

Princeton Plasma Physics Laboratory
Environmental Management System

Appendix C

Summary of EMS Objectives & Targets

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Robert S. Sheneman
EMS Program Manager

Virginia L. Finley
Chair, Environmental Review Committee

Jerry D. Levine
Head, Environment, Safety & Health Department

Stacia Zelick
Acting Head, Information Technology Department, CIO

Larry Dudek
Acting Head, Engineering & Infrastructure Department

Joh DeLooper
Acting Deputy Laboratory Director for Operations

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Appendix C - Summary of EMS Objectives & Targets**

NOTE: The performance status for each goal is color coded:
blue for exceeded the goal, green for met/meeting the goal, yellow for not met but on target and red for at risk.

DOE Goal #	DOE Goal	Performance Status through FY2015	Planned Actions & Contribution	Risk of Non-attainment
<i>Goal 1: Greenhouse Gas Reduction</i>				
1.1	50% Scope 1 & 2 GHG reduction by FY 2025 from a FY 2008 baseline (2015 target: 19%)	MET FY15 emissions 54% below baseline	Continue to focus on energy efficiency, especially electricity use, and fugitive emissions	NA
1.2	25% Scope 3 GHG reduction by FY 2025 from a FY 2008 baseline (2014 target: 6%)	IN PROGRESS Previous years were below baseline but FY15 emissions increased.	Focus on telework and employee commuting; continue to emphasize energy efficiency and business travel.	Moderate. Ongoing international research emphasis
<i>Goal 2: Sustainable Buildings</i>				
2.1	25% energy intensity (Btu per gross square foot) reduction in goal-subject buildings, achieving 2.5% reductions annually, by FY 2025 from a FY 2015 baseline	EXCEEDED FY15 goal New baseline year.	Continue to focus on energy efficiency and building energy performance	Moderate. Limited funding available for ECMs
2.2	EISA Section 432 energy and water evaluations	MET 100% of covered buildings had Type 1 audit in FY15	25% of buildings will be evaluated in 2016	NA
2.3	Meter all individual buildings for electricity, natural gas, steam and water, where cost-effective and appropriate	MET	Additional sub-metering as cost-effective and programmatically appropriate	Moderate. Current utility configuration doesn't allow building-level metering.

DOE Goal #	DOE Goal	Performance Status through FY2015	Planned Actions & Contribution	Risk of Non-attainment
2.4	At least 15% (by building count or gross square feet) of existing buildings greater than 5,000 gross square feet (GSF) are compliant with the Guiding Principles (GPs) of HPSB by FY 2025, with progress to 100% thereafter	MET Using GSF option	Plan to continue HPSB Guiding Principles on additional facilities in conjunction with facility repairs & renovations.	Moderate. LEED-Gold certification of LSB due to renewal. Limited funding available for ECMs
2.5	Efforts to increase regional and local planning coordination and involvement	MET	Continue to coordinate with Princeton Forrestal Center.	NA
2.6	Net Zero Buildings: Percentage of the site's existing buildings above 5,000 gross square feet intended to be energy, waste, or water net-zero buildings by FY 2025.	NONE	Evaluating existing buildings to identify opportunities and strategies to address this goal	High. Critical infrastructure needs may not allow sufficient funds in the near term.
2.7	Data Center Efficiency. Establish a power usage effectiveness target in the range of 1.2-1.4 for new data centers and less than 1.5 for existing data centers	IN PROGRESS Data center PUE for FY15 was 1.58	Reviewing near-term options to improve cooling efficiency. Evaluating potential GPP project to replace existing HVAC with chilled water cooling.	Low.
Goal 3: Clean & Renewable Energy				
3.1	"Clean Energy" requires that the percentage of an agency's total electric and thermal energy accounted for by renewable and alternative energy shall be not less than: 10% in FY 2016-2017, working towards 25% by FY 2025	New Goal ON TARGET	Continue purchasing RECs and evaluate ESPC/PPA opportunities	Moderate.
3.2	"Renewable Electric Energy" requires that renewable electric energy account for not less than 10% of a total agency <u>electric</u> consumption in FY16-17, working towards 30% of total agency <u>electric</u> consumption by FY