SB

429

S.B. 429

Hello, My name is Robert Maxwell, I am the Executive Director of Interior Weatherization, Inc. We provide weatherization services to residents of the Fairbanks North Star Borough, the road system east to Delta Junction and south to Cantwell. In that capacity I am here to support the funding of weatherization programs proposed in S.B. 429.

As a board member of the Alaska Association of the Energy Efficiency Industry, I am also here to support the funding of other energy efficiency and conservation programs proposed in S.B. 429

The Associations' proposal that you have received should be viewed as a State Energy plan that we have provided free of charge in the hope that we can turn around the current situation that needlessly drains millions of dollars annually from our economy.

We feel the only shortcoming of S.B. 429 is that the amount of funding proposed for weatherization and other energy efficiency programs is not adequate.

The Energy Efficiency industry understands the current financial picture and the resulting challenges facing our decision makers. These programs represent an opportunity to invest now in order to save later. If we continue to postpone adequate funding of these programs even another year, we may be sentencing our residents to a economic handicap that will not allow us to be competitive in the world market.

These programs have both long-term and immediate economic benefits. State funding of weatherization in the railbelt area has excellent cost-benefit ratios. Jobs are created with this funding, a 1988 study by ISER showed that weatherization creates more jobs and personal income per dollar spent than any other type of capital project. The study showed that 18 jobs, of one year duration, were created for every $1 million spent.

By funding other energy efficiency programs as well, we will enhance our existing buildings and reduce their operating costs. We will improve the health and safety of all Alaskans through these programs.

These programs will generate better more efficient quality housing and eliminate future State liability and expense like the $90 million required by AHFC to upgrade and repair some of the repossessed homes during the last recession.

Weatherization improves substandard housing and helps prevent homelessness. The State will save money from decreased energy assistance expenses and medicare claims by providing livable and healthy home environments for the low-income.

State funding for weatherization is used in conjunction with federal weatherization funds in the railbelt area. It is only with State funding and State regulations that we can truly address the needs of Alaskan weatherization recipients.

The federal weatherization funds for Alaska are set at the same dollar amount per home and must be spent under the same regulations as if the home were located in Florida.
Federal regulations still require that we treat home-owners and renters equally when providing weatherization services.
That landlords may benefit from property improvements from weatherization at no cost to them continues to be a concern of weatherization providers.
There is currently a federal rule change procedure taking place that will allow States to mandate landlord financial participation. Heating system replacement funds under State control now require a 50% minimum landlord participation when replacing a heating system in a rental unit.
The need for a low-income weatherization in the railbelt area is illustrated by the fact that the three weatherization providers in the railbelt have hundreds of applications each year that current funding cannot serve. The majority of our 230 dwellings served last year were applicants that were either elderly, handicapped or families with children 6 years and younger.

Many of our older Alaskan clients spend over 28% of their incomes on heat alone. Add to that the cost of other utilities, medication and food and you have what you would call here a budget shortfall. Our clients call it a disaster.

Some of these individuals are the pioneers that opened up this country. They are all independent people who are not after a handout, but do not have the means to perform their own weatherization. The weatherization program can have a positive impact for these seniors on fixed incomes. After we remedied a situation that she could not take care of on her own, one client recently asked "I wonder how many people have had to abandon their homes and leave Alaska because they couldn't afford to fix their roof?" Ironically, had she been able to afford to fix it herself, she would have wasted her money on repairs that would not have fixed the problem. This is where the experience and expertise of weatherization providers becomes so important.

State energy efficiency programs are a most effective way to deal with railbelt energy issues. I recently had the pleasure of serving on Golden Valley Electrical Associations Energy Efficiency Advisory Committee. This was a large committee of 15 people with widely varied interests and perspectives from all walks of life. After many week-night meetings and a couple of long Saturdays, this committee came to a unanimous recommendation that GVEA use the existing State energy efficiency programs to accomplish electrical end-use conservation goals. The committee felt that this would be the most cost-effective way to insure quality delivery of program services.

The low-income weatherization program would be used to deliver the services to GVEA low-income residential consumers. The Energy Rated Homes of Alaska Program would be used to deliver the services to other GVEA residential consumers and the Building Energy Assistance Team would be used to implement electrical end-use conservation for the commercial consumers of GVEA. So, it would appear that even the utilities may be relying on these State energy efficiency programs to effectively deliver any electrical end-use conservation programs.

It is in the best interest of the State, the utilities and the residents of the railbelt that adequate funding for energy efficiency programs be made available under this bill. Other projects mentioned in S.B.429 do have alternative funding available to them, State energy efficiency programs do not. We cannot afford to continue to ignore the impact that a $213 million dollar annual residential heating bill has on the residents of this State and it's economy.

I would like to thank the committee for the opportunity to testify today on these important issues. I am confident that you will do the right thing for the future of Alaskan residents.

MAR 6 1992

L-C member file

Senator Due Pearce
State Capitol Room 101
Juneau, Alaska 99801-1182

March 3, 1992

Dear Senator Pearce:

I certainly appreciate your sponsorship of Senate Bill No. 429. I am sure you are making a great effort to get this bill passed. We certainly hope Section 5 will not be deleted from your bill. I do believe Bill 429 will benefit not only the McKinley Village area but Fairbanks, Anchorage and the whole State of Alaska.

The State of Alaska subdivided a large portion of land and called it McKinley Village. The McKinley Village area lies directly south of the Denali National Park entrance, the NUMBER ONE tourist attraction in our State. The State sold off the lots at a very high price. This area has attracted many permanent families and businesses. It would most likely expand very rapidly if commercial power was available in the area.

The Denali Grizzly Bear Cabins and Campground has no commercial power. We must use a 38 K.W. diesel generator. We have a 20 K.W. generator for a standby back up power. In August of 1990 we had only the 20 K.W. plant and due to overloading so many times it proceeded to quit during the busy part of our season. I had to purchase the 38 K.W. at the f.o.b. Anchorage price of $26,000.00. By the time we had it shipped and installed we had a total bill of $28,000.00. During the summer of 1991 we had a total expense for generating electricity of $5,581.41. This figure included diesel fuel, oil, filters, and minor parts. Because we had purchased the new generator in 1990 we had no break down costs. Our labor maintenance costs were not figured in. Perhaps the biggest problem with generating your own electricity is not the cost but the constant worry and sleepless nights watching over the whole system. When the power goes off the whole camp shuts down and the income stops. In some years during power outages we have had to refund money to our clients. Believe me, this hurts.

Last year we paid to the State of Alaska corporation taxes, vehicle registration fees, A.B.C. Board retail liquor license fee and a business license fee. If we were to get commercial power our business income would increase as would our fee payments.

With ten employees on our payroll, one must consider their impact on the Alaska economy. Two of our employees are enrolled at the U of A Anchorage. Four are enrolled at the U of A Fairbanks, one is teaching school in Anderson, one is living and working in Fairbanks and my wife and I are living in the Salcha area during the winter. There is no doubt that Anchorage and Fairbanks receive a major portion of this payroll.

