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TESTIMONY ON SENATE BILL 665

"Energy is the only real wealth in the new order. But, like all wealth it is finite. It must be the lemming in us that makes production with a capital "P" so much more attractive than conservation. To waste our knowledge and technology of totally renewable resources on a glut of stagnant, oozing ferment limited by the amount of decayable material that was obliterated by mother nature 30 million years ago seems the height of folly. When will we stop?"

Buckminster Fuller
"Critical Path"

My name is Robert Robadeau and I am a member of the City Council of Unalakleet as well as the Chairman of the Energy Planning Board which is the first attempt in our village to unify the I.R.A. Council, the Native Corporation and City Government in a common goal. Traditionally a Native village is a single living organism; a bond of community with a single purpose. To survive, perhaps when possible, with a degree of comfort. But comfort is a matter of comparison. To you comfort may be crisp, clean sheets each night; a steak not too well done; or no lines at the local gas pump. To us in Northwestern Alaska it is shelter, warmth, food and survival.

The differences in our perceptions of comfort is what I have come to talk to you about today.

Martha Nanouk is 77. She is mother to 14, grandmother to 43, great grandmother to 31. Martha has no income. The checks which keep her home heated, her stomach full, her many generations of children in spending money is not income. She has been told it is the privilege of the government to give her money for her long service, her many years of being a part of Unalakleet. Because she has no income, she qualifies for no loans. Martha is too used to giving to know the rules about asking. But before I came down here she asked me if I would ask you to fix her house. Although her house is not an old one it has withstood the east wind and our winters for one too many years with open cracks in the door jams that makes shoveling out the kitchen after a snow storm a matter of course. She has stuffed moss in the bigger holes but the hollow core door lets the cold through anyway. Her walls have all the insulation the designer thought necessary when the house was designed for suburban Arizona. Martha receives help from some agency, she is not sure of which one; to pay her electric bill so the few dollars she could set aside for repairs to cut the

high fuel bills would not be put back in her pocket, are spent paying a great grandchild to shovel out her kitchen.

Once you break a ridge pole in a log cabin it begins to resemble a large snow drift very quickly. Andrew Bang's home broke its ridge pole 17 years ago when his cabin was hooked to a bulldozer and dragged back away from the crumbling bank that threatened to deposit his home in the river mouth. Andrew is 83. His parents came to Alaska to herd the reindeer and he has lived his life on Norton Sound. Andrew has stretched waxed paper on his windows, the Nome Nugget is chinked into his walls, he uses a wood stove for heat, but he must keep an oil burner on, for days he can't chop wood and haul it from the beach. He pays half again as much for his fuel oil as you. Andrew receives \$250 per month, this is the money he has to stay alive and maintain his degree of comfort.

Energy is our life blood, and energy is expensive. When I talk to Martha and Andrew I tell them that the State of Alaska is very interested in helping to relieve the heavy burden of costs. I tell them that a billion dollars is as many greenbacks as the sand on the beach and that is what our state will spend next year on the energy problem. I haven't told them that 95% of that will only help the people living in the cities of the Great Land. I would feel embarrassed.

"But can you fix our house?" they asked me; and I am here to ask you.

I want to go back and tell them yes. With the additional handicap of including our prohibitive freight costs in the total grant leaves only slightly more than half of the money left over for materials. Why should we who have the greatest need because of our poor housing, high energy costs, and more severe climate be given only half the help of residents who reside in urban areas?

We need weatherization. We are an independent breed of folks in Unalakleet. We would like the means to become self sufficient once again. We do not want huge subsidies that hide the cost of energy. We do not want huge projects along the lines of the pyramids or the Hoover Dam. We want the ability to lessen our need, our dependence. Conservation!

Our local Energy Planning Board wants to be able to formulate a comprehensive, long range energy blueprint for our village. As reapportionment rears its ugly head we are not naive enough to demand new programs, new legislation. All we are asking is that you allow us to use the existing programs under the intent of the law. In our village we hope to establish a model energy plan to lead the way of other villages in our area. But we need the weatherization.

project to help us inventory our need. Even the \$1,500 before freight is nowhere near what 70% of our homes need now to meet our new building codes for a weather efficient house. But, it is a start. If I can go back to all of the Marthas and Andrews and tell them that next winter their fuel needs will drop by 20% I will feel that a start has been made.

Ideally, I hope that you will do all in your power to help us make use of the conservation audit program, the weatherization program, and the findings of the village energy Reconnaissance Program. If these three similar projects could be brought under the administration of one agency, coordinated by a village planning board the, immediate benefits would be twofold. First, each home would be eligible for a \$300 grant and the \$5,000 loan program as benefits of the audit, and the \$1,500 material fees in order to approach minimum weatherization standards. Secondly, the real wealth of all three of these programs is not in the money provided to each home, but more importantly a total energy use inventory of each housing unit would provide the data needed for our comprehensive plan. Without the data base cost effective programs would be as impossible to design for rural Alaska as they are now. Conservation is part of the Eskimo culture traditionally regulated by the harsh environment. Give us the means to use conservation rather than subsidies to approach our degree of comfort. The old adage about giving a man a fish and he eats once, but teaching him to fish feeds him for life seems to have more meaning to me these days. With our energy needs your subsidy programs taught us to eat too much without teaching us the brutal facts of overconsumption. Soon we will be left with huge needs and no subsidies. Let us learn again how to conserve. I urge you to pass Senate Bill 665 immediately. It is just a step towards our energy independence.

