

COMPREHENSIVE ENVIRONMENTAL & RESOURCE MANAGEMENT PROGRAM



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**Thomas W. Torti
Commissioner
Department of Buildings & General Services**

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Executive Summary

The CERMP establishes for the first time a single source within State government for identifying and advancing the environmental sustainability of State government operations. There are four (4) philosophical underpinnings for the CERMP. First, to reduce the environmental impact of State government daily operations. Second, to reduce the costs of operating State government through energy and programmatic savings. Third, to create new and sustain existing Vermont businesses that develop, produce or market environmentally preferable products. Fourth, to demonstrate to other states and the private sector that fiscal responsibility does not have to be sacrificed for environmental stewardship.

State government, under the direction of the Department of Buildings and General Services, will focus sustainability efforts on three areas: Infrastructure Management; State Purchasing, and Transportation Management. Additionally, a revised and comprehensive State agency energy plan will be developed by June 2005, executive orders will be updated and a revolving fund for energy improvements that have demonstrated paybacks will be created.

Policy, Purpose and Objectives

Introduction

There have been numerous separate initiatives over the last several decades to improve the efficiency of consumption of natural resources and energy by State Agencies. These initiatives met with varying degrees of success in responding to critical needs of the time. Governor Douglas has concluded that the time has come for the State to take a more comprehensive approach to resource consumption. State government has an increasing awareness of the total cost of resource consumption, including its associated impact on the environment. It desires to protect and manage the built environment as a resource. This program outlines a comprehensive initiative to encourage and coordinate accountable environmental and resource stewardship throughout State government. The proposal is structured as follows:

- A statement of Policy and Purpose.
- Definitions of key terms.
- Goals and objectives, which include practice standards.
- Implementing authorizations, including summaries of proposed legislation, executive orders and administrative bulletins.
- An implementation timeline.

Policy Statement

It is the Policy of the State of Vermont that resource consumption by State Agencies should be managed efficiently, economically and in an environmentally accountable manner.

This proposal directs State agencies to develop and implement practices that minimize the use and consumption of resources including:

- The physical development and maintenance and operations of the State's infrastructure,
- The purchase and disposal of materials and resources for the program and operational needs of all State agencies and departments,
- The development and operation of the state's fleet and other transportation aspects affecting resource use and consumption.

This policy applies to all departments within the executive branch of government, to all projects managed for other entities by a department within the executive branch, and to all those projects funded in whole or majority part with state-appropriated money.

Purpose

There are four overriding principal purposes in enacting this program. They are:

- Reduce the environmental impact of State government's daily activities.
- Save operating revenue through energy savings
- Create increased market demand for environmentally sensitive products, packaging, and delivery, which will, in turn, lower the direct prices for these commodities.
- Demonstrate the State's commitment to preserving our environment and set a positive example for other states and the private sector, showing that fiscally successful governmental operations are not incompatible with environmentally responsible operations.

Operational Areas

There are three (3) operational areas covered by this program:

- Infrastructure Management
 - Significantly change the State's environmental footprint.
 - Reduce Greenhouse Gas emissions from 1990 baseline level.
 - 25% by 2012.
 - 50% by 2028.
 - 75% BY 2050.
 - Reduce overall energy consumption to reduce emissions.
 - Change fuel energy sources.
 - Implement renewable energy strategies.
 - Design, construct, maintain and operate facilities with environmental awareness of effects of activities.
 - Save significant financial resources through intelligent energy management decisions.
 - Base decisions on life cycle cost analyses.
 - Create new funding mechanisms to fund energy saving initiatives.
 - Establish annual energy consumption reduction goals.
 - On square foot basis.
 - On building uses basis.
 - Help create markets for sustainability produced and environmentally responsible products as well as goods and services utilizing "best practices."
 - Measure and publicize results demonstrating fiscal responsibility and environmental accomplishments for export of practices to other sectors of the economy.

- Transportation Management
 - Reduce environmental footprint:
 - Consume less fuel through optimization of travel requirements.
 - Purchase vehicles right sized for application.
 - Increase use of hybrid vehicles and low-emission vehicles.
 - Reduce State operational cost:
 - Reduce reimbursed mileage expenditures.
 - Reduce mileage traveled through video-conferencing and RideShare
 - Reduce number of trips.
 - Measure vehicle usage patterns annually and create incentives to modify behavior.
- Statewide Purchasing Management
 - Reduce environmental footprint
Create and maintain a set of best practices that incorporates current and future objectives established within the Materials Management Plan, the Environmental Management System findings of the Climate Neutral Working Group, and applicable executive orders. EPP objectives will be strengthened and enhanced by firmly putting in place the following practices:
 - Create "level field" bidding environment for EPP products.
 - Chlorine free paper.
 - Biodegradable cleaning compounds.
 - Full circle purchase contracts
 - Create new markets
Establish that environmentally preferable purchasing practices are inherent in determining "best interests of the state."
 - Specify locally produced products or products produced within a certain distance to destination.
 - Specify sustainability harvested or manufactured products.
 - Specify products that are produced with low environmental impacts.
 - Specify products produced through best practices.

Definitions

Alternatively Fueled Vehicle (AFV) - Alternatively fueled vehicles are powered by fuels that reduce the air pollution, solid waste, and hazardous waste that result from their use, service, and maintenance. The term "alternatively fueled vehicles" is used to refer to various types of vehicles, including compressed natural gas, biodiesel, ethanol, electric and hybrid electric, propane, liquefied natural gas, and hydrogen fuel cell.

