

State of Alaska
FY2004 Governor's Operating Budget

Department of Community & Economic Development
Rural Energy Programs
Budget Request Unit Budget Summary

Rural Energy Programs Budget Request Unit

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BRU Mission

The mission of the Alaska Energy Authority - Rural Energy Operations component is to lower the cost and increase the reliability of rural energy systems.

The mission of the Circuit Rider program is to increase the reliability and efficiency of rural electric systems and to respond quickly and effectively to electrical emergencies.

BRU Services Provided

The Energy Operations Component provides personnel resources and administrative support needed to implement Alaska Energy Authority's (AEA) rural energy programs, including bulk fuel storage upgrades, rural power system upgrades, power cost equalization, energy conservation and alternative energy development, circuit rider maintenance and emergency response, training, the Bulk Fuel Revolving Loan Fund program, and the Power Project Fund loan program:

- Bulk fuel storage upgrades - AEA manages the design and construction of tank farm consolidation projects in rural communities. As described in the department's capital budget request, recent funding has been provided primarily by the Denali Commission, supplemented by additional federal funds from agencies such as HUD and by State capital appropriations.
- Rural power system upgrades - AEA manages the design and construction of upgrades and replacements to diesel powerplants and electrical distribution systems in rural communities. Recent funding has been provided primarily by the Denali Commission.
- Power cost equalization (PCE) - Program administration is divided between the Regulatory Commission for Alaska (RCA) and AEA. RCA determines the amount of PCE per kilowatt hour to be paid in each community to each eligible customer. AEA's main task is to review the monthly reports on eligible usage of electricity from the participating utilities and to issue the monthly PCE payments based on the amount of eligible usage and the approved PCE rate. AEA calculates the pro-rated PCE level based on the current appropriated funding level.
- Energy conservation and alternative energy development – Through an RSA with Alaska Housing Finance Corporation AEA receives federal State Energy Program funding to provide technical and financial assistance to rural schools and other institutional energy consumers for energy efficiency improvements. As described in the capital budget request, AEA also manages the federally-funded biomass energy program, participates in wind energy development, and works with the U.S. Department of Energy and rural utilities on a wide range of alternative energy initiatives.
- Circuit rider maintenance and emergency response - AEA contracts with private firms to provide minimal maintenance and emergency response for rural electric utilities. AEA personnel provide contract supervision and supplemental services in the field as needed.
- Training – Denali Commission provides training funds via an RSA through the Department of Labor to the Alaska Energy Authority to fund a program that sends powerplant operators and bulk fuel operators to the Alaska Vocational Technical Center (AVTEC) for training. In addition, the RSA includes funding for utility clerk training.
- Bulk Fuel Revolving Loan Fund - AEA evaluates loan applications for purchase of bulk fuel supplies, issues loans, collects payments, and works with purchasers and fuel distributors as necessary to finance bulk fuel purchases.
- Power Project Fund - AEA evaluates loan applications, issues loans, collects payments, and works with eligible borrowers as necessary to finance eligible projects.

The Circuit Rider program offers preventive maintenance services, on-site operator training, and emergency response to rural electric utilities, specifically the smaller utilities that have difficulty acquiring and maintaining the necessary technical skills. The Alaska Energy Authority (AEA) contracts with private sector firms to provide these services, supplementing with AEA field staff when necessary.

The contract personnel providing these services include qualified plant operators, electricians and linemen. They visit the participating communities on a semi-annual or yearly basis, depending on the conditions of the electrical systems, local

operator skills and utility management. Inspection, testing, and preventive maintenance is performed on diesel engines, generators, control panels, metering systems and other related components. The contractors are assisted by the local plant operators, who acquire training and skills in the process.

As described in the department's capital budget request for electrical emergency funds, circuit rider contractors are also dispatched to participating communities when power failures occur that the local utility is unable to resolve.

BRU Goals and Strategies

See components.

Key BRU Issues for FY2003 – 2004

See components.

Major BRU Accomplishments in 2002

See components.