Thank you.

My name is George Olanna from Nome, originally from Shishmaref about 125 miles north of Nome. I am working for Kawerak, Inc., non-profit organization of Bering Strait Regional Corporation. I am a Certified Teacher and work as ABE teacher for Kawerak.

I am in support of SB 665, providing that rural villages get their share. Our region is cold, lot colder than southern part of our state. There are lots of homes right now in the villages that need up-grading. We needed this program long time ago. We had weatherization program in Shishmaref about 4-5 years ago. The problem was that most of the homes did not get help. It was not enough.

The money that is approved for the villages is, in most case, not enough due to high cost of transportation.

We also need to train our people to do home audits. We live in these homes and know what is needed. The problem with home audit programs is that individuals who are eligible for \$300 grants can receive \$300 to improve their homes. But what is \$300 in the villages? What can we get with \$300? Not much. The value of \$300 is like a penny. We can qualify for home improvement loans up to \$5,000 after the home audits are done. But who can afford to borrow money when there is no employment in the villages?

The cost of fuel is very high in the villages. In Shishmaref during the winter months, a drum of stove oil will last one week, in most of the homes. We need to repair these homes to offset the cost of fuel and electricity. Without weatherization programs for low-income families, it is impossible to obtain the material we need.

At this time I like to read a letter of support from Norton Sound Health Corporation Board of Directors, signed by Clinton Gray, Executive Director, for Charles Soxie, Chairman of the Board.

Thank you for giving me this time.



NORTON SOUND HEALTH CORPORATION

P.O. BOX 966
NOME, ALASKA 99762
(907) 443-5411

February 22, 1982

To Whom It May Concern:

The Board of Directors of Norton Sound Health Corporation convey their support for Senate Bill 665 relating to the weatherization program for low-income households.

Further, the Board supports this program for all rural Alaskan communities. The Norton Sound Health Corporation views the weatherization program as a vital element in safeguarding the health and well-being of rural Alaskans.

Sincerely,

Charles F. Soxie
Chairman, Board of Directors

My name is Frank Fox. I work for Nunam Kitlusisti as Energy Planner for Bethel area. The villages I work with are from Tuluksak to Eek down river from Bethel including Tuntutuliak. All are within 50 miles radius from Bethel.

The villages I work with have had problems in the past about winterization. When we make orders from Seattle from the villages, our orders arrive in mid-part of August just enough time to do some work in some homes.

Sometimes the supply doesn't arrive all in one package. When this happens the cost of transportation goes up to fly them to villages from Bethel.

Last year, cost of building material by barge was \$5.44 per 100 lbs. for lumber and \$9.35 per 100 lbs. for insulation. The cost would go up about 10% this summer.

I am in support of SB 665, providing that rural villages get their share. With the high cost of heating fuel, this program is badly needed in our area. Thank you. I am looking forward for your help and you will help!

Testimony of the Rural Alaska Community Action Program, Inc. on
Senate Bill 665

RurAL CAP appreciates the opportunity to comment on SB 665, the supplemental appropriation to the low income weatherization program, and we strongly recommend speedy approval of the \$1.5 million appropriation. Fast action is necessary to ensure that remote rural communities are able to participate on an equal footing. The level of federal funding that Alaska receives for this program has been cut back substantially, and the arrival of the diminished federal dollars has been delayed until approximately April 1. Consequently, barge deadlines for rural areas may be missed. As a result, the State will be spending nearly all of the money in urban and roadaccessible areas. Expedited approval of SB 665 would help to offset the large reduction in this year's federal grant and help ensure that rural communities facing the highest energy costs of all are served by this vitally needed program.

The need for weatherization for lowincome families exists throughout the state, but nowhere is that need more critical than in rural Alaska. There, energy costs range from \$1.50 to over \$3.00 per gallon for heating fuel. The climate of Western, Interior and Northern Alaska is significantly more severe than that of the rest of the state. The result is that some families are forced to pay from \$1,000 to \$4,000 to heat homes that are smaller than some urban garages. Per capita incomes in certain rural areas, sometimes less

than onethird of the levels in Anchorage, Juneau and Fairbanks, often end up being halfspent on energy and transportation costs. The lack of year round surface transportation causes problems in maintaining a secure year round fuel supply. Cutbacks in federal money for new housing mean that insulating existing houses properly is even more important.

Every gallon of fuel saved under this program in rural areas has a very high payoff to people with very low incomes. RurAL CAP's preliminary study of energy savings under the federally funded weatherization program based on our 1978 and 1979 Nome project show actual energy savings of over 14% for most households, or an average of \$200 per household per year in 1980.

Because our study assumptions were very conservative, those savings are likely to be even higher. Unlike many programs which aid low-income persons, this program offers people a chance to reduce their reliance on welfare by reducing the money they spend on energy.

Small wonder, then, that the Northwest Alaska's Mayors Conference and the state's Weatherization Policy Advisory Committee have called for speedy passage of SB 665.

Why is a supplemental appropriation for lowincome weatherization necessary? Repeated delays in the delivery of the federal grant mean that there would be problems in meeting deadlines for rural areas. A large reduction in the amount of the federal grant means that there is little money

to meet a large need. The state has therefore decided to spend an unusually large share of the grant in urban areas and on the road system, where houses can be weatherized more quickly and more cheaply.

