

ALASKA STATE LEGISLATURE

LEGISLATIVE BUDGET AND AUDIT COMMITTEE

Division of Legislative Audit



P.O. Box 113300
Juneau, AK 99811-3300
(907) 465-3830
FAX (907) 465-2347
legaudit@legis.state.ak.us

September 22, 2008

Members of the Legislative Budget
and Audit Committee:

In accordance with the provisions of Title 24 of the Alaska Statutes, the attached report is submitted for your review.

DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT
ALASKA ENERGY AUTHORITY
RURAL POWER SYSTEM UPGRADE PROGRAM
PROCUREMENT ISSUES

August 15, 2008

Audit Control Number
08-30048-08

The objectives of the audit were to review and assess the procurement process for Rural Power System Upgrade (RPSU) projects, and the related *Switchgear Evaluation Report*, dated November 21, 2007. In addition, we conducted a survey of communities with a completed RPSU project to obtain their perspective on certain aspects of the program

The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Fieldwork procedures utilized in the course of developing the findings and discussion presented in this report are discussed in the Objectives, Scope, and Methodology.

A handwritten signature in black ink that reads "Pat Davidson".

Pat Davidson, CPA
Legislative Auditor

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OBJECTIVES, SCOPE, AND METHODOLOGY

In accordance with Title 24 of the Alaska Statutes and a special request by the Legislative Budget and Audit Committee, we have conducted an audit of procurement issues under the Rural Power System Upgrade (RPSU) program administered by the Alaska Energy Authority (AEA).

Objectives

The specific objectives of the audit were to:

- Review and assess the procurement process used for RPSU projects.
- Determine if procurements were made in accordance with AEA's processes.
- Review and assess the *Switchgear Evaluation Report*, dated November 21, 2007.
- Survey communities with completed RPSU projects to obtain their perspective on certain aspects of the program.

Scope and Methodology

In order to obtain an understanding of AEA's RPSU program, we reviewed the following:

- AEA's enabling legislation, AS 44.83, and related regulations, 3 AAC 105 through 108.
- Information on AEA's website.
- By-laws of AEA Board of Directors and its meeting minutes for January 2004 through August 2007.
- AEA audited financial reports for FY 04 through FY 07 and related accounting reports to verify the amounts for the RPSU program aggregated with all the rural energy programs¹ in the reports.
- Legislative capital appropriations for AEA energy projects for FY 04 through FY 09.
- Federal regulations, 15 CFR 24.36 - Uniform Administrative Requirements for Grants and Cooperatives, Post-Award Requirement, Procurement.
- Delegation of procurement authorities to AEA from the state departments of Administration, and Transportation and Public Facilities.
- State Procurement Code, AS 36.30, and related regulations, 2 AAC 12.
- AEA's *Rural Energy Group Bulk Fuel Upgrade Program/Rural Power System Upgrade Program Project Reference Manual* (REG Manual).
- State energy reports:

¹ AEA's rural energy programs include: Bulk Fuel Upgrade projects, Rural Power System Upgrade projects, Power Cost Equalization, Alternative Energy, Utility Training and Technical Assistance, two active loan programs funded from the Bulk Fuel Revolving Loan Fund and the Power Project Fund, and one inactive loan program.

- *Rural Energy Action Council, Findings and Recommendations for Governor Frank Murkowski*, April 15, 2005.
- *Alaska Energy Policy Task Force, NonRailbelt Report, Findings and Recommendations*, April 15, 2004.
- *Alaska Rural Energy Plan, Initiatives for Improving Energy Efficiency and Reliability*, April 2004.
- *Sustainable Utilities in Rural Alaska*, July 15, 2003.
- *Screening Report for Alaska Rural Energy Plan*, April 2001.
- Denali Commission (Commission) website information, including data related to AEA energy projects and related financial awards from the Commission's project database system.
- Inspection reports of AEA RPSU projects issued in 2006 and 2007 by the Commission's Inspector General.
- Alaska Supreme Court Opinion No. 6196, dated November 9, 2007 in the case of *PowerCorp Alaska v. State, et al. (S-12176)* and the related AEA hearing officer's decision.

Interviews regarding the state procurement policies and procedures for construction projects were conducted with Department of Transportation and Public Facilities procurement management. In addition, the procurement staff for the Village Safe Water (VSW) program² was interviewed to determine the program's procurement process under similar federal regulations as the RPSU projects. We also conducted interviews with the Commission's Energy Program Manager regarding the RPSU program and the VSW program due to the Commission's involvement in both programs.

We interviewed AEA procurement and rural energy program management and staff to gain an understanding of the RPSU program procurement process. Various reports for all rural energy programs procurements from July 2003 through February 2008 were obtained and analyzed. These reports were used to determine the number and dollar amounts of RPSU project procurements made during the same period. Based on the information obtained, we selected FY 07 and FY 08 for the test years. During the period, there were 405 procurements with payments to the vendors totaling a little over \$10 million.

We randomly selected 5 individual procurements and a sample of 15 small, informal, and formal procurements. We also selected 14 term contracts (8 awarded in FY 03 and 6 awarded in FY 08). The total amount of the contract awards for the 20 procurements selected was approximately \$3 million, while the FY 03 term contracts totaled \$67 million and the FY 08 term contracts totaled \$18.5 million.

We tested the selected procurements for compliance with the policies and procedures of the REG Manual and federal regulations.³ All RPSU project procurements during the audit

² This program is administered by the State's Department of Environmental Conservation.

³ 15 CFR 24.36

period were also analyzed for artificial fragmentation by AEA management to avoid the required procedures for higher dollar procurements.

We obtained and reviewed the *Switchgear Evaluation Report*, dated November 21, 2007 and interviewed the consulting engineering firm that conducted the evaluation. We also interviewed representatives of the manufacturers of the switchgear included in the evaluation as well as AEA management and project staff, and the Commission's Energy Program Manager.

There were 26 communities with a completed RPSU project as of May 2008.⁴ We conducted structured, telephonic surveys with 22 of the 26 rural communities.⁵ This provided us with the communities' perspective on certain aspects of the RPSU program.

We reviewed legislation⁶ related to renewable energy grants passed during the 2008 legislative session. We interviewed the program manager for AEA alternative energy resource (aka renewable energy) projects to obtain an understanding of the efforts made for use of alternative energy in rural Alaska. AEA staff provided a listing of the agency's FY 04 through FY 08 alternative energy projects with the expended amounts and funding sources. In order to obtain the Commission's perspective on alternative energy projects and HB 152, we attended a meeting of its Energy Advisory Committee.

⁴ Data was obtained from the Denali Commission project database at www.denali.gov.

⁵ Officials in four communities were unavailable or did not respond.

⁶ Chapter 31, SLA 2008

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ORGANIZATION AND FUNCTION

The Alaska Energy Authority (AEA) was created in 1976 by the Alaska Legislature. The Authority is a public corporation of the State with a separate and independent legal existence. AEA is a component unit of the State of Alaska. AEA's mission is to reduce the cost of energy in Alaska.

