

PROJECT SUMMARIES

HIGH ENERGY COST GRANT PROGRAM

ALABAMA

Pioneer Electric Cooperative, Inc.,

\$855,760

Pioneer Electric Cooperative is an electric distribution cooperative serving several rural counties in Alabama. Its grant proposal for Energy Saving Retrofits for rural low-income, high-energy-use homes drew on the experience of the coop's staff energy specialists in conducting energy audits of customer homes. The project will improve participating rural residents' living conditions by replacing expensive-to-operate electric resistance heaters and window air conditioners with more efficient heat pumps and by making energy efficient weatherization and home repairs to cut energy costs. In addition, the coop will provide training to program participants to help them better manage their energy use and their finances. The project was developed in collaboration with local county community action programs and has the support of the State of Alabama's Low Income Heating Assistance Program, the State Department of Economic and Community Affairs, the Alabama-Tombigbee Regional Commission, and the State Treasurer.

By reviewing its customer records, the coop discovered that more than 1,000 customers in poor counties spending more than \$2,509 annually for electricity. Many of these homes are in clusters of housing units in deteriorated condition and with inefficient electric heat systems. The grant will provide funding to provide energy savings measures for many of these homes and is expected to provide a successful model for similar efforts in other rural areas.

The coop estimates that these energy savings measures can help cut electricity costs for their low income customers by as much as 30 to 40 percent. The coop has documented similar savings in 10 model homes. Despite the potential for cutting home energy costs through more efficient equipment and simple improvements, many of the coop's customers are too poor to qualify for even low interest loans to take advantage of these opportunities. The target counties are among the poorest counties in the nation with poverty levels range from 20 to 30 percent, well above the statewide average. Lower income families spend a much higher portion of their total family income on energy than upper income families. Too often the choice is heat or eat.

The project is featured in the May 2007, *RE Magazine*, published by the National Rural Electric Cooperative Association.

ALASKA

Alaska Energy Authority,

\$1,178,490

The Alaska Energy Authority will administer this grant for the benefit of the Community of Elfin Cove Non-Profit Corporation. Funds will be used to make safety improvements and upgrade the power system serving the community. Elfin Cove is a very small rural community in Southeast Alaska. Its population grows in summertime to about 300 people. Its generator has failed and it is currently operating with a generator set loaned from the Alaska Energy Authority. The community participated in Denali Commission power system assessments to identify needed upgrades. The grant will provide a replacement with a higher efficiency, cleaner, more reliable diesel generator and a new power house for the community.

Alaska Energy Authority

\$2,775,000

The Alaska Energy Authority will administer this grant for the benefit of Napakiak Ircinraq Power Company, and the Native Village of Napakiak, population 353. The grant will be used to upgrade and replace the distribution system and backup electric generator for the Village of Napakiak and the existing tie line with Bethel. The village has been experiencing high line losses and power quality problems. Village population growth and electric loads have exceeded the design limits of

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the original low voltage distribution system that was built as a demonstration project in the early 1980s. The replacement would be built to modern USDA electric distribution system standards and provide greater reliability and substantially reduce line losses. This project proposal was developed in cooperation with and support of the Alaska Energy Authority (AEA).

Alaska Power Company **\$1,100,750.**

Alaska Power Company will use this grant assistance to extend electric distribution service to a cluster of homes in Lutak north of Haines. Approximately 36 homes there do not have electric service and rely on individual gasoline-powered generators. The cost of extending service is very expensive as the lines will have to be buried along the Lutak Highway because the landward side is too steep and the seaward side is adjacent to marine waters and has been designated as a scenic highway corridor. The area also hosts many bald eagles and undergrounding likely would be required for these protected species. APC has received signed letters of commitment from most households in the area to receive service if the line is extended with grant assistance and the project has local support from the Haines Borough. Grid service will provide reliable electricity at substantially lower costs and benefit the community by displacing the inefficient, costly, noisy, and polluting individual household generators now in use.