The result is that areas with very great need for low-income weatherization will be left out for yet another year. Omitted are areas like the Calista region, which has one of the lowest per capita incomes in the state and among the lowest number of homes weatherized. Also omitted are the Aleutians, where the high cost of travel and restrictive federal administrative cost regulations mean that weatherization is extremely difficult. Northwest Alaska, with an especially harsh climate and high energy costs, is omitted because certain communities have had 11% of the houses weatherized under the program. Other communities in the same region have never received weatherization services. Speedy passage of the supplemental appropriation will enable deserving people in these areas to receive weatherization.

We call on the Legislature to express its intent that these supplemental funds be geographically distributed in the proportion that federal weatherization monies have historically been distributed -- approximately 75% to rural areas; and 25% to urban areas. This distribution reflects the higher costs, more severe climate, and lower incomes of Alaska's rural areas. This 75/25 split would restore the program's historic distribution before it was disrupted by delays in this year's federal grant.

Barge deadlines imposed by outside shipping companies and

the mechanics of the bureaucracy do require speedy action by the legislature. Because the state's fiscal year ends right in the middle of the construction season, it is necessary to make sure the appropriation will not lapse until the end of fiscal 1983 (June 30, 1983).

In addition to expanding the list of areas served, the supplemental will also enable more people to save more energy and money in those areas which are to be served by the federal program. Part of the supplemental should be used to offset the reductions in the number of people served in a given area caused by the reduction in the federal grant. All of the supplement should be used to bring flexibility to the rigid federal regulations which don't reflect Alaska's special circumstances. The federal regulations need more flexibility in three areas:

1. The current limit of \$1,008 worth of materials (including freight) per house should be increased to \$1,500 of materials before freight (F.O.B. Anchorage or Seattle). The \$1,008 limit has not been increased since the program began in 1975. Since then, inflation has cut the purchasing power of that \$1,008 in half. The limit is so low that major cost savers like wall insulation often cannot be done.

The inclusion of freight in materials cost is not a problem in the lower 48, where nearly everyplace has cheap surface transportation. But in Alaska, to include freight in the materials costs unfairly discriminates against the areas of highest need by reducing the amount of energy savings materials that are allowed. A more reasonable limit of \$1,500 before freight, would treat all areas of the state fairly

and ensure that necessary energy saving improvements will be made. Since homes done with federal money will otherwise be bound by the federal limit of \$1,008, we recommend that the Legislature allow some of the supplemental funds to be used to increase that limit to \$1,500 before freight.

2. The categorical restrictions on types of materials expenditures also need more flexibility. For example, many houses are in very bad repair, but the \$250 limit on general repairs often means that important energy-related improvements cannot be made. Leaky roofs or rotten windows allow moisture to destroy the value of insulation. Sealing air leaks in the house may require big improvements, such as pieces of new siding or new stove pipes. \$250 for repairs does not go far in rural Alaska.

3. The third major need is for flexibility in setting and applying the low-income guidelines for Alaska. Though the federal regulations allow Alaska's cutoff to be higher, there is no allowance for regional variations within Alaska. We would endorse a formula which adjusts weatherization income guidelines for the higher cost of living in various areas of the state.

In conclusion, the low income weatherization program is successful; it is needed. Without SB 665, it will not reach the areas of greatest need and it will not serve the areas it will reach as well as it could. We call on the Legislature and Governor to approve SB 665 as soon as possible.

THE NEED FOR WEATHERIZATION IN RURAL ALASKA

As Found in Alaska Power Authority Village Energy Reconnaissance Studies

NORTEC: Grayling, Scammon Bay, Goodnews Bay, Togiak

"The actual oil consumption in this area ('The Western Alaskan region where degree days vary from 12,000 to 14,000 days per year'.) is approximately 40-50% greater than required for a well-insulated home...Energy conservation offers the best opportunity in the villages for reduction of oil consumption and energy costs... These (energy conservation) technologies have the highest reliability, the greatest availability, and are most appropriate for the area involved."

Roy Barkwell: * Savoonga

"...Conservation of residential heating fuel has definite merit... The author's judgment from past experience and the site visit is that approximately 30% of this heat could be conserved through upgrading of building envelope by weatherstripping, added insulation, etc....The primary advantage of this technology is inherent in its low capital cost requirements and lack of complex maintenance and operations procedures."

Marks Engineering: Tanana

Conclusions: "Heating requirements ... can be greatly reduced if the structures are upgraded with energy saving improvements."

Recommendations: "Community residents should be encouraged to weatherize...."

CH₂M Hill: Ahkiok, King Cove, Larsen Bay, Old Harbor, Ouzinkie,
Sand Point

Recommendations for all villages: Feasibility studies of heat energy conservation (i.e. weatherization).

(This recommendation for a feasibility study of weatherization reflects the cumbersome way the reconnaissance process works in Rural Alaska when consultants apply it literally without taking

* Master's Thesis based on work done for Fryer: Pressler: Elliott reconnaissance of Savoonga.

into account the special circumstances in rural areas. At least one other consultant, NORTEC, has said no feasibility study is necessary for weatherization, since we already know that it works and is greatly needed.)

Retherford Associates: Buckland, Koyokuk, Russian Mission, Sheldon Point, Chuathbaluk, Crooked Creek, Nikolai, Red Devil, Sleetmute, Stony River, Takotna, Telida, Hughes

"It cannot be overemphasized that if villages wish to stabilize and hopefully reduce the local cost of energy, immediate short-term conservation measures must be implemented. These conservation measures . . . can reduce current non-transportation fuel use on the order of 15 percent over the 20 year period of this study."