Key Performance Measures for FY2004

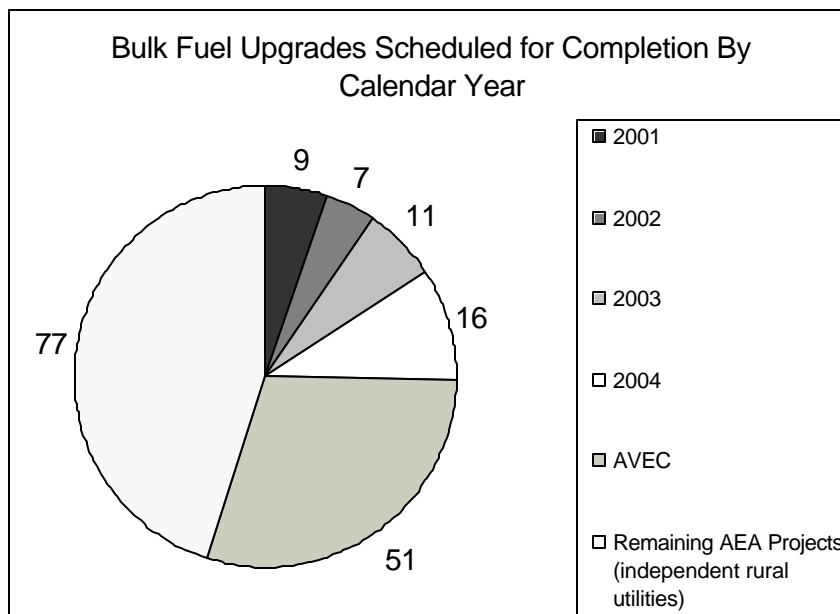
Measure:

The number of bulk fuel storage upgrade projects on rural energy group priority lists compared to the number completed.

Sec 31(b)(1) Ch 124 SLA 2002(HB 515)

Alaska's Target & Progress:

There are 171 communities listed on the bulk fuel storage deficiency list. The following chart shows the progress made towards addressing the bulk fuel storage needs in rural Alaska. In FY01, the Denali Commission provided a financial assistance award to AVEC to address the bulk fuel storage deficiencies in the communities they service. AVEC's progress to address the remaining communities is not tracked by AEA.



Benchmark Comparisons:

Not applicable.

Background and Strategies:

AEA's bulk fuel storage data base and priority list includes information on approximately 1100 tank farms in 171 rural communities. Most of these tank farms have serious deficiencies. The U.S. Coast Guard and the Environmental Protection Agency are continuing to issue citations to owners of many substandard facilities in rural Alaska but have thus far refrained from ordering them closed as long as effective measures are under way to bring them into regulatory compliance.

Consolidation of all tanks into one location is the primary strategy to address the bulk fuel needs of a community. A typical rural village may presently have separate tank farms owned and operated by the city government, the tribal government, the village corporation, the local school, the electric utility, and other public or private entities. Relying primarily on federal funds, the State has conducted a program over the last several years to replace these tank farms with new or refurbished facilities that meet all applicable safety and environmental codes. Consolidation reduces the cost of construction and helps to avoid the inconsistent maintenance and operations practices that can result from multiple projects operated by multiple owners.

There are some communities that are not in need of community-wide consolidations. In FY02, AEA reviewed the deficiency list and determined that there are several communities in which "small scale retrofits" can occur with costs less than \$500,000. Typically these communities can be brought into compliance with fuel storage codes by upgrading existing facilities instead of constructing entirely new facilities.