Best practices: best practices are specific procedures, policies or standards implemented either voluntarily or as required in order to address problems, issues or situations in an environmentally, economically and socially responsible manner using the latest developed appropriate technology to achieve compliance with stated objectives and goals.

Bio-based products - are defined as commercial or industrial products (other than food or feed) that utilize biological products or renewable, domestic, agricultural (e.g., plant, animal and marine), or forestry materials.

Deconstruction – is the dismantling or disassembling the existing structure into its original components and pieces, salvaging reusable goods, diverting inert material for beneficial uses and recycling recyclable material.

Energy consumption - the total amount of energy consumed for product or service manufacture, use, and disposal. Different sources of energy are associated with different environmental impacts.

Energy efficiency - Refers to products that meet or exceed **Energy Star**.

Energy Star - Energy Star is a voluntary partnership among the U.S. Department of Energy, the U.S. Environmental Protection Agency, product manufacturers, local utilities, and retailers. Partners help promote efficient products by labeling with the Energy Star® logo and educating consumers about the benefits of energy efficiency.

Environmental attributes - Environmental characteristics of a product or service, such as energy or water efficiency, low-toxicity, biobased, and recycled-content.

Environmentally preferable - Products or services that have a lesser or reduced impact on human health and the environment when compared with competing products or services that serve the same purpose. The product or service comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal. (EO 13101, Section 201)

Global Warming The slow but steady increase in average world temperatures. Greenhouse gases in the atmosphere naturally trap outgoing energy from the sun and consequently warming the Earth. This is otherwise known as the "greenhouse effect".

Life cycle cost - means the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs and disposal costs discounted over the lifetime of the product. This definition does not include external costs (i.e., those not borne directly by the entity that owns and operates a product/service, such as environmental costs to society at large).

Pollution prevention - Source reduction and other practices that reduce or eliminate the creation of pollutants through: increased efficiency in the use of raw materials, energy, water, or other resources; or protection of natural resources by conservation.

Post-consumer material - Refers to a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. "Post-consumer material" is part of the broader category of "recovered material."

Pre-consumer materials - Materials generated in manufacturing and processes such as manufacturing scrap and trimmings and cuttings. Includes print overruns, over issue publications, and obsolete inventories.

Practice Standards- guidelines or protocols for performing specific operations or functions to produce consistency in a desired outcome.

Recyclability - Refers to products or materials that can be collected, separated or otherwise recovered from the solid waste stream for reuse, or in the manufacture or assembly of another package or product, through an established recycling program.

Recycled content Materials that have been recovered from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).

Recycled materials: include but are not limited to recycled paper products retreaded automobile tires, re-refined lubricating oil, used automotive parts, reclaimed solvents, recycled asphalt, recycled concrete, and compost materials. (T29 Ch. 49 S 903(d).)

Sustainability- using, developing, and protecting resources in a manner that meets the needs of the present generations without compromising the ability of future generations to meet their own needs, from the joint perspective of environmental, economic and community objectives.

Take-back - Refers to the manufacturer or designee accepting a return of end-of-life product; who pays for the transportation of the product may be situation-specific.

Toxicity - the potential of a chemical substance to cause adverse health effects from exposure.

Waste prevention - also known as source reduction, refers to any change in the design, manufacturing, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they become municipal solid waste. Waste prevention also refers to the reuse of products or materials.

Waste reduction - Refers to preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products.

Strategies

A. Infrastructure

1. **Reduce the State's environmental footprint: Design, Construction and Maintenance Guidelines:** BGS shall create design, construction and maintenance guidelines based on the United States Green Building Council (USGBC) "Leadership in Energy and Environmental Design (LEED) rating system model. These guidelines will be developed for use by all State Agencies, incorporating the following criteria into new construction projects, renovation projects and facility operations and maintenance procedures and practices to the greatest degree possible:
 - a. **Sustainable sites:** Considerations include erosion and sedimentation control, site selection with an emphasis on redevelopment in growth centers, brown field redevelopment opportunities, alternative transportation opportunities, reductions in initial site disturbance, responsible stormwater management practices, landscaping features affecting habitability of site such as green space concepts, reduction of light trespass from sites.
 - b. **Water efficiency:** Considerations will include reducing water requirements for landscaping needs by using gray water or captured water: reductions in potable water demand by using flow restrictors and low flow fixtures, and investigating the use of innovative wastewater and sanitary waste treatment strategies.
 - c. **Energy and Atmosphere:** Strategies will include optimizing energy performance to reduce emissions, using renewable sources energy, instituting commissioning and re-commissioning practices, using environmentally responsible refrigeration and fire protection chemical systems, expanding electronically based measurement and verification systems.
 - d. **Materials and resources:** Continue to develop and expand facility based storage and collection of recyclables, consider building reuse opportunities, intensify construction waste management practices, take increased advantage of extending the useful life of building materials, consider deconstruction of obsolete buildings when demolition and removal of an existing structure is necessary, employ greater use of materials with higher degrees of recycled material content, extend the practice of purchasing and incorporating locally produced materials into development and operational practices, use more rapidly renewable products and extend the practice of incorporating certified wood products into our building infrastructure.
 - e. **Indoor environmental quality:** Where feasible and appropriate, use carbon dioxide measuring devices to control ventilation air, investigate measures to improve ventilation effectiveness, investigate improvements to our IAQ management practices, use low volatile organic compound (voc) emitting materials in facility development and operations, carefully control and manage indoor chemical and pollutant sources, install and maintain controllable systems, develop strategies for controlling, within

reasonable ranges, the thermal comfort zone suitable for the occupants of the space, be cognizant of and provide appropriated daylight and outside viewing opportunities.