(It is ironic to note that this study simply assumed that energy conservation would be done and did not include this important energy strategy in the list of options studied.)

Wind Systems Engineering: Shungnak, Kiana, Ambler

Recommendations in all three villages: An "integrated" approach to conservation and weatherization:

"Increasing end use (energy) efficiency is as important as increasing (energy) conversion efficiency. This approach looks at energy as both electrical and thermal and takes advantage of reduced electric consumption associated with a well-insulated thermally tight building. Community facilities which are consolidated and built with energy efficient appliances, load management, and a well insulated shell make excellent sense from an integrated energy standpoint."

Fryer: Presslev: Elliott: Elim, Savoonga, Kaltag, White Mountain

Recommendations for all four villages: To bring in an auditor/energy specialist to help the villages participate in existing federal and state weatherization programs. (The consultants did not check whether those programs have enough money to meet weatherization needs of rural households.)

MINUTES OF THE LOW-INCOME WEATHERIZATION
POLICY ADVISORY COMMITTEE MEETING OF
FEBRUARY 10, 1982

The meeting was called to order at 1:15 p.m.

Members Present: Tom Hunter, Doug Elliott, Patrick Durkin,
Budd Goodyear, Shirley Yocum, Earl Finkler
for Johnny Adams, Jan Sarice for Eric
Sutcliffe

Members Absent: Vera Gazaway, Ted Wellman

State Personnel Present: Mike Carr, George Skladal

Guests Present: Vince Holton, Bob Lohr

The meeting was called to order by Mike Carr, the acting
Chairman, and the introduction of the new members and
representatives was completed. Also, it was announced that Fred
Janvrin, from the University of Anchorage Alaska, has resigned
from the Policy Advisory Committee (PAC).

George Skladal made an opening statement for the Department of
Energy and Power Development (DEPD) thanking the PAC members for
their participation and asking for their continued support.

The minutes of the January 8, 1982 PAC meeting were read and
approved as a matter of record. Moved by Doug Elliott, 2nd by
Tom Hunter, vote unanimous.

OLD BUSINESS

Election of a Chair person:

The necessity of choosing a chairperson was discussed.
Since no member would volunteer to serve as chair person,
Mike Carr was asked to serve as temporary chairman until the
members of the PAC would be able to choose a member for the
position.

State Plan Funding Allocation:

Mike Carr presented the States' substitute Funding
Allocation Plan in response to the PAC's suggestions from
the January 8, 1982 meeting. Bob Lohr voiced RurAL CAP's
support of the substitute plan and withdrew the plan
suggested by RurAL CAP earlier in the week. After much
discussion and debate, and the consideration of amendments
made and withdrawn, the State's substitute Funding
Allocation Plan was approved by a vote of 6 in favor and 1
opposed. Motion for approval was made by Doug Elliott and
seconded by Earl Finkler.

Final Approval of the State Plan:

A motion to approve the State Plan as amended was made by Tom Hunter and seconded by Pat Durkin. The motion passed by a vote of 6 in favor and 1 opposed.

NEW BUSINESS

Senate Bill 665:

The PAC discussed the need for additional funding to supplement the federal support for the Weatherization Program. Discussion centered on the legislation introduced by Senator Ferguson and how it could be used to augment the program. It was decided that the PAC would send a resolution in support of SB 655 to the Governor and each member of the State House and Senate. The following resolution was moved for adoption by Earl Finkler and seconded by Budd Goodyear. The motion was passed by unanimous consent.

It is resolved that the Weatherization Policy Advisory Committee supports the appropriation of \$1,500,000, as provided by Senate Bill 655, to supplement funding for the existing federal Low-Income Weatherization Assistance Program; and it is further resolved that the funding be authorized for utilization to meet the unique needs of Alaskans, and not be bound by federal limitations which are unduly restrictive as applied to Alaska.

Governors' Request for '83 Funding:

The PAC discussed the Governor's Capitol Improvements budget and the \$5,000,000, allocated for low-income weatherization under the Residential Energy Conservation Program. The PAC decided that a second resolution should be sent to the Governor and each member of the State House and Senate in support of this allocation of funds. The following resolution was made for adoption by Pat Durkin and seconded by Doug Elliott. The motion was passed by unanimous consent.

Whereas, there is a great unmet need for Low-Income Weatherization Assistance in the State of Alaska, and;

Whereas, Federal funds for this purpose have been significantly reduced and elimination of the federal funding is likely in 1983;

Therefore, be it resolved, that the Weatherization Policy Advisory Committee supports the Governor's request for creation of a state funded Low-Income Weatherization Assistance Program, and also, supports the appropriation of \$5,000,000, to fund this program through fiscal year 1983.

Future Meetings:

It was decided that no date be set for the next meeting of

the PAC until such time as funds are appropriated by the State or until an unexpected situation demands the participation of the PAC.

PAC Chairman:

Budd Goodyear volunteered to serve as Chairman of the PAC for the remainder of the year. He will appoint someone to record the minutes of the meeting.

The meeting was adjourned at 3:50 p.m.

