Brief Description of Catalog of State Actions

Residential, Commercial and Industrial

Draft Prepared for Alaska Climate Change Mitigation Advisory Group

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Descriptions of policy options prepared by the Center for Climate Strategies (CCS) based on actions undertaken or considered by Alaska and other states, including regional, state, local and private actions. Relevant descriptions for Alaska will be developed through the process as determined by the Mitigation Working Group.

RCI-1 ENERGY EFFICIENCY PROGRAMS, FUNDS, AND GOALS

1.1 Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity (including expansion of same)

This option focuses on increasing investment in electricity demand-side management programs through programs run by utilities or others, energy efficiency funds, and/or energy efficiency goals. These options are typically termed DSM activities, and may be designed to work in tandem with other recommended strategies that can also encourage efficiency gains.

The policy design includes two key and linked dimensions: achievable/desirable energy savings and policy/administrative mechanisms to achieve these savings. In order to implement expanded DSM programs, a number of mechanisms should be considered. Candidate mechanisms include revising existing statutes to enable utility investments in energy efficiency at the levels indicated above, to consider as potentially eligible programs that are cost-effective taking into account the valuation of for CO_2 emissions. Policy and administrative mechanisms that might be applied include regulator-verified savings targets, public benefit charges, portfolio standards, “energy trusts,” integrated resource planning, performance-based incentives, decoupling of rates and revenues, and appropriate rate treatment for efficiency. Elements that might be considered in designing this option might include:

- Implementation/administration by utility (including municipal utilities and cooperatives), state agency, or third-party actors.
- Subsidized energy audits for homeowners, businesses, industries.
- Incentives for specific technologies, potential including (but not limited to) lighting, water heating, plug loads, networked personal computer management, power supplies, motors, pumps, boilers, customer-side transformers, water use reduction, ground-source heat pumps, and others.
- Energy efficiency reinvestment funds.

This policy may be broad in focus, or it can focus on specific market segments (see 10.1). Complimentary policies include appliance recycling/pick-up programs (9.4). Measures supporting this option might include consumer education, performance contracting, and energy end-use surveys.

1.2 Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Natural Gas, Propane, and Fuel Oil

This option has most of the same attributes and options for design elements and implementation as option 1.1, but focuses on increasing investment in demand-side management programs related to the use of natural gas, propane (or liquefied petroleum gas—LPG), and fuel oil, through programs run by utilities or others, energy efficiency funds, and/or energy efficiency goals.

1.3 Energy Efficiency Funds (e.g., public benefits funds) administered by state agency, utility, or 3rd party (e.g., Energy Trust)

A public benefits charge (sometimes call systems benefits charge) is a fee attributed to utility customers based on their usage of energy in a given time period. With deregulation in many states, the utility commissions often lost the ability to require efficiency programs of the electric utilities. The result in many states was the development of the public benefits charge, which is a non-bypassable charge on electric bills. The funds collected are then provided to a third party to provide energy efficiency programming.

1.4 Regional Market Transformation Alliance

Market transformation alliances use voluntary efforts, typically implemented by non-utility organizations, to encourage greater uptake by consumers (residential, commercial, and industrial, as well as the professionals that service energy-using equipment) of cost-effective energy efficiency practices. A market transformation program is designed to create a situation where the bulk of the private market automatically adopts or incorporates technologies or techniques that result in improved energy efficiency. The goal of a market transformation and technology development program is to put energy efficiency technologies and practices into a position where they will be demanded by the public, chosen by builders and manufacturers, and provided by retailers and contractors. Methods of transformation can be different for each technology or technique, but often revolve around public and private review of quality and effectiveness, including partnerships between government agencies, retailers, manufacturers, and non-governmental agencies. Market transformation programs can be statewide or regional.

Market transformation also seeks to ensure sufficient supplies of technologies and practitioners to meet the subsequent increased demand for energy efficiency.

Potential elements of a market transformation program include:

- Target specific measures, such as ground-source heat pumps, solar WH/PV, or other technologies important for the state.