Fiscal resources and measurement of the ratio between the cost and the benefit of project elements will be an important aspect to decision making.

These guidelines shall be used to the degree appropriate for all smaller projects on a case-by-case basis where decisions have a measurable impact on the environment. In no case is any capital project exempted from meeting the intent of these guidelines with respect to the development and operation of the State's building infrastructure in an environmentally responsible manner.

These guidelines shall be incorporated into the development and the maintenance and operations practices of all state agencies and departments charged with the responsibility of building ownership.

- 2. Create operational savings for the State Energy Cost reduction programs:**
BGS shall -- in all activities relating to the design, construction, maintenance and operations of the State's infrastructure -- implement conservation and efficiency measures to reduce resource consumption of electricity, fuels and water to the greatest degree practicable to save the State operational costs.

The energy resource expenditure by BGS is about \$4,250,000 or 45% of the total state infrastructure energy cost of \$9,350,000. Through conservation and improved efficiency measures, it may be possible to save as much as 25% or more of the annual expenditure on energy.

There is an associated cost with the institution of this effort to improve the operational efficiencies of our infrastructure. To ensure that this program survives over the term of the initiative there must be a reliable source of revenue. The State is limited in its ability to fund this initiative through capital bonding. Past experience has shown that without a reliable source of revenue, this program will cease to be effective long before we reach our first milestone in 2012. There is no process by which the savings generated by these initiatives go to support the capital bond appropriation process.

By creating a "Resource Management Revolving Fund" (RMRF), the RMRF can be paid back through the operational savings achieved between what was actually built or what was changed as opposed to what would have been built or left unchanged but for the lack of funds.

The following strategies draw a distinction between conservation and efficiency. Where efficiency is using the energy that is needed as effectively as possible, conservation is the intelligent choice not to use energy unnecessarily.

- a. Conservation:** (Demand management) conservation strategies, often overlooked, are strategies based on the concept that not using energy in the first place is a simple and effective way to reduce costs. Conservation strategies however are more dependent upon occupant demands and use practices, than infrastructure changes.

Target demand management challenges shall be developed and incentive structures created to help achieve the goals of this policy. Strategies might include but are not limited to: incorporation of energy miser devices on vending machines; CO₂ measuring instruments to reduce ventilation air quantities when appropriate based on actual occupancy loads, occupancy sensors to turn off lights when an area is unoccupied and light is not needed for secondary security purposes, educational programs for state employees to embed a sense of responsibility for minimizing resource consumption with the use of "challenges" in order to provide incentives to achieve desired results.

- b. **Efficiency Measures:** (Physical improvements with energy efficient products and systems) Taking advantage of today's technology, an opportunity exists to create new initiatives and make changes to infrastructure, reducing resource consumption and to increase smart building operations. New technological changes might include; installation of DDC systems in more buildings, a new generation of replacement lamp programs, improved HVAC design strategies, "re-commissioning" older systems, revisiting existing building envelop features including windows, use of vestibules, improved foundation, wall and roof thermal barriers and investigating district heating options as well as distributed cogeneration feasibility. To implement these changes the State shall begin a new phase of measurement so that financial resources can be directed to the areas that are in the most obvious need. The State shall require the establishment and use of technology in order to measure resource consumption to assist in determining measures necessary to modify our infrastructure.

To facilitate assurance that all new buildings and significant renovations to existing buildings achieve the highest practicable energy efficiencies, they shall be designed to achieve efficiencies of 30% greater than that required by the current energy code and that the "High Performance Design Guide to Energy Efficient Commercial Buildings" be used as a design basis from which to achieve this objective.

3. **Create markets for sustainably produced and environmentally responsible products as well as goods and services provided utilizing "best practices".** BGS shall in all activities relating to the design, construction, maintenance and operations, when appropriate, incorporate sustainably produced goods and locally available services.

Vermont has some of the most valued and unique of natural materials that can be incorporated into our building environment including: granite, marble, slate, a variety of hardwoods and other valuable resources. In addition, Vermont has many product and service providers in the buildings trade industry that are unparalleled in their abilities to use Vermont's natural resources so that they can be incorporated into our building environment including; cabinetmakers, wood workers, stonecutters, masons, brick manufactures, other trades people, as well as designers, engineers, and architects. This is a resource, not to be squandered, but to be developed and expanded.

Existing specifications should be strengthened and new specifications should be developed to encourage and provide new market opportunities for this sector of the economy.

4. **Measure and publicize results to demonstrate the compatibility of fiscal and environmental responsibility:** This program can have and is intended to have an impact beyond its immediate sphere of influence. Some of the desired beneficial outcomes of this program are by demonstrating the State's commitment to preserving our environment we can set a positive example for businesses statewide, showing that fiscally successful governmental operations are not incompatible with environmentally responsible operations. Further, that this governmental success is transferable to private sector business operations.

To accomplish this objective BGS shall in all activities relating to the design, construction, maintenance and operations participate in data collection and analysis to the extent appropriate.