Alaska Power Company **\$675,687.**

Alaska Power Company will use this grant to construct line extensions along the Haines Highway in Southeast Alaska to complete a project that will connect the Haines closed grid with the Chilkat Valley closed grid and also provide electric service to about 13 households along the route that rely on self generation. The project would build 5.5 miles of 3-phase 35 kV distribution line through an existing buried conduit and connect to the isolate distribution system operated by the Inside Passage Electric Cooperative (IPEC). According to APC, the intertie will enable IPEC to secure access to additional (and potentially lower cost) power supplies for its customers in the area and improve reliability. The project has support from the Haines Borough.

Alaska Power Company, **\$1,697,740.**

The Alaska Power Company will use the grant funds to extend its existing transmission line from Tok 19 miles to the Tetlin powerplant. The Community of Tetlin has a population of 117 and has been designated as an economically distressed community by the Denali Commission. Tetlin is located in the Southeast Fairbanks Census Area. Because of the permafrost environment, the line will be buried to protect it from damage and to reduce maintenance costs from ice buildup, and also to avoid potential for raptor strikes and electrocutions. APC operates the electric service in Tetlin, but because the community is isolated from the grid, operating costs and rates are extremely high at over \$0.48 per kilowatt hour. APC estimates that the intertie will allow Tetlin residents to purchase power at the lower prevailing rate in Tok at an estimated savings of around 30 percent. The project will benefit the Tetlin community with potentially lower rates, greater reliability, and reduced maintenance needs, and elimination of noise and air emissions from operation of the existing generators at Tetlin.

Alaska Village Electric Cooperative (AVEC) **\$2,500,000**

AVEC will use \$2,500,000 in High Energy Cost Grant funds from USDA to address the cost of electricity in Chevak, Alaska. Chevak is a USDA Champion Community with high energy costs and persistent poverty. Chevak has a population of 765 people, 95.9 percent are Alaska Native or part Native. The funds will be used for a power plant upgrade, heat recovery system, and a wind generation system. Costs will be reduced for the community through increasing overall generating efficiency, improving reliability, and using wind and heat recovery to offset high generation costs. AVEC is a Denali Commission partner and the USDA grant is in concert with the Denali Commission's Program for rural Alaska energy upgrades.

Alaska Village Electric Cooperative, Inc. (AVEC) **\$1,156,811**

AVEC, a consumer-owned electric cooperative headquartered in Anchorage, serves more than 50 remote villages in rural Alaska. It will use its \$1,156,811 grant to construct a wind turbine to provide electricity to the village of Hooper Bay. The village is located in a high value class 7 wind

regime that is highly favorable for wind power development. The proposed wind turbines at Hooper Bay could reduce the use of expensive diesel fuel for electric generation by about 24 percent. The average cost of providing electricity for residential customers in Hooper Bay currently exceeds \$0.45 per kilowatt hour.

Hooper Bay is located in the Yukon Kuskokwim Delta. The 1,014 residents rely on commercial fishing and subsistence activities. Hooper Bay is an economically distressed community with unemployment averaging in excess of 37 percent and over 27% of residents living below the poverty level.

Aleutian Pribilof Islands Association

\$474,475.

The Aleutian Pribilof Islands Association, an Alaska Native Corporation will use this grant to add a wind turbine and associated high penetration control system that will integrate with a recently completed high efficiency diesel generation system on the island of Nikolski in the Aleutian Islands. This technology will allow the community to benefit from available wind power and displace diesel fuel with significant future savings to the community. This grant will support wind-diesel capability for an electric system that had already been upgraded through an earlier Denali Commission project, partially funded by USDA. This project will provide additional operational experience with small wind-diesel systems for rural Alaska.

City of Atka,

\$390,000

The City of Atka in the Aleutian Islands, population 102, will use \$390,000 in USDA grant funds to construct a hydro-electric plant to serve all residents and businesses, and local, State of Alaska, and Federal facilities. This new source of electricity will replace high cost diesel fuel that has been used to power the existing generators and significantly reduce the cost of power to the community. Atka is seriously economically challenged and the per capita income of \$17,095 is 55 percent of the Alaska per capita income level of \$30,995. The hydroelectric plant will provide power to the locally owned seafood processing plant that currently has to provide its own electricity during the processing season. Funding assistance for the project will also be provided by other State and Federal agencies.