- Support for commercialization of promising technologies.
- Bulk purchasing programs (public/private) or arrangements with retailers.

Consumer education is a significant supporting measure for market transformation programs.

1.5 Low-cost Loans for Energy Efficiency improvements

This option refers to revolving low-interest loan fund(s) for energy efficiency investments in distribution service areas that are not covered by existing utility programs.

RCI-2 BUILDINGS

2.1 Improved Building Codes for Energy Efficiency

Building energy codes specify minimum energy efficiency requirements for new buildings or for existing buildings undergoing a major renovation. Given the long lifetime of most buildings, amending state and/or local building codes to include minimum energy efficiency requirements and periodically updating energy efficiency codes could provide long-term GHG savings. Implementation of building energy codes, particularly when much of the building occurs outside of urban centers, can require additional resources.

Potential elements of a policy to include building codes include:

- Require high-efficiency appliances in new construction and retrofits.
- Training of building code and other officials in energy code enforcement.

Potential measures supporting this option can include consumer education, improved enforcement of building codes, training for builders and contractors (see 2.7), and development of a clearinghouse for information on and to provide access to software tools to calculate the impact of energy efficiency and solar technologies on building energy performance.

2.2 Promotion and Incentives for Improved Design and Construction (e.g. LEED[1], green buildings) in the Private Sector

This policy provides incentives and targets to induce the owners and developers of new and existing buildings to improve the efficiency with which energy and other resources are used in those buildings, along with provisions for raising targets periodically and providing resources to building industry professionals to help achieve the desired building performance. This policy can include elements to encourage the improvement and review of energy use goals over time, and to encourage flexibility in contracting arrangements to encourage integrated energy- and resource efficient design and construction.

Additional potential elements of this option include:

[1] Leadership in Energy and Environmental Design; see U.S. Green Building Council, http://www.usgbc.org.

- Target new, renovated, and/or existing buildings (retrofits).
- Set a cap on consumption of energy per unit area of floorspace for new buildings.
- Encourage building commissioning and recommissioning, including energy tracking and benchmarking.
- Set up a "feebate" program to encourage energy efficiency in building design.
- Provide incentives, in the form of tax credits, DSM program support, financing incentives (such as "green mortgages"), or other inducements for retrofit of existing residential and commercial buildings.
- Encourage the use of alternative and local building materials and practices.

Potential supporting measures for this option include training and certification of building professionals (see 4.3, 4.4), consumer and primary/secondary education, performance contracting/shared savings arrangements, and setting up of a clearinghouse for information on and access to software tools to calculate the impacts of energy efficiency and solar technologies for buildings.

2.3 Improved Design and Construction, "Government Lead-by-example"

Recognizing that governments should "lead by example" the option presented here provides energy use targets to improve the efficiency of energy use in new and existing State and local government buildings. The proposed policy provides energy efficiency targets that are much higher than code standards for new state-funded and other government buildings. This option sets energy-efficiency goals for the existing government building stock, as well as for new construction and major renovations of government buildings.

In addition to the potential elements noted for option 2.2, most of which also apply here, potential elements of this policy include:

- Requiring that energy efficiency be a criterion in procurement of energy-using equipment and systems, and in the improvement in operation of buildings and other facilities
- Audits of energy performance and operations of State and other government buildings (in tandem with an audit program). Audit results could be used to target and prioritize investments in improving government building energy efficiency. (See also 10.2)
- Improvement and review of efficiency goals over time, and development of flexibility in contracting arrangements to encourage integrated energy-efficient design and construction.
- Recommendations that the infrastructure for implementation (meters, bookkeeping systems, staff, etc.) be established as soon as possible.
- State bulk-purchase of appliances and equipment with higher-than-standard energy efficiency for public facilities.

- Establishing "retained savings" policies whereby government agencies are able to retain funds saved by reducing energy bills for further energy efficiency/renewable energy investments or other uses.

Potential supporting measures for this option are also similar to those for option 2.2, including training and certification of building sector professionals (see 4.3, 4.4), and performance contracting/shared savings, but could also include surveys of government energy and water use, energy benchmarking, measurement, and tracking programs for municipal and state buildings.

