Alaska Conservation Alliance

Uniting for Alaska's Future

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On behalf of 40 state based conservation organizations with a combined membership of 38,000 Alaskans, Alaska Conservation Alliance is pleased to present this short paper on

Energy Cost Relief and Energy Conservation

Whether it is rural Alaskans coping with $8 gallon diesel, Fairbanks residents struggling with burdensome increases in home heating oil or Juneau residents coping with an avalanche-induced energy crisis, Alaskans across the state are feeling the pain of high energy costs. Fortunately, rising oil prices also means rising revenues to the State of Alaska and as such the State can provide a path to reduced monthly bills and long-term energy security.

The challenge is to meet this need without undermining the price signals for energy conservation. As noted by economist Greg Erickson, "the most troublesome aspect of these programs (referring to Governor Palin's recent energy rebate proposal) is the incentives they create for us to increase our energy use. Higher prices convey a powerful message of conservation." Furthermore, to provide relief without leadership on energy conservation and efficiency would be the equivalent of applying a band-aid while ignoring the underlying systemic problem of relying on high-priced fossil fuels; a problem that is not going away anytime soon. For that reason, the Alaska Legislature and the Palin Administration, in addition to short-term energy price relief, should carefully consider and institute some longer-term strategies, especially investing in education of the public and integrating energy conservation and efficiency into building, weatherization, and renewable energy into state energy grids.

Fortunately, Alaskans are resourceful and in many areas are already implementing immediate 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.

It is in response to the dual need of energy cost relief and energy conservation that the conservation community, through Alaska Conservation Alliance, has prepared a list of options to be evaluated and considered by the Alaska Legislature and the Palin Administration. This list is divided into four parts:

A. Energy Price Relief Alternatives – options that should be further investigated as means to provide price relief while minimizing distorted market signals and incentives to consume more energy.

PO Box 100660, Anchorage Alaska 99510 / Ph. 907.258.6171 / Fax 907.258.6177
PO Box 22151, Juneau Alaska 99802 / Ph. 907.463.3366 / Fax 907.463.3312 / www.akvoice.org

B. Immediate Energy Conservation Measures – options that are doable in a short special session.
C. Other Energy Conservation Measures – options that may have more long-term benefit but may require more legislative deliberation.
D. Transportation Relief Options - As gasoline and diesel prices increase, Alaskans are facing increased transportation costs and it is appropriate to consider price relief in this arena.

Please note: options with an * are based on the recommendations contained in the "Energy Efficiency Interim Report" prepared for Cold Climate Housing Research Center (CCHRC).

A. Energy Price Relief Alternatives

1. **Fully fund, expand and adjust the Power Cost Equalization Program (PCE).** 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 impacted communities. First of all, the PCE needs to be fully funded for this upcoming year to ensure 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 that the program is currently under funded by approximately 10 to 15%, a short fall of approximately $3 million. Secondly, the PCE could be expanded to include schools and other key buildings and institutions not currently covered. In this context, the appropriateness of expanding this program to small businesses should be considered. The cost of this depends on the magnitude of the expansion. Equally important to fully funding the program is the need to remove disincentives for reducing diesel consumption.

2. **Consider Short-Term Residential Electric and Heating Oil Rebates.** The legislature should examine the merits of utility based rebate program that results in credit back to residential electrical users, including tenants. Using established home heating vendors a limited rebate approach could also be targeted to provide price relief to those areas most impacted by escalating prices of heating oil. However, the time frame should be shortened (not the 12 months currently proposed) to avoid creating entitlement expectations and price distortions both which would result in increased energy consumption.

B. Immediate Energy Conservation Measures

1. * **Fund a Comprehensive Energy Conservation Public Awareness Campaign**. 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.

One option is to immediately establish an Alaska Energy Conservation Education program within Alaska Energy Authority (AEA). This unit of AEA 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 energy use. It could also work with the media to produce statewide PSAs on energy use reducing strategies; and with key housing and other organizations like RuralCAP, as well as local governments. Printed materials, including posters, would also be utilized.

An alternative option would to provide an $800,000 grant to an existing entity outside of state government, to provide the services described above.

2. **Purchase Power Cost Monitors for Alaskan Households** Provide money to utilities to educate their consumers and distribute home metering devices (also called 'smart meters'). 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 use. Right now these smart meters cost about $150 each. They consist of two parts - a transmitter that is attached on the outside of a meter (no electrical expertise needed) that transmits data wirelessly to a receiver in the home. The user programs in his kWh cost information and the device will display what the current load is, how much it costs per hour, what has been used in the last day, month and so on. Anecdotal reports are that a user that understands how their electricity is being used can typically lower their consumption by 15 - 25%. There are about 250,000 households in Alaska so approximately 100,000 of these devices would be enough to blanket the state. They should not be supplied to users at no charge. A nominal amount of $25 or so should be the co-pay to ensure that recipients make good use of them. They should be made available through the utility because then the utility would know whether their usage actually goes down or not. If a residential consumer using 500 kWh a month can save 15%, that's 75 kWh a month or 900 kWh a year. At 25 cents a kWh, that's an annual saving of $225. If 250,000 households each reduce their monthly electric consumption by 75 kWh, that would equate to 225,000,000 kWh a year or approximately three and a half Alaska Village Electric Co-ops or the equivalent of 10 million gallons of diesel. For more information go to www.powercostmonitor.com.htm.