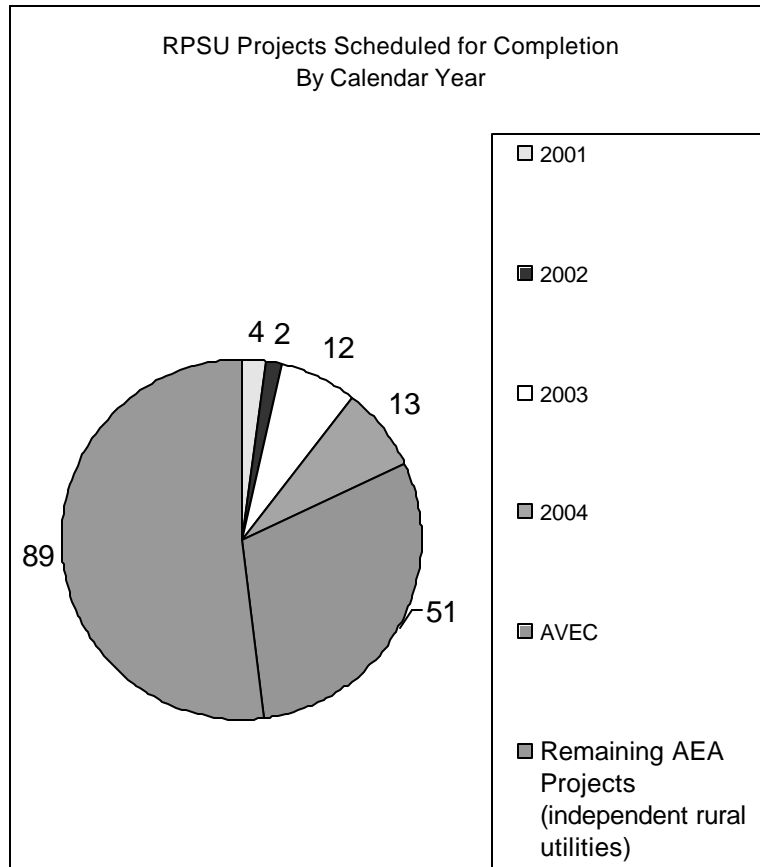
Measure:

The number of electric utility upgrade projects on rural energy group priority lists compared to the number completed.

Sec 31(b)(2) Ch 124 SLA 2002(HB 515)

Alaska's Target & Progress:

The following chart illustrates AEA's progress and schedule to complete RPSU projects. In FY01, the Denali Commission provided a financial assistance award to AVEC to address the deficiencies in the communities that they provide service. AVEC's progress to address the remaining communities is not tracked by AEA.



Benchmark Comparisons:

Not applicable.

Background and Strategies:

AEA has a database that includes approximately 171 rural electric utility systems, ranks them in the order of their physical condition. In rural Alaska, 192 communities are served by 95 independent electric utilities. For most of these utilities, the power plant and distribution system do not meet accepted utility standards for safety, reliability, and environmental protection.

Electric utility systems are part of the basic infrastructure of rural communities and are fundamental to the operation of other community facilities, the maintenance of present living standards, and to the prospects for economic development. Due to high costs and limited economies of scale, most local communities cannot make the capital investments needed to meet accepted utility standards for safety, reliability, and operating efficiency.

As funds are available, the State contributes to these capital investments through the Rural Power System Upgrade (RPSU) program. Depending on the condition of existing facilities, these investments can include new generators, new controls, upgrades and modifications to distribution lines, or entirely new power plants and distribution systems.