2.4 Support for Energy Efficient Communities Planning, "Smart Growth"

"Smart Growth" aims to create communities that are, among other attributes, livable, designed for reduced use of energy both within homes and businesses and in the transport sector, and have a reduced environmental impact relative to typical developments. Variants on the smart growth concept exist, but many call for clustering living units with easy access (often walking distance) to shops, schools, and entertainment and recreational facilities, incorporating elements of energy-efficient design and renewable energy in buildings, sharing energy facilities between buildings (for example, district heating systems), and preserving open spaces. See, for example, http://www.epa.gov/smartgrowth/about_sg.htm for additional information about Smart Growth.

Smart growth policies may include many of the potential design elements and supporting measures noted above for options 2.2 and 2.3.

2.5 Increased Use of Blended Cement (substituting fly ash or other pozzolans for clinker)

This policy option would promote the use of blended cement in buildings and other applications. (Substituting fly ash or other pozzolans for clinker—the chief ingredient of cement—reduces CO_2 emissions associated with clinker production from limestone.)

2.6 Training and Education for Builders and Contractors

This option refers to an education and outreach program for building professionals to encourage incorporation of energy-efficiency and greenhouse gas emissions-reduction considerations. Examples include:

- Start programs to train builders and contractors on proper heating and air conditioning sizing and installation.
- Mandate that State Boards of Licensing for building professionals cover knowledge of the improved building codes and building energy performance requirements reflected in various policy options in licensing exams.
- Implement code training and technical assistance for builders and architects.

2.7 Energy Management Training/Training of Building Operators

Energy Management Training provides administrative and technical training for energy managers, school officials, building operators, and others responsible for energy-efficient facility operation. This policy could include:

- Training commercial building energy managers, for example by making use of the building operator training and certification program developed in the Pacific Northwest.
- Training industrial energy and facility managers in techniques for improving the efficiency of their steam, process heat, pumping, compressed air, motors, and other systems, perhaps dovetailing with the U.S. DOE in this area.

RCI-3 APPLIANCE STANDARDS

3.1 More Stringent Appliance/Equipment Efficiency Standards

Appliance efficiency standards reduce the market cost of energy efficiency improvements by incorporating technological advances into base appliance models, thereby creating economies of scale. Appliance efficiency standards can be implemented at the state level for appliances not covered by federal standards, or where higher-than-federal standard efficiency requirements are appropriate.[2] Regional coordination for state appliance standards can be used to avoid concerns that retailers or manufacturers may (1) resist supplying equipment to one state that has advanced standards or (2) focus sales of lower efficiency models on a state with less stringent efficiency standards.

Potential elements of an appliance efficiency standards policy include:

- Establishment and enforcement of higher-than-federal state-level appliance and equipment standards (or standards for devices not covered by federal standards).
- Joining with other states in adopting higher standards.
- Requiring high-efficiency appliances in new construction and retrofits.

Consumer education (see below) is a potential supporting measure for this option.

3.2 Support for Federal-level Appliance Efficiency Standards

This policy option involves advocating for the development and implementation of higher federal-level appliance efficiency standards.

[2] In recent years, Arizona, Oregon, and Washington, among other states, adopted state standards for several appliances; this led to the inclusion of standards for these appliances in the 2005 federal Energy bill.

RCI-4 EDUCATION AND OUTREACH

4.1 Consumer Education Programs

The ultimate effectiveness of emissions reduction activities in many cases depends on providing information and education to consumers regarding the energy and GHG emissions implications of consumer choices. Public education and outreach is vital to fostering a broad awareness of climate change issues and effects (including co-benefits, such as clean air and public health) among the state's citizens. Such awareness is necessary to engage citizens in actions to reduce GHG emissions in their personal and professional lives. Public education and outreach efforts should integrate with and build upon existing outreach efforts involving climate change and related issues in the state. Ultimately, public education and outreach will be the foundation for the long-term success of all of the mitigation actions proposed in the climate change planning process, as well as those that may evolve in the future.

