaska Energy Authority (AEA). The purpose of the audits was to identify ways of reducing energy costs of public buildings. The audits were part of AEA's participation in Rebuild America, a program sponsored by the U.S. Department of Energy.

The Rebuild America program supports community partnerships of local and state governments and the private sector to promote increases in energy efficiency and conservation. The Rebuild America program in Alaska targeted rural communities, where the cost of electricity is typically three to four times the national average.

Rebuild America energy auditors did walk-through building assessments and recommended no-cost or low-cost changes to save on energy. Energy auditors also offered training to maintenance workers, building occupants, school children and community members on ways to conserve energy. Rebuild America energy audits, training, and technical support are free to communities, although the program does not pay for products or retrofits.

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*THIS INSERT ON THE ACTIVITIES AND PROGRAMS OF THE AEA RURAL ENERGY GROUP IS DESIGNED TO KEEP YOU INFORMED ABOUT RURAL ENERGY ISSUES. THE RURAL ENERGY PROGRAMS OF THE ALASKA ENERGY AUTHORITY INCLUDE BULK FUEL STORAGE UPGRADES, RURAL POWER SYSTEM UPGRADES, POWER COST EQUALIZATION, ALTERNATIVE ENERGY, UTILITY TRAINING AND TECHNICAL ASSISTANCE AND TWO ACTIVE LOAN PROGRAMS - THE BULK FUEL REVOLVING LOAN FUND AND THE POWER PROJECT FUND.*

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## Rural energy audits *continued from page 1*

By following through with the energy auditor's recommendations, community buildings may yield annual savings of up to 25 percent on energy costs.

Two demonstration projects, funded in part by AEA, proved just how cost-effective the energy-saving measures can be. Aniak High School Gym reduced its light bill 20 percent by upgrading old fluorescent lamps. The energy upgrade produced savings of \$8,000. The project, which cost \$12,892, will have paid for itself in less than 20 months. The upgrade was funded by an \$11,392 grant from AEA and a \$1,500 match from the Kuspuk School District.

The Aniak School was selected as a demonstration site in 1998 after the school approached AEA about high electrical bills. An assessment indicated the gym would offer concrete evidence of the benefits of new lighting technologies. The retrofit was a basic one - T12 fluorescent lamps were upgraded to newer T8 lamps with electronic ballasts.

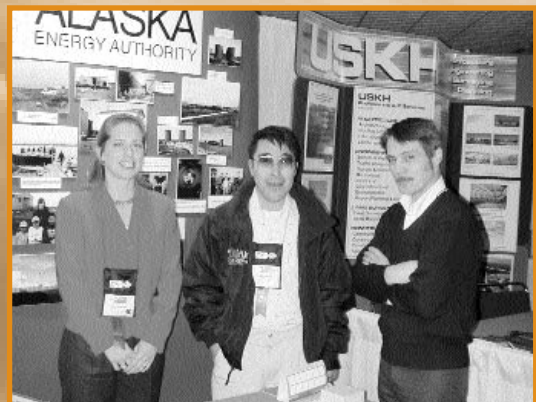
In another demonstration project earlier in the year, a lighting upgrade in Chevak generated savings of \$12,264, reducing the Chevak School's light bill by 8 percent. The project will have paid for itself in 16 months. It was funded by a \$14,355 grant from AEA with a \$2,500 match from the Kashunamiut School District.

The Chevak School was selected as a demonstration site in 1999 after school officials approached AEA about their high electrical bills. An assessment indicated that with low cost upgrades the school could lower its electrical bill significantly. In the administration building, old T12 lamps and magnetic ballasts were replaced with T8 lamps and electronic ballasts. Incandescent lamps in the school, teacher housing and administrative offices were replaced with compact fluorescent bulbs. Some areas of the school were simply de-lamped and the ballasts removed to bring lighting levels down, while still following the Department of Education guidelines.

"Rebuild America is an ideal program for rural school districts in Alaska," said Rebecca Garrett, Rebuild America Program Manager with AIDEA/AEA. "Schools are typically the largest energy users in rural communities. Energy savings can lower operating costs. That can mean new jobs and opportunities in areas where jobs are scarce."

The U.S. Department of Energy estimates that over 300 Rebuild America partnerships will be in place by the year 2003 and will be involved in more than 2 billion square feet of building renovations targeted to reducing energy costs. These renovations are expected to save \$650 million annually in energy costs, generate \$3 million in private investment and create 26,000 new jobs nationwide.

*AEA staffed an information booth at the annual conference of the Alaska Municipal League, Nov. 10-14, in Juneau. PCE administrator Terri Harper (left) and Bruce Tiedeman (right), acting manager of the rural energy group, talk programs with an AML participant.*



## State DOT partners for energy savings

The Alaska Department of Transportation and Public Facilities (DOT) is working with the Alaska Energy Authority and the State of Washington on a project that officials hope will generate significant energy savings in DOT facilities and buildings around the state.

The DOT has become a partner in Rebuild America, a federal program under the U.S. Department of Energy. One of the programs under Rebuild America helps partners such as DOT make energy improvements that are paid for by the savings incurred. The Alaska Energy Authority sponsored DOT and worked with the agency to get the partnership going.