RESOLUTION

ENTITLED: URGING SUPPORT FOR SENATE BILL 665 TO PROVIDE FOR A COMPREHENSIVE WEATHERIZATION PROGRAM FOR LOW INCOME ALASKANS

WHEREAS, Energy costs of \$3.00 per gallon for fuel oil is not uncommon in rural communities, and

WHEREAS, low income Alaskans are unable to bear these high energy costs, and

WHEREAS, federal programs that have traditionally subsidized the payment of low income people's housing energy bills are being dramatically cut and may be entirely phased out, and

WHEREAS, weatherization properly applied to low income households in rural Alaska to meet Alaskan climatic conditions with produce energy savings for the life of the home rather than subsidize bills on a one time basis, and

WHEREAS, the federally funded low income weatherization program has been cut and that limited funding for fiscal year 1982 will not be available in time to meet barge deadlines for work in rural areas this summer, and

WHEREAS, a special appropriation called for in Senate Bill 665, if passed in a timely manner would insure that funding would be available in time to meet rural barge deadlines, and

WHEREAS, local and regional non-profit contractors would be used, and local hire would be used exclusively in the installation of weatherization materials in local communities, now therefore be it

RESOLVED, THAT THE NORTHWESTERN MAYORS CONFERENCE URGES THE ALASKAN STATE LEGISLATURE TO PASS SENATE BILL 665 AND ALSO URGES THAT THE GOVERNOR SIGN THE BILL IN TIME TO MEET SPRING BARGE DEADLINES AND INSURE THAT LOW INCOME RURAL ALASKANS RECEIVE WEATHERIZATION PROGRAM BENEFITS THIS SUMMER TO HELP MEET THE ENERGY NEEDS FOR THE COMING WINTERS.

0001 | PRELIMINARY REPORT

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0003 | ENERGY SAVINGS FROM WEATHERIZATION IN RURAL ALASKA

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INTRODUCTION:

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0008 | MOST ANALYSES OF ENERGY PROBLEMS IN RURAL ALASKA ASSUME THERE IS
 0009 | SIGNIFICANT POTENTIAL FOR CONSERVING ENERGY USED IN SPACE
 0010 | HEATING. HOWEVER, TO DATE THERE HAS BEEN NO STUDY TO DETERMINE
 0011 | ACTUAL ENERGY SAVINGS THAT HAVE RESULTED FROM ATTEMPTS AT ENERGY
 0012 | CONSERVATION IN RURAL AREAS, SUCH AS THE FEDERAL LOW-INCOME
 0013 | WEATHERIZATION PROGRAM. RURAL CAP HAS STUDIED A SAMPLE OF HOMES
 0014 | IN NOME WHICH WERE WEATHERIZED UNDER THE FEDERAL PROGRAM IN 1978
 0015 | AND 1979 TO DETERMINE THE RESULTING ENERGY SAVINGS. THAT PROGRAM
 0016 | PROVIDED A MAXIMUM OF \$1,008 PER HOUSE FOR IMPROVEMENTS WHICH
 0017 | WOULD SAVE ENERGY. THE PROGRAM REGULATIONS IMPOSE VARIOUS
 0018 | SPENDING COST LIMITS ON SPECIFIC TYPES OF IMPROVEMENTS, SUCH AS
 0019 | THE PROPOSED \$250.00 LIMIT TO BE IMPOSED FOR THE CATEGORY OF
 0020 | "GENERAL HEAT WASTE" IN THIS YEAR'S PROGRAM. DESPITE A FAIRLY
 0021 | DISTINCT DIFFERENCE IN THE QUALITY OF HOUSING, THESE SPENDING
 0022 | LIMITS WERE THE SAME FOR BOTH RURAL AND URBAN AREAS. IN ADDITION,
 0023 | THE HIGH COST OF TRANSPORTING MATERIAL TO RURAL AREAS LIMITED THE
 0024 | EXTENT OF IMPROVEMENTS THAT COULD BE MADE WITH THE AVAILABLE
 0025 | FUNDS.

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0027 | FEDERAL FUNDING FOR THE PROGRAM HAS BEEN SEVERELY REDUCED AND MAY
 0028 | BE ELIMINATED NEXT YEAR. THE ALASKA LEGISLATURE IS CONSIDERING
 0029 | PROPOSALS TO USE STATE FUNDS ON WEATHERIZATION.

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0031 | TO AID POLICY-MAKERS, INTERESTED PARTIES AND THE PUBLIC IN
 0032 | DISCUSSION OF ENERGY CONSERVATION IN RURAL ALASKA, RURAL CAP HAS
 0033 | PREPARED THIS STUDY OF ACTUAL ENERGY SAVINGS THAT HAVE RESULTED
 0034 | UNDER THE FEDERAL LOW-INCOME WEATHERIZATION PROGRAM IN NOME,
 0035 | ALASKA.

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0037 | IT SHOULD BE EMPHASIZED THAT TWO DIFFERENT ISSUES ARE INVOLVED IN
 0038 | THIS STUDY. FIRST IS THE BROAD QUESTION OF THE POTENTIAL FOR
 0039 | ENERGY CONSERVATION IN RURAL AREAS, BASED ON ACTUAL FUEL USE
 0040 | BEFORE AND AFTER ENERGY CONSERVATION IMPROVEMENTS HAVE BEEN MADE.
 0041 | THE DISTINCTION BETWEEN USING ACTUAL BEFORE AND AFTER DATA AND
 0042 | USING SAVINGS ESTIMATED FROM ENERGY AUDITS IS IMPORTANT. THE
 0043 | SECOND QUESTION IS THE EFFECTIVENESS OF THE FEDERAL LOW-INCOME
 0044 | WEATHERIZATION PROGRAM ITSELF. THE PROGRAM MAY NOT REALIZE THE
 0045 | FULL POTENTIAL ENERGY SAVINGS FOR A VARIETY OF REASONS: SOMETIMES
 0046 | CONFLICTING GOALS (SUCH AS LOCAL EMPLOYMENT AND JOB TRAINING
 0047 | VERSUS QUICK COST-EFFECTIVE PROJECT MANAGEMENT); PROBLEMS IN
 0048 | ADMINISTRATION; THE LOW PER HOUSE EXPENDITURE LIMIT; AND THE
 0049 | LIMITS ON SPENDING FOR VARIOUS TYPES OF IMPROVEMENTS. THIS STUDY
 0050 | IS INTENDED TO SUGGEST ANSWERS TO THE FIRST QUESTION BY ANSWERING
 0051 | THE SECOND--TO DOCUMENT THE POTENTIAL FOR ENERGY CONSERVATION IN
 0052 | RURAL HOMES BY EXAMINING ACTUAL ENERGY SAVINGS UNDER THE FEDERAL