In 1993 under comprehensive energy legislation, AEA's statutory authority to construct and acquire energy projects was eliminated. The board of directors of the Alaska Industrial Development and Export Authority (AIDEA) became the board of directors for AEA. Concurrently, the executive director of AIDEA was also appointed the executive director of AEA. The corporate structure of AEA and its operating assets, including state-owned hydroelectric projects and the Alaska Intertie project, were retained. However, programs addressing the energy needs of rural communities were transferred to a newly-created Division of Energy within the Department of Community and Regional Affairs.

In July 1999, the rural energy programs were transferred back to AEA, with AIDEA oversight and management.⁷ The reintegration was done by the legislature as part of a larger reorganization of state agencies. Legislative intended benefits included: a coordinated state energy policy encompassing rural energy programs and state-owned hydroelectric projects, AIDEA oversight to foster a business-oriented attitude toward finance and development, and a focused approach to work with the federal Denali Commission on rural energy issues.

AEA does not have statutory authority to hire staff. Therefore, all AEA management, program, and project staff are AIDEA employees.⁸ In March 2008 a new AEA executive director was appointed by the Governor, who will also serve as the State Energy Coordinator. In May 2008 the AIDEA board of directors appointed another individual to be the executive director over AIDEA operations.

AEA Rural Energy Programs

AEA's rural energy programs include: Bulk Fuel Upgrade projects, Rural Power System Upgrade projects, Power Cost Equalization, Alternative Energy, Utility Training and Technical Assistance, two active loan programs funded from the Bulk Fuel Revolving Loan Fund and the Power Project Fund, and one inactive loan program.

AEA receives financial awards through the Denali Commission. Each award can fund numerous and varied energy projects. These projects include RPSU projects, as well as

⁷ In order to shield the bond rating of AIDEA, the energy programs were technically placed under AEA, rather than directly under AIDEA.

⁸ The personnel costs of all Rural Energy Program staff are budgeted through AIDEA's operating budget.

projects for bulk fuel upgrades, alternative energy, and energy reduction. The funding for these projects is appropriated to AEA through its capital budgets.

Capital appropriations for FY 04 through FY09 for AEA energy projects⁹ totaled about \$182 million. The majority of funding was from the Denali Commission (\$139 million or 76%), the U.S. Department of Energy (\$25 million or 14%), and the Alaska Capital Income Fund (\$10 million or 6%). The remaining 4% came from various state sources.

⁹ These capital appropriations were for Bulk Fuel Upgrade, Rural Power System Upgrade, and Alternative Energy and Energy Efficiency projects.

BACKGROUND INFORMATION

Rural Power System Upgrade Program

Program and Funding Processes

In rural communities throughout Alaska, electricity is generated and distributed by a small local “system”, using diesel fuel at a cost generally much higher than that in urban parts of the State.

Rural Power System Upgrade (RPSU) projects provide for increased efficiencies in diesel-fuel generation in order to cut the rural electrical costs and to provide power plants that are compliant with current state and federal codes. Examples of the efforts under RPSU projects include:

- Rebuilding or replacement of worn-out diesel generator units.
- Rebuilding or replacement of old and hazardous distribution systems.
- Construction of new power generation systems that meet state and federal codes.
- Inclusion of heat recovery systems, where possible, in new powerhouses.
- Use of local force account labor and to provide technical assistance to rural communities through AEA personnel and/or contractors with experience in rural construction.

The Denali Commission (Commission) provides the majority of funding for RPSU projects. Established by Congress in 1998,¹⁰ the Commission is a federal-state partnership designed to provide critical utilities, infrastructure, and economic support throughout Alaska. The Commission has partnered with the Alaska Energy Authority (AEA), the Alaska Village Electric Cooperative (AVEC), and the Alaska Power Company to upgrade the rural power systems.

In 2000, AEA completed an assessment of power plant facilities in 179 rural communities. AVEC provides electrical service to 51 of the communities. Therefore, AVEC was to manage the power system upgrade projects in their service areas, while AEA was to manage the upgrade projects for the remaining 128 communities.

AEA prioritized the 128 communities based on the condition of the power plant facilities; those in worst condition were at the top. The Commission accepted this priority list, but established some additional criteria to prioritize funding of projects. Projects in economically distressed communities have top priority. Other funding priority factors considered by the Commission are: the benefits to the community, level of community cost-sharing, federal responsibility for the project, and commitments to local hire.

¹⁰ Denali Commission Act of 1998, PL 105-277, 42 USC 3121.

The Commission provides funding for the projects through federal assistance award agreements with AEA. A list of projects for the funding is attached to each agreement. The agreement also states that “*AEA will make subgrants to the Alaska communities or local utilities to construct the projects.*” In addition, it states “*AEA may act as the subgrantees’ agent to plan, design, and construct the projects.*”

According to the agreement, AEA must comply with the Commission’s policies, other federal policy laws, federal uniform administrative requirements under 15 CFR 24, and certain federal Office of Management and Budget circular requirements.

The Commission’s policies include: rural Alaska energy infrastructure criteria for sustainability, cost containment policy, energy project design capacity, and energy project prioritization. Further discussion of these policies follows.

1. Rural Alaska infrastructure criteria for sustainability. The Commission requires the project to comply with its criteria for sustainability before construction funds may be advanced to AEA. The community or local utility will take ownership of the new or improved power plant facility. Therefore, the community must develop a business plan for the operation and maintenance of the facility. If issues such as facility location, project ownership, construction costs, and compliance with sustainability criteria cannot be resolved in a reasonable time frame, the Commission expects AEA to move down the priority list to projects that are ready to proceed to construction.
2. Cost containment policy. The cost containment policy requires: project designs to provide cost-effective solutions for the needs of the community, project designs should address the specific community needs, competitive procurement, effective management of construction activities, and to maximize the benefits for the cost. Further, cost containment policies require projects for new construction to be initiated by a conceptual design report.¹¹

For construction of new power plant facilities, the Commission has benchmark unit costs. If the estimated cost of the facility exceeds these benchmark costs, the AEA project manager must provide the Commission with written justification for the excess costs. The Commission may determine there is sufficient benefit for the associated excess costs or AEA can modify the conceptual design to bring the project costs within the benchmark limits. When satisfied, the Commission will release funding for the detailed final design phase of the project.

After the detailed final design and community business plan are completed, AEA submits them to the Commission for approval. AEA must provide explanation for any changes in

¹¹ The Conceptual design report is prepared by an AEA consulting engineering firm. The primary elements of the report includes: community overview; community application for RPSU program; information regarding site visits, community meetings, local contacts, business plan and proposed power plant operating scenario; information on existing power plant, if any; historical electrical usage; other planned infrastructure projects for the community; recommended site for new power plant, if applicable; environmental assessments and considerations; site survey information; site control and geotechnical investigations; flood data; permits and agency reviews; conceptual engineer drawings and cost estimate; construction plan and schedule.

the final design from the conceptual design and whether the changes affect the project capacity or unit costs. If the changes increase design capacity beyond policy limits, see the energy project design capacity policy is discussed below. or increase unit costs beyond the benchmark limits, AEA must provide the Commission with written justification for such changes. The Commission may determine there is sufficient justification for the project capacity and costs or AEA can modify the final design to bring the project into compliance with the capacity criteria and benchmark costs. When satisfied, the Commission will release funding for construction of the project.