B. Purchasing & Contract Administration

Materials Acquisition and Disposal:

The intent of the Materials Management Plan is to institutionalize in State government the purchase, use, reuse and proper disposition of products that promote the environmental practices of resource conservation and pollution prevention.

1. Commodities

- a. By June 2004 the Department shall review and update standard language for insertion into all Requests for Proposal issued on behalf of the State of Vermont to advance the use of environmentally preferable purchasing practices. As a result of this measure a checklist will be established for purchasing agents to use in applying significant criteria to each project.
- b. By June 2004 all state agencies shall be required to use EPP contracts established by the Department. Any state agency not complying with this requirement must have on file a waiver signed by the Commissioner of Buildings and General Services.
- c. By June 2004, where applicable, the Department shall ensure that Life Cycle Cost Analyses are completed on commodities prior to a contract award. A life cycle cost analysis looks at the entire cost of purchasing, installing, operating, maintaining, and disposing of a particular piece of equipment or product such as a hot water heaters, tires, copiers, and fax machines.

To reduce our environmental footprint the Division shall create and maintain a set of best practices which will incorporate current and future objectives established within the Materials Management Plan, the Environmental Management System findings, and applicable executive orders. EPP objectives will be strengthened and enhanced by firmly putting in place the following practices:

- a. By April 2005, when the current contracts end, the next generation of custodial cleaning product contracts will be based on Green Seal Standards wherever possible. The Green Seal Standard has been adopted in agreement with various state and local governments for the purpose of establishing minimum criteria for us in drafting contract bids, and providing a common specification for manufacturers to meet or exceed.
- b. By April 2004 the Department will flag all products on contracts that have been identified as having a significant environmental impact and shall review these products annually to determine if there are new alternatives. This review is to be done by the anniversary date of the contract in accordance with the latest EPA guidelines.
- c. On an ongoing basis the Department shall work with departments, vendors, and the Clean State Council to develop specifications and locate new products that will lessen environmental impact and comply with the goals of the Materials Management Plan.
- d. Paper:
 - Copier Paper: The current specifications call for processed chlorine free and recycled content of at least 30% post consumer (EPA Guidelines). Current products on contract exceed this standard.
 - Printing and Writing Paper: The current specification minimum calls for 30% post consumer per EPA for non-coated, 10% for coated. Every effort should be made to purchase chlorine free when suitable choices are available.

- Other Paper Products: All agencies ordering non-printing paper products to specify minimum post-consumer recycled contents as listed in US EPA updated RMAN (Recycled materials Advisory Notice). The web address is <http://www.epa.gov/epaoswer/non-hw/procure/pdf/paper-00.pdf>. Types of materials included in this category are: paper towels, bathroom tissue, facial tissues, corrugated containers and other paperboard and packaging products. Additionally, processed chlorine free should be required where feasible.
2. **Create new markets:** These criteria clearly establish that environmentally preferable purchasing practices are inherent in determining "best interests of the state".
- On an ongoing basis the Department shall review all products purchased that still have mercury content and seek reasonable alternatives with no or low levels of mercury. Where mercury-free alternative products do not exist, preference will be given to the purchase of products with the lowest (documented) total mercury content feasible and products that bear a mercury content warning label as required of product manufacturers under Vermont law. The State of Vermont urges suppliers to continue to develop, produce, and bring to market appropriate, cost competitive, and effective mercury-free replacements.
 - Where practical, Vermont State Agencies shall purchase only energy efficient consuming equipment and devices that meet or exceed the Energy Star standards established by the U.S. Government.
 - For construction projects contractors are required to submit a Construction Site Waste Reduction Plan. Failure to comply with the approved waste reduction plan will result in withholding of general conditions' money from the contractor's monthly requisition and imposition of daily fine. A sample plan is available at:
www.anr.state.vt.us/dec/wastediv/recycling/CGC&D.htm.
 - State procurement officials shall continue to specify that wood and paper products shall be derived from sustainably managed forestlands, and that such products should be certified to acceptable standards by an independent third party. By June 2004 the Department shall have in place a contract for certified hardwood lumber.
 - By April 2004 the Department shall develop a list of all products covered by contracts that can be categorized as EPP and shall promote the use of these green product contracts to political subdivisions and state agencies.
3. **Efficient Government operation:** In an effort to reduce paper flow, track usage and observe compliance we are recommending the following:
- By June 2004 expand the current purchasing card program to items on contract.
 - By December 2004 move towards mandating the use of the state purchasing card program across State government.

C. Transportation

1. Create operational savings for the state.

- A statewide fleet management initiative will save money in a variety of ways: by reducing overall mileage reimbursement expenditures, reducing per-car operational expenses, right-sizing vehicles, and right sizing the fleet.
- Mileage reimbursement will be reduced primarily by replacing the use of employees' personal vehicles with the use of state-owned vehicles that can be operated at a cost far lower than the current mileage reimbursement rate of \$.375/mile. Mileage reimbursement will also be reduced by making state-owned vehicles available for use by departments whose budgets had not allowed them to purchase vehicles.
- A centralized reservation system will provide the potential to coordinate interdepartmental car-pooling and to identify travel corridors where shuttle busses or other means of mass transportation would be economically viable.
- A coordinated fleet program will save money by reducing the per-car operating costs of the overall fleet. By leveraging its buying power and ensuring that vehicles receive all scheduled maintenance and warranted repairs a coordinated fleet program can purchase, maintain, repair, fuel, and operate vehicles at a lower cost than is possible by individual departments with fewer vehicles.
- Per-car operating expenses will also be reduced by ensuring that the right vehicle is being used for the job. Since it is rarely feasible for departments to purchase multiple vehicles to cover their full range of needs departments are often forced by budgetary constraints to utilize vehicles inappropriately – they make do with whatever they have. Centralized ownership will also make it possible to transfer vehicle assignments from one department to another as needs change or as vehicles age – for example as a vehicle's mileage increases it can be transferred from high-usage departments to a lower use application.
- A fleet that is managed on a statewide basis across departmental lines will make it possible to reduce vehicle downtime. In our current system it is quite common for one department to be paying employee mileage reimbursement while other departments have vehicles sitting unused in a state parking lot nearby. By making all state-owned vehicles available for use by any state employee such instances will be drastically reduced.