Cordova Electric Cooperative, Inc.,

\$1,037,500

Cordova Electric Cooperative, Inc. is the local electric utility for the community of Cordova, Alaska, population 2,298, located on the eastern edge of Prince William Sound in south-central Alaska. The principal industries are fishing and fish processing. The residential electricity cost is over 34 cents per kilowatt hours and the average household spends more than \$3,600 per year in electricity costs. The existing Humpback Creek Hydroelectric facility has been in operation for 13 years and is in need of structural repairs. The Humpback Creek facility provides approximately 8 percent of Cordova's power needs. The grant will allow repairs to deteriorated structures and equipment for the Humpback Creek Hydroelectric Project that were identified in inspections by the Federal Energy Regulatory Commission (FERC) and recommended for rehabilitation. The repairs will allow the facility to continue in operation. The Denali Commission is also providing funding support for the project.

Gustavus Electric Company,

\$1,500,000

Gustavus Electric Company (GEC) is the electric utility serving the city of Gustavus, Alaska, an enclave within Glacier Bay National Park. GEC at present relies on diesel generation and electric rates vary based on fuel costs. According to the State of Alaska, average residential electric rates for GEC were in excess of 57 cents per kWh in 2005. The grant funds will be used for construction of an 800 kW run of river hydroelectric facility on Falls Creek with a diversion structure, a 9400 long penstock, a powerhouse, a 800 kW turbine generator and related equipment, tailrace pipeline from powerhouse to plunge pool, a substation, 5 miles of 12.5 kV buried transmission line to existing generating plant, 2 miles of service road from powerhouse to the diversion parallel to the pipeline and a 1.7 mile access road along the power line route to the service road. The project would displace existing diesel generation and support GEC's future

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load growth and could provide power for the nearby National Park Headquarters complex. USDA grant funds along with other Federal and State grants and GEC contributions will support project construction. The project has been licensed by the Federal Energy Regulatory Commission.

The population of Gustavus is 473 and is higher in the summer when seasonal employees and visitors are in residence. Half of the employed residents work for the National Park Service (NPS); most of the rest have seasonal employment tied to park operations, fishing, and recreation.

Inside Passage Electric Cooperative **\$2,119,517**

Inside Passage Electric Cooperative, Inc. (IPEC) of Auke Bay, Alaska will use \$2,119, 517 in grant funds to carry out three projects for the benefit of consumers in its Southeast Alaska service area. IPEC serves 5 scattered villages in rural Alaska with a total population of 2,815. IPEC is dependent on expensive diesel fuel for generation and the cost of producing electricity for residential customers has averaged about \$0.37 per kilowatt hour in 2004.

The village of Angoon on Admiralty Island is accessible only by boat, seaplane, or the Alaska State ferry. The grant will provide line extensions to connect the village of Angoon on Admiralty Island to the community Alaska State ferry terminal providing electricity and phone service. From the ferry terminal, a submarine cable will connect neighboring Kilisnoo Island, providing electricity and enabling phone service to a homes, a fishing lodge, and a commercial facility.

More than half of the grant funds will be used to upgrade the aging distribution system in Klukwan and the Chilkat Valley. In some places line losses exceeded 20 percent - far above the rural average of 8 percent. Upgrading the distribution system will substantially reduce costs for the area and produce net fuel savings for the system.

In the village of Kake, the grant will extend the electric distribution service to the Kake Boat Harbor to serve fishing boats that use the local fish processing plant, thus helping to sustain the community's investment.

All of the communities to be aided by the grant are economically distressed. Household incomes range from 58 to 79 percent of the State median. The financially distressed salmon fishing industry and the decline in the logging industry has contributed to economic hardship and high unemployment in these communities.

McGrath Light and Power Co. **\$465,522**

McGrath Light and Power Co., is a wholly owned subsidiary of MTNT, Ltd, an Alaska Native Corporation. The electric utility serves 249 customers in the village of McGrath located in interior, Alaska approximately 220 miles northwest of Anchorage. The village has a population of 401. The village is part of the Yukon-Koyukuk Census area that has a household median income of \$28,666, about 55 percent of the state median. Unemployment is in excess of 14 percent.