0053 | ~~LOW-INCOME WEATHERIZATION PROGRAM. THE LIMITATIONS OF THE FEDERAL~~
0054 | ~~PROGRAM SHOULD BE KEPT IN MIND WHEN USING THE RESULTS TO ADDRESS~~
0055 | ~~THE BROADER QUESTION OF DEMONSTRATING THE POTENTIAL FOR ENERGY~~
0056 | ~~CONSERVATION IN RURAL AREAS.~~

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0058 | METHODOLOGY:

0059

0060 | THE STUDY BEGAN WITH THE NAMES OF WEATHERIZATION CLIENTS FROM
0061 | 1978 AND 1979 IN NOME. RURAL CAP STAFF VISITED THE FUEL DEALERS
0062 | IN NOME AND LEARNED THAT MOST OF THE CLIENTS PATRONIZED BONANZA
0063 | FUEL EXCLUSIVELY. PATRONS OF THE OTHER FUEL DEALER, ARCTIC
0064 | LIGHTERAGE, WERE DROPPED FROM THE SAMPLE. BONANZA HAS ON FILE
0065 | MONTHLY STATEMENTS FROM CUSTOMERS WITH CHARGE ACCOUNTS FOR THE
0066 | YEARS 1977-78 AND 1980-81. THE MONTHLY STATEMENT IDENTIFIES FUEL
0067 | OIL PURCHASES, ALTHOUGH ONLY A TOTAL INVOICE CHARGE IS GIVEN. BY
0068 | DEDUCTING THE CITY'S 3% SALES TAX AND DIVIDING THE AMOUNT
0069 | PURCHASED BY THE PRICE IN EFFECT AT THE TIME, THE NUMBER OF
0070 | GALLONS PURCHASED WAS DETERMINED. WHERE THE EXACT DAY OF PURCHASE
0071 | WITHIN A MONTH WAS NOT LOGGED, THE LOWEST PRICE IN THE PERIOD WAS
0072 | ASSIGNED TO THE PURCHASE. WITH MULTIPLE PURCHASES IN A MONTH THE
0073 | LOWEST PRICE WAS ASSIGNED TO THE FIRST PURCHASE, THE NEXT HIGHEST
0074 | PRICE TO THE NEXT PURCHASE, ETC. BY ERRING ON THE SIDE OF LOWER
0075 | PRICES THE NUMBER OF GALLONS IS OVERSTATED AND THE TOTAL SAVINGS
0076 | IS UNDERSTATED. THIS METHOD WAS USED PRIMARILY FOR INCOMPLETELY
0077 | LOGGED DATA IN THE YEAR AFTER WEATHERIZATION (1980).

0078

0079 | SPECIFIC PRICE DATA FOR SALES DURING 1977 - APRIL 1978 ARE NOT
0080 | YET AVAILABLE. THE PRICE IN EFFECT DURING MAY 1978 (\$.785/GAL.)
0081 | WAS USED. SINCE THIS PRICE IS CERTAINLY HIGHER THAN ACTUAL
0082 | PRICES DURING THAT PERIOD, THE NUMBER OF GALLONS IN A GIVEN
0083 | PURCHASE IS UNDERSTATED. BY UNDERSTATING BASE YEAR CONSUMPTION,
0084 | WE UNDERSTATE THE ENERGY SAVINGS UNDER THE PROGRAM.

0085

0086 | WHEN PRICE DATA FOR THAT PERIOD BECOMES AVAILABLE, A FINAL
0087 | ANALYSIS WILL BE DONE. PRELIMINARY CALCULATIONS UNDER A VARIETY
0088 | OF PRICE ASSUMPTIONS INDICATE THAT THE FINAL ANALYSIS WITH ACTUAL
0089 | (I.E., LOWER) PRICES IN THE BASE YEAR COULD SHOW FROM 2-15
0090 | PERCENTAGE POINTS GREATER SAVINGS DEPENDING ON THE LEVEL OF
0091 | CONSUMPTION.

0092

0093 | STAFF AT BONANZA FUEL INFORMED US THAT ALMOST ALL CUSTOMERS
0094 | EITHER ALWAYS PAY CASH OR ALWAYS CHARGE THEIR PURCHASES. MOST OF
0095 | THE WEATHERIZATION CLIENTS ON OUR LIST DO CHARGE THEIR PURCHASES.
0096 | THOSE WHO PAID CASH WERE DROPPED. IN ADDITION, CLIENTS WHOSE
0097 | NAMES APPEARED IN BOTH YEAR'S WEATHERIZATION PROJECTS WERE ALSO
0098 | DROPPED (TO AVOID COMPLICATIONS IN ACCURATELY IDENTIFYING POST-
0099 | WEATHERIZATION FUEL USE). THE MONTHLY STATEMENTS OF THE REMAIN-
0100 | ING SAMPLE OF 21 CLIENTS WERE EXAMINED FOR 1977-78 AND 1980.