2. Reduce the state's environmental footprint.

- Transportation is responsible for nearly 40% of the state's greenhouse gas emissions, approximately 13% of which is attributable to the use of passenger vehicles (as opposed to trucks and heavy equipment). The passenger vehicle fleet is estimated to produce over 5,300 tons of CO₂ annually. It will be difficult to meet Vermont's goal of a 25% reduction below 1990 emissions levels without addressing this emissions source.

- Reduce miles traveled, ensuring optimum operational efficiency, using the right vehicle for the job, and obtaining scheduled maintenance, will reduce fuel consumption and reduce GHG emissions.
- Greater reductions are possible by replacing traditional vehicles with alternatively-fueled vehicles. (Replacing just one traditional sedan [28 miles per gallon] with a hybrid vehicle [50 miles per gallon] would reduce fuel consumption by nearly 300 gallons per year – eliminating nearly 6,000 pounds [3 tons] of greenhouse gas emissions per year.)
- Greenhouse gas emissions will be reduced by discouraging vehicle idling. A centralized pool of vehicles for employee travel will provide the opportunity to communicate directly with drivers to provide education on this issue. Those communication efforts can be one piece of a statewide educational campaign for state employees, which would ideally affect employee behavior even when they are using their own vehicles – for business or for pleasure.

3. Increase Market Demand for sustainably-produced and environmentally-responsible products and services.

- Operating a statewide fleet management system for passenger vehicles will enable us to have an impact on the Vermont marketplace. The purchase of alternatively-fueled vehicles will have an impact on the marketplace. First, through State purchasing, we are likely to be able to drive the price down
- Another benefit of operating a fleet of alternatively-fueled vehicles is that we can guarantee a demand for the alternative fuels that these vehicles require, thereby increasing the confidence of fuel station owners for investing in the necessary infrastructure.
- By implementing and utilizing statewide contract for maintenance, parts, and equipment we will also be able to require vendors to utilize environmentally-responsible practices.
- The contract award process will also enable us to review and accurately compare the costs of parts made from recycled materials, reconditioned parts, re-treaded tires, etc. to their “virgin” counterparts and, if we elect to do so, to assess the performance of these parts/supplies over time.

4. IV. Implementing Authorizations:

A. Legislative:

- Contracting with Energy Services Companies

Amends the time frame for "ESCO contracts", multi-year contracts with energy service companies for energy efficiency and fuel switching improvements to state facilities, the cost of which is recovered through the avoided fuel, utility, operating and maintenance costs resulting from the improvements. Existing authorization permits Commissioner of Buildings & General Services (BGS) to enter into contracts with the approval of the emergency board for cost-recovery periods of up to 10 years, with a \$1 million dollar cap on the total cost of all improvements made pursuant to this authority. The capital bill language proposes to increases the cost recovery period to 20 years and remove the \$1 million dollar total cap for all such projects so that these self-financing efficiency projects may be implemented on a broad-scale throughout state government facilities.

- Vermont Energy Initiative

Proposes to authorize the Commissioner of Buildings and General Services to enter into performance contracts with private sector providers to create energy smart state government facilities and to work with a private energy contractor and the State's utility companies to develop a creative and innovative plan that will analyze the State government's energy needs, improve purchasing procedures for efficient acquisition of new technology, and propose an audit method to identify best-practices for new energy-saving technologies.

- Resource Management Program

Proposal for a multi-faceted program to enhance existing policies and to create new initiatives that are appropriate given today's technological advancements for energy conservation. Proposal includes:

- 1) Amendments to the State Agency Energy Plan [for state government], 3 V.S.A. § 2291.
- 2) Adds a requirement for State Agency Planning and Coordination, 3 V.S.A. §2291a.
 - o Requires state agencies to engage in a continuing planning process coordinated, in a manner established by the commissioner of the Department Of Buildings And General Services, to assure that programs and actions are consistent with the goals established in the State Agency Energy Plan.
 - o By June 30, 2005, after review by the commissioner of buildings and general services and approval by the secretary of the agency of administration, each state agency shall adopt an implementation plan to ensure compliance with the State Agency Energy Plan. These plans will be readopted and filed biennially, to ensure that each agency implementation plan remains compatible with the Stage Agency Energy Plan.