3. Energy project design capacity policy. This policy states that the design capacity of a power plant shall be based on projected power requirements for not less than five years nor more than ten years. If feasible, the design layout should allow for future expansion to meet the community's needs for at least twenty years. In addition, the rate of change in the community's population over the past ten years, historical power production and consumption data, and future infrastructure development that increases electric energy consumption must be considered.
4. Energy project prioritization policy. These are guidelines for moving an energy project forward to the final design and construction phases. As a financial assistance award recipient, AEA is responsible for the enforcement of this policy.

The policy states that, when the project has a completed conceptual design and a draft business plan, the project is to be placed in the queue for the final design and construction phases. In addition, the community must provide signed resolutions agreeing to the conceptual design and draft business plan, and committing to adopt the finalized business plan before funding for the final design phase can be authorized. The business plan must be completed by the time the final design phase is completed.

Funding for the construction phase will not be authorized by the Commission prior to the completion of the final detailed design, the community signing the completed business plan, and the community providing a signed copy of the lease or deed for the project site.

Controversial project prioritization issues may be referred to the Commission's Energy Program Manager for resolution.

The Commission, through the financial assistance award agreements with AEA and its policies, controls which projects receive funding for each phase of the project: conceptual design, final design, and construction. The Commission must also approve the design as complying with its capacity criteria and unit costs benchmark limits.

AEA is required to issue subgrants to the community's for which the Commission has approved for funding. The agreement between AEA and the Commission allows AEA to act as an agent for the subgrantee in the planning, design, and construction of the power plant facility or upgrade.

AEA is allowed to charge the direct cost of its personnel time devoted to, as identified on their timesheets, the performance of the award, that is planning and construction of the

project. In addition, up to 4% of the total costs of a project under the award may be charged as a direct cost of AEA personnel, supported by timesheets, administering the award. Any costs that exceed the 4% limit are considered a matching contribution from AEA.

The following are AEA expenditures by funding source for the FY04 through FY 08, as of February 27, 2008:

Exhibit 1

RPSU Expenditures (In thousands)					
<u>Funding Sources</u>	<u>FY 04</u>	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>	<u>FY 08</u>
Federal – Denali Commission	\$7,677	\$13,036	\$9,137	\$6,183	\$6,505
Federal – USDA, Rural Utility Service	-0-	-0-	-0-	747	154
State	-0-	19	43	46	31
Totals	\$7,677	\$13,055	\$9,180	\$6,976	\$6,690

Source: AEA audited financial statements and accounting records.

Procurement Policies and Procedures

The federal financial assistance agreements between AEA and the Commission require AEA and its subgrantees to comply with federal procurement regulations.¹² These regulations permit grantees and subgrantees to use their own procurement procedures provided that such procedures conform to applicable federal law and the standards enumerated in the federal regulations.

AEA has developed procurement policies and procedures for the RPSU and Bulk Fuel Upgrade projects. However they were not promulgated through regulations but rather are available on-line as part of the *Rural Energy Group Bulk Fuel Upgrade Program/ Rural Power System Upgrade Program Project Reference Manual* (REG Manual).

The procurements under the REG Manual fall into three categories: small (\$5,000 or under), informal solicitation for quotes (\$5,001 to \$100,000), and formal solicitation for bids or proposals (\$100,001 and over). Standard procedures call for all procurements of greater than \$5,000 to be competitive, with the low bid deciding how a contract will be awarded. A proposal method may be used if the AEA project manager determines that factors other than cost are a significant consideration. In these cases a numerical rating system shall be used to rate proposals and cost must be an evaluation factor with a minimum weight of 50 percent. AEA has regulations in place for parties to protest procurement decisions made under the REG Manual.

¹² 15 CFR 24.36.

RPSU Procurement Litigation

As part of AEA's mission to reduce cost of energy in rural Alaska, AEA provides technical assistance¹³ for Alaskan communities that do not have the expertise to design, build, or in some cases, fully maintain, a modern diesel-fired electric power system and its associated switchgear. To carry out its mission, in the mid-90's AEA staff developed a standardized design specification for switchgears.¹⁴ Over the past 15 years, AEA has developed and installed automatic load-sharing, paralleling switchgear to maximize fuel efficiency by matching the appropriate generator with the variable load. Specifically, the switchgear will automatically control the starting and stopping of the generator equipment on demand. AEA's switchgear uses a programmable logic controller (PLC)-based system.

In June 2004 AEA's procurement process for switchgear systems to be installed in eight rural Alaskan communities was protested. The protest was by Powercorp Alaska, LCC an Alaskan subsidiary of an Australian company who manufactures an alternative to the PLC which runs off personal computers.¹⁵ In September 2004, AEA accepted the recommended decision of its hearing officer that concluded AEA did not abuse its discretion in procuring the switchgear systems. The State Superior Court and the State Supreme Court upheld the hearing officer's decision regarding the procurement of switchgear systems. Specifically, the November 2007 State Supreme Court opinion¹⁶ stated that

...appellant Powercorp Alaska, LLC alleges that the agency [AEA] unduly restricted competition in the bidding process by requiring bidders to use a particular operating system that Powercorp does not use. At issue is whether the agency violated its authority in issuing a specification that excluded from competing for the contract. We affirm the agency's determination that no violation occurred... Because the Energy Authority's decision to deny Powercorp's bid protest has a reasonable basis in law and is supported by substantial evidence, we AFFIRM the agency's decision in all respects.

AEA management contended that AEA "had no experience with either PC [Personal Computer]-based systems in general or the Powercorp system in particular." The hearing officer found that the agency had "reasonable grounds for not accepting a PC-based alternative at this time." AEA had pre-existing construction schedules that dictated the timing of the Invitation to Bid (ITB). The hearing officer found that AEA

¹³ Technical assistance includes design and construction as well as circuit rider training and support for the utilities to maintain and operate powerhouses.

¹⁴ These are assemblies of switching and interrupting devices, along with controls to check and regulate the flow of power, metering devices to measure the flow of electric power, protective devices to protect power service from interruption and to prevent or limit damage to equipment, and regulating equipment. These devices/controls allow for the automatic match of diesel-generator units to the electrical load requirements to gain fuel efficiency.

¹⁵ PLC-based systems use ladder logic to derive commands for the engine controllers from the data submitted by the sensors. PC-based systems rely on a personal computer rather than a PLC to derive the commands sent to the engine controllers.

¹⁶ Powercorp Alaska v. State, et al., Case No. S-12176, No. 6196 (11/9/07)

“did not abuse its discretion by issuing the ITB before completing its evaluation of the PC system.”

Further the hearing officer concluded that it was appropriate for AEA to ask Controlled Power (a manufacturer of PLC switchgear) for technical information concerning the system the company built for AEA’s switchgear demonstration project for purposes of developing bid specifications for the ITB. The hearing officer declined to address whether the brand-name specification for the Allen-Bradley supervisory controller was unduly restrictive. This was because Powercorp had no intention of submitting a bid for a PLC system, therefore, the brand name specification was immaterial from Powercorp’s perspective.