4.2 Energy Efficiency and Environmental Impacts Awareness in School Curricula

The long-term effectiveness of emissions reduction activities depends on providing information and education not only to present consumers, but to future consumers as well. This policy option involves the education of primary and secondary school students regarding the energy and GHG emissions implications of consumer and societal choices. Public education and outreach is vital to fostering a broad awareness of climate change issues and effects (including co-benefits, such as clean air and public health) among the state's young citizens. As with adult consumers, public education and outreach efforts should integrate with and build upon existing outreach efforts involving climate change and related issues in the state.

4.3 In-Home Energy Displays

There are a number of energy use display units that are now available to provide customers with readily accessible, real-time (or near real-time) information about their energy use. Though such units have been deployed in relatively small numbers, multiple studies and experience with prepayment programs (where the number of devices in use is more significant) demonstrate that in-home display devices can help catalyze customer energy conservation, with savings ranging from 4 to 20%. The costs of display units have been an obstacle to mass deployment. However, increased attention to demand response and advanced metering infrastructure in the U.S., and in energy conservation for emissions reductions in Canada, has spurred recent interest. Truth-in-advertising campaigns target advertising of energy consuming products to provide factual and accurate information regarding the GHG emission implications of the product(s).

4.4 Energy Performance Disclosure

Energy performance disclosure requirements aim to ensure that purchasers of buildings, equipment and appliances are aware of the energy performance of what they are purchasing.

RCI-5 PRICING AND PURCHASING

5.1 Green Power Purchasing for Consumers

Green power purchasing comprises a variety of consumer-driven strategies to increase the production and delivery of low-GHG power sources, above and beyond levels achieved through Renewable Portfolio Standards and other mandatory programs.

Possible elements of green power programs include:

- A definition of what power sources qualify as green power source by a relevant authority.
- Regulatory encouragement for utilities to develop green power tariff structures.
- Implementation of regulatory requirements that power sources and emissions data be reported in consumer utility bills.
- State goals or mandates for green power purchases, or for the renewable fraction of standard purchased electricity, that would apply to all non-federal government buildings, including local government buildings, public schools, and public universities. This could also be a part of State "Lead-by-example" programs.
- Promotion by the State and/or other entities of voluntary purchasing of green power through provision of information and promotional materials.

5.2 Net-metering for Distributed Generation and Combined Heat and Power

This policy option involves the consideration and adoption by state regulatory authorities of rate designs, coupled with the necessary metering technology, that promote reduction in GHG emissions by encouraging consumers to install distributed generation systems—especially those based on renewable fuels—and combined heat (and or cooling) and power systems that offer the opportunity to improve the overall efficiency of fuel use.

Potential elements of this option include:

- Review existing net-metering policies, including policies that affect electricity consumers who install on-site combined heat and power or distributed generation fueled with renewable or fossil fuels. Consider the impact of NO_x and power factor requirements on net-metering and availability of information for small customers.
- Review rate issues, including decoupling of utility revenues from sales, and consider a specific focus on the impacts of rate design on greenhouse gas emissions. This could include an exploration of the impacts of time-of-use rates on GHG emissions.

- Review and consider utility and other technical rules related to the interconnection of consumer-sited power sources to the electricity grid to assure that they offer equitable treatment of potential distributed generation hosts while providing adequate safeguards for the public and for power sector workers.

5.3 Rate structures and Technologies to Promote Reduced GHG Emissions

This option, which is more general than 5.2 above, could include various elements of utility rate design that are geared toward reducing greenhouse gas emissions, often with other benefits as well, such as reducing peak power demand. The overall goal is to revise rate structures so as to better reflect the actual economic and environmental costs of producing and delivering electricity as those costs vary by time of day, day of the week, season, or from year to year. In this way, rates provide consumers with information reflecting the impacts of their consumption choices.