- 3) Amends 29 V.S.A. § 903, to:
 - Increase the purchasing preference for comparable products containing recycled materials from five percent to ten percent;
 - Set the goals for the purchase of recycled materials (which include, but are not limited to, recycled paper products, re-treaded automobile tires, re-refined lubricating oil, used automotive parts, reclaimed solvents, recycled asphalt, recycled concrete and compost materials) to at least 40 percent by the end of 2008
 - Remove the specific requirement for increased procurement of recycled paint products, and
 - Remove the requirement for consultation with the commissioner of public service when considering alternative fuels for vehicle operation.
- 4) Amends 29 V.S.A. § 906, to:
 - Require that the commissioner of buildings and general services manage a supply program in order to ensure the disbursal of equipment for use by state government rather than maintain a physical location for central stores of such supplies, and
- 5) Amends 3 V.S.A. § 217 to:
 - Authorize the Commissioner of Buildings and General Services to provide and maintain a fleet of passenger vehicles for state employees other than sworn law enforcement officers
 - Use proceeds of the sale of fleet vehicles to be applied to future replacement of the fleet.
 - Delete the requirement a state employee be offered the option of purchasing a state car particularly assigned to that employee if the Commissioner has determined the car should be disposed of by sale.
- 6) Creates a Resource Management Equipment Revolving Fund, 29 V.S.A. § 168.
 - Provides a source of revenue for implementation of resource conservation measures anticipated to generate a life cycle cost benefit to the State and for the administration of state agency energy planning.

B. Executive Orders:

In addition, revised versions of two existing Executive Orders have been proposed to the Governor in order to ensure coordination with the implementation of the CREMP:

- **Executive Order No. 06-94 Vermont Clean State Program**
- **Executive Order #14-03 Climate Change**

IV. Timelines for Implementation

A. Infrastructure

- 1. Guidelines/Practice Standards** – design construction and maintenance practice standards shall be created, approved and implemented within nine months of the adoption of this policy.
- 2. Energy Cost reduction programs:**
 - a. Demand management strategies** - shall be created within nine months and shall be implemented once appropriate approvals are obtained as necessary
 - b. Physical improvements** – Because of the previous improvements made to State infrastructure, measurements of the existing infrastructure's energy consumption rates, both thermal and electrical, must be accomplished prior to new initiation of systemic infrastructure improvements. However, continued resource conservation improvements can be made where existing funding sources permit and where a net positive return on investment can be demonstrated. In order to measure the State's infrastructure energy use, measuring devices must be specified purchased and installed. Once installed and measurements taken for a period of time, a strategy to reduce energy is to be developed. Funding for these improvements may come from a number of sources including; grants from Efficiency Vermont or other sources, direct appropriations from the general fund or the capital bill, Resource Management Equipment Revolving Fund (RMERF) when grants or direct appropriation sources are not available, and financing using ESCO authorization. The timeline for making physical improvements given this overall strategy is:
 - (1) Continued resource conservation improvements funded through Efficiency Vermont and major maintenance capital bill funding resources:
 - 5th Flr. Pavilion: installation of occupancy sensors, exhaust fan timing switches, and HVAC equipment operational adjustments and refinements.
 - i. Pavilion Chiller
 - ii. 108 Cherry Street Chiller
 - (2) Obtain appropriation for measurement devices installation and 1st phase physical plant improvements, estimated at \$1,000,000.
July 1,2004
 - Instrumentation:
 - Capital Complex, Montpelier (\$250,000)
 - a. Waterbury State Complex, Waterbury (\$250,000)
 - b. Largest “uninstrumented” buildings next
 - Physical Plant Improvements
 - Waterbury State Complex window replacement project (\$500,000; phase 1 of \$1,500,000 project)

Strategy	Deadline
-- Gain legislative authorization for RMERF	July 1,2004
-- Begin implementation of conservation measures using REF sources on a case-by-case basis:	July 1, 2004
-- Measurement device installation complete by	March 2005
-- Complete first fiscal year measurements	July 1, 2006
-- Analyze and develop systemic strategy for improvements	November 2006
-- Present findings to legislature for funding and implementation strategy determination	January 2007
-- Begin implementation of complete systemic infrastructure strategy consistent with the goals of this initiative	July 1, 2007

B. Purchasing

Strategy	Deadline
RFP's issued by Purchasing and Contract Administration to include language on Environmental Preferable Purchasing Practices (EPP), and checklist established	June 2004
All state agencies shall be notified and required to use EPP contracts established by the Department	June 2004
Implement Life Cycle Cost Evaluations on commodities prior to contract award	June 2004
Implement Green Seal Standards where possible	April 2005
Annually review products on contracts for alternatives	June 2004
BGS shall work with departments, vendors, and the Clean State Council to develop specifications and locate new products that will lessen environmental impact and comply with the goals of the Materials Management Plan	June 2004
Tighten requirements for use of copier and printing paper	June 2004
Review products on contract with a mercury content and seek no or low levels of mercury	June 2004
Where practicable, state agencies will purchase only energy efficient consuming equipment and devices that meet or exceed Energy Star standards	June 2004
Achieve 50% recycling rate of total waste stream on construction projects	January 2005
Develop list of products categorized as EPP and promote	June 2004

Appendix:

1. Resource Management Revolving Fund, Add 29 V.S.A. § 168. [State resource management; revolving fund].

(a) The department shall be responsible for administering the interest of the state in all resource conservation measures. All resource conservation measures for the benefit of departments or agencies to which this section applies shall, beginning on July 1, 2004, be made and executed by and in the name of the commissioner.

(b) There is established a resource management revolving fund to provide a source of revenue for implementation of resource conservation measures anticipated to generate a life cycle cost benefit to the State. Measures may include but are not limited to equipment replacement, studies, weatherization, and construction. Measures affecting any environmental or natural resources are eligible for funding. All state agencies responsible for development and operations and maintenance of state infrastructure shall have access to the revolving fund on a priority basis established by the commissioner.