Effect of Renewable Energy Grant Program

During the 2008 legislative session, a bill¹⁷ was passed establishing a renewable energy grant fund to finance certain energy projects in Alaska. AEA will administer the fund and, in consultation with an advisory committee and the Department of Natural Resources, will develop a methodology for prioritizing projects, establish grant eligibility requirements, adopt regulations identifying criteria to evaluate the benefit and feasibility of projects, make recommendations to the legislature for renewable power production reimbursement grants, and submit to the legislature each session recommendations regarding eligible applicants’ projects. As a result of this legislation, questions that may arise are how active has AEA been in the area of renewable energy resources and whether the RPSU program to improve diesel power generation needs to continue. The following discusses these two issues.

AEA in the partnership with the Commission has been engaging in alternative energy resources (aka renewable energy) projects for almost 10 years. The first project related to alternative energy resources administered by AEA and funded by the Commission was in the year 2000. In the last five years, AEA spent almost \$29 million (\$25 million federal funds and \$4 million state funds) on alternative energy resource related projects. Examples of these projects include: Craig Biomass District Heating, Landfill Gas Assessment; Geothermal Outreach (workshops, conferences, and resource availability); and Tidal In-Stream Energy Conversion Feasibility Study.

In December 2007 AEA and the Commission jointly solicited proposals for alternative energy resources projects. The total funding available for the projects is \$5 million (\$4 million from the Commission and \$1 million from AEA). Ninety-six proposals were received of which 60 met the qualifying criteria in the Request for Proposals. AEA engineers and project managers are performing cost-benefit analyses on the 60 projects and will report the results to the Commission. The Commission in concert with AEA will prioritize the projects and issue grants for the available funds.

¹⁷ Chapter 31, SLA 2008

AEA is in the process of developing a State long-term energy plan. The plan will build upon the state studies performed since 1999. One of the goals for the plan is to reduce energy costs by incorporating alternative energy resources.

While alternative energy resources generally cost less than diesel fuel, these resources may not be consistently available due to environmental fluctuations. Therefore, AEA believes diesel-fuel generation needs to be available as a back-up system to ensure electrical power generation for the health and safety of Alaska communities. The Commission and AEA plan to continue the RPSU projects until all 128 rural communities identified in 2000 have upgraded diesel-fuel power generation systems.

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REPORT CONCLUSIONS

We were requested to review and assess the procurement process for Rural Power System Upgrade (RPSU) projects, and the related *Switchgear Evaluation Report*, dated November 21, 2007. In addition, we conducted a survey of communities with a completed RPSU project to obtain their perspective on certain aspects of the program.

In summary, we have concluded the following:

- Procurement policies and procedures for Alaska Energy Authority's (AEA) Rural Energy Group (REG) projects need to be rewritten.
- Procurements for RPSU projects were not consistently made in compliance with the *Rural Energy Group, Bulk Fuel Upgrade Program/Rural Power System Upgrade Program Project Reference Manual* (REG Manual) guidelines or the underlying federal regulations.
- The *Switchgear Evaluation Report* does not clearly meet the original, intended purpose.
- The majority of communities with completed RPSU projects are basically satisfied with their upgraded power system; however, the program provides little community involvement in the design of the system or the procurement process.

Rural Energy Group procurement policies and procedures need improvements.

AEA has developed procurement policies and procedures for its REG projects, including those under the RPSU program. However, we noted deficiencies in AEA's procurements.

In summary, these deficiencies fall into two broad categories. First, the REG Manual does not include some of the procurement practices set out in federal or state regulations (refer to Recommendation No. 1). And second, the agency does not comply with written policies and procedures in the REG manual (refer to Recommendation No. 2).

Several vendors who have done business with AEA under the RPSU program believe that AEA's procurement practices are not consistently fair, equitable, and unbiased. Procurement procedures must be conducted in a manner that provides: increased public confidence, fair and equitable treatment of all vendors, maximum purchasing value; effective broad-based competition within the free enterprise system, and safeguards for the quality and integrity of its procurement system.

Switchgear Evaluation Report does not clearly meet the original, intended purpose

As part of AEA's mission to reduce cost of energy in rural Alaska, AEA provides technical assistance¹⁸ for Alaskan communities that do not have the expertise to design, build, or in some cases, fully maintain, a modern diesel-fired electric power system and its associated switchgear. To carry out its mission, in the mid-90's AEA staff developed a standardized design specification for switchgears.¹⁹ Over the past 15 years, AEA has developed and installed automatic load-sharing, paralleling switchgear to maximize fuel efficiency by matching the appropriate generator with the variable load. Specifically, the switchgear will automatically control the starting and stopping of the generator equipment on demand.

In November 2003 through funding provided by the Denali Commission, AEA procured switchgear controllers systems to include remote monitoring capabilities from two different vendors.²⁰ According to AEA's procurement documents,

The [Denali] Commission has requested several different systems be installed to evaluate and determine which system will work best in the communities. The primary goals are to reduce the cost of power in communities, provide reliable power to the customers, and to be able to remotely monitor the systems.

The switchgear systems were installed in two different rural Alaskan communities²¹ that were scheduled for a power system upgrade project. In mid 2004, the construction for one of the new power systems was completed, while the other power system was completed in early 2005.

In September 2006 AEA solicited for an independent evaluation of switchgear systems installed in five rural communities.²² The evaluation was to be performed by a registered electrical engineer familiar with automatic paralleling switchgear for diesel generators.

Each of the switchgears to be evaluated was manufactured or assembled by a switchgear assembly firm that either adapted the existing design or built the switchgear to the specifications provided by AEA or the Alaska Village Electric Cooperative.

¹⁸ Technical assistance includes design and construction as well as circuit rider training and support for the utilities to maintain and operate powerhouses.

¹⁹ These are assemblies of switching and interrupting devices, along with controls to check and regulate the flow of power, metering devices to measure the flow of electric power, protective devices to protect power service from interruption and to prevent or limit damage to equipment, and regulating equipment. These devices/controls allow for the automatic match of diesel-generator units to the electrical load requirements to gain fuel efficiency.

²⁰ Both vendors were awarded contracts under an approved sole source procurement.

²¹ Golovin and Stevens Village.

²² The evaluation study's scope of work not only included the switchgears in Golovin and Stevens Village, but also included additional switchgear to be evaluated: two villages with switchgear installed by the same vendor for the Alaska Village Electric Cooperative and another system installed in Southeast Alaska by a different AEA vendor.

The evaluation consisted of four phases: (1) data review and interviews with vendors, (2) field inspection and local power operator interviews, (3) evaluation of remote access and Supervisory Control and Data Acquisition (software), and (4) summary report and recommendations. In order to provide a comparative analysis of the switchgears reviewed, evaluation criteria were mutually agreed upon by AEA and the contractor. See Exhibit 2 for a list of evaluation criteria and its respective weighted percent.