0101

0102 | FURTHER DELETIONS FROM THE SAMPLE WERE MADE AFTER GATHERING THE
0103 | AVAILABLE DATA. THE SAMPLE DID NOT INCLUDE CLIENTS FOR WHOM ONLY
0104 | PARTIAL BEFORE AND AFTER DATA WAS AVAILABLE. IN ADDITION, THOSE

0105 CLIENTS WHO DID NOT HAVE A CONSISTENT PATTERN OF FUEL PURCHASES
0106 DURING AT LEAST ONE OF THE YEARS BEFORE AND ONE OF THE YEARS
0107 AFTER WEATHERIZATION WERE DROPPED (FOR EXAMPLE, A GAP OF TWO
0108 MONTHS IN PURCHASES COMPARED TO OTHER YEARS INDICATES AN UNUSUAL
0109 | ABSENCE, SUCH AS AN EXTENDED STAY AWAY FROM HOME.). IF THE
0110 PATTERN OF PURCHASES WITHIN EACH YEAR SHOWED GAPS BUT THE GAPS
0111 WERE CONSISTENT ACROSS THE YEARS, THE CLIENT WAS RETAINED IN THE
0112 SAMPLE. IN SOME INSTANCES, THE PATTERN OF PURCHASES ONLY ALLOWED
0113 | COMPARISONS FOR 10- OR 11-MONTH PERIODS. WHERE THE PATTERN OF
0114 PURCHASES WITHIN THESE PERIODS ACROSS THE YEARS WAS CONSISTENT,
0115 THE CLIENT REMAINED IN THE SAMPLE.

0116
0117 THE STUDY ASSUMED THAT FUEL PURCHASES WITHIN THE PERIODS COMPARED
0118 FOLLOW THE PATTERN OF ACTUAL FUEL USE. IN A SCATTERED FEW
0119 INSTANCES, WHERE THE PATTERN OF PURCHASES SUGGESTED AN ADJUSTMENT
0120 TO REFLECT ACTUAL USE WAS NECESSARY, THE ADJUSTMENT WAS MADE BY
0121 PRO-RATING THE PURCHASE AMOUNT. (FOR EXAMPLE, WHEN THERE IS A
0122 PURCHASE ON THE FIRST AND LAST DAY OF THE PERIOD OF COMPARISON,
0123 ONE PURCHASE WOULD BE EXCLUDED.)

0124
0125 STAFF AT BONANZA FUEL INDICATED THAT ONLY ONE OF THE FINAL SAMPLE
0126 OF 14 MAY HAVE MOVED DURING THE PERIOD OF ANALYSIS. A CHANGE IN
0127 THE CLIENT'S ACCOUNT NUMBER AND A GAP IN THAT YEAR'S PURCHASES
0128 TEND TO CONFIRM THAT POSSIBILITY. THAT CLIENT HAS BEEN DROPPED
0129 FROM THE FINAL SAMPLE.

0130
0131 FUEL USE WAS ADJUSTED FOR DIFFERENCES IN HEATING DEGREE DAYS
0132 BETWEEN THE BASE YEAR AND THE YEAR AFTER WEATHERIZATION. FUEL
0133 USE WAS ASSUMED TO BE DIRECTLY PROPORTIONAL TO THE NUMBER OF
0134 DEGREE DAYS IN THE PERIOD OF COMPARISON.

0135
0136 FINDINGS:

0137
0138 DESPITE THE LACK OF PRICE DATA IN THE BASE YEAR, WHICH HAS CAUSED
0139 AN UNDERSTATEMENT OF ENERGY SAVINGS IN EACH HOUSEHOLD, AVERAGE
0140 ACTUAL SAVINGS ACROSS THE SAMPLE RANGE BETWEEN 7.2% AND 14.8%,
0141 DEPENDING ON THE EXACT COMPOSITION OF THE SAMPLE. THREE CLIENTS
0142 HAD GREATER ENERGY USE AFTER WEATHERIZATION, ONE SLIGHT (+1.3%);
0143 ONE MODERATE (+12.8%) AND ONE VERY HIGH (+47.9%). IN OUR
0144 PRELIMINARY DATA GATHERING, WE WERE UNABLE TO GATHER DATA TO
0145 CONTROL FOR FACTORS WHICH MIGHT EXPLAIN SUCH ANOMALOUS RESULTS,
0146 SUCH AS AN INCREASE IN HOUSE SIZE OR IN NUMBER OF HOUSEHOLD
0147 RESIDENTS OR A CHANGE IN LIFESTYLES. WE WILL ATTEMPT TO GATHER
0148 SUCH DATA FOR THE FINAL ANALYSIS. IN THE MEANTIME, WE HAVE
0149 PRESENTED A VARIETY OF AGGREGATIONS OF THE FINDINGS TO SHOW THE
0150 IMPACT OF VARIOUS CHANGES IN THE SAMPLE AS A RESULT OF THESE
0151 SOMEWHAT ANOMALOUS DATA POINTS.