The \$465,522 grant funds will be used for expansion of McGrath's existing waste heat recovery system, energy efficiency retrofits to the power house, and safety upgrades to its current power plant feeder system. McGrath's cost per kilowatt hour is \$0.381 or 448 percent of the national average cost of power. The ultimate goal of this plan is to reduce McGrath's consumption of expensive diesel fuel and to provide additional district heat service to several large commercial customers, replacing thousands of gallons of fuel oil used by these customers to heat their buildings.

Naknek Electric Association, Inc. **\$ 2,618,387**

Naknek Electric Association, Inc. a consumer-owned electric cooperative in Naknek, Alaska, will use its \$2,618,387 grant funds to complete rural power plant upgrades in the villages of Naknek,

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South Naknek, and King Salmon. The villages have a combined population of 1,105 persons and are located in the Bristol Bay region 289 miles southwest of Anchorage. The communities have been economically devastated by the decline of the commercial fishing industry in the region.

The grant will fund an upgrade of Naknek's generation facilities by replacing three existing units with newer, low emission fuel efficient units. The powerplant upgrade will be associated with a waste heat recovery system project in partnership with the Alaska Energy Authority. The new systems will lower emissions, reduce fuel consumption and save money for the Naknek's customers

New Koliganek Village Council, \$250,000.

The New Koliganek Village Council is the Federally-recognized tribe for the Village of Koliganek, a predominantly Yup'ik Eskimo village of 182 permanent residents located on the Nushagak River some 65 miles northeast of Dillingham. The grant will allow the village to purchase and install two new diesel generators, upgrade the cooling system, install new electronic control panels, and add new service lines to provide reliable power for the village school. The upgrades will provide more reliable power and more efficient and cleaner generation. The Village is providing matching funds.

Nome Joint Utility System \$2,500,000

Nome Joint Utility System will use its \$2,500,000 grant funds in combination with other local, State, and Federal funds for the relocation of its existing electric generation plant and substations and to install new, high-efficiency generators and a waste heat recovery system. Relocation will move the plant to higher ground out of a flood zone and outside of the Nome Airport runway protection zone.

The City of Nome, Alaska has a population of about 3500. Nome is an economically distressed community with a median household income of \$41,250, less than 80 percent of the state average and an unemployment rate exceeding 11 percent.

Nome Joint Utility System \$2,500,000

Nome Joint Utility System will use its \$2,500,000 grant funds in combination with other local, State, and Federal funds to complete construction of new high-efficiency electric generating facility at its newly-relocated power station and distribution substation. The relocation of the city's main electric plant to higher ground was necessary to move the plant out of a flood zone and outside of the Nome Airport runway protection zone.

The City of Nome, Alaska has a population of about 3,500. Nome is an economically distressed community with a median household income of \$41,250, less than 80 percent of the state average and an unemployment rate exceeding 11 percent.

ARIZONA

The Havasupai Tribal Council, \$2,157,800

The Havasupai Reservation is located at the bottom of the Grand Canyon adjacent to Grand Canyon National Park. There are 503 residents on the reservation that is about 172 miles from Flagstaff, Arizona. The nearest community is Peach Springs on the Hualapai Reservation, 72 miles away. Access to the isolated Village of Supai is by horseback or foot via a steep 8-mile hiking trail – or by helicopter. Parts of the Reservation are so remote that the homes have never been electrified. This grant proposal would assess and make needed improvements to the 70 mile distribution line from Mohave Electric Cooperative's Nelson sub-station to the Havasupai Long Mesa switch above Supai Village, repair and replace the distribution line from the switch to the village and the underground distribution system within the village, and install remote metering to allow meter readings, disconnects and reconnects without requiring a trip into the canyon. The

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underground distribution system in the village must be replaced because it has deteriorated. The distribution system upgrades and repairs will help assure more reliable electric service and allow connection of additional households. Letters of support were provided by the Bureau of Indian Affairs (BIA) the local office of Health and Human Services, and USDA Rural Development Arizona State Office.

