

FY06 Agency Sustainability Tracking, Reporting and Plan Update form

Fiscal Year 2006 (July 1, 2005 through June 30, 2006)

MA State Sustainability Program



OVERVIEW

Measuring and tracking the environmental impacts of Massachusetts agency operations is a critical component of the Massachusetts State Sustainability Program and a requirement of Executive Order No.438. **This 3-part form is intended to be a simple, clear way for the program to collect and manage state agency operational data**, which will allow the State Sustainability Program to measure progress toward sustainability goals and targets, and compile an annual report on sustainability efforts in Massachusetts State Government operations. **Completion and submission of the tracking form is also a requirement for eligibility for State Sustainability Pilot Project funding.**

GENERAL INSTRUCTIONS

Reporting should include **all facilities** within your agency and be consistent from year to year. Please note any new or missing sites.

Section 1: FY06 Operational Data: Collect energy, water and waste data for your agency and enter it on page 4. Page 2 and 3 explain what data is requested from different agencies.

Section 2. Utility Account Data Request: **Please read page 5 and use the** attached Excel Spreadsheet: Account Data Request to submit Electricity and Gas account numbers for inclusion in an online energy information system.

Section 3: Agency Sustainability Activities: Provide written information on recent and current sustainability activities on page 7 and additional pages as needed. Include new or recent programs, activities and efforts from all your facilities, and where possible, provide information on their environmental and fiscal benefits.

Agency Coordinators may wish to send this Form to regional directors, facility directors, or other relevant staff, and compile the received information into one, agency-wide reporting form response.

DEADLINES FOR SUBMISSION

All relevant parts of this form should be filled out and returned to the State Sustainability Coordinating Council by **Friday November 17, 2006** and may be submitted by **email (preferred)** or through regular mail to:

ian.finlayson@state.ma.us

*Ian Finlayson - State Sustainability Program Manager
Executive Office of Environmental Affairs
100 Cambridge Street, Suite 900, Boston, MA 02114*

Additional Information: If you have any questions, or wish to review your agency's data with State Sustainability Program staff please contact Ian Finlayson at 617-626-4910 or by email.

The State Sustainability Program of the Commonwealth of Massachusetts, is administered by the Executive Office of Environmental Affairs, Governor Mitt Romney, Lt. Governor Kerry Healey, Secretary Robert W. Gollidge, Jr.

Who Should Fill Out this Form?

- The 45 State entities identified below are required to fill out the entire form, as these agencies are included in the greenhouse gas inventory and other statewide annual reporting. (*In the case of the 4 authorities this is by voluntary commitment rather than executive order, but continued active participation is essential for consistent State government reporting.)

State Entities required to fill out all 3 sections of the form

EXECUTIVE AGENCIES: BSB, CHE, DCAM, DCR, DMH, DMR, DOC, DPH, DYS, MHD, MIL, POL

AUTHORITIES*: MassPort, MWRA, Mass Turnpike, MBTA.

COLLEGES AND UNIVERSITIES: All 5 UMass Campuses. All 24 state and community college campuses.

- All other **State entities should, as a minimum, complete sections 2 and 3**, and are encouraged to report on section 1 on a voluntary basis, as this information is helpful and may be required in future years.

Section 1. Instructions for FY06 Operational Data

This section of the form is used to track **Fiscal Year 2006 data** for:

- Energy consumption**
- Water and Sewer use**
- Solid waste and recycling**

Data Collected and Data Required from Agencies

DATA TYPE		Executive Agencies	Authorities & UMass	Colleges
a) Energy Consumption	Building Fuels (Fuel oil #2,#4, #6)	Collected from State Contracts	Need to Report	Collected from BHE (Except Dorms) (Please provide Dorm data and review BHE data)
	Vehicle Fuels (gasoline, diesel, CNG, propane, etc.)	Collected from State Contracts	Need to Report	Collected from BHE (Please review BHE data)
	Electricity	Partially Collected from Energy Information System* (See section 3)	Need to Report (See section 3)	Collected from BHE (Except Dorms) (Please provide Dorm data and review BHE data)
	Natural Gas Other	Need to Report (See section 3)	Need to Report (See section 3)	Collected from BHE (Except Dorms) (Please provide Dorm data and review BHE data)
b) Water and Sewer		Need to Report	Need to Report	Need to Report
c) Solid Waste & Recycling		Need to Report	Need to Report	Need to Report

* EIS does not yet track Municipal Utility data, and may have an incomplete listing of accounts.

a) Energy Consumption Data

As summarized in the table above, EOE is able to compile some Energy data for executive agencies, as well as for colleges from a variety of sources, including:

1. Statewide contract reports for vehicle and certain building fuels purchased by executive agencies – these reports are provided by the Operational Services Division (OSD)
2. Electricity consumption from NStar and National Grid Utilities, through an online database for executive agencies (through DOER) See Section 2 for details on improving this tracking.
3. Reports from the Board of Higher Education on all energy and water consumption at state and community colleges except for Dormitory buildings owned by Mass State College Building Authority

Note: We will ask you to confirm or explain any discrepancies in OSD, DOER or BHE data with your agency records.