As the Grizzly Bear adds new facilities each year the money spent goes directly into the Fairbanks and Anchorage economy. This year we had to bring in a Fairbanks engineer to design our two new septic systems. We hired a local McKinley Park contractor to construct these. We purchased all the material to build these systems in Fairbanks. The washed gravel was purchased from a Healy industry. We have completed another new cabin and all the material was purchased from Fairbanks. We use a local attorney from Fairbanks in any legal matters that come up from time to time. The accounting firm that does our payroll, accounts and taxes is from Fairbanks.

Our liquor store purchases are from Fairbanks wholesale distributors. Our gift shop purchases are primarily from Anchorage and Fairbanks but we buy from local and statewide artisans also. All of the grocery store items we purchase come out of Fairbanks, Palmer and Anchorage wholesalers. The vehicles and light plant generators we own were purchased in Fairbanks and Anchorage. The propane and fuels we sell and use are purchased from Fairbanks companies. Our printing need are purchased from local Fairbanks print shops. The laundry service we use for our bed linen is supplied from Fairbanks and Anchorage. We deal with utility companies that are Alaska owned. Our banking is done in two locally owned Fairbanks banks. Our long range savings investments are done with financial houses having local offices. Our insurance, liability auto and workmens compensation is purchased from Alaska firms. Our retirement fund is held by a local Fairbanks firm. I could go on but I believe that I have convinced the reader that we are a locally owned business and as our business grows so does Fairbanks, Anchorage and the State of Alaska.

At the present time the number one item that keeps the Denali Grizzly Bear Cabins and Campground from expanding, as we would like to see it expand, is the lack of commercial power.

For whatever reason the passed veto actions of former State of Alaska Governors or the "do not pass" actions of former legislators, I sincerely request that when you consider the Electrification Project from Cantwell to McKinley Village, that you keep in mind that this project does not only benefit the "Village" area but will also benefit Fairbanks, Anchorage and the State of Alaska. PLEASE SUPPORT SENATE BILL NO. 429

Sincerely yours,

Jack N. Reisland

Jack N. Reisland
Denali Grizzly Bear Cabins & Campground
P.O. Box 7
Denali Park, Alaska 99755

STATE OF ALASKA
1992 LEGISLATIVE SESSION

BILL NO. SB 429

Revision Date: _____ **Department Affected:** DCED

Title: Design/Construct Railbelt Interti **BRU:** AEA

Component: _____

Sponsor: Frank,Craft,Pearce,etc.

Requestor: _____ **COMPONENT SERIAL NO.** | | | | |

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
REVENUE FUND SOURCE:						

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS	-0-	-0-	-0-	-0-	-0-	-0-
OTHER FUND SOURCE:	-0-	-0-	-0-	-0-	-0-	-0-
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME	-0-	-0-	-0-	-0-	-0-	-0-
PART-TIME	-0-	-0-	-0-	-0-	-0-	-0-
TEMPORARY	-0-	-0-	-0-	-0-	-0-	-0-

Estimate of current year impact: _____

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Charlie Bussell **Phone:** 561-7877

Division: Alaska Energy Authority **Date:** MArch 6, 1992

Approved by Commissioner: Asst. Comm

Agency: Department of Commerce & Economic Dev. **Date:** 3.6.92

Distribution (by preparer): Leg. Fin., Legislative Sponsor, Requestor, OMB/DBR, Gov. Legis. Ofc., & Impacted Agency(ies).

Rev 10/7/91

ALASKA STATE
HOMEBUILDERS ASSOCIATION

March 5, 1992

The Honorable Drue Pearce
Chair
Labor and Commerce Committee
The Senate
Alaska State Legislature
Juneau, Alaska

RE: SB 429

Dear Senator Pearce:

The Alaska State Homebuilders Association Board of Directors strongly supports the concept of Railbelt Energy Funds being used in part for energy conservation programs. To use this money to fund only the generation of energy without thought given to the other end of the equation -- the consumption of energy -- would seem to be less than prudently and fiscally responsible.

To maximize the responsible use of this fund, it would also seem wise to put money for energy conservation into programs that already are in place in Alaska. These programs would include Energy Rated Homes of Alaska, the Alaska Craftsman Home Program, and the weatherization program.

Next to the mortgage on a home, the single highest cost for owning a home in Alaska is energy consumption. The largest percentage of this cost is to heat the home. In some households, this cost can be 33% of the household's income. There are ways to cut this cost, some of them quite simple, but they all require that the builders and the homeowners become educated about the possibilities of energy conservation in the home and the ways to accomplish this. The programs mentioned above not only do this, but they do it very well, and their continued effective presence in the State of Alaska can only benefit the people of this state.

SB 429 contains $14 million for energy conservation programs. It is important that this money be made directly available to the established energy conservation groups in this state, and that the amount itself be substantially increased to reflect the importance of this end of the energy equation. We urge the Labor and Commerce Committee to consider this carefully.

Very truly,

Steven L. Bell
President

7801 SCHOON STREET, UNIT E • ANCHORAGE, ALAKSA 99518 • (907) 522-3605

A PROPOSAL TO CREATE JOBS, AND FUEL ECONOMIC DEVELOPMENT THROUGH ENERGY EFFICIENCY

In these days when the State is faced with the need to do the same for less, and make the maximum use of every dollar it spends, we should seek out ways to make investments today that will reduce State operating costs tomorrow.

Alaskans spend $213 million every year to heat their homes, plus another $100 million to heat their community facilities, state buildings, offices and commercial buildings. There is a great opportunity for Alaska to make economically attractive investments in energy efficiency and permanently reduce this $313 million drain on Alaska's economy.

INVESTMENT OPPORTUNITIES

100's of Jobs Will Be Created For Alaskans
A 1988 study by the University of Alaska's Institute of Social & Economic Research showed that state spending for energy efficiency programs such as Weatherization creates more jobs and personal income per dollar spent than any other type of capital project. ISER's study showed that 18 jobs, of one year duration, were created for each $1 million spent.

Efficiency Will Generate Economic Development.
Millions of dollars which are now being sent Outside to buy heating oil will stay in the state. Families will have more money in their budget for other expenses, creating extra benefits in their communities through an economic ripple effect. The State will also have reduced operating expenses, more money for important services like education.

Improved Buildings Will Reduce the State Operating Budget.
State operated facilities throughout Alaska are wasting millions of dollars by wasting energy. Improving the efficiency of State facilities offers one of the most cost-effective ways to reduce State spending, with no reduction of State services. Providing funding for improving community facilities in rural areas which rely on State revenue sharing will also save the State money in the long run.

The State Will Protect Its Investment In New Homes.
The State of Alaska through the Alaska Housing Finance Corporation spent $90 million to upgrade and repair repossessed homes during the last recession. Higher quality, more durable and efficient homes will be built to last for decades, instead of a few years. Homes that are built with [illegible] and state funds will also be built to withstand the harsh Alaska climate for decades, instead of a few years.

P.O. Box 110021 • Anchorage, Alaska 99511

Substandard Housing Will Be Improved.
Life threatening problems such as defective heating systems and faulty wiring are repaired through the Low Income Weatherization Program every day. Other typical weatherization improvements include fixing leaky roofs, sealing cracks, replacing doors and windows and adding insulation.

Homelessness Will Be Prevented.
Extending the usable life of homes and making substandard housing livable, increases housing availability, especially for low income Alaskans. Fixing life threatening problems also prevents low income families from having to abandon their homes and becoming homeless.