The Reservation is served by the BIA which purchases power for them. The BIA is responsible for the Havasupai electrical system below the canyon rim and for billing and collections. The Reservation has frequent service disruptions and power quality problems attributed to the poor condition of the 70 mile distribution line connection. BIA has been able only to make emergency repairs.

The grant will also advance the success of USDA's \$1.2 million broadband grant for Supai that requires the availability of a dependable, reliable and stable source of power for the communications system for the Reservation.

The Hualapai Nation **\$2,000,000**

The Hualapai Nation, Peach Springs, Arizona, will use its grant funds and tribal contributions to construct a hybrid solar photo-voltaic electric system to serve the Grand Canyon West community on the Hualapai Reservation. The Federal Aviation Administration will also contribute funds for the system that will serve the FAA Grand Canyon West Airport facility, small commercial facilities, workers housing, a water system plant, and approximately 50 homes in the area on the rim of the Grand Canyon approximately 90 miles from Las Vegas, Nevada. The Grand Canyon West Power Project is the first part of the tribe's plan for ecologically sensitive development in this area.

Tohono O'odham Utility Authority **\$173,000**

Tohono O'odham Utility Authority (TUA) will use its \$173,000 High Energy Cost Grant to extend electric service to communities within the reservation that are without service. Eleven communities on the reservation that currently have no electric service have requested power, not only through the Utility Authority, but also through District Councils and through the Commerce Committee of the Tohono O'Odham Legislative Council. Availability of electric power will open the door for additional economic development in these communities including housing, business development and clean, safe drinking water. Residents currently depend on wood for both heating and cooking.

Sacred Power Corporation **\$1,900,000**

Sacred Power Corporation of Albuquerque, New Mexico in cooperation with the Navajo Nation Cameron (Arizona) Chapter project will install Residential PV/Hybrid Power Stations on scattered off-grid homes that currently have no electricity or rely on gasoline generators. The homes will also receive energy efficient appliances. About 978 people live within the Cameron Chapter. Many of the Navajo homes in the Cameron area of the reservation are without electric service. The project will create credits that can be used by utilities to satisfy the Arizona state solar portfolio standard and creates an opportunity to partner with an Arizona utility to expand the project scope. Project implementation will involve the Cameron Chapter in outreach and selection of participating households. Sacred Power successfully implemented a similar High Energy Cost Grant project award New Mexico in 2004. The success of the earlier project triggered efforts by other chapter houses on the Navajo Reservation to seek assistance.

Tohono O'odham Utility Authority **\$763,350.**

Tohono O'odham Utility Authority (TUA) is an RUS electric borrower that serves the Tohono O'odham Nation in southern Arizona west of Tucson comprised of more than 60 communities scattered across the Reservation about the size of Connecticut. This grant will provide an opportunity to extend service to 9 remote communities where households have been unable to afford the required line extension contributions. This project will provide for 51 miles of new single phase distribution lines to connect 30 households with a population of 105 in the Chukut

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Kuk District. It is expected that availability of electricity will make it more attractive to live in this area of the Reservation and the line extension will enable connection of additional homes and services in the target area. The project has strong support from the residents, the Tribe, and the District government.

CALIFORNIA

Yurok Tribe

\$ 3,000,000

The Yurok Tribe Reservation is located in a remote area of Northern California in the Klamath River Basin on the border with Oregon. The grant funds will be used to build distribution lines on the reservation and to connect with the local utility. The Reservation is isolated by both distance and terrain, and has been one of the poorest communities in the state. Without this assistance, a significant portion of the Yurok Reservation will remain without electric power. Without reliable, affordable electric service, residents must depend on wood and LP Gas for heating and cooking. According to the tribe, this lack of electric service perpetuates the poverty and prevents sustainable development on the reservation. Electric power will open the door to improved housing, making available clean, safe drinking water, and telecommunications services.