Potential elements of this option include:

- Time-of-use rates, which typically price electricity higher at times of higher power demand, and thus better reflect the actual cost of generation. Time-of-use rates may or may not have a significant impact on total GHG emissions, but do affect on-peak power demand and thus both the need for peaking capacity and fuel for peaking plants.
- Tiered (increasing block) rates for electricity and natural gas use, which provide affordable base usage rates for consumers, but which increase with increasing consumption.
- "Smart metering"—implementation of consumer meters showing real-time pricing, and the level of GHG emissions related to consumption at any given time. Smart meters are described as providing consumers with the information needed to make consumption choices, and can include the capability for consumers to adjust the type of power (for example, "green" versus conventional power) "on the fly".

5.4 Bulk Purchasing Programs for Energy Efficiency or Other Equipment

Bulk purchasing of appliances and equipment with higher-than-standard energy efficiency by public agencies, and for the organization of similar bulk-purchase programs in the private sector, is a policy option that can augment or be a part of DSM, market transformation, or State Lead-by-example programs. In this option, a government or non-governmental organization purchases large quantities of energy-efficiency products (such as high-efficiency refrigerators or office equipment, or solar water heaters) and/or services (such as home weatherization services) at a bulk price. The organization then either uses the purchased items and services internally, or sells them at an attractive price to other buyers. Bulk purchase programs can help to rapidly develop markets for energy-efficiency or low-GHG goods and services.

Potential elements of this option include:

- Municipal or State government programs, possibly including training in the use of existing bulk-purchasing tools[3].
- Programs for schools.
- Private-sector programs (possibly in coordination with market transformation programs).

RCI-6 CUSTOMER-SITED DISTRIBUTED ENERGY AND COMBINED HEAT AND POWER

6.1 Incentives to Promote Implementation of Renewable Energy Systems

Distributed electricity generation sited at residences and commercial and industrial facilities, and powered by renewable energy sources (typically solar, but also wind, small hydroelectric power sources, or biomass or biomass-derived fuels), displaces fossil-fueled generation and avoids electricity transmission and distribution losses, thus reducing greenhouse gas emissions. This policy can also encourage consumers to switch from using fossil fuels to using renewable fuels in applications such as water, process, and space heating, as well as to supply new energy services using fuels that produce low or no GHG emissions. Increasing the use of renewable energy applications in homes, businesses, and institutions can be achieved through a combination of regulatory changes and financial incentives.

Potential elements of this option include:

- Solar roofs (roofing materials with built-in solar photovoltaic cells, or solar PV panels erected on roofs).
- Solar water heating and solar space heating systems.
- Wind power systems, particularly for rural areas.
- Biomass-fired generation, space, or water heating systems.
- Programs targeted at specific customer sectors (residential, commercial, industrial), or specific markets within sectors.
- Tax credits, and/or utility or other incentives to lower the first cost of distributed energy systems to users.
- Potential supporting measures for this option include training/certification of installers/contractors, net metering and other pricing arrangements, interconnection standards, and creation/support of markets for biomass fuels.

[3] For example, the EnergyStar bulk purchasing tool—developed by the U.S. Department of Energy, in collaboration with the Department of Housing and Urban Development and the U.S. Environmental Protection Agency—is designed to make it easy to comparison shop for energy-efficient products. The tool provides a simple way to obtain bids on EnergyStar-qualified products such as appliances, compact fluorescent light bulbs, and light fixtures.

6.2 Incentives and Resources to Promote Combined Heat and Power (CHP, or "cogeneration")

Combined heat and power (CHP) systems reduce fossil fuel use and greenhouse gas emissions, both through the improved efficiency of the CHP systems, relative to separate heat and power technologies, and by avoiding transmission and distribution losses associated with moving power from central power stations that are located far away from where the electricity is used. Potential elements of this option include:

- Promotion of the use of gas-fired CHP systems
- Promotion of the use of biomass-fired CHP systems
- Creation/expansion of markets for, and incentives designed to promote implementation of, CHP units in capacities suitable for residential, commercial, and industrial users.
- Provision of tax benefits, attractive financing arrangements, and other incentives to promote CHP technologies.

Potential supporting measures for this option include training/certification of installers/contractors, net metering and other pricing arrangements, establishment of clear, and consistent interconnection standards, and creation/support of markets for biomass fuels.