In early 2007 the evaluation study was conducted by the consulting contractor and the results of the study were issued in a report in November 2007. The recommendation made by the contractor states that AEA’s existing design specifications for switchgear are appropriate. The contractor also stated that AEA should

...continue their process of evaluating new technology as it becomes available; and incorporate that new technology, where beneficial, into the existing switchgear specifications that are presently used as the basis for their proposal request.

Exhibit 2

Evaluation Criteria	Percent of Criteria
Cost to install	25%
Operability/Functionality	20%
Standardization of control system	10%
Redundancy of controls	10%
Redundancy of master processor	10%
Firm’s technical ability	10%
Cost of maintenance	5%
Company history	5%
Technical support	5%

Source: *Switchgear Evaluation Report*, November 21, 2007

Based on the information contained in the report, it is not clear that the work performed by the contractor meets the Commission’s intended purpose of the evaluation. As stated in the Request for Proposal’s background, the independent evaluation was,

... to determine which system(s) work best in achieving the primary goals of reducing the cost of power in communities, providing reliable power, and allowing remote monitoring of the power system.

In particular, the evaluation report does not clearly state how the cost of power in the communities was reduced by the various switchgear under study nor does it determine which one provides the most effective and user friendly remote monitoring.

Communities indicate little involvement in the RPSU projects but majority are satisfied with their upgraded power systems.

We surveyed 22 of the 26 rural communities²³ that received a power system upgrade. The following is a summary of the responses received from the communities.

²³ Officials in four communities were unavailable or did not respond.

Eighty-two percent of the communities responded they were satisfied with their RPSU project, while 14% were dissatisfied. Dissatisfactions were largely due to equipment not working properly.

The communities were asked how involved they were with the powerhouse design, selection of contractors, and force account labor. The majority were not involved with the powerhouse design (59%) or the selection of contractors (64%). In contrast, the majority of the communities, 64%, reported involvement with the use of force account labor for the construction phase of their project.

We also asked the community about the on-site operator training that was provided for the upgraded power system. Nineteen communities²⁴ indicated that operator training was provided, with 15 of those communities stating the training duration was at least one full day. However, the remaining four communities received only a half day or less of training. The overall satisfaction with the quality and quantity of the on-site operator training was rated by 74% of the respondents as satisfactory, while 26% of the respondents were less than satisfied. Most dissatisfaction was in the communities that received a half day or less of training.

The communities were asked to rate the operating reliability of their new power system. Seventy-seven percent rated their system as reliable 75% or more of the time. While 23% believed the system was reliable about 50% or less of the time. Problems with the power systems included overloading resulting in shutdowns and generator malfunctions.

We then asked if the community had to repair or replace the following items related to their new power system: powerhouse building module, switchgear controllers, generator, cooler, fuel connections or any other major item. Generators at 13 of the 22 communities had to be repaired or replaced and three communities had to repair or replace switchgear controllers. Ten communities had one or more of the other listed items repaired or replaced in their power system. Six communities of the 22 surveyed did not report any repairs or replacements.²⁵

The communities were asked if the repairs or replacement of the items were related to the construction of the power system. Twelve of the 16 communities with repairs or replacements indicated the problems were related to the construction. Then, we asked who paid for the repairs. Nine communities stated that state or federal funds were used, while four stated they paid for all or a portion of the costs.²⁶

We also inquired whether the community had requested that the power system design include the ability to use an alternative energy resource in addition to diesel fuel. If they had made

²⁴ Two respondents (9%) did not know about the operator training. One community did not have operator training, because their power system operator had years of experience and had received some AEA training in the past.

²⁵ The responses total more than 22 on this question because some communities selected more than one item.

²⁶ One community stated the costs were shared between it and AEA.

such a request, we asked whether AEA included the request in the system design. Four communities stated AEA had provided the capability to use an alternative energy resource as they requested, while three communities stated that AEA had not included the request in the system design. Fifteen communities made no such request.

We asked for additional comments or suggestions regarding the RPSU program. Some of the comments made included:

- AEA did a good job assisting our village.
- AEA needs to work closer with the communities and involve them in the procurement process.
- Let the community have a say in the physical design of their power plant, so it is appropriate to their environment.
- AEA allowed for no involvement by the community on any aspect of the project, except for the location of the system.
- Let one contractor be responsible for the project.
- AEA's communications with the communities should be improved.
- AEA does not respond for weeks when requested to fix something that the communities are not able to fix on their own.

While it appears the majority of communities surveyed are satisfied with their RPSU project, AEA management should ensure any issues or concerns of the communities are addressed.

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FINDINGS AND RECOMMENDATIONS

Recommendation No. 1

The executive director of the Alaska Energy Authority (AEA) should undertake revision to the Rural Energy Group procurement policies and procedures to more closely align with the state developed policies and procedures.

AEA receives 99 percent²⁷ of the funding for Rural Power System Upgrade (RPSU) projects from federal sources – primarily the Denali Commission. The federal assistance agreements governing this funding require AEA and its subgrantees to comply with federal procurement regulations.²⁸ These regulations permit grantees and subgrantees to use their own procurement procedures provided that such procedures conform to applicable federal law and the standards enumerated in the federal regulations.

Most rural communities do not have any established procurement policies and procedures or, if they do, such procedures are not compliant with the federal law and regulations. It is AEA management's perspective that the procurements made under the RPSU program are not subject to the state procurement code. AEA management sees itself in the role as acting as an agent for the community; in the planning, designing, and construction of the projects, including making related procurements.

AEA has developed a set of procurement policies and procedures to use for a community's RPSU project. These procurement policies and procedures are incorporated into the AEA *Rural Energy Group, Bulk Fuel Upgrade Program/Rural Power System Upgrade Program Project Reference Manual* (REG Manual) According the AEA management, "*these procurement procedures, while not identical to the state and federal procurement requirements, parallel both.*"

AEA management may believe the REG Manual is parallel to state and federal procurement requirements, but there are key areas where REG procurement requirements do not or inadequately address specific aspects set out in state or federal procurement codes, regulations, and policies and procedures.

The following are areas of weakness in AEA's procurement system related to informal and formal procurement methods.²⁹ Not only do AEA's procurement policies and procedures not

²⁷ Based on FY 07 and FY 08 (through February 27, 2008) revenues for the RPSU program.

²⁸ 15 CFR 24.36.

²⁹ Informal procurements (\$5,001 to \$100,000) are made without public notice and AEA staff contact three or more vendors for a quote. Formal procurements (over \$100,000) are publicly noticed through the issuance of an Invitation for Bids.

comply with federal and state procurement procedures, but are not consistent with good procurement practices:

- Approval authority listing is not maintained. The listing of AEA staff with purchasing authority along with the dollar limits placed on that authority is not updated regularly. We saw a listing that listed former staff members and did not include new staff members. Such a listing should be consulted by accounting staff in evaluating if contracts are properly authorized or procurements were made in accordance with established purchase authority.
- Signatory records are not maintained. No signatory records are maintained to ensure only authorized personnel approve procurements and the payment for the purchases. Again, accuracy of such a listing is important in making sure that individuals authorizing and receiving goods and services are acting within the scope of their authority as set by management.