Programs Vital to the Housing Industry Will Be Maintained.
Professional home builders rely on the residential efficiency programs for training required by the State to obtain a contractor's license. They also use the programs to meet the State's energy efficiency standard for new homes and to obtain financing incentives offered by national mortgage programs.

A New Permanent Fund.
A penny saved is a penny earned, as the old maxim goes. Although energy savings through a comprehensive efficiency effort can be measured in millions of dollars a year, not pennies. Those energy savings amount to a new Permanent Fund for Alaska, paying annual dividends to families and reducing the state and local communities' operating budgets.

PROPOSED RAILBELT ENERGY FUND ALLOCATION FOR ECONOMIC DEVELOPMENT THROUGH ENERGY EFFICIENCY

Low Income Weatherization	$16 million
State/Institutional Facilities Efficiency Upgrade	$10 million
Ongoing Residential & Business Energy Efficiency Programs	$ 8 million
Regional Housing Authority Efficiency Upgrade of New Homes	$ 3 million
Grants to Utilities for End Use Conservation	$ 2 million
TOTAL:	$39 million

STEVE FRANK

119 N. Cushman, Rm. 213
Fairbanks, Alaska 99701
(907) 452-3421

Alaska State Legislature

While in Juneau
P.O. Box V
Juneau, Alaska 99811
(907) 465-3709
Capitol Rm. 417

Senate

MEMORANDUM

TO: Senator Drue Pearce, Chair
Senate Labor & Commerce Committee

FROM: Senator Steve Frank

RE: Hearing Request for SB 429 - Appropriating monies for electrical interties, energy conservation and electrification purposes

DATE: February 19, 1992

I am writing to request a hearing on Senate Bill 429 in the Labor & Commerce Committee at your earliest convenience.

This Legislation would appropriate funds in the following ways:

1) $90,000,000. to construct the Kenai/Anchorage and Healy/Fairbanks 138 KV transmission lines with the utilities matching costs 50/50
2) $7,000,000. as grants to electric utilities for electrical end-use conservation programs
3) $10,000,000. to capitalize the electrical service extension fund
4) $5,000,000. for Low income weatherization
5) $2,000,000. for Ongoing residential and business energy efficiency improvement programs
6) $2,500,000. for electrification of McKinley Village

While not all inclusive, I have attempted to take a comprehensive approach to use of the Railbelt energy fund.

Thank you for your consideration.

STATE OF ALASKA

THE LEGISLATURE

BUDGET AND AUDIT COMMITTEE

FINANCE DIVISION
P.O. BOX WF
JUNEAU, ALASKA 99811
PHONE: (907) 465-3795

MEMORANDUM

DATE: February 13, 1992

TO: Senator Steve Frank

FROM: Nancy J. Slagle
Fiscal Analyst

SUBJ: Railbelt Fund Balances

Your staff has asked for the current balance of the Railbelt Intertie Reserve. According to the Division of Finance, the balance of the Intertie Reserve is as follows:

110,661,478	AKSAS Balance
580.106	December Interest (not yet posted)
111,241,584	Actual Balance

The interest accruing to the Intertie Reserve has been running over $500,000 a month. The January interest computations are being developed now and should be posted by Finance within the next two weeks.

The available balance of the Railbelt Energy Fund remains at $2,566,000.

PROJECT TITLE:
Railbelt Interties Construction/State Share

LOCATION: Railbelt

COMPLETION DATE: 1996

ELECTION DISTRICT: 92

PROGRAM: Development

TYPE: New Construction

	FUNDING:	CAPITAL REQUEST	OPERATING COSTS	NEW POSITIONS (PFT):
1002	FEDERAL RECEIPTS			
1003	GENERAL FUND MATCH			
1004	GENERAL FUND	115,275.1*	0	
1007	INTER-AGENCY RECEIPTS			
1012	RAILBELT ENERGY FUND			
	TOTALS:	115,275.1	All operating costs funded by user fees (wheeling charges)	

*Railbelt Intertie Reserve in the general fund (SLA 1990, Chapter 208, Section 159), including estimated interest through 6/30/92.

PROJECT DESCRIPTION AND JUSTIFICATION:

The Railbelt intertie proposals consist of two projects: (1) a new 138 kV transmission line between Anchorage and the Kenai Peninsula, and,
) a new 138 kV transmission line between Healy and Fairbanks, plus additional electrical equipment needed for increased transfer capability.
e construction cost estimate for the Anchorage-Kenai line ranges from $75.1 million to $84.1 million in 1991 dollars, depending on resolution
routing and right-of-way issues. The construction cost estimate for the Healy-Fairbanks line, including associated electrical equipment, is
.6 million in 1991 dollars. The total estimate in 1991 dollars therefore ranges between $152.7 million and $161.7 million.

se are the two projects identified in CH. 208, Sec. 159, SLA 1990, which appropriated $100 million plus interest earnings beginning July 1,
0 from the Railbelt Energy Fund to a newly created Railbelt Intertie Reserve in the general fund. Funds deposited to the Railbelt Intertie
erve cannot be expended until appropriated by the Legislature. In accordance with the Railbelt Intertie Plan of Finance, authorization to
ain future interest earned on the appropriation balance is also requested.

CP1 CAPITAL PROJECTS DESCRIPTION

PRIORITY 11 OF 20

AGENCY Dept. of Commerce & Economic Development

BRU Alaska Energy Authority

Revised Date 1-17-92

FY 93

)-cp1 1561/D065(1)

Additional project costs will be financed with revenue bonds to be repaid by the participating Railbelt electric utilities.

The existing line between Anchorage and the Kenai Peninsula runs around the end of Turnagain Arm via Girdwood and Portage. It is subject to wind and avalanche induced outages, and does not have a good reliability history. The proposed new line would provide a second connection between Anchorage and Soldotna via an alternative route that includes a submarine crossing of Turnagain Arm. The new line would improve reliability, increase transmission capability, and improve access to Kenai Peninsula generating resources. Anchorage and Fairbanks will begin to import power from the Kenai Peninsula after completion of Bradley Lake and are therefore especially concerned that the proposed transmission improvements take place. The existing single line connection does not meet prevailing industry standards of transmission reliability.

The proposed new line between Healy and Fairbanks plus associated electrical equipment would increase the transmission capability between Anchorage and Fairbanks while substantially reducing transmission losses. In addition, the new line combined with the planned 50 MW coal plant at Healy would result in a substantial reliability improvement in the Fairbanks area. Instead of acquiring most of its power over a single line from Anchorage area plants over 300 miles away, Fairbanks would obtain most of its power over two lines from 100 miles away. Further, the increase in transmission capability will enable Fairbanks to meet its full power requirements without reliance on expensive, local oil-fired generation.