RCI-7 GHG EMISSIONS-SPECIFIC GOALS AND POLICIES, INCLUDING PROCESS EMISSIONS

7.1 GHG Cap and Trade Program (for RCI Sectors)

A cap-and-trade system is a market mechanism in which GHG emissions are limited or capped at a specified level, and capped entities can trade permits (a permit is an allowance to emit one ton of CO_2e). In principle, trading lowers the overall costs of meeting a given emission target, as participants with lower costs of compliance can choose to over-comply and sell their additional reductions to participants for whom compliance costs are higher.

Among the important considerations with respect to a cap-and-trade program are: the sources and sectors to which it would apply ("upstream" at the fuel extraction or import level vs. "downstream" at points of fuel consumption); whether electricity is dealt with from a load-based or generation-based perspective; the level and timing of the cap; how allowances would be distributed (e.g. via grandfathering and/or auctioning) and how new market entrants would be accommodated; what, if any, offsets would be allowed; over what region the program would be implemented (e.g., nationally, regionally, etc.); which GHGs are covered; whether price caps (e.g. safety valves) are included; whether there is linkage to other trading programs; whether banking and/or borrowing among time periods is allowed; early reduction credit; what, if any, incentive opportunities may be included; use of any revenue accrued from permit auctions; and provisions for encouraging energy efficiency, if relevant. The principal example of a GHG cap-and-trade system in the US is the Northeast States' Regional Greenhouse Gas Initiative: http://www.rggi.org/. For the RCI sectors, a Cap and Trade program may be

considered primarily for large (usually industrial) sources of greenhouse gases, or may include other sectors as well.

7.2 GHG or Carbon Tax

A carbon or GHG tax is typically a tax on each ton of CO_2 or CO_2e emitted from an emissions source covered by the tax. A GHG tax could be imposed upstream based on the carbon content of fuels (for example, imposed at the level of fossil fuel or electricity suppliers) or at the point of combustion and emission (this approach would typically be applied for large point sources of emissions such as large industrial plants). Taxed entities may pass some or all of the cost on to consumers, change production processes to lower emissions, or a combination of the two. As the suppliers respond to the tax, consumers would see the implicit cost of GHG emissions in products and services, and could adjust their behavior to purchase substitute goods and services that result in lower GHG emissions. GHG tax revenue could be used in a number of ways, from income tax reduction to policies and programs to support GHG reductions or technology innovation. GHG tax revenue could also be directed to helping the competitiveness of industries or assisting communities or groups most affected by the tax. Carbon taxes have been in place in a number of European countries since the early 1990s.

7.3 Switching to Lower GHG Fuels

A number of the energy services provided by fuels use in the RCI sectors can be met through the use of different fuels. Prime examples here are water and space heating, as well as industrial process heat, which can be provided by burning coal, oil, gas, biomass, and perhaps hydrogen, or by using electricity or solar heat. Alternatives also exist for air conditioning, where absorption air conditioning units using heat from combustion of fuels or from solar heat can substitute for electric units. Moving to less carbon-intensive fuel/technology combinations in some end uses can be achieved through a combination of promotion and incentive programs, market creation/expansion (for biomass fuels or for equipment not common in the market, for example).

7.4 Policies and/or Programs Specifically Targeting Non-energy GHG Emissions

GHG emissions from RCI sources not directly associated with energy use include emissions of both major GHGs such as carbon dioxide, but also a number of specialty gases—such as refrigerants, fire retardants, and solvents—that are emitted in relatively small quantities but have proportionately much larger impacts on climate. This policy option can encourage industry to replace process gases that have high global warming potentials (GWP, a measure of the potential impact of different gases on climate in terms of "CO_2-equivalent") in key applications with alternative gases (other HFCs, hydrocarbon coolants/refrigerants, etc.) that have lower GWPs.

7.5 Negotiated/Voluntary Emissions or Energy Savings Agreements

Government agencies could work with industrial and other large users of energy (and/or of process gases that are greenhouse gases) to encourage those organizations to set emissions reduction targets. This option may be implemented through a combination of financial and other incentives, public-private partnerships and agreements, provision of information and technical assistance, and other methods.