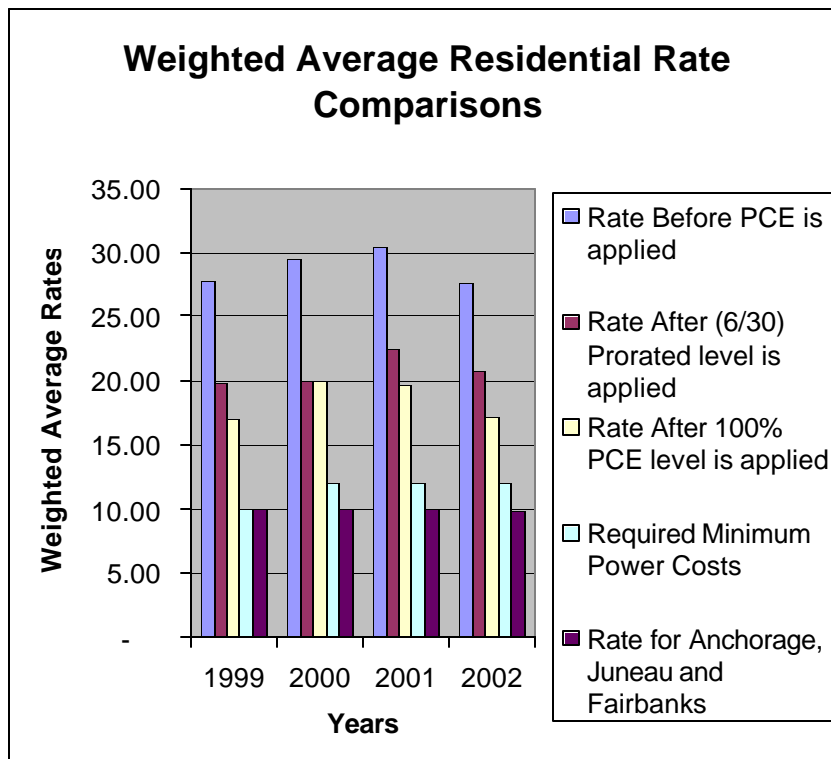
Measure:

The change in the average power cost for households receiving power cost equalization compared to average statewide costs.

Sec 31(b)(3) Ch 124 SLA 2002(HB 515)

Alaska's Target & Progress:

Weighted Average Residential Rate Comparisons				
	1999	2000	2001	2002
Rate Before PCE is applied	27.71	29.55	30.54	27.64
Rate After (6/30) Prorated level is applied	19.81	20.07	22.42	20.76
Rate After 100% PCE level is applied	16.96	20.07	19.57	17.21
Required Minimum Power Costs	9.90	12.00	12.00	12.00
Rate for Anchorage, Juneau and Fairbanks	9.90	9.90	9.90	9.80



Average rate for residential customers in Anchorage, Fairbanks, and Juneau in 2002: 9.8 cents per kilowatt-hour.

Benchmark Comparisons:

Not applicable.

Background and Strategies:

Legislation enacted in 2000 includes the following statement of findings by the Legislature:

1. Adequate and reliable electric service at affordable rates is a necessary ingredient of a modern society and a prosperous developing economy.
2. At the current stage of social and economic development in the state, direct participation by the state is necessary to assist in keeping rates in high-cost service areas to affordable levels.
3. Providing a long-term, stable financing source for power cost equalization will permit and encourage the electric utility industry and its lenders to develop plans, make investments, and take other actions that are necessary or prudent to provide adequate and reliable electric service at affordable rates and to meet the health and safety needs of residents of the state.

There are many factors that affect the cost of power in rural Alaska. For example, fuel costs may fluctuate during the year and from year to year, and most rural utilities do not have long-term power sales agreements as compared to the urban utilities.

Measure:

The reduction of power cost in dollars and the percentage of increased reliability and technological advances.

Sec 31(b)(4) Ch 124 SLA 2002(HB 515)

Alaska's Target & Progress:

The Rural Energy Group has reviewed the efficiency levels (kWh sales/gallons consumed) before and after a powerhouse upgrade in the following communities:

	Before Upgrade	After Upgrade
Kotlik	9.69	10.32
Deering	10.71	11.23

The Deering efficiency standard is included in their 1999 and 2001 annual filing. The Deering powerhouse went on-line in late September. The 2000 annual report had an efficiency level of 10.85.

The Kotlik facility is newly completed. AEA compared fuel consumption data from three months after the facility going on-line to the same three months in the prior year.

Efficiency standards are established by the Regulatory Commission of Alaska and are set out in 3 AAC 52.620.

Benchmark Comparisons:

Not applicable.