CP1 ADDITIONAL EXPLANATION FORM

AGENCY Dept. of Commerce & Economic Development

BRU Alaska Energy Authority

COMPONENT

Revised Date 1-17-92

FY 93

State of Alaska
Walter J. Hickel, Governor

Alaska Energy Authority

A Public Corporation

February 11, 1992

Mr. Rick Solie
c/o Senator Steve Frank
P.O. Box V
Juneau, AK 99811

Re: Railbelt Intertie Cost Escalation

Dear Mr. Solie:

In the Railbelt Intertie Feasibility Study, issued by the Alaska Energy Authority (AEA) in March 1991, construction cost estimates for the proposed Railbelt intertie projects were presented in January 1991 dollars as follows:

Soldotna-Anchorage 138 kV ("Enstar" route)	$75.1 million
Soldotna-Anchorage 138 kV ("Tesoro" route)	$84.1 million
Healy-Fairbanks 138 kV (incl. SVS additions)	$77.6 million

Your request today was for AEA to suggest a reasonable escalation factor for expressing these costs in 1992 dollars. A revised estimate based on updated quotations for major cost components would be good to have but would require some resources to produce. A rough escalator is less desirable, but at least provides some recognition for the general magnitude of cost inflation.

We first consulted the Handy-Whitman Index of Public Utility Construction Costs for the Pacific Region. For the category entitled "Total Transmission Plant," the following cost indices were reported:

July 1990	308
Jan. 1991	304
July 1991	314

Although these indices are reported every 6 months, the January 1992 index is not yet available. The figures shown above indicate that the average cost of transmission plant in the Pacific region declined slightly between July 1990 and January 1991, but increased by 3.3 percent during the 6 months between January 1991 and July 1991. If

☐ P.O. Box AM Juneau, Alaska 99811 (907) 465-3575
☒ P.O. Box 190869 701 East Tudor Road Anchorage, Alaska 99519-0869 (907) 561-7877

the second half of 1991 mirrored the first half, escalation for the year following our January 1991 intertie cost estimates would be about 6.6 percent. These indices are volatile, however, and it is hard to guess what the pattern may be for any given 6 month period.

For comparison, we do have the U.S. Consumer Price Index (CPI) reported by month through December 1991. The increase in the CPI between December 1990 and December 1991 was 3.1 percent.

The foregoing suggests that the intertie costs expressed in January 1991 dollars should be increased by at least 3.1 percent to convert the price level to January 1992 dollars. However, there are two reasons to suggest using a somewhat higher escalation factor:

1) Although the Handy-Whitman index for "total transmission plant" moves unevenly, the increase for the first six months following January 1991 was 3.3 percent, and the following six months might show another increase.

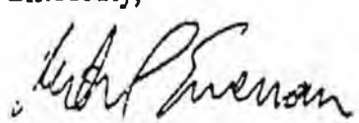
2) If the revised price level is stated as "1992 dollars," rather than "January 1992 dollars," then an additional 6 months of escalation should be added to the estimate (essentially making it a "mid-1992" price level).

Recommendation

To convert the intertie cost estimates from January 1991 to "January 1992" dollars, escalate the figures presented in the March 1991 report by 3.5 percent.

To convert the intertie cost estimates from January 1991 dollars to "1992" dollars (i.e. mid-year), escalate the figures presented in the March 1991 report by 5.0 percent.

Sincerely,



Richard Emerman
Senior Economist

cc: Charlie Bussell

Alaska
Rural
Electric
Cooperative
Association, Inc.

ARECA

703 W. Tudor Rd., #200
Anchorage, AK 99503
(907) 561-6103
FAX (907) 561-5547

MEMO TO: Representative Mike Navarre

FROM: David Hutchens
Executive Director

DATE: December 26, 1991

SUBJECT: Proposed Electric Energy Conservation Program

This is in response to your suggestion that the utilities examine energy conservation alternatives and propose a realistic program.

Structure of Program

The simplest, most cost effective approach would be for the administrative agency receiving the appropriation to provide reimbursement to utilities for their direct cost in making grants or giving rebates to consumers for electric energy conservation measures. If the utilities are given flexibility in shaping and administering these programs to fit their service areas, they are willing to absorb their costs of administering these electric energy conservation programs.

Funding Level

The railbelt utilities estimate they could effectively use $5 million in this program over the next three to five years. If this program is expanded statewide, an appropriation of $6.3 million would be needed to make the same amount of funds available per consumer.

Allocation

Funds should be allocated to electric utilities eligible to participate in the program on the basis of their number of consumers. Any funds allocated to a utility which has made no effort to the money after two years should be reallocated to the participating utilities. Again, this allocation should be made on the basis of the number of consumers served.

Administration

The funds would be appropriated to a state agency -- preferably the Alaska Energy Authority – which would implement the program with regulations and monitor the use of the grant funds. We hope this agency would establish in its regulations a list of allowable electric energy conservation measures which would qualify. The regulations should also state the limitations. For example, we recommend that the funds only go through utilities certificated by the APUC in the service area (either the railbelt or the whole state), and that any grants to individual consumers exceeding $250 must require an investment by the consumer in the conservation measure of at least 20%.

We envision a process which could work at minimal cost by having the program parameters known in advance and applications for funds within the utility's allocation has uses within those guidelines would

receive automatic approval. The administrative agency would need to monitor the program to make certain the expenditure was properly made, but on a cost reimbursement basis that should be quite simple.

Eligible Conservation Measures

Essentially any electrical energy and use conservation measure the utility is willing to sponsor and which is reasonably believed to have a "payback" in benefits at retail electric rates within five years should be *allowed. The following* lists are programmatic conservation measures we would support:

RESIDENTIAL ELECTRIC ENERGY CONSERVATION MEASURES

Storage Water Heating
Water Heater Blanket
High Efficiency Lighting
High Efficiency Refrigerators
Low Flow Showerheads
Duct and Pipe Insulation
DLC of Water Heaters
Energy Efficient Washers and Dryers
High Efficiency Freezers
Automatic Controls
Window Treatments
Insulation
Load Management Thermostats
Programmable Controllers
Dual Fuel Heating System
Ceramic Heat Storage
Heat Recovery Water Heaters
Energy Efficient Cooking Appliances
Security Lighting
Infiltration Control Measures
Slab Heating
Storm Windows and Doors
Add-on Heat Pumps
High Efficiency Air Conditioner
Task Heating
Zoned Resistance Heating
Passive Solar Design
Solar Domestic Water Heating
Groundwater Source Heat Pump
High Efficiency Air Source Heat Pump
Room Heat Pump
Ground Coupled Heat Pump
Daylighting
Active Solar Space Heating

COMMERCIAL/INDUSTRIAL ELECTRIC ENERGY CONSERVATION MEASURES

Efficient Building Envelope
Energy Efficient Street Lighting
Energy Efficient Lighting Fixtures
Energy Efficient Lighting Lamps
Energy Management Systems
Commercial Refrigeration

PROJECT TITLE:
Electrical Service Extension Fund

LOCATION: Statewide

COMPLETION DATE:

ELECTION DISTRICT: 99

PROGRAM: Energy Development

TYPE: New Construction

	FUNDING:	CAPITAL REQUEST	OPERATING COSTS	NEW POSITIONS (PFT):
1002	FEDERAL RECEIPTS			
1003	GENERAL FUND MATCH			
1004	GENERAL FUND	10,000.0	0	
1007	INTER-AGENCY RECEIPTS			
	TOTALS:	10,000.0	All operating costs to be funded by user fees	

PROJECT DESCRIPTION AND JUSTIFICATION:

During the 1991 legislative session, House Bill 226 (HB 226) was adopted by the Legislature and subsequently signed into law. HB 226 created a new program, the Electrical Service Extension Grant Program and established the Electrical Service Extension Fund (AS 44.83.370) in the Alaska Energy Authority (AEA). The Fund consists only of money appropriated to it by the Legislature. Initial year funding of $1,000,000 was appropriated for line extension matching grants during FY92. First priority use of grant funds is only for extending electrical service to private residences and small businesses not currently served by an electric utility, and as a second priority, for making improvements to existing utilities.