Organizations that use large amounts of energy (electricity, gas, or other fuels) and/or are responsible for large volumes of direct greenhouse gas emissions would be encouraged to set and pursue their own emissions reduction targets. The organizations participating in such a program would typically be large industrial plants, although in some cases large commercial or governmental organizations and facilities might also participate. Reductions in greenhouse gas emissions can be achieved in the industrial sector through energy efficiency, process changes, and/or switching to the use of less carbon-intensive fuels to provide key energy services. Providing tools and information for residents, businesses, and communities to inventory GHG emissions, and to use inventory results to set reduction targets, can also be an element of this option.

RCI-8 TECHNOLOGY-SPECIFIC POLICIES

8.1 White Roofs, Rooftop Gardens, and Landscaping (including Shade Tree Programs)

High summer roof temperatures increase the need for more electricity for air conditioning, as well as producing black carbon from updrafts. Incentives for white roofs, rooftop gardens, and landscaping can lower electricity demand.

This policy may be considered in tandem with RCI-1.1 (Demand-Side Management/Energy Efficiency Programs, Funds, or Goals for Electricity).

8.2 Focus on specific end-uses/technologies

Policies focusing on specific energy end-uses and technologies can target window AC units, lighting, water heating, plus loads, networked PC management, power supplies,

motors, pumps, boilers, and others. Consumer products programs may include education incentives, retailer training, and marketing and promotion.

RCI-9 NON-ENERGY EMISSIONS (HFCS, PFCS, SF_6, CO_2 PROCESS EMISSIONS)

9.1 Participation in Voluntary Industry-Government Partnerships

Voluntary agreements with industries can be used to reduce the emissions of process gases that have high global warming potentials (GWP, a measure of the potential impact of different gases on climate in terms of "CO_2-equivalent"). The state can implement voluntary programs and public-private partnerships, or it can provide support to programs at the local or county level.

9.2 Process Changes/Optimization

Promotion and funding for process changes/optimization can be used to reduce the emissions of process gases with high global warming potential.

9.3 Leak Reduction / Capture, Recovery and Recycling of Process Gases

The state could engage in promotion and funding for leak reduction/capture, recovery and recycling of process gases with high global warming potential.

9.4 Appliance Recycling/Pick-Up Programs

Emissions associated with improper disposal of discarded appliances can be reduced by facilitating appliance recycling and disposal. This policy may be considered in tandem with RCI-1.1 (Demand-Side Management/Energy Efficiency Programs, Funds, or Goals for Electricity), RCI-1.4 (Regional Market Transformation Alliance), and other policies that effect appliance turnover.

RCI-10 OTHER

10.1 Focus on specific market segments

Energy efficiency programs, funds, or goals can focus on specific market segments, such as existing homes (weatherization), new construction, apartments, low income residential, and small and medium businesses. Targeting specific market segments can also be an effective component of a regional market transformation alliance (See 1.1 and 1.3).

10.2 Municipal Energy Management

Under this type of policy, the state could initiate and provide funding for Municipal Energy Management systems, as well as audits of energy performance and operations of local government buildings. Audit results could be used to target and prioritize investments in improving government building energy efficiency.

10.3 Industrial ecology / by-product synergy

The state can engage in outreach activities and voluntary partnerships with industry to promote implementation of industrial ecology, using innovation and systems-based analysis to reduce GHG emissions, and by-product synergy, in which waste streams from one industry or process are used as a resource to another.

10.4 Industrial audits

This policy option includes providing industrial-sector energy technical assistance (energy audits) to identify and recommend options for reducing fossil energy and electricity use, and for reducing non-energy emissions of GHGs. A combination of incentives, expertise, and information to implement recommended options could be included in the policy to encourage the operators of industrial-sector facilities to follow up on audit recommendations.

10.5 Green Building Tax Credit

This policy option offers state tax credits for the construction of buildings that meet specific green building criteria.