

The Energy Relief Savings and Efficiency Plan (ERSEP)
or
A Better Approach to Addressing Alaska's Energy Needs in the
2008 Special Session

by Alaska Conservation Solutions
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Alaska is at a critical fork in the road. High energy prices are creating both budget surpluses and individual hardships. In response to this situation, we can implement a thoughtful, comprehensive strategy that has both immediate and long term benefits, or we can make the problem worse. If we simply subsidize fossil fuel consumption by all Alaskans, this will increase our dependence on foreign supplies, create inequities, fail to address the root causes of the problem, and establish a massive subsidy that will be virtually impossible to undo in the future. On the other hand, there are numerous strategies that can provide immediate, mid- and long-term relief to high energy prices and simultaneously reduce our demand for fossil fuels. This is the responsible path to the future.

I. Addressing Utility Costs

As Alaskans face rising utility costs, residents are looking for relief. The state can provide a path to reduced monthly bills and long-term energy security. To provide relief without leadership on energy conservation and energy efficiency would be short-sighted, as energy cost relief would only treat the symptom and not the underlying challenge.

Alaskans can significantly lower their energy bills by implementing immediate state-assisted energy conservation measures. The public's response in Juneau to their energy crisis demonstrates this clearly. Virtually overnight individuals and businesses in Juneau adopted multiple conservation measures, and energy consumption dropped by approximately one-third. For example, on Tuesday April 15, prior to the avalanche, Juneau consumed 1,006 MWh, while on Tuesday May 6, after the avalanche, Juneau consumed 660MWh.

There is a need for more public education on energy conservation measures, and, in some cases, implementation assistance. Some energy conservation measures are not universally understood, such as the energy savings achieved from unplugging appliances not in use. A 2000 study by the University of California and Lawrence Berkeley National Laboratory indicates that eliminating this "standby electricity" could save households between 6 and 26 percent on their average electricity bill. It is estimated that "phantom" appliances use about 450 kWh per household annually. Other energy conservation strategies may require additional education, such as how and why to reduce the thermostat setting on a water heater. Notably, each 10°F reduction in water temperature results in 3%–5% savings in energy costs.

Alaska Conservation Solutions proposes at least seven areas in which appropriations represent wise investments that will help Alaskans immediately lower their utility bills:

1) Effective Public Education Program

Immediately establish an Alaska Energy Conservation Education Coordinator position and program within Alaska Energy Authority. This position would work with utilities, the media, key organizations and others to educate the public on ways in which consumers can reduce their energy use quickly and efficiently. Among other immediate projects, this program could modify and expand a state-wide, web-based Alaska Energy Reducer, which would provide quick, practical ways to reduce consumption. It could also work with the media to produce statewide Public Service Announcements on energy reducing strategies; and with key housing and other organizations like RuralCAP, as well as local governments. Printed materials, including posters, would also be utilized.

(Appropriation: \$800,000.)

1a) Alternative: An alternative strategy would be to provide an \$800,000 grant to an existing entity outside of state government, to provide the services described above.

2) Metering and Utility Education Program

Provide money to utilities to educate their consumers and distribute home metering devices. Studies show that when consumers can see how much energy they are using and from what sources, they are better able to reduce their energy consumption. Providing utilities with metering devices, and having utilities distribute them along with energy conservation recommendations, would produce significant results. For example, after meters were installed in the City of Saint George, demand was reduced and the utility realized a 15% savings on fuel (AHFC 6/19/07).

(Appropriation: \$500,000 to the highest cost areas, utility educational efforts, and other outreach.)

3) Juneau Study and Lessons Learned

Fund a study to examine quickly how Juneau reduced its energy consumption by approximately one-third. This study would document the strategies and lessons learned. The results of this study would be promptly disseminated.

(Appropriation: \$100,000.)

4) Distributing Energy Efficiency Products

Have Alaska Energy Authority (AEA) provide consumers immediate access to free or low-cost energy conservation products. This could be done either for low-income consumers or for all consumers. Such products could include: compact fluorescent bulbs (CFL bulbs use about 75% less energy than standard incandescent bulbs),

programmable room thermostats (average savings about 10%, according to AEA), low-flow showerheads (the US Department of Energy reports that quality low-flow fixtures cost around \$10-20 a piece and achieve water savings of 25–60%), plug-in power strips (facilitating the quick and easy turn-off of power to appliances not being used), and lighting occupancy sensors (artificial lighting consumes almost 15% of a household's electricity use, according to the DOE.)