HAWAII

Department of Water Supply, County of Hawaii

\$475,000

The Department of Water Supply (DWS) of the County of Hawaii will use the grant to install a 45 kilowatt hydroelectric generating unit onto a gravity-fed water line from a water storage tank on the water distribution system in Kailua-Kona, Hawaii. The use of distributed hydroelectric generation on the water system will reduce energy costs to the customers in the local target area. DWS has installed and used similar generators on other parts of its system for over 20 years. The sharp increase in fuel prices prompted DWS to add additional distributed hydroelectric generating units to its system as energy conservation and cost reduction measures. DWS will enter into a contract to sell any excess electricity to the local utility. Initial estimates of projected savings are in excess of \$40,000 per year in avoided electricity charges that would otherwise be paid for by water customers. Higher electricity costs will boost savings. DWS will provide matching funds for the project.

The project will serve the town of Kailua on the West Side of Hawaii County, the Big Island of Hawaii. The town has a total population of 9,870. Average residential rates in the area are \$0.275 cents per kilowatt hour. Project savings will be seen through reduced water charges for local users of the system because of lower electricity costs through distributed generation and revenues from sale of electricity.

Maui Electric Company (MECO)

\$ 1,108, 548

This grant will enable the Maui Electric Company to install 300 renewable energy solar water heating systems to offset the impacts of extremely high residential cost in the Enterprise Community of Molokai Island, Hawaii. Molokai residents pay 23.7cents per kWh and the installation of solar water heating systems will lower the annual electric cost by an estimated 45 percent. MECO will contribute \$300,000 in cash as well as marketing, coordination and administration of the effort. Program administration costs are estimated as less than 1.5 percent of the overall project cost. The median household income is 66 percent of the state median and the population of the entire Island is 7,404.

The Grantee has been working in association with the Molokai Local Office of USDA Rural Development on eligibility and outreach plans.

IDAHO/NEVADA

Raft River Rural Electric Cooperative

\$3,775,000

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Raft River Rural Electric Cooperative, a consumer-owned electric system headquartered in Malta, Idaho will use its award of \$3,775,000 to help replace the transmission line serving the remote Duck Valley Indian Reservation and other Raft River Western Division customers in Owyhee and Mountain City on the Idaho, Nevada Border. The original 69 kV line was built in 1915 by a mining company and traverses a mountainous area in a National Forest. The line is inadequate for modern loads, expensive to maintain, and plagued by frequent winter outages, endangering residents who rely on electric heat. This extremely high cost to serve portion of the Raft River service area and the transmission line was recently acquired from Idaho Power. Raft River is developing engineering and surveys to define the new route will be partially financed through the grant. Relocation and replacement of the line and upgrading and extending the distribution systems will reduce outages and improve operations and maintenance conditions and provide the electric infrastructure to support economic activity on the Reservation.

The Western Division service area includes about 515 households. Median household income is less than 62 percent of the Idaho statewide median and less than 52 percent of the Nevada statewide median household income. The Duck Valley Indian Reservation of the Shosone-Paiute Tribes is a financially stressed area. The Tribe is very progressive and working to bring new industry and associated infrastructure to the area. The Tribe actually constructed much of the distribution network on the Reservation. The extremely high per customer costs for the necessary replacement of the transmission line if fully allocated to the residential customers served will push average household electric costs over \$2,423 per year.

The project award was finalized in 2006 after completing Federal and State environmental and engineering studies, including preparation of an environmental impact statement required by the Bureau of Land Management.

MAINE

Fox Islands Electric Cooperative, Inc.

\$2,633,522

The Fox Islands Electric Cooperative of Vinalhaven, Maine, received an award of \$2,633,522. The funds will be used to replace a submarine electric transmission cable serving the islands of North Haven and Vinalhaven, located ten miles off the coast of Maine. The submarine cable providing the only source of power to the islands deteriorated over time causing major reliability problems and power outages. There were 26 failures over six years, including seven in 2002 alone. In summer 2003, the cooperative was forced to rent replacement diesel generators and have them shipped to the island to continue service during outages. The grant was awarded in 2003 and installation of the replacement cable began shortly after to restore reliable power and alleviate both the costly repairs on the old cable and the uncertainty of service.

The island communities of North Haven and Vinalhaven qualify as extremely high energy cost communities because the high cost of fuel and electricity combined with harsh weather conditions push average household energy costs above 275 percent of the national average. The grant will help offset some of the increased costs of replacing the transmission cables serving the islands.