Joel St. Aubin, DOT's manager of the project, said DOT is consulting with the State of Washington, which has had tremendous success with energy service companies. St. Aubin said requests for qualifications (RFQs) for prospective contractors

would likely be issued in the spring for a pilot program. "We'll have audits done first at three facilities in Juneau and three in Anchorage. If we can demonstrate success, we'll expand it to all DOT buildings," St. Aubin said.

DOT will contract with energy service companies to conduct energy audits of the selected buildings. If the audit can identify energy savings upgrades with a reasonable payback period, the contracting company will proceed with the work. DOT will pay for the upgrade out of a portion of the energy savings. St. Aubin said energy upgrades could reduce energy bills 15 percent to 25 percent.

"This has been done quite successfully in other states," he said. "Given the big list of the state's deferred maintenance, this is one way of making improvements without a capital outlay. This could be a fairly large program for the state."

## Emmonak happy with new storage tanks

The village of Emmonak got an important Christmas present this year - a \$2 million bulk fuel storage system that complies with environmental and safety codes. With assistance along the way from Alaska Energy Authority, this Western Alaska community obtained federal and state funding to consolidate and upgrade its bulk fuel storage tanks.

Emmonak sits close to the Bering Sea. Its approximately 900 residents depend - to put it mildly - on bulk fuel storage tanks for heat and fuel. Like many of Alaska's rural communities, Emmonak's bulk fuel storage tanks were scattered, old, and far from meeting the environmental and safety standards enforced by the U.S. Coast Guard and the Alaska Department of Environmental Conservation (ADEC).

The City of Emmonak and Emmonak Corporation joined forces several years ago to apply for funding to upgrade their systems. Emmonak Corporation President Robert Moore said the corporation's and the city's tanks were significantly out of compliance.

"We had tanks in a bad floodplain. There was no plan for spill response. We didn't have proper fencing, signs, diking, electrical systems or overflow protection," he said. "Now, our tanks are consolidated and up to code."

City Manager Martin Moore, who worked on the project from the start, said it took a lot of cooperation, a unified effort and the support of the community. "We had to reach a consensus within the community. Plus, it's a complex project with a complex funding formula. AEA was instrumental in helping us get the grants and work through all the steps," he said.

As of mid-December, a few bugs were still being worked out, but a grand opening was planned for after Christmas.

"We're happy to have something so important for our community. It's heavy duty, it'll withstand the next flood, earthquake or a spill. We're really quite proud of it," Martin Moore said.

## Construction projects abound in rural Alaska

The Alaska Energy Authority was busy this year helping rural communities develop code-compliant and environmentally safe bulk fuel storage facilities and rural power system upgrades. AEA provides technical assistance, construction expertise and funding assistance. AEA also helps the communities leverage local assets with additional federal and state funding programs.

AEA currently has five bulk fuel projects under construction. Projects in Tuntutuliak, Noorvik, Kiana, and Cheforvak will be completed in early 2001. Another project underway in Napaskiak is scheduled for completion in the fall of 2001.

In communities where a bulk fuel consolidation project has been completed, each community facility now meets regulatory codes.

Under the Bulk Fuel Storage System Upgrade program, AEA provides support to rural communities to construct consolidated bulk fuel tank farms. The program provides storage tank repairs, training and technical assistance to ensure that bulk fuel storage facilities comply with codes and regulations.

## Five communities get federal grants

The Alaska Energy Authority (AEA) reports that five communities have been notified that they are receiving federal grants of \$500,000 each. The funds are Indian Community Development Block Grants from the Department of Housing and Urban Development (HUD).

Three of the grants - to Kotlik, Kongiganak and Nikolai - are for consolidation of bulk fuel tank farms. The other two - to Stevens Village and Tuluksak - are for rural power systems upgrades.

AEA, according to acting manager Bruce Tiedeman, provided technical assistance and grant writing to help the communities obtain the grants. Under management agreements with the communities, AEA will help ensure that the grant-funded projects meet safety and environmental codes.

“The whole idea of these federal grants is to reduce the cost of electricity and fuel,” Tiedeman said. A typical small rural community might have four major fuel users - the school, the local utility, the local government and the village store - each with its own tank farm. “On the tank farm projects, consolidation positions communities to take advantage of economies of scale. At the same

time, consolidation makes it easier to comply with environmental regulations,” he said.

AEA plays only a supporting role in the process; the communities initiate the grant application and they are the designated grant recipients. But AEA also helps the communities deal with the regulatory agencies, the U.S. Coast Guard and Alaska Department of Environmental Conservation, that are charged with ensuring that communities comply with environmental requirements.

“The regulatory agencies realize there are a lot of tank farms out there that are not code compliant,” Tiedeman said. “We work with them closely and they’re cooperative because the point is to solve the problem. That’s what we’re doing.”

Projects funded with HUD grants must be completed within two years before a community is eligible for another one. Alaska is receiving grants under this program an average of every other year, Tiedeman said.