Federal³⁰ and state³¹ procurement regulations both require procurement delegations to be in writing and the authorizing signature to be a verifiable symbol of an individual to indicate a present intention to approve the document. A key part of making sure such requirements are consistently met is to maintain a formalized written list of the purchasing authority of various staff and the signature of the staff involved so that approvals can be verified.

- A formal vendor listing is not maintained for various types of procurement. A vendor listing is not maintained for procurements that require AEA staff to only obtain price quotes from at least three vendors rather than issuing invitations for formal bids. Use of such a listing allows private sector businesses seeking to do business with AEA a formalized way to be recognized as a qualified supplier, and be given an opportunity to provide price quotes as necessary. Currently, the group of vendors used by AEA project staff is kept in the staff's minds, and there is no documentation that staff selected vendors for informal bidding in a nonexclusive manner.

Federal procurement regulations³² require necessary affirmative steps are taken to assure small and minority firms and women's business enterprise are considered. All procurements are to be made under full and open competition.³³ In order to promote competition, the solicitation of quotes must not be based on personal preference. Without a vendor listing or an alternative method to advertise procurements greater than \$5,000 but less than \$100,000, like the Department of Transportation and Public Facilities (DOTPF) has on its website, neither of these requirements can be substantiated for RPSU procurements.

³⁰ CFR Title 48, Federal Acquisition System.

³¹ AS 36.30.990 (18), 2 AAC 12.740, and AAM 35.060.

³² 15 CFR 24.36 (e).

³³ 15 CFR 24.36 (c) (1) and (4).

During the period from July 2006 through February 2008, AEA awarded 15 contracts, totaling just over \$6 million, through a formal procurement process using Invitations to Bid, while the remaining 96 contracts, totaling about \$2.3 million, were awarded through the informal process of contacting three or more vendors for a quote.

- A formal record of the date and time bids or proposals are received is not consistently kept. A record of the date and time of the receipt of bids/proposals was not consistently maintained to ensure they were received prior to the publicly noticed deadline. Federal, state, and REG Manual procedures require this for Invitations to Bid and Request for Proposals.
- Use of specific brand name equipment is not consistently justified. Written justification for limiting brand name specifications was submitted by the project manager and approved by an AEA procurement manager in some instances. In another instance, the brand name specification was not included in a stamped set of design drawings by AEA's contract consulting engineer firm.

The REG Manual provides that:

...a specification that limits the procurement of items to a specific manufacturer's name or catalog number for purchases over \$5,000 shall only be used for equipment, materials, or supplies specifically identified by a consulting engineer and included in a stamped set of design drawings.

However, the design specifications for a powerhouse were developed by AEA employees. The consulting engineer takes those specifications and prepares a stamped set of design drawings to allow for proper installation of the powerhouse, like a blueprint for the construction contractor.

Federal regulations³⁴ state “specifying only a “brand name” product instead of allowing “an equal” product to be offered. . .” is a situation considered restrictive of competition.

Specific brand name requirements were used in purchases of equipment related to the powerhouse switchgear, engines, generators/alternators, and coolers. The procurements for these items totaled approximately \$5.4 million during the period from July 2006 through February 2008. A written justification supported the brand name generators and alternators. However, the remaining \$2.5 million of procurements with brand name specifications were without written justification approved by the procurement officer.

³⁴ 15 CFR 24.36 (c) (1) (vi).

In other instances, primarily discussed in more detail in Recommendation No. 2, there are examples where RPSU procurements were not done in a manner consistent with REG policies and procedures, or the underlying federal procurement regulations.

Project staff's actions have been inattentive in following good procurement practices that are consistent with federal and state requirements. Accordingly, REG requirements should be revised to better align AEA procurement actions with the letter and spirit of the federal funding standards.

We believe there is no need to develop a written set of policies and procedures that are different from the state procurement policies and procedures. Rather, like DOTPF, AEA should use the state procedures as the base and only make changes where federal regulations differ. We compared the state procurement policies and the federal requirements for RPSU projects and found minimal differences. The main difference is that the federal regulations do not allow for in-state or local geographical preferences in the evaluation of bids or proposals while state law and regulations allow such preferences.

Both the Department of Administration and DOTPF have worked to develop procurement procedures that provide for fair and open procurement methods. The procurement policies and procedures for the Rural Energy Group projects should be more aligned with the content and format of the state policies and procedures. These are standards that are known across state agencies and familiar to vendors and firms doing business in Alaska.

Recommendation No. 2

AEA Rural Energy Group procurements should be made in accordance with the required policies and procedures.

There were three exceptions to established procurement standards related to the award of what are referred to as term contracts. These contracts, last awarded in 2002, essentially put a group of firms on retainer to AEA. This allows the agency to make work assignments on an as needed basis, through what are termed Notices to Proceed (NTP). The exceptions included:

- The cost of services was not a part of the evaluation criteria for the term contract award. Cost was not used as one of the evaluation factors of proposals for construction management services (CMS) term contracts. CMS firms not only provide oversight of a project, the firm also provides skilled labor if the skills are not available through the community's labor force.

AEA's REG Manual states "*cost must be an evaluation factor for proposals*" and given a minimum weight of 50 percent in the evaluation.

Federal regulations allow for the use of competitive sealed proposals as does the State. Federal regulations state that

...Awards are to be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; ...The method, where price is not used as a selection factor, can only be used in procurement of A/E [architectural/engineering] professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

There were twelve firms that were responsive to the 2002 request for proposals (RFP) issued by AEA. Three were engineering firms and the other nine were construction firms. Five firms were awarded construction management services term contracts for one year with four one-year renewal periods. The awards ranged from \$5 million to \$20 million.

- Business licenses were not confirmed. Three of the five firms awarded a CMS term contract did not have a state business license in the construction line of business as required by state law and regulation.³⁵
- NTPs were awarded to term contractors in a non-competitive manner. Specific construction projects were assigned to a CMS firm through the issuance of a NTP. There was no “mini-competition” between the term contract CMS firms. AEA requests the assigned CMS firm to submit a project proposal, but does not perform a documented technical/price analysis.

Assignment of the construction of a RPSU project to a CMS term contractor through a NTP does not provide fair and open competition prescribed by the federal regulations. Federal regulations require all contractors under multiple award contracts be provided a fair opportunity to be considered for a NTP in excess of \$3,000.³⁶ Further, AEA must perform a cost or price analysis in connection with every procurement action including contract modifications.³⁷

These deficiencies are such that the procurements made with federal funding may result in questioned costs. The deficiencies stem from both the inadequacies of the procurement policies and procedures as set out in the REG manual and the erosion over time of the importance of consistently following an established set of procurement standards.

Various vendors who have done business under the RPSU program believe that AEA’s procurement practices are not consistently fair, equitable, and unbiased. Procurement procedures must provide actual and perceived fair and equitable treatment of all persons in order to maintain the quality and integrity of AEA’s procurement system.

³⁵ AS 36.30.210 (e) requires a valid business license at the time designated for opening of the proposals. 12 AAC 12.020 requires a separate business license for each line of business in which the firm seeks to engage in the State.

³⁶ 48 CFR 16.505(b)(1)

³⁷ 15 CFR 24.36 (f).