There is an excellent model for doing this: The Oregon Energy Trust. This “public-purpose organization” was established by the Oregon Legislature as a one-stop shop for state energy assistance (see <http://www.energytrust.org/>.) An Alaska Energy Trust could be similarly established and housed under AEA or The Regulatory Commission of Alaska (RCA). The Alaska Energy Trust could offer conservation programs that have a proven record of reducing energy demand, such as:

- free residential and small business energy audits
- rebates (\$50-100 range) for purchasing ENERGY STAR appliances such as refrigerators, clothes washers and dryers
- rebates (\$100–200 range) for upgrades to high efficiency gas, oil and electric furnaces and hot water heaters
- free compact fluorescent light bulbs
- free energy reviews for commercial buildings, using certified energy contractors
- free programmable thermostats
- other (this is not a comprehensive list)

(Appropriation: Depends on extent of program, but could range from \$1 million to \$50 million.)

5) Assist Local Governments

There are several actions that can relatively quickly assist local governments, including schools, in saving energy. Examples include energy audits, installing more energy efficient street lighting, upgrading refrigeration units, water conservation, and upgrading and making indoor lighting more efficient.

(Appropriation: Depends on extent of program, but could range from \$2 million to \$100 million.)

6) More Efficient Diesel Generation

There are substantial energy savings to be achieved from more efficient diesel generation. The state could provide grants or no-interest loans to continue and accelerate existing efforts to retrofit inefficient rural diesel generators with the best available current technology.

(Appropriation: Depends on extent of program, but could range from \$5 million to \$300 million.)

7) Additional Measures

In addition to the above, we recommend the following short- to mid-term energy efficiency measures:

- **Training and Certification**
Provide expanded and accelerated training and certification programs necessary to implement Alaska's new weatherization, renewable energy, and energy conservation programs.

- **Revising Building Codes**

The state should fully adopt and implement Building Energy Efficiency Standard (BEES – introduced in 1985 and adopted in 1992 but not implemented) as the new state residential energy efficiency building code. BEES should be viewed as the minimal energy efficiency code, and research should be quickly conducted to see how best to build upon BEES in light of current prices, new international standards and technologies.

- **Net Metering**

Pass legislation creating a net metering system based on actual avoided costs in Alaska.

II. Addressing Transportation Costs

As gasoline and diesel prices increase, Alaskans are facing increased transportation costs. Here are four possible funding strategies that would provide Alaskans less costly alternatives as well as long-term solutions:

1) Expand Mass Transit

Bus systems in Alaska are underfunded, and provide minimal service. Providing state funding to increase bus service in larger communities, and to begin bus service in smaller ones, is a very desirable option. In the short term, the state could provide money to reduce or even eliminate fares. This strategy also creates jobs and is especially beneficial to low-income employees. Depending on the scope of program, costs could range from \$10 million to \$100 million.

2) Expand Van Pooling and Car Pooling

Van pooling systems in Alaska are underfunded. Providing state funding to acquire vans for shared rides, and/or paying for gas for van pools and car pools would promote these services. Additional staff would be needed to advertise and coordinate

van and car pools. Depending on the scope of the program, costs could range from \$5 million to \$25 million.

3) Implement Bicycle Programs

Currently some people who would like to have a bicycle for alternative transportation cannot afford one. This program would make bicycles available either for purchase or rent on needs-based criteria. Bike paths and bike routes would also be improved. Depending on the scope of the program, costs could range from \$500,000 to \$2 million.

4) Provide Efficiency Rebates

Many people want to buy new, more efficient vehicles, outboard motors, snowmobiles, and so forth. This program would provide money for such purchases. The amount of the rebate could be income-based. This program could also be available to municipalities to upgrade their fleets. Depending on the scope of the program, costs could range from \$5 million to \$50 million.

III. Power Cost Equalization Component of the Conservation Community Alternative

The legislature should fully fund and expand the Power Cost Equalization Program, as part of its approach to addressing the increased price for electricity in heavily affected communities.

First, the PCE needs to be fully funded for this upcoming year to insure that the first 500 kWhs consumed by residential customers are affordable. (In the last six months of 2007, only 89% of the program was covered.) It appears as if the program is currently underfunded by approximately 10 to 15%, a shortfall of approximately \$3 million.

Second, the PCE could be expanded to include schools and other key buildings and institutions not currently covered. The cost of this depends on the magnitude of the expansion, but could be in the range of \$1 to \$10 million.

IV. Legislative Hearings

It is appropriate for the Legislature to hold a series of hearings exploring how we can lower the burden of high energy costs on those most in need, including institutions such as schools and municipalities. The goal would be to find short-term relief that:

- does not aggravate the underlying problems (such as increasing the consumption of energy);

- is targeted to those most at need (do people making \$250,000/year really need \$100/person/month for their family?); and
- provides maximum mid- and long-term benefits.

V. Conclusion

The Governor's proposal needs careful scrutiny. What are the consequences? How much will it increase energy use? Is it equitable? Is it needed for people with high incomes? What are the political consequences of this proposal in Washington DC and other places? How would it ever be discontinued?

If the state is prepared to spend over \$800 million, we can make smart, equitable, long-lasting investments that will benefit the state for years to come, lower our carbon footprint, make us a model for others, and provide critical relief to people throughout the state, especially those most in need. We do not want to make an enormous investment in the wrong direction.