   Along the same line, purchasing of 'Kill A Watt' meters should be considered. These differ from "smart meters' in that do not meter household energy consumption but rather are specific to metering specific appliances. This enables the homeowner or consumer to determine which appliances are 'energy hogs' and in need of replacement. These meters run about $25 each and could also be distributed through utilities.

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 should be promptly and widely disseminated.

4. **Distribute Energy Efficiency Products**. Provide to consumers via AEA and/or local utilities immediate access to free or low-cost energy conservation products. This could be done either for low income consumers or for all consumers regardless of income levels. 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%), plug-in strips, and lighting occupancy sensors (average household dedicates 11% of its energy budget to lighting).

5. * **Articulate an Energy Efficiency Vision for Alaska**. Through Legislative Resolution or Executive Order set a goal to reduce energy consumption in buildings 20% by 2020 from 2000 levels. The State of Alaska and its political subdivisions could set an example by reducing energy consumption in state-owned facilities by the same amount – reducing consumption 20 percent by 2020 from 2000 levels. Furthermore, the State of Alaska could implement energy conservation measures wherever they are cost-effective – in facilities, purchasing, transportation, etc. The political climate is ripe for leadership in energy conservation.

6. **Assist Local Governments**. There are several actions that can relatively quickly assist local governments, including schools, in saving energy. Examples include installing more energy efficient street lighting and stop lights, upgrading refrigeration, water conservation measures (water treatment plants are high energy consumers), energy audits and upgrading and making indoor lighting more efficient.

7. **Target Inefficient Community Diesel Systems.** Task AVEC and AEA to evaluate the rural diesel systems that would benefit most from energy-efficiency retrofitting and then provide the money to retrofit those systems.

C. Other Energy Conservation Measures

1. ***Designate a Lead Entity for State End-Use Efficiency Programs**. As noted in the Interim Report to CCHRC referenced above there are 7 state related programs that deal with energy efficiency policies and programs. The Oregon Energy Trust is a non-profit set up by the Oregon Legislature that is 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. This energy trust could then offer these conservation programs that have a proven record of reducing energy demand:
    - 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 (CFL bulbs use about 75% less energy than standard incandescent bulbs)
    - free energy review for commercial buildings using a certified energy contractor

- free programmable thermostats to low-income residents (average savings about 10%).

While this is not a comprehensive list, it does however demonstrate the potential for an effective one-stop shop dedicated to energy audits, conservation, efficiency and problem-solving.

2. ***Adopt and Implement Building Energy Efficiency Standard (BEES**) The BEES program was introduced in 1985 and adopted in 1992 (but not fully 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 new international standards and technology. For a brief explanation of BEES see p. 4 of the Interim Report. In regards to commercial building codes, AEA should contract for a stakeholder process to develop a commercial energy efficiency building code.

3. **Training and Certification**. Establish training and certification programs necessary to implement Alaska's new weatherization, renewable energy, and energy conservation programs. In particular, the capability to perform energy audits in response to implementing SB 289 needs to be reviewed and supported where necessary.

4. **Consider Net Metering Legislation**. Pass legislation similar to HB 288 which promotes renewable energy use by establishing a net metering policy for Alaskan utilities. Net metering is the measurement of the difference between electricity purchased from a utility and electricity produced from a customer's private generating equipment. Home and business owners who install renewable energy equipment such as solar panels or wind turbines will receive a credit for any excess monthly energy generation. Alaska utilities also benefit under this legislation. By trading the homeowner a credit for the energy that the homeowner leaves on the grid, the utility does not have to generate more electricity to supply other customers. Alaska is one of the few states left in the nation without such a policy in place. Net metering is current policy in 42 states.

D. Transportation Relief Options

1. **Expand Public Transportation**. Public transportation systems in Alaska are under funded, 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 bus driving jobs and is especially beneficial to low-income residents. Similarly for residents that depend on marine transportation for community access use of more fuel efficient ferries should be considered.

2. **Expand Van Pooling and Car Pooling**. Van pooling systems in Alaska are under funded. Providing state funding to acquire (preferably hybrid vehicles) and operate vans for van pooling, and/or paying for gas for van pools and car pools would promote

these services. Additional staff should be hired to advertise and coordinate van and car pools.

3. **Implement Bicycle Programs**. Right now, 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. Also, bike paths and bike routes could be improved and included in such a program.

4. **Increase Pedestrian Programs**. Community planning for pedestrian access to major work centers should be encouraged. And for those communities with active pedestrian systems, support should be considered for sidewalk plowing and safety. Aggressive implementation of the Safe Routes to Schools program would reduce reliance on personal autos.

5. **Provide Efficiency Rebates**. Many people want to purchase new, more efficient vehicles, outboard motors, snow machines, and so forth. This program would provide money to acquire more efficient vehicles. The amount of the rebate could be income based. This program could also be available to municipalities to upgrade their fleet.

6. **Jumpstart Commuter Rail Service – Mat. Valley and Anchorage**. Over 15,000 commuters travel between Palmer and Wasilla and Anchorage every day. At $4.00/gallon the economics for commuter rail service on the existing rail line has improved dramatically since the Alaska Railroad last studied the issue five years ago. Self propelled and efficient railcars called diesel multiple units (DMU) can move people with approximately 10 times the fuel efficiency of a person traveling alone while getting 15 miles per gallon. Federal grant monies are available to purchase rolling stock and build a Wasilla station and maintenance facility. Side benefits include the likelihood of higher work productivity of commuters, less roadway congestion and fewer dollars needed to maintain the Glenn Highway.