1. The Program is **unable to centrally compile natural gas consumption data (other than through BHE), or energy from renewable sources.**
2. If you are an executive agency that purchases fuel other than through state contracts, you will **need to report those purchases.** Also, if you **lease space and know your electricity and/or fuel consumption**, please report that information on this form.
3. If you are an **authority or an UMass campus**, you will **need to report all energy data**, as the Program is not able to collect any data centrally.

b) Water and Sewer Data

The Program is **unable to centrally track Water and Sewer usage volumes.** This form asks that you report water and sewage volume data. Please take care to use the correct units: gallons, cubic feet (cf) or 100 cubic feet (ccf) are commonly used. If you do not already keep track of water and sewer use by volume as well as cost, we strongly encourage you to discuss tracking this data with your water and wastewater treatment supplier.

c) Solid Waste and Recycling Data

The Program is **unable to centrally track solid waste and recycling generation.** This form asks that you provide solid waste generation and recycling data to the best of your ability. If you do not have actual tonnages for waste, we strongly encourage you to request this data from your hauler – almost every hauler will have this information. If you do not have specific data on recycling tonnages, you may alternatively report estimates based on material, volume collected, and frequency of collection. *[For example, it is sufficient to report that you recycled 10-96 gallon totes of mixed paper once per week for 48 weeks, and then calculate tonnage based on the conversion sheet in the Appendix of this form.]*

NOTES: Please check your Units and explain any unusual data reporting

- i) Please be sure to check and fill in the name of the units that you are using for Water, Sewer and the various Recycling programs that you have.
- ii) Commonly used Conversion Factors for solid waste and recycling are available in **Appendix I** of this Tracking Form.
- iii) Please include any additional information you feel is needed to explain the data (e.g. explain why you don't have cost information, if data is only for some facilities, or if the energy unit of measure differs from what is listed)

Section 1. FY06 Operational Data

CONTACT INFORMATION

Name: Paul A. Righi Agency/Department: Bunker Hill Community College

Phone: 617-228-347 Email: prighi@bhcc.mass.edu

* Please remember to indicate units of measurement used if different from measure listed

Topic	FY06 Data		Unit*	Cost	Notes
Building Energy Use					
Electricity	5,530,086		KWh	\$444,034.89	
Natural Gas	202,690		therms	\$143,131.41	
Fuel Oil #2			gallons	\$	
Fuel Oil #4	3560		barrels	\$160,524.68	
Fuel Oil #6			barrels	\$	
Biodiesel (#2 heating)			gallons	\$	e.g. B5
Onsite Renewables			KWh	\$	e.g. Solar /Wind/Biomass
Renewable Energy Credits			KWh	\$	e.g. Solar PV/Wind
Other (e.g. Steam)				\$	
Vehicle Fuel Use					
Gasoline	7749		gallons	\$18,715	
Low Sulfur Diesel			gallons	\$	
Ultra low sulfur Diesel	3295		gallons	\$8,785	
Biodiesel			gallons	\$	e.g. B20 soy-based or waste oil
Ethanol (E85)			gallons	\$	
CNG			gallons	\$	
Propane			gallons	\$	
Electric			KWh	\$	
Water Use					
Water	1,982,064		gal	\$ 91,947.68	
Sewer (if separate)				\$	
Solid Waste and Recycling (see Appendix I for common volume/weight conversions)					
Solid Waste total *	349.76		Tons	\$41,684	
Recycling total *			Tons	\$	Can not get weight free service
Recycling Programs	Y/N	Amount	Units	\$ Cost	Notes
White Paper	y			\$	Can not determine exact amount service
Mixed Paper	y			\$	provided as part of our solid waste
Cardboard	y			\$	contract separate weight not provided.
Mixed Cans & Bottles	n			\$	
Lawn and Yard Waste	y	12	tons	\$2,265	
Food Waste	n			\$	
Scrap Metal	n			\$	
Other C&D Waste	n			\$	
White Goods	n			\$	
Electronics/Computers	y	8709	lbs	\$1,817	
Toner Cartridges	y	250		\$	
Batteries	y	748	lbs	\$224	
Cell Phones	n			\$	
Other_florescent lamps	y	7,312	Linear ft	\$602.32	