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October 20, 2008

RECEIVED
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LEGISLATIVE AUDIT

Ms. Pat Davidson, Legislative Auditor
Division of Legislative Audit
P.O. Box 113300
Juneau, AK 99811-3300

RE: Response to preliminary audit reports on:
Department of Commerce, Community, and Economic Development, Alaska Energy
Authority, Rural Power System Upgrade Program, August 15, 2008

Dear Ms. Davidson:

This letter is in response to the September 29, 2008 letter which transmitted the preliminary audit reports (Report) described above. As requested, the Alaska Energy Authority (AEA) provides the following information, which we understand will become a part of the final Report.

In general, AEA concurs with the preliminary audit report conclusions. AEA acknowledges the need to update the written rural energy procurement policies and procedures, which are used when contracting on behalf of rural communities. These procedures were specifically developed to assist AEA's Rural Energy Group (REG) in constructing bulk fuel facilities and rural powerhouses as community grantee agents under Denali Commission grant programs. These procedures were developed and are separate from other AEA procurement procedures, since these procurements are exempt from AS 36.30.

AEA procurement staff has updated its procurement practices. Since hiring a new Procurement Manager II in 2004, AS 36.30 exempt REG procurements are being made taking into consideration AS 36.30 procurement practices. Although practices have been updated, written policies do not yet reflect the procedural changes.

Since the audit was completed, AEA procurement staffing has changed, starting with the departure of the incumbent Procurement Manager I. AEA (whose staff, per statute, are employees of the Alaska Industrial Development and Export Authority) has hired an experienced Procurement Manager I, who worked for another Alaska state public corporation under procedures, although exempt from AS 36.30, which were similar to AS 36.30. AIDEA has recently created a new position and hired another procurement manager with experience in DOT/PF contracting. These changes will allow AEA to update the written procedures used for rural energy grant construction projects as well as develop internal controls within the procurement section to provide better quality control and consistency in its procurement documentation.

Specific Response to the Report Recommendations

Recommendation No. 1

“The executive director of AEA should undertake revision to the REG procurement policies and procedures to more closely align with state developed policies and procedures.”

We concur with the overall recommendation to update the REG procurement policies and procedures to more closely align with state developed policies and procedures.

Steps have already been taken to more closely align RPSU procurements with DOA and DOT/PF policies and procedures, as evidenced by the methods used to develop new term contracts for engineering services in 2007. AEA’s goal is to have a formal working draft of new procedures by the end of January 2009, and a final version with adoption of regulations, if necessary, by June 2009. Since the procurements AEA makes as agents of communities are not subject to AS 36.30, AEA anticipates that in order to be compliant with federal restrictions, give communities the ability to be more directly involved in their projects, and limit the State’s liability, AEA’s adopted policies and procedures will be different than DOT/PF and DOA in some areas. In particular, we anticipate differences in approval authority for non-standard procurements, use of force account labor, use of preferences, and levels of authority in resolving protests and disputes.

As to the specific comments noted under Recommendation No. 1, we concur with the recommendation as it relates specifically to maintaining an approval authority listing and signature records. We also concur with the need to be consistent with recording receipt of formal bids and proposals and justifying brand name equipment specifications in bids.

A system should be in place for updating our authority listing and signature records by the end of November 2008. AEA has already put in place a peer review process for bid development to bring consistency to bid receipt tracking and justifications of brand specific bids.

AEA does not concur with the genesis of the comment “A formal vendor listing is not maintained for various types of procurement.” There is currently no requirement in state or federal statutes or regulations that requires a vendor listing be maintained for use on informal procurements. AEA believes the difficulties and cost to update and maintain such a list for one small program is not cost effective.

AEA does agree that staff can take steps to better research the markets to promote more competition. A better option for AEA is to use existing on-line vendor listings, such as Buy Alaska and those maintained by DOT/PF, and encourage any vendors who do business with AEA to contact the entities who maintain those sites. AEA has had discussions with DOT/PF procurement staff regarding access to their site and been told it should be possible. Details on how to use DOT/PF’s site are expected to be in place by December 2008. Staff has already been instructed to take steps to proactively look for other suppliers of materials, equipment, or services routinely procured.

Recommendation No. 2

AEA Rural Energy Group procurements should be made in accordance with the required policies and procedures.

We concur that applicable procurements should be made in accordance with policies and procedures. Specific to the comments noted in the Report, AEA concurs with the need to consider cost as part of the evaluation criteria for award of construction management services and confirming contractor's have appropriate business and professional licenses prior to award.

However, AEA does not concur with the comment "NTPs were awarded to term contractors in a non-competitive manner."; references to AEA's construction management services (CMS) term contracts as "retainer" contracts; nor to the reference to 48 CFR 16.505(b)(1).

As stated on page 25 of the Report, AEA established its CMS term contracts in 2002 with "twelve firms that were responsive to the 2002 request for proposals (RFP) issued by AEA." AEA did a formal competitive solicitation process to obtain the CMS contracts. Generally, retainer contracts involve a fee paid for an exclusive right to services whether those services are used or not. Under the CMS term contracts, AEA pays only for services rendered. AEA's CMS contracts were competitively solicited.

For AEA's CMS contracts, unit prices (i.e., wage rates, mark ups, etc.) were established in the contract based on the initial solicitation and annual renewals. The pricing analysis for a specific NTP is done at the time the project manager solicits a proposal from a specific term contractor, using rates already established by contract. If, at the time work is solicited for an NTP, the project manager believes the cost for the work is not reasonable, he either negotiates with the contractor regarding the scope or contacts another term contractor to see if the work can be done more efficiently.

Although not explicitly identified in the procurement records, the RPSU project manager did consider cost when selecting a construction manager. If a contractor had higher rates, that contractor was considered only if it provided services not comparable by another contractor or if costs were mitigated by the contractor already being on or near site, thereby reducing mobilization costs. There was no need to solicit additional proposals as the unit prices were already established in the contracts.

AEA acknowledges, when the contracts were established in 2002, cost should have been an evaluation factor and a clearer process could have been identified for contractor selection of specific project work.

AEA intends to remedy the process of documenting contractor selection for work under term agreements and evaluation of cost and pricing data by using cost as an evaluation factor and having procurement staff more involved in the NTP stage of the process in future CMS term contracts (similar to the process used for soliciting the 2007 Engineering Term Contracts). AEA anticipates soliciting for new CMS term contracts before March 2009 and will incorporate term contractor selection process into the new contracts. AEA may also explore the possibility of

using an abbreviated open solicitation process similar to that used by Village Safe Water this winter, to see if that method of contracting would be efficient and cost effective for AEA's grantees.

AEA believes the reference to 48 CFR 16.505(b)(1) on page 25 (footnote 36) is inappropriate because it infers that because the Federal Acquisition Regulations (FAR) requires "contractors under multiple award contracts be provided a fair opportunity to be considered for an NTP in excess of \$3000" that AEA should do the same. The FAR is established for the codification and publication of uniform policies and procedures for acquisition by all "Federal" executive agencies (48 CFR 1.101). It is not applicable to AEA's procurements under Denali Commission grants, which are governed by OMB Circular A 102.36 and previously under 15 CFR 24.36.