(c) The fund shall consist of:

(1) Moneys which are appropriated to the fund, or which are paid to it under authorization of the emergency board;

(2) money saved by the implementation of resource management conservation measures;

(3) fees to be paid by departments and agencies which shall be fixed by the commissioner of buildings and general services subject to the approval of the secretary of administration.

(d) Moneys from the fund shall be expended for resource conservation measures anticipated to generate a life cycle cost benefit to the State and all necessary costs involved with the administration of state agency energy planning as determined by the commissioner.

(e) The commissioner shall establish criteria for measures for eligibility of funding.

(f) Agencies or departments receiving funding shall repay the fund through their regular operating budgets according to a schedule established by the commissioner. Repayment shall include charges for administrative costs over the term of the payback.

(g) The commissioner of finance of management may anticipate receipts to this fund and issue warrants based thereon.

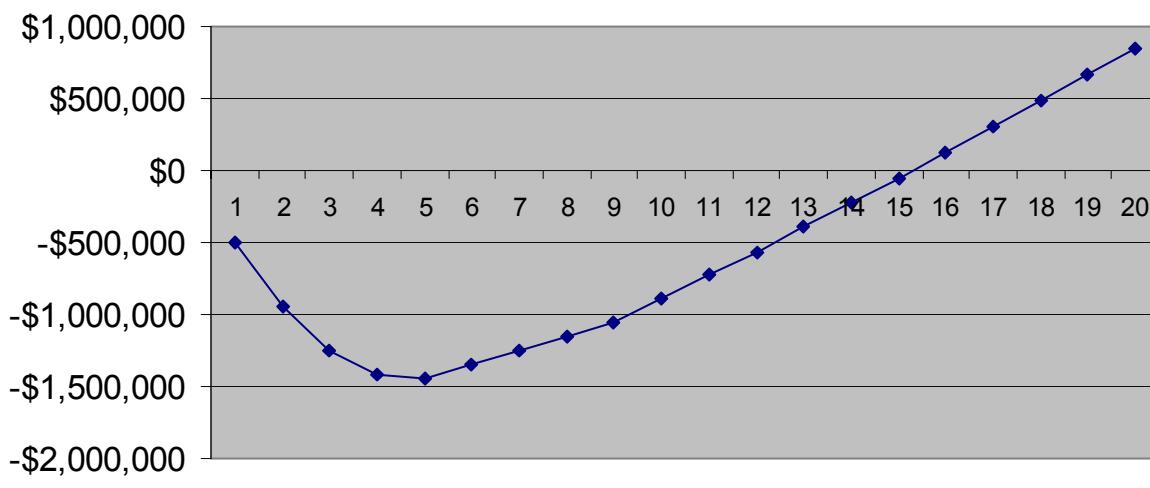
(h) The commissioner of buildings and general services shall maintain accurate and complete records of all such receipts and expenditures and shall report to the general assembly on January 15 of each year, projects approved through this fund, the status of the fund, and a consolidated amortization schedule.

(i) All balances remaining at the end of a fiscal year shall be carried over to the following year, and the auditor of accounts shall audit the fund.

Economic Basis of Resource Management Equipment Revolving Fund

Year	Capital Investment	Estimated Payback Term (yrs)	Annual Savings/YR	Total Annual Savings	Total Accumulated Savings	Total Accumulated Investments	Net Capital Investment	Return on Investment	Year
1	\$500,000	10	\$50,000	0	0	\$500,000	\$500,000	-\$500,000	1
2	\$500,000	10	\$50,000	\$50,000	\$50,000	\$1,000,000	\$450,000	-\$950,000	2
3	\$400,000	10	\$40,000	\$100,000	\$150,000	\$1,400,000	\$300,000	-\$1,250,000	3
4	\$300,000	10	\$30,000	\$140,000	\$290,000	\$1,700,000	\$160,000	-\$1,410,000	4
5	\$200,000	10	\$20,000	\$170,000	\$460,000	\$1,900,000	\$30,000	-\$1,440,000	5
6	\$100,000	20	\$5,000	\$190,000	\$650,000	\$2,000,000	-\$90,000	-\$1,350,000	6
7	\$100,000	20	\$5,000	\$195,000	\$845,000	\$2,100,000	-\$95,000	-\$1,255,000	7
8	\$100,000	20	\$5,000	\$200,000	\$1,045,000	\$2,200,000	-\$100,000	-\$1,155,000	8
9	\$100,000	20	\$5,000	\$205,000	\$1,250,000	\$2,300,000	-\$105,000	-\$1,050,000	9
10	\$50,000	20	\$2,500	\$210,000	\$1,460,000	\$2,350,000	-\$160,000	-\$890,000	10
11	\$50,000	20	\$2,500	\$212,500	\$1,672,500	\$2,400,000	-\$162,500	-\$727,500	11
12	\$50,000	20	\$2,500	\$215,000	\$1,887,500	\$2,450,000	-\$165,000	-\$562,500	12
13	\$50,000	20	\$2,500	\$217,500	\$2,105,000	\$2,500,000	-\$167,500	-\$395,000	13
14	\$50,000	20	\$2,500	\$220,000	\$2,325,000	\$2,550,000	-\$170,000	-\$225,000	14
15	\$50,000	20	\$2,500	\$222,500	\$2,547,500	\$2,600,000	-\$172,500	-\$52,500	15
16	\$50,000	20	\$2,500	\$225,000	\$2,772,500	\$2,650,000	-\$175,000	\$122,500	16
17	\$50,000	20	\$2,500	\$227,500	\$3,000,000	\$2,700,000	-\$177,500	\$300,000	17
18	\$50,000	20	\$2,500	\$230,000	\$3,230,000	\$2,750,000	-\$180,000	\$480,000	18
19	\$50,000	20	\$2,500	\$232,500	\$3,462,500	\$2,800,000	-\$182,500	\$662,500	19
20	\$50,000	20	\$2,500	\$235,000	\$3,697,500	\$2,850,000	-\$185,000	\$847,500	20
Subtotal 20 Years	\$2,850,000			\$3,697,500				-\$847,500	