NEVADA

Moapa Band of Paiutes

\$2,382,000

The Moapa Band of Paiutes, Moapa, Nevada will use a grant of \$2,382,000 for the Valley of Fire Community Electrification Program. The project will allow construction of a new 25kV electric distribution line to bring power from Glendale to the Valley of Fire Community on the Moapa River Reservation. Final route selection for the project to serve the reservation and a proposed cement plant will be determined through a siting process following environmental studies. The population of the reservation is 206. The Valley of Fire Community is about 50 miles northeast of Las Vegas, NV. The community currently relies on diesel generation located at a Travel Plaza owned and operated by the Tribe. Continued operation of the travel facility and implementation of the Tribes economic development plans for accommodations, housing, and a museum requires the

availability of adequate infrastructure. Because the area currently lacks adequate electricity, the Tribe must haul water 36 miles round trip by truck at a rate of \$40,000 gallons per week. The trucked in water supply is not adequate to support development or fire protection. The new power line will provide reliable power to existing facilities and support expansion that is valuable to the Tribe. The Tribe estimates that connecting to the distribution systems will reduce household electric rates from over 24 cents per kilowatt hour to about 7 cents per kilowatt hour. The tribe's commercial and community facilities estimate their annual savings to be as much as \$100,000 per year. At completion of construction, the distribution line will be operated and maintained by the State of Nevada, Overton Power District # 5.

NEW MEXICO

Sacred Power Corporation

\$825,108

Sacred Power Corporation of Albuquerque, New Mexico, in cooperation with the Ojo Encino and Torreon/Star Lake Chapter Houses of the Navajo Nation will use grant funds to provide distributed Solar PV and Wind hybrid power stations and energy efficiency upgrades for remote homes on tribal lands northwest of Albuquerque. As a result of this grant at least 50 remote homes will, for the first time, have reliable electric service. The extremely high costs of connecting these scattered residences has made on-grid electric service prohibitively expensive. The cost of running small generators for household needs in off grid residences averages about \$0.75 per kilowatt hour. Use of the hybrid units will reduce the costs by at least one third. The grant will further reduce the costs for residents. The hybrid units will be manufactured by Sacred Power, a Native American-owned small business. The units will be maintained and serviced using local labor.

The Torreon and Ojo Encino Chapters are located in Sandoval and McKinley Counties in Northwest New Mexico. The two chapters have a combined population of about 2500 persons and the unemployment rate averages over 75 percent.

Sacred Power Corporation

\$661,625

Sacred Power Corporation in collaboration with the Navajo Nation Counselor, Pueblo Pintado, and Ramah Chapters will use this grant award to provide rural homes in the Navajo Nation in Northwestern New Mexico with solar photovoltaic hybrid residential generating systems along with compatible high efficiency lighting and refrigeration units. These modular units will bring reliable electric service to homes that are not connected to local distribution grids. Depending on the location, the units will combine solar panels with supplemental wind turbine or propane generators and battery storage systems to provide a constant source of power for the home. Sacred Power will partner with the Chapter Houses to enroll project participants and provide training and maintenance for the systems.

WASHINGTON

Public Power District Number 1 of Ferry County

\$888,408

The Public Power District Number 1 of Ferry County, Republic, Washington received an award of \$888,408 that will be used to reach some of 175 to 200 households in areas so remote they are not connected to the utility's electric distribution system. The full cost burden of extending service or providing off-grid distributed generation for these homes averages in excess of \$0.42 per kWh. Ferry County will establish a revolving fund to finance line extensions and installation of off-grid solar PV for consumers with an estimated cost of electric service exceeding \$0.23/kWh. The fund would be combined with the utility's line extension allowance to help residents obtain electric service. The expenditures are paid back through a bill adder to replenish the designated fund. Ferry County will maintain and service the PV systems purchased and installed through the Western Solar Utility Network.

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The utility district currently serves the electrical needs of 3,130 residential and commercial consumers, including the Colville Confederated Tribes Reservation. The grant implementation plan includes a process for consulting with the Tribes for projects on the Reservation.