AEA administers the Electrical Service Extension fund and makes grants from the fund to certified utilities under the following statutory criteria: 1) the amount of a grant made from the Fund may not exceed 60% of the total cost of construction of the project and 2) the costs considered in making the grant may not include costs of planning, feasibility studies, or design. In addition, the utility receiving the grant may charge an initial connection fee for the new electrical service being made available.

CP1 CAPITAL PROJECTS DESCRIPTION

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AEA will begin making grants from the Fund during October, 1991. Based on the approximately $29 million in grant requests from eligible electric utilities and potential public to be served, we anticipate no remaining FY92 grant monies to carry over into FY93. Because of the limited funding made available for grants during FY92 and the large number of eligible applications to be considered, the FY93 appropriation level of the Electrical Service Extension Fund is requested at $10 million.

CPI ADDITIONAL EXPLANATION FORM

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WALTER J. HICKEL, GOVERNOR

DEPT. OF COMMUNITY & REGIONAL AFFAIRS

Rural Development Division

ENERGY PROGRAMS
333 W. 4TH AVE., SUITE 220
ANCHORAGE, ALASKA 99501-2341
PHONE: (907) 269-4500
FAX: (907) 269-4520

February 18, 1992

Richard Solie
Office of Senator Frank
P.O. Box V
Juneau, AK 99811

Dear Mr. Solie,

This is in response to your request for information on the Department of Community and Regional Affairs' energy efficiency programs and an analysis of the conservation and demand-side programs contained in House Bill 77. You also asked me what services would be provided if allocations contained in the bill are appropriated as well the effect of reducing or increasing these levels.

It is appropriate that in investigating the potential uses for the railbelt energy funds demand-side options are considered. Studies have shown that energy efficiency is very practical and economically attractive. Let me cite from some of the numerous studies of energy programs conducted by state agencies and independent sources:

* The University of Alaska's Institute of Social and Economic Research found that state spending for energy efficiency programs such as weatherization creates more jobs and personal income per dollar outlay than any other type of capital project.

* Jack Kreinheder, Senior Policy Analyst for the Governor's Office of Management and Budget projected: "A comprehensive energy efficiency program could yield a 20-30 percent annual return on the funds invested-two to three times the earnings rate of the Permanent Fund."

* BusinessWeek magazine reported that in the lower 48 investments in consumer rebates for demand-side measures nets a 11.2% return on investment.

* In Fairbanks, the integrated resource plan developed for Golden Valley Electric Association (GVEA) by CH2M HILL concluded that "conservation appears to be the least cost resource available to GVEA."

In looking for means to reduce electrical costs for consumers it is also appropriate to address space heating. A recent study by the University of Alaska found that in 1990, Alaskan's who heated their homes primarily with electricity spent over $50.3 million for heat. This figure does not reflect the costs of homeowners who use electric space heaters as a supplemental heating source.

I have addressed the programs in the order they are contained in the proposed legislation.

LOW INCOME WEATHERIZATION

Program that has been in existence since 1977 and funded with a combination of state and federal funds. This program differs significantly from other energy assistance programs in that it permanently upgrades the assisted families' homes to reduce energy waste instead of subsidizing energy use. It makes the most cost-effective improvements to homes of low income families. Priority is placed upon senior citizens and the handicapped. Fiscal Year 1992 funding for the program: $2 million in state funds through the capital budget and $1.8 million in federal funds. This results in over 1,400 households from Ketchikan to Point Lay receiving assistance. This is no way meets the demand for the program. The 1992 Comprehensive Housing Affordability Strategy completed by the Alaska Housing Finance Corporation found: "Weatherization programs both federal and state funded are helping lower income Alaskans lower their energy costs. These programs too lack adequate funding for the depth of need." In Fairbanks, inadequate funding resulted in 109 eligible families who applied for the program this year not being served.

The $7 million proposed in House Bill 77 would basically maintain the program at its current level for a period of three years. Such an appropriation would result in over 2,600 households receiving assistance to reduce their heating bills. $10 million allocated to the program could expand the program to meet the current demand or be used to extend the program for five years at its present level of support. An appropriation at this level would result in over 3,700 households receiving assistance. Any appropriation less than $7 million would reduce the period of time that the program would be supported through the appropriation. In its budget planning the Department of Community and Regional Affairs believes the program can effectively use $10 million in state funds over three years.

INSTITUTIONAL FACILITIES

OMB Staff Proposal

The State of Alaska spends millions of dollars annually in its operating budget paying heating and electricity bills for state and local facilities. The Office of Management and Budget estimates that it is realistically possible to reduce the utility bills on state facilities by $8 to $10 million per year. Mr. Kreinheder of that office estimated that achieving this level of savings could require investing approximately $25 - $35 million over a period of years. He also estimated that an appropriation in the range of $2 - 5 million range would allow "substantial reductions in energy costs to be achieved fairly quickly." I have attached a copy of a memo from Mr. Kreinheder in which he outlines how a state facility energy demand-side management program could work.

Rural Capital Projects Retrofit Program

The Department of Community and Regional Affairs manages a program aimed at rural community facilities. The program offers energy audits of facilities, lighting improvements, heating system tune-ups and increases in insulation levels. Pilot projects enabled expanded use of the facilities while reducing energy costs by over 35%. The program works with the community in identifying the need for the work, uses local labor and is matched with local funds. The program has been supported with one time only federal court oil overcharge settlement funds which will soon be depleted. Other funding is essential to keep this highly successful program operating. In its capital budget planning the Department estimated the program needed a $5 million appropriation for a three period.

GRANTS TO UTILITIES FOR END-USE CONSERVATION PROGRAMS

I understand that the utilities have developed a working group to develop a proposal for the use of funds in this area. The Department of Community and Regional Affairs brought the concept of demand-side planning to the public's attention through a conference held in 1987 and has worked with utilities ranging from Chugach Electric Association to the Copper Valley Electric Association in developing demand-side plans and undertaking demand-side conservation programs.

ONGOING RESIDENTIAL AND BUSINESS ENERGY EFFICIENCY PROGRAMS

The Department of Community and Regional Affairs offers a comprehensive approach for improving the quality and energy efficiency of housing in Alaska. This effort features market driven efforts through a public/private partnership with the state's housing industry. Program elements include:

* ENERGY RATED HOMES OF ALASKA - Private/public partnership sponsored by the Department of Community and Regional Affairs. It is a nationally recognized innovative market driven program that assists Alaskans to afford higher quality, energy efficient homes through uniform rating of homes according to their energy efficiency.

  Use by the Private Sector: (1) The program is viewed by the state's housing industry and financing agencies as being integral to the current housing market, (2) Used by homebuyers to determine the energy efficiency of homes they are purchasing and receive credit in the mortgage loan for an energy efficient home, (3) To allow the rolling in the costs of upgrading the energy efficiency into the mortgage loan when purchasing an existing home. (4) Provides recommendations to homeowners on cost-effective ways to upgrade current home and receive financial assistance in undertaking the improvements.