NOTE: Total Annual Savings Year 6 Exceeds Investment Year 6.

Return on Investment

EPP PRACTICES CHECKLIST

April 2004

By April 2004, the Department shall review and update standard language for insertion into all Requests for Proposals issued on behalf of the State of Vermont to advance the use of environmentally preferable purchasing practices (EPP). As a result of this measure, a checklist will be established for purchasing agents to use in applying significant criteria to each project.

Pollution Prevention should be consistent with the Departments Environmental Management System dated September 27, 2000. Document is available and located on the Purchasing and Contract Administration web-site.

1. Paper Recycling Content:

Standard Language: Copier Paper: The current specification calls for processed chlorine free and recycled content of at least 30% post-consumer content. This meets the 30% EPA guideline.

Printing and Writing Paper: The current specification minimum calls for 30% post consumer per EPA for non-coated; 10% for coated. Every effort should be made to purchase chlorine free when suitable choices are available.

Chlorine Free Paper/Alternate Bid:

Standard Comments: Per Executive Order 06-94 the state desires to reduce the use of chlorine in the products it purchases to protect the environment from pollution. PCF paper is Processed Chlorine Free, i.e. recycled paper in which the recycled content is processed unbleached or bleached without chlorine or chlorine derivatives. Any virgin material portion of the paper must be TCF (Totally Chlorine Free).

2. Sustainability:

Standard Language: Sustainable Products: Vendors are encouraged to provide alternate quotations on wood or paper products that are derived from sustainably managed forestlands. Such products must be independently third-party certified to acceptable standards. Sustainably-managed forest lands shall be defined as those lands enrolled and licensed under one of the following: Sustainable Forestry Initiative Program, the American Tree Farm System, the Canadian Standards Association's Sustainable Forest Management System Standards, the Finnish Standard, Forest Stewardship Council, Pan-European Forest Certification, Swedish Standard, the United Kingdom Woodland Assurance Scheme or other such credible programs as they are developed and implemented. Vendors must provide satisfactory documentation of certification with their bid.

3. Life Cycle Cost Evaluation:

Standard Language: Life cycle costs looks at the entire cost of purchasing, installing, operating, maintaining, durability and disposing of a particular piece of equipment or product.

4. Equipment Take Back Provisions

Standard Language: Offeror must describe their equipment take-back/recycling program by addressing each of the following: date the program is or will be in operation, type of equipment being taken back or proposed to be taken back, volume of equipment being recycled/disposed or proposed, certificates of disposal, disk storage cleaning, take-back charge by type of equipment, and compliance with federal or other regulatory authorities regarding disposal.

5. Energy efficiency (Energy Star)

Standard Language: State of Vermont Agencies and Departments are directed to reduce greenhouse gas emissions from state government buildings and operations, per Executive Order # 14-03. To improve our energy performance and help the environment by reducing our energy use, purchases shall be made only for energy-consuming devices that meet or exceed the Energy Star or comparable standards established by the U.S. federal government, where possible, without compromising quality or performance. These products use 25 to 50 percent less energy than their traditional counterparts. Reduced energy consumption will result in fewer fossil fuels burned and greenhouse gas emissions reduced, lessening air pollution. Energy efficient products often have an extended product life and decreased maintenance costs, and provide a return on investment due to a reduction in energy costs.

6. Design for the Environment:

Standard Language: Offeror must describe their environmental program in each f the following areas: reduction/minimization/avoidance of use of toxic and hazardous constituents (cadmium, chromium, mercury, lead,) compliance with international directives such as the European Unions' Directive "Restriction of Hazardous Substances", reduction of chlorinated plastics (PVC) and brominated flame retardants, compliance with the European Union's WEEE Directive requiring the recycle or reuse of old equipment, certification by independent third party eco-labeling program (TCO, Blue Angel, etc.) the use of recyclable, nontoxic packaging.

7. Mercury Content:

Standard Language: The State of Vermont is committed to minimizing the amount of mercury utilized in its operations, and desires to eliminate the purchase of products that contain mercury whenever feasible alternatives exist at a reasonable cost and comparable performance. Where mercury-free alternative products do not exist, preference will be given to the purchase of products with the lowest (documented) total mercury content feasible and products that bear a mercury content warning label as required of product manufacturers under Vermont law. Executive Order #03-02

The State of Vermont urges suppliers to continue to develop, produce, and bring to market appropriate, cost competitive, and effective mercury-free replacements.

8. Alternative Fuels:

Standard Language: Specifications for vehicles and other fuel consuming equipment shall consider not only fuel efficiency but also the type of fuel so as to provide lower emissions of greenhouse gases and pollutants.