Background and Strategies:

Powerhouse upgrades include the installation of new generators that burn fuel more efficiently. Unfortunately, the generators do not come with energy output/fuel ratings. The small independent utilities that are provided the new generators do not have systems in place to track the reduction of power costs when using new generators. AEA does not have a system in place to measure this information currently; however, the Regulatory Commission of Alaska annually reviews the efficiency level for utilities receiving PCE payments.

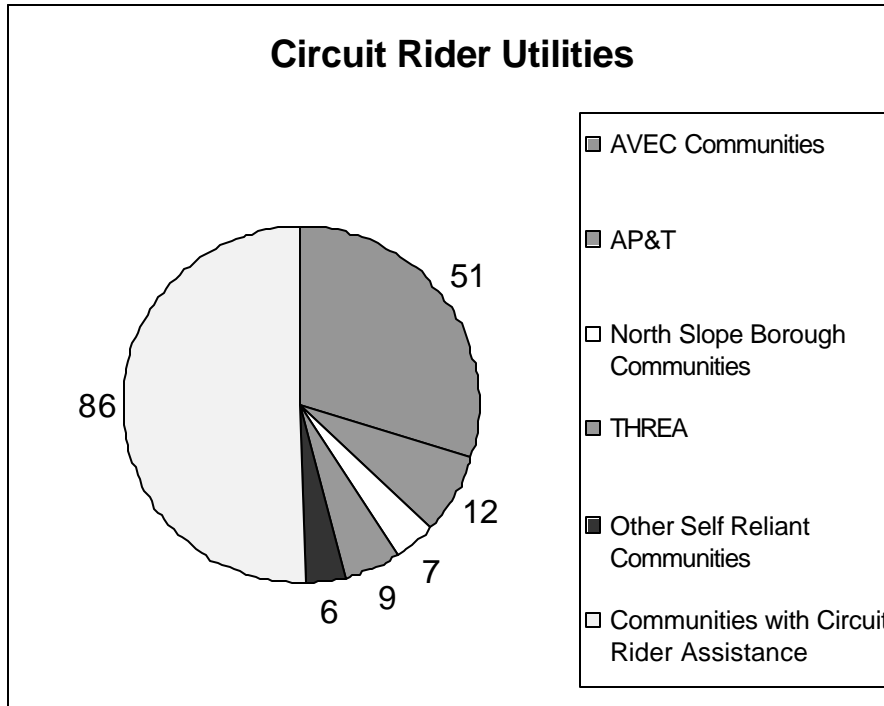
Measure:

The number of communities that have become self-reliant in fully maintaining their power systems.

Sec 31(b)(5) Ch 124 SLA 2002(HB 515)

Alaska's Target & Progress:

This is a new FY03 measure for AEA. Of the 171 rural utilities, 85 receive circuit rider assistance. These are also the same communities that are more likely to call upon AEA in case of an electrical emergency.



Benchmark Comparisons:

Not applicable.

Background and Strategies:

AEA has requested a capital appropriation to provide preventative maintenance to rural utilities that are not self-reliant.

Rural Energy Programs
BRU Financial Summary by Component

All dollars in thousands

	FY2002 Actuals				FY2003 Authorized				FY2004 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
Formula Expenditures												
Power Cost Equalization	0.0	0.0	15,619.6	15,619.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-Formula Expenditures												
Energy Operations	289.7	0.0	2,029.3	2,319.0	288.6	68.3	2,400.2	2,757.1	288.6	68.3	2,400.2	2,757.1
Circuit Rider	200.0	34.2	0.0	234.2	100.7	100.0	0.0	200.7	100.7	100.0	0.0	200.7
Totals	489.7	34.2	17,648.9	18,172.8	389.3	168.3	2,400.2	2,957.8	389.3	168.3	2,400.2	2,957.8

Rural Energy Programs
Proposed Changes in Levels of Service for FY2004

See components.

Rural Energy Programs
Summary of BRU Budget Changes by Component
From FY2003 Authorized to FY2004 Governor

All dollars in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2003 Authorized	389.3	168.3	2,400.2	2,957.8
FY2004 Governor	389.3	168.3	2,400.2	2,957.8