Section 2. Utility Account Data Request

In collaboration with the Division of Energy Resources (DOER), we have initiated efforts to develop an online 'Energy Information System' (EIS) that is designed to **automatically track your electricity and gas data** straight from the Utilities. Once agencies provide us with all electric and gas accounts we believe this will save you time and effort in tracking your future energy consumption, and provide you with on-line, detailed and up-to-date information about energy use at all your facilities.

Electricity Account Information

While we have partial electricity account data for many agencies, we do not have a comprehensive list of all electricity accounts that is necessary for us to initiate this new on-line tracking system. Following release of this tracking form, we will email to all agency contacts an excel template with a list of the accounts we have for that agency. We ask that you **review the current list of electric accounts and check it against your information** and provide us with any necessary corrections, deletions, and/or additions to this list.

Agencies for which we do not have any electricity account information will be sent a blank Excel template, which we ask that you **fill out with all agency electricity account information**. Please note that we only have data for NStar and National Grid – you will need to provide us with both electricity data and account information for all other utilities.

Natural Gas Account Information

Unlike electricity accounts, we do not have any information on natural gas accounts. We will therefore include in our excel templates sent to each agency a tab for natural gas account information.

Please note that this is a one time task, although you will want to notify us of any new accounts (e.g. for new buildings) or changes in accounts in the future. Also, **you may choose to send us a copy of one bill for every electricity or natural gas account as opposed to filling out the excel spreadsheet.**

If you have any questions about this task please contact Ian Finlayson at 617-626-4910 or email ian.finlayson@state.ma.us. For our reference please complete the contact information for the primary contact for account information at your agency below.

Agency Name: _____

Contact Name for Utility Account Information: _____

Email: _____ Phone: _____

Sample of data needed for Electricity and Gas Accounts (fill in Excel Templates sent to you)

Utility	Account #	Meter #	Facility	Address	Town

Section 3. Agency Sustainability Activities

In addition to the numerical operational and environmental data collected and compiled by the State Sustainability Program, EOE and the Coordinating Council are asking **ALL AGENCIES TO PROVIDE INFORMATION ON SUSTAINABILITY PROJECTS AND PROGRAMS** that have occurred at facilities during FY06 or previously if you have not provide such information before. This information will be used to:

- 1) Acknowledge and recognize innovative efforts at state agencies
- 2) Identify the current "state of sustainability" in Massachusetts state agencies
- 3) Create a database of "best management practices"
- 4) Assist with the development of a sustainability report for Massachusetts state government

Please use the template included below to provide an overview of all key sustainable activities either currently on-going or recently completed at your agency.

Some **examples** of the types of projects and information we are looking for are:

- **Planning & Budgets** – Do you include sustainability goals in your long-term planning? Do you have any budget line items for sustainability? Did you hire a full-time sustainability coordinator/ manager?
- **Energy** – Did your agency complete energy retrofits at facilities? Replace incandescent light bulbs with compact fluorescents? Buy energy star appliances? Do you have any renewable installations?
- **Recycling/Waste Reduction** – What recycling programs does your agency currently have in place and what materials do you recycle? Did you recently initiate a new recycling program? Improve upon your recycling rate? Issue a paper reduction policy? Start Composting?
- **Sustainable Design** – Did your agency design or build a green building? Apply for or obtain LEED certification?
- **Transportation** – Do you have any alternative fuel or electric vehicles? Retrofit vehicles for bio-diesel? Do you have a ride-share program? Provide incentives to use public transportation? Have bicycle storage and shower facilities?

[SAMPLE]

Project Name **Dormitory Container Recycling Program**

Topic:	<input type="checkbox"/> Energy <input checked="" type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input type="checkbox"/> Natural Resources		
Facility Info:	XXX College, Boston MA		
Contact Name	John Smith		
Contact Phone	617-555-5555	Contact Email:	John.smith@state....
Project Description:	Initiated a can and bottle recycling program in the dorms at XXX College campus. Purchased 10 two-hole top recycling bins, to be placed on each floor in the dorm. College facility staff, with a student coordinator, will manage program and the building will sponsor a contest, with prizes for the floor that recycles the most material.		
Cost:	\$ 200 for bins, hauling	Savings (if relevant):	None
Results (env. and cost benefits)	Expected to pull 5 tons of cans & bottles from the waste stream each year. Results will be tracked based on hauler reports, and posted on student floors every quarter.		