0152
0153 | WE BELIEVE THE YEARLY AVERAGE SAVINGS PER HOUSEHOLD OF ALL
0154 | HOUSEHOLDS WITH SAVINGS, 14.8% OR \$207.64 (ITEM B), BEST REFLECTS
0155 | THE DEMONSTRATED POTENTIAL FOR ENERGY CONSERVATION IN RURAL
0156 | HOUSEHOLDS UNDER THE FEDERAL LOW-INCOME WEATHERIZATION PROGRAM.

0157 | IF FINDINGS AT BOTH EXTREMES ARE ELIMINATED, THE AVERAGE SAVINGS
0158 | RANGE FROM 9-11% (C - E). IN LIGHT OF THE STUDY'S CONSERVATIVE
0159 | ASSUMPTIONS, THE PROBABILITY OF DEVELOPING DATA TO EXPLAIN THE
0160 | ANOMALOUS FINDINGS, THE LOW PER HOUSE FUNDING UNDER THE
0161 | WEATHERIZATION PROGRAM, AND THE PROGRAM'S CUMBERSOME REGULATIONS,
0162 | WE CONCLUDE THAT THE RESULTS OF THE FEDERAL LOW INCOME
0163 | WEATHERIZATION PROGRAM IN NDME, ALASKA INDICATE A SIGNIFICANT
0164 | POTENTIAL FOR ENERGY CONSERVATION IN SPACE HEATING IN RURAL
0165 | ALASKA. WE BELIEVE THAT THE FINDINGS SUGGEST EVEN GREATER SAVINGS
0166 | COULD BE ACHIEVED UNDER A MORE FLEXIBLE PROGRAM WITH HIGHER
0167 | EXPENDITURES PER HOUSEHOLD.

Findings

Annual Energy Savings under the Federal Low Income Weatherization Program in Nome, Alaska (1980)

<u>Sample</u>	<u>% change in energy use</u>	<u>Money saved on Fuel 1980</u>
001554	- 25.4	\$524.92
792007	- 29.2	737.50
792011	- 10.3	159.18
792014	- 9.2	112.89
001547	- 15.1	392.20
001533	- 9.2	167.52
*001548	+ 1.3	N/A
*001545	+ 12.8	N/A
*792010	+ 47.9	N/A
792419	- 1.7	15.37
001541	- 7.6	113.62
001531	- 19.4	205.08
001556	- 19.8	305.55
001549	- 15.5	279.93

A Average, entire sample: -7.2%

B Average, omitting those with greater fuel use (*): -14.8%

C Average, omitting highest and lowest: -7.9%

D Average, omitting two highest and two lowest: -10.9%

E Average, omitting three highest and three lowest: -11.0%

Average cost savings per household, sample B \$207.64

Money Saved By Weatherization

<u>Client</u>	<u>% Savings</u>	<u>1980 Fuel Cost</u>	<u>1980 Fuel Savings *</u>	<u>Household Income</u>	<u>Annual Savings as % of income</u>	<u>Weatherization Expenditures on household**</u>	<u>Payback in years</u>
001554	25.4%	\$1541.68	\$524.92				
792007	29.2%	1788.19	737.50	\$6,542	11.3%	\$647.65	0.88 yrs
792011	10.3%	1386.33	159.18	7,300	2.2%	647.65	4.07 yrs
792014	9.2%	1114.22	112.89	10,800	1.0%	647.65	5.74 yrs
001547	15.1%	2205.13	392.20				
001533	9.2%	1653.41	167.52				
001548							
001545							
792010							
792419	1.7%	898.43	15.37	4,382	0.4%	1198.00	77.9 yrs
001541	7.6%	1381.44	113.62				
001531	19.4%	852.02	205.08				
001556	19.8%	1237.63	305.55				
001549	15.5%	1526.11	279.93				

** Includes freight costs plus \$190 labor (2 men 8 hours, per house, on average).

* 1980 Fuel Costs include savings from Weatherization. Savings were determined by calculating 1980 costs without weatherization as follows: 1980 fuel costs (a) ÷ (1-% savings (1-b)) = fuel costs without weatherization (c). That amount (c) times % savings (b) = savings due to weatherization = s. or, $s = \frac{a}{(1-b)}(b)$.

COMMITTEE MINUTES FORM

This form is to be prepared and submitted to the Committee Records Staff within the next legislative day following the public hearing or committee meeting. Please submit this form completed with the following information pursuant to Rule 23 of the Uniform Rules.

Committee Name: Senate Labor and Commerce

Date: 1 March, 1982

Members Present: Senator Mulcahy, Chairman
Senator Fahrenkamp
Senator Rodey
Senator Ziegler

Public hearing or committee meeting on:

COMMITTEE CALENDAR

SB 665	"An act making a supplemental appropriation to the Department of
bill number	bill title Commerce and Economic Dev for the low income
	weatherization program; and providing for an effective date."
bill number	bill title

WITNESS REGISTER

Witness Name: Mr. Terry Pegues

Affiliation: Southeast Alaska Community Action Program

Address: Box 490, Juneau, Alaska

Phone:

Summarized Position Statement: Testified in support of the legislation explaining the need for supplemental funding for weatherization program.

PREVIOUS ACTION

Reference Number:

Statutory Reference:

Amendments Formally Considered:

Member Moving Adoption: Senator Rodey

Action: Passed or Failed

Voting Record: 3 do pass

ACTION NARRATIVE

Tape Recording

Number 0000

Chair opens at 004 with members 3 present etc.

Testimony begins at tape reading 138 and continues through 187.