  Institutional Use: (1) Used by the Alaska Housing Finance Corporation and FHA to determine whether a newly built home complies with the state minimum energy efficiency standard. (2) Used by regional housing authorities across the state to determine the most cost-effective energy upgrades for substandard HUD homes.

  The program has been also funded with one time federal oil overcharge settlement funds which will soon be depleted. Other funding is vital to keep this highly successful program operating.

* ALASKA CRAFTSMAN HOME PROGRAM - Nationally recognized non-profit organization funded through the Department that teaches the latest building technology for northern climates. Program developed standard for the optimum energy efficiency for the state. Homes built to the program's voluntary standard cost 60-80% less to heat. The program is seen as the option of choice for home building industry to meet training requirement for state licensing.

* HUD INITIATIVE - Partnership with the federal government to improve quality and energy efficiency of homes financed through FHA and public housing. Through memorandums of agreement between HUD and the Department of Community and Regional Affairs the initiative features: agreement that all new housing financed through HUD will comply with state's energy efficiency standard, crediting of home's energy efficiency in FHA

mortgages, and a major retrofit program for substandard rural housing.

The Department also offers a program to assist small businesses in becoming more competitive through energy efficiency, the Business Energy Assistance Team. The programs offers energy audits of businesses and rebates to make cost-effective improvements recommended by the audit.

The $3 million contained in House Bill 77 for these programs would continue the programs for another three years. In preparing its 1993 capital project request the Department concluded that an one-time investment of $5 million for these programs over three years would be required to fully incorporate energy efficiency into the housing market.

I have not been able to uncover the specific purpose of the $2 million in House Bill 77 for grants for energy efficiency improvements under AS 37.05.316 or AS 37.05.317. In discussions with staff and others who were involved with drafting the bill I found that there was a general intent to allocate $5 million for ongoing energy programs administered by the Department of Community and Regional Affairs. After reviewing the language in House Bill 77 this could not be done with the current wording. If this is the goal it would be better to consider shifting the $2 million into the ongoing energy improvement programs line item.

I hope that this letter provides the information that you were looking for. For your information I have enclosed copies of research completed by the Institute of Social and Economic Research on the job creation of energy efficiency programs and what Alaskan's spent in 1990 to stay warm. If you need additional information please give me a call at 269-4632.

Sincerely,

Steve Baden, Chief
Energy Programs

Enclosures

cc: Edgar Blatchford, Commissioner
Robert L. Brean, Director

MEMORANDUM

State of Alaska
Office of the Governor
Office of Management and Budget
Office of the Director

TO: J. Shelby Stastny
Director
Office of Management & Budget

DATE: February 7, 1991

FROM: Jack Kreinheder
Senior Policy Analyst

PHONE: 465-3568

SUBJECT: Capital Budget Funding to Reduce Energy Costs

Summary and Recommendations

The State of Alaska spends in excess of $40 million per year on energy for State buildings, vehicles, and the Power Cost Equalization program. Improving the efficiency of State energy use offers one of the most cost-effective ways to reduce State spending, with little or no impact on public services. As you know, nearly every State program has a constituency which makes it difficult to cut spending. The only benefactors of wasteful State energy use are the power companies and the oil dealers, and they can't really complain about the State making its operations more efficient.

A comprehensive energy efficiency program could yield a 20-30 percent annual return on the funds invested—two to three times the earnings rate of the Permanent Fund. Previous State efforts to reduce energy costs, with limited exceptions, have been sporadic at best, and examples of wasteful energy use in State facilities are common.

Accurately estimating the potential for State energy savings will require detailed surveys of each facility or program, but my research suggests that reducing energy use by 20-25 percent, or $8 to $10 million per year, is a realistic long-term goal. Achieving this level of savings could require investing approximately $25 - $35 million over a period of years.

Recommendation: An energy efficiency fund. There are several alternatives for financing energy efficiency improvements; however, the approach which would provide the greatest overall savings to the State is to capitalize a revolving fund for energy efficiency investments. This approach has been successfully used by the State of Washington since 1986. This is how the fund would work:

- The energy efficiency fund would be capitalized with an initial non-lapsing appropriation.
- A relatively small amount of money from the fund would be used to survey State facilities to determine the most cost-effective projects.
- State agencies would borrow money from the fund to make energy efficiency improvements.

- One portion of the annual energy savings would go to the general fund, a second portion would be retained by the agency (and could be used for deferred maintenance or additional energy projects), and the third portion would repay the loan to the fund over a period of years. When the loan is repaid, this third portion of the savings would revert to the general fund.

- Additional energy-saving projects would be financed from repayments to the fund until no other cost-effective efficiency opportunities could be identified, at which time the fund balance could be reappropriated for other purposes.

The amount required for the initial appropriation to the fund depends naturally on funds available and on how rapidly we want to reduce the State's energy bills. An appropriation in the $2 - 5 million range would allow substantial reductions in energy costs to be achieved fairly quickly. An appropriation of less than $1 million would take many years to finance the full range of energy-saving opportunities available, and an alternative financing approach might be more effective in this case.

The State's Current Energy Use

As noted above, an accurate assessment of the potential dollar savings from improving the energy efficiency of State facilities will require surveys of each facility. But the fact that little has been done to reduce energy consumption in most facilities since they were built, combined with the experiences of other states and Alaska's cold climate, suggests that the potential savings are large. My research indicates that there appear to be few other state governments in which energy efficiency and costs have as low a priority as in Alaska — an ironic situation given our climate and the high cost of energy in many areas of Alaska.

Examples of inefficient State energy use are widespread, most visibly in the lighting of State buildings. Lighting typically is responsible for more than 50 percent of the power bills for office buildings. Incandescent lighting is common in the hallways, lobbies and stairwells of State buildings, when fluorescent lighting could reduce this lighting cost by more than 75 percent. Some hallways are lit much more brightly than office areas, indicating that little or no attention has been given to appropriate lighting levels. The Municipality of Anchorage and two of the largest Anchorage hotels have been able to cut their power bills significantly through lighting improvements. Other types of energy use are not as visible, but may well offer comparable savings potential.

Why have these large energy savings in State buildings been mostly ignored? There are several reasons:

- The responsible agency managers have placed a low priority on reducing energy costs. To be fair, in many cases more pressing problems have prevented these managers from having the time to deal with energy costs.

- As indicated by the major backlog of deferred maintenance needs across the state, most managers of State facilities have not had the staff or budget resources

to keep up even with routine maintenance needs, much less make improvements to their facilities. Even if a building manager identifies a potential improvement with a payback of only two years, most maintenance and operations budgets simply don't have sufficient funds to pay for such improvements.

- The technology for improving energy efficiency has changed rapidly over the last five to ten years, and is not well-known in Alaska.

Alternative Approaches

An energy efficiency fund is not the only way to finance energy-saving projects. Financing methods which have been successfully used by other states include:

- The sale of revenue bonds, with the bonds repaid from energy savings. California has sold over $65 million in energy efficiency bonds.

- Third party financing, also known as energy performance contracting. Under this approach, vendors install energy-saving equipment at no up-front cost to the state, in exchange for a portion of the energy savings over a period of years. Many states and the federal government have used this approach.

- Lease purchase arrangements. This is a variation on third party financing, which also avoids the need for an up-front cash outlay to finance projects.

If insufficient funds are available in the capital budget to establish an energy efficiency revolving fund, I recommend that we pursue one or more of these financing alternatives. However, all of these options have their price: the State would have to give up a significant portion of the energy savings to repay the revenue bonds, the third party financier, or the equipment lessor. Using a portion of the FY 91 revenue surplus to establish an energy efficiency fund would provide much higher net dollar savings to the state.

Please let me know if you have any questions or need additional information about this proposal.

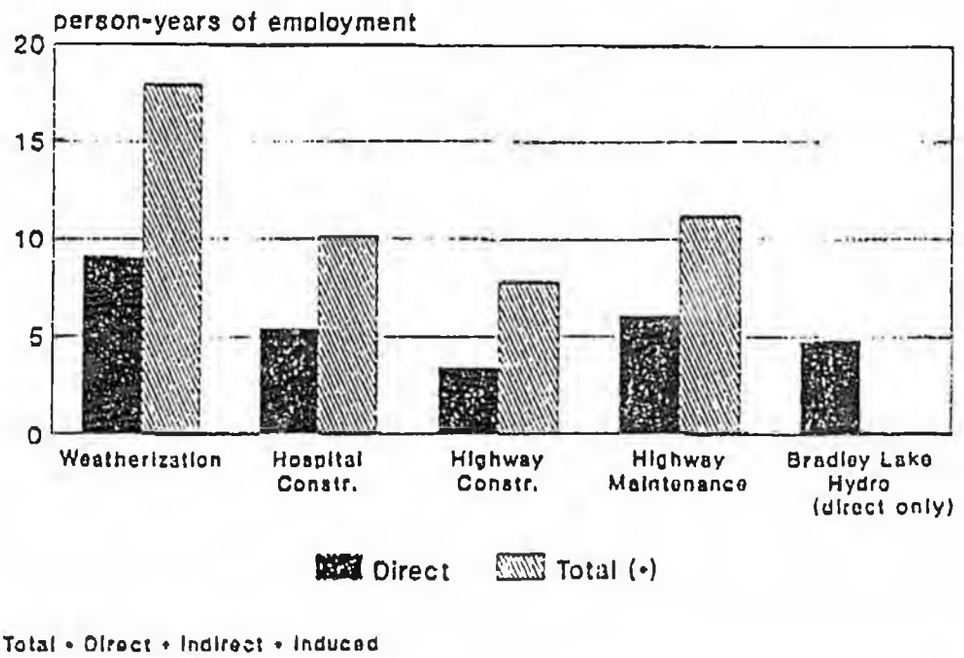
Jobs and Income from Energy Efficiency Programs

Steve Colt
Institute of Social and Economic Research, Anchorage, Alaska

State spending on low-income weatherization projects creates more jobs and personal income per dollar of outlay than any other type of capital project of which we are aware. During the installation phase, the weatherization program generates jobs and personal income at all levels of the Alaska economy: Villages, regional centers, and urban areas all benefit. These jobs and income come from *direct* use of labor, from *indirect* jobs in the transportation, air freight, and trade sectors, and from the *induced* respending of project-related wages. In addition to the one-time effects from the installation phase, the program provides a sustained economic boost to local residents in the form of reduced energy bills.

Installation Phase. During the installation phase, an expenditure of $1 million on weatherization creates the equivalent of 18 full-time jobs lasting one year and boosts Alaska personal income by $500,000. Even though the program is targeted towards rural areas, the urban economy receives most of the economic stimulus from the installation phase.

Figure 1: Jobs Created by State Projects per Million Dollars of Outlay



Recurring Savings. After installation is complete, program participants enjoy a sustained drop in their energy bills. These savings are spent and re-spent throughout the Alaska economy. As a result, there is a *sustained* annual increase in personal income of about $143,000 for every million dollars of original program expenditure. Most of this ongoing benefit accrues to local residents.

As table 1 table shows, weatherization projects create almost three times as many direct jobs as highway construction and almost twice as many as the Bradley Lake hydroelectric project. This result is not surprising, given the labor-intensive nature of the weatherization process and the relatively low wages paid to even the skilled labor employed.

Table 1: Comparative Economic Impacts of $1 Million of State Outlays

Project Type	Alaskan Jobs Created (person-years) Direct	Total[a]	Personal Income Generated (Thousand $) Direct	Total[a]	Data Source
Weatherization	9.0	17.9	281	500	(1)
Hospital Construction	5.4	10.2	252	381	(2)
Highway Construction	3.3	7.8	216	347	(2)
Highway Maintenance	6.0	11.2	371	524	(2)
Bradley Lake Hydro	4.8	NA	NA	NA	(3)

(a): Total = Direct + Indirect + Induced
Source numbers refer to references cited at the end of this summary

Summary of Impacts. Table 2 summarizes our estimates of both installation phase and recurring economic impacts from a $1 million weatherization expenditure targeted toward a rural village. The four columns show our estimates of where the employment and income is actually generated. Although the program analysed here is targeted for a rural area, significant employment and income is generated in the regional and urban economies, since these areas supply skilled labor, materials, and freight services to the project effort.

Table 2: Economic Impacts of a $1 Million Expenditure on Weatherization

Project Impacts	Local	Regional	Urban	State
Personal Income ($)				
Direct	27,879	0	252,658	280,537
Indirect	11,952	50,024	54,160	116,136
Induced	3,846	10,972	92,376	103,349
Total Project Personal Income	43,678	60,996	399,195	500,022
Employment (person-years)				
Direct	1.5	0.0	7.5	9.0
Indirect	0.6	1.7	2.3	4.6
Induced	0.2	0.5	3.7	4.2
Total Project Employment	2.4	2.2	13.5	17.9
Recurring Personal Income	**Local**	**Regional**	**Urban**	**State**
Direct	134,834	0	0	134,834
Induced	13,020	21,395	5,281	39,697
Displacement	(11,732)	(9,354)	(10,134)	(31,219)
Total Recurring Personal Income	136,122	12,041	(4,852)	143,311

References:

(1) Colt, Steve, 1989. *Income and Employment Impacts of Energy Efficiency Programs.* ISER Working Paper 89.2. UAA Institute of Social and Economic Research, Anchorage Alaska.

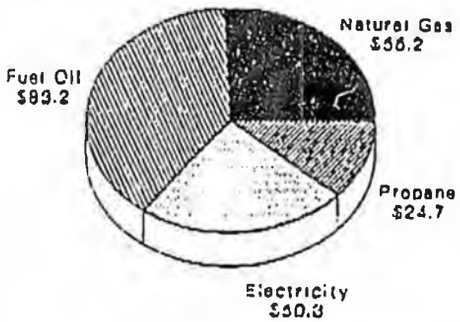
(2) Goldsmith, Scott, 1982. *Assessing the Economic Impacts of Capital Expenditures.* UAA, Institute of Social and Economic Research, Anchorage Alaska.

(3) Letter of 8 December 1989 from David Eberle, Bradley Lake Project Manager, AEA, to Steve Colt.

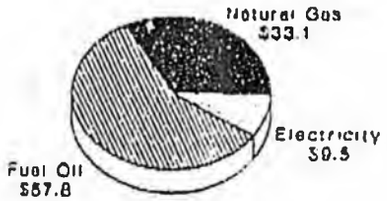
The Cost of Staying Warm:
Alaska's 1990 Heating and Hot Water Bill

Alaskans spent about $314 million for heat and hot water in 1990. Households paid two thirds of the bill --about $213 million-- while businesses and governments paid over $100 million.

Alaska's 1990 Heating and Hot Water Fuel Bill: $314 Million



Residential
$213.4 Million



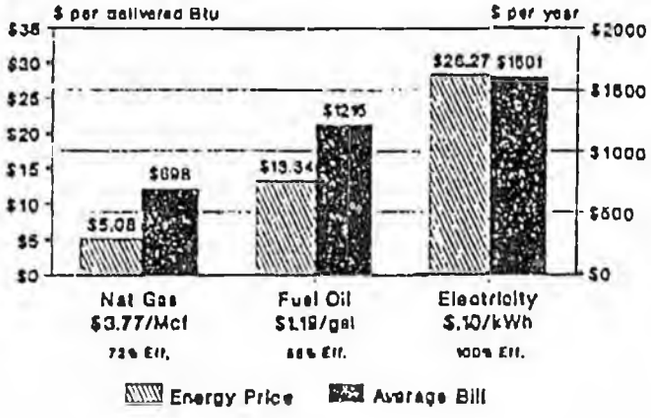
Non-Residential
$100.4 Million

Residential Use. About 42 percent of Alaska's 188,000 households heat with natural gas. The gas they burn accounts for 57 percent of total residential heating and hot water energy use, but only makes up 26 percent of the residential bill. That's because gas is so inexpensive--only about 1/3 the cost of oil and 1/6 the cost of electricity for equal amounts of delivered heat. Electricity provided only 5 percent of residential heat and hot water, but accounted for 24 percent of the total bill.

Business and Government Use. The residential heating bill is twice the size of the nonresidential bill largely because there is twice as much floor space in houses as there is in business and government buildings. Heating energy costs *per square foot* appear to be about the same: roughly 87 cents per square foot in houses and 90 cents per square foot in nonresidential buildings.

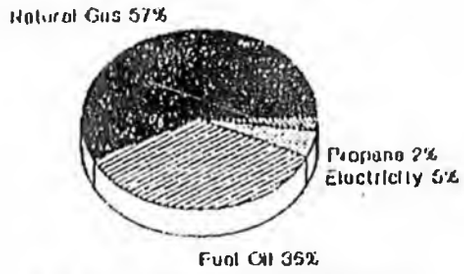
Cost per Household. An Alaskan household using gas spends an average of about $700 per year for heat and hot water. Electric heat users pay more than twice that: over $1600 per year on average. These statewide averages conceal a great disparity in heating bills. An apartment dweller using gas in Anchorage might pay as little as $400 per year. A homeowner in Fairbanks using oil could pay five times as much--more than $2000 per year for a 2400 square foot home.

1990 Energy Prices and
Average Heating and Hot Water Bills



Alaska's 1990 Heating and Hot Water Bill

Source	Amount	Units	Cost $ Million	Consumption in Trillion Btu
Natural Gas	24,827,000	Mcf	88.3	25.6
Fuel Oil	118,529,481	gallons	140.9	16.0
Electricity	629,480,597	kWh	59.8	2.1
Propane	528,780	bottles (100#)	24.7	1.1
Wood & Coal	*unknown*			small (<1)
Total State of Alaska			313.6	44.9



Residential Consumption

Source	Amount	Units	Cost $ Million	Average Price	Households using fuel for primary heat: Number	Households using fuel for primary heat: percent	Avg Use per Household	Avg Cost per Household
Natural Gas	14,652,380	Mcf	55.2	3.77 $/Mcf	79,000	42%	185 Mcf	$698
Fuel Oil	69,953,639	gallons	83.2	1.19 $/gal	68,000	36%	1,022 gal	$1,215
Electricity	521,522,781	kWh	50.3	0.10 $/kWh	24,000	13%	16,593 kWh	$1,601
Propane	528,780	bottles (100#)	24.7	46.68 $/Bottle	10,000	5%		
Wood & Coal	*unknown*		*unknown*		7,000	4%		
Total			$213.4		188,000	100%		$1,135

Business and Government Consumption

Source	Amount	Units	Cost $ Million	Average Price
Natural Gas	10,174,620	Mcf	33.1	3.26 $/Mcf
Fuel Oil	48,575,842	gallons	57.8	1.19 $/gal
Electricity	107,957,816	kWh	9.5	0.09 $/kWh
Total			$100.4	

Notes and Data Sources: Mcf = Thousand cubic feet = 1,030,000 Btu. kWh = kilowatt-hour = 3413 Btu. 1 gallon oil assumed to average 135,000 Btu.
Oil and electric prices are sales-weighted statewide averages. Gas price includes customer charge.
Data sources include: 1990 US Census (Population and Households), AK Dept. of Revenue (Oil Consumption),
Enstar Co. (Gas consumption), AK Energy Authority (Electric Consumption), ISER 1987: Forecast of
Electricity Demand in Alaska Railbelt (end-use breakdowns, market share, floorspace), DHSS Energy Assistance Program (Oil prices).
Prepared by Steve Colt, UAA Institute of Social and Economic Research, 1/30/92.

OJECT TITLE: McKinley Village Electrification

CATION: Southcentral | COMPLETION DATE: 10/31/91 | ELECTION DISTRICT: 17

'PROPRIATION TO: Dept. of Commerce & Economic Development | PROGRAM: Energy Development

	FUNDING:	CAPITAL REQUEST	OPERATING COSTS	NEW POSITIONS (PFT):
002	FEDERAL RECEIPTS			
1003	GENERAL FUND MATCH			
1004	GENERAL FUND	2,500.0		
1007	INTER-AGENCY RECEIPTS			
	TOTALS:	2,500.0		

PROJECT DESCRIPTION AND JUSTIFICATION:

This request is for funding of a powerline extension along the Parks Highway to electrify the area between Denali Park and Carlo Creek. The line extension would be built under a grant agreement with Golden Valley Electric Association, Inc. (GVEA). In addition, GVEA would pay for all future operation and maintenance costs.

The majority of the customers to be served would be between McKinley Village and Carlo Creek and would serve approximately 12 businesses and 70 residences. Many have been waiting for service for over 20 years. A public meeting in November 1991 reaffirmed local interest and support for this project. Currently, the communities immediately to the north and south enjoy the same rates for power that Fairbanks residents have as a direct result of $3.4 million in State grants for the Nenana Canyon Extension and the Cantwell Substation and distribution system. All of these communities compete for the same basic source of revenue-tourism in the Denali Park. The residents and businesses in the proposed area must

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generate power at a much higher cost than that enjoyed by their neighbors (competitors). This funding would result in more equitable costs of power for this entire area, enhance tourism based on economic development, improve the quality of life, and move one step closer to electrification of this important highway area.

CP1 ADDITIONAL EXPLANATION FORM

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