Section 3. Agency Sustainability Activities

Agency Name: Bunker Hill Community College Sustainability Coordinator: Paul A. Righi
 Contact Phone/Email: 617-228-3474 prighi@bhcc.mass.edu _____

Project Name Chiller Cycling _____

Topic:	<input checked="" type="checkbox"/> Energy <input type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input checked="" type="checkbox"/> Natural Resources		
Facility Info:	Bunker Hill Community College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	Raised temperatures on chiller air flow and also instituted chiller cycling during the summer months		
Cost:	No	Savings (if relevant):	Still evaluating
Results (env. and other benefits)	Used less energy during peak times, lessened strain on natural resources, money savings measure also. The downside is that we may have actually used more energy by starting motors from a "cold" position. Our evaluation will determine the effects of wear and tear from start to stop of motors.		

Project Name Bottle and Can Recycling

Topic:	<input type="checkbox"/> Energy <input checked="" type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input type="checkbox"/> Natural Resources		
Facility Info:	Bunker Hill Community College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	Trying to institute facility wide bottle and can recycling. Currently, a student organization provides this service during certain months of the year but the Facilities Management Department would like to do it year round.		
Cost:	none	Savings (if relevant):	
Results	Would lesson amount of trash produced, more bottles and cans recycled and reused natural resources		

(env. and other benefits)

Agency Name: Bunker Hill Community College Sustainability Coordinator: Paul A. Righi
Contact Phone/Email: 617-228-3474 prighi@bhcc.mass.edu _____

Project Name Facility Wide Computer Sleep Mode _____

Topic:	<input checked="" type="checkbox"/> Energy <input type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input checked="" type="checkbox"/> Natural Resources		
Facility Info:	Bunker Hill Community College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	All building computers go into sleep mode after 15 minutes of non use.		
Cost:	No	Savings (if relevant):	Still evaluating
Results (env. and other benefits)	Uses less energy since computers require very little energy in this mode.		

Please copy and add additional pages as needed

APPENDIX I: Water Units and Volume-to-Weight Conversions for Recyclable Materials

Available on DEP website: <http://www.mass.gov/dep/recycle/cities.htm#mrpd>

Category	Material	Density
Water and Sewage	Water Volumes	1 CCF = 100 cubic feet = 748 gallons
Paper	Newspaper	
	Loose, unbaled	445 pounds / cubic yard
	Compacted	800 pounds / cubic yard
	Hand stacked	35 pounds / 12 inch stack
	Corrugated Cardboard	
	Loose, unbaled	200 pounds / cubic yard
	Compacted	460 pounds / cubic yard
Other Paper	Telephone Books	250 pounds / cubic yard
	Mixed Paper	490 pounds / cubic yard
Containers	Commingled	
	Cans, Glass & Plastic	180 pounds / cubic yard
	Cans & Glass	270 pounds / cubic yard
	Glass	
	Whole Bottles	620 pounds / cubic yard
	Crushed-semi (manually)	1,175 pounds / cubic yard
	Mechanically Crushed	1,840 pounds / cubic yard
	Steel/Tin Cans	
	Whole	150 pounds / cubic yard
	Flattened	850 pounds / cubic yard
Aluminum Cans	Whole	60 pounds / cubic yard
	Flattened	225 pounds / cubic yard
Plastics	All Plastics: #1 - #7 – whole	38 pounds / cubic yard
Miscellaneous Materials	White goods (appliances)	300 lb / cubic yard or 170lb each on average
	Textiles	175 pounds / cubic yard
	CRTs/Computers	50 lbs each (whole on average)
Organics – Weight Conversions	Grass Clippings	667 pounds / cubic yard
	Leaves	400 pounds / cubic yard
	Brush	500 pounds / cubic yard
	Unfinished Compost	1,500 pounds / cubic yard
	Finished Compost	1,350 pounds / cubic yard
Organics – Volumetric Conversions	Grass Clippings	3 cubic yards/ton
	Leaves	5 cubic yards/ton
	Brush	4 cubic yards/ton
Hazardous Household Products (HHP)	Auto batteries	39 lbs each
	Batteries (household)	40 pounds / 5 gallon pail
	Fluorescent lamps	0.5 pounds / four foot lamp
	Oil filters	250 pounds / 55 gallon drum