Response to other Report Conclusions not specifically included in RECOMMENDATIONS.

The Switchgear Evaluation Report does not clearly meet the original intended purpose.

We disagree with the conclusion that the Switchgear evaluation report does not clearly meet the original intended purpose, which was stated in the background section of the Request for Proposal's scope of work;

...to determine which system(s) work best in achieving the primary goals of reducing the cost of power in communities, providing reliable power, and allowing remote monitoring of the power system (2003).

The Report conclusion states "the evaluation report does not clearly state how the cost of power in the communities was reduced by various switchgear under study nor does it determine which one provides the most effective and user friendly remote monitoring."

By 2006, when the evaluation contract was solicited, AEA knew the installation of multi parallel switchgear, with new generators, did reduce the use of diesel in communities. However, it would have been difficult to determine which system worked "best" to reduce the cost of power, as there are too many other variables (i.e., size of the load, generator age and size, and maintenance).

With respect to determining which one provided the "most effective" and user friendly remote monitoring, a review of the switchgear evaluation summary shows that all the gear evaluated scored equally high on operability and functionality.

Prior to soliciting the evaluation report, AEA had learned that a number of issues affect the cost of switchgear and, as a result, expanded the evaluation criteria beyond what was stated in the background of the solicitation done in 2003.

The general scope of the 2006 RFP and subsequent contract was to have a registered electrical engineer familiar with automatic paralleling switchgear for diesel generators perform an independent evaluation of switchgear systems. The evaluation was to include a comparison of the Powercorp system in Golovin, the AEA designed system in Stevens Village, and as funding

permitted (based on the responses to the RFP), also evaluate the most recently completed AEA designed system in Tenakee Springs, and systems installed by AVEC in Elim and Kasigluk. The evaluation of each system included four phases: 1) Data review and interviews; 2) Field inspection and local operator interview; 3) Remote access and SCADA evaluation; and 4) Summary report and recommendations. The tasks involved in each phase were specifically listed in the RFP and subsequent contract.

Specific evaluation criteria were recommended in the RFP and the contract, which was subsequently modified after AEA staff met with the contractor during Phase I to confirm the final evaluation criteria and format that would be used in conducting the evaluation of switchgear.

In summary, the final criteria were: the cost to install; standardization, compatibility and availability of spare parts; operability/functionality; cost of service and upgrades; redundancy capabilities; as well as the track record of the vendors. We believe this criteria was more appropriate than limiting the criteria to determine which system(s) work best in achieving the primary goals of reducing the cost of power in communities, providing reliable power, and allowing remote monitoring of the power system. The contractor's final work product met the intent of the project and provided an independent recommendation for switchgear design and standards.

Community Surveys

The Report states 22 of the 26 communities with completed Rural Power System Upgrade (RPSU) projects were surveyed. Of those, 82% of the communities were satisfied with their project and 14% were dissatisfied. The dissatisfactions were largely due to equipment not working properly.

It is difficult to respond to very broad statements without knowing further details. An example is comments relating to repairs or replacement of equipment in new powerhouses, found on page 18 of the Report:

"Generators at 13 of the 22 communities had to [be] repaired or replaced and three communities had to repair or replace switchgear controls." and

"The communities were asked if the repairs or replacement of the items were related to the construction of the power system."

All of the major components in a powerhouse have a manufacturer's warranty of one year, starting when the plant goes on line. Without knowing the maintenance practices of a utility and whether simple maintenance was completed on the powerhouses in question, AEA cannot respond to the observations. There are two sides to every story and AEA cannot adequately present its side without knowing the communities affected; there may have been extenuating circumstances such as improper maintenance, changes in personnel, or manufacturing defects.

Besides satisfaction with their project, the communities were also asked about their involvement in the design, selection of contractors, force account labor, on-site operator training, reliability of

the new power system, repairs or replacement of items related to their new power system, and the ability to use an alternative energy resource besides diesel fuel.

The degree of community involvement varies depending on the community; regardless of a community's involvement, AEA actively takes steps to work with communities as described in the RPSU process outlined below.

The first step in any RPSU project is the conceptual design report (CDR). The CDR is prepared by a design engineer hired by AEA to take into consideration, among other things, current power requirements of the community and future anticipated growth of those power requirements over the next ten years (to include consideration of new housing units, any airport expansion, water/sewer system demands, alternative energy resources, etc.). This information is gathered from local utilities, community governmental bodies and federal and state organizations.

The CDR stage of the project provides the community the opportunity to offer their wants and needs for the RPSU project. Meetings are held in the community to discuss these items. The process takes 3 to 6 months to complete; before the CDR is finalized, the community has to approve the CDR before the project can move forward.

After completion of the CDR, the project moves to final design/procurement and then construction. The contractor is selected from the construction management term contractors. This gives AEA the ability to assign a specific contractor to a project that has experience in RPSU construction. The contractor works with the community to hire local force account labor when possible; not all communities have the certified personnel required to meet the highly specialized construction needs of the projects (welders, electricians, mechanics, etc.).

As construction of a powerhouse reaches completion, there is an approximate two week startup period. AEA staff provides training to local operators throughout that process. The amount of training in the community is determined by the availability and skill level of the local operators; operators may have other commitments and be unavailable for training and, when available, some operators catch on quickly and others take several days.

In addition to onsite training, AEA has a training program for all operators statewide at no cost to the communities. It is scheduled twice yearly at the AVTEC training center in Seward, AK. Every utility is encouraged to send their local operators to this training for certification. AEA also has the circuit rider program; every community is eligible. This program assists operators with training on the equipment in their powerhouse.

The overall reliability of the community's power system, whether new or old, is ultimately the utility's responsibility. With the cost of fuel climbing, AEA has observed over the last couple of years that utilities have to choose between buying fuel to keep the lights on or buying parts to keep a generator running. Some cannot do both; most defer maintenance so they can buy fuel.

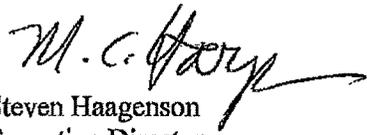
Ms. Pat Davidson
October 20, 2008
Page 7 of 7

Conclusion

We appreciate the opportunity to respond to the preliminary audit report. We are in the process of updating the written rural energy procurement policies and procedures and providing new procurement staff with the knowledge and authority to ensure consistency in the implementation and application of these procedures.

Sincerely,

ALASKA ENERGY AUTHORITY


for Steven Haagenson
Executive Director

cc: Commissioner Notti, DCCED

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ALASKA STATE LEGISLATURE

LEGISLATIVE BUDGET AND AUDIT COMMITTEE



Division of Legislative Audit

P.O. Box 113300
Juneau, AK 99811-3300
(907) 465-3830
FAX (907) 465-2347
legaudit@legis.state.ak.us

October 27, 2008

Members of the Legislative Budget
and Audit Committee:

We have read the Alaska Energy Authority's response to this audit and nothing in the response gives us cause to reconsider the report's overall conclusions or recommendations.

Sincerely,

A handwritten signature in black ink that reads "Pat Davidson".

Pat Davidson, CPA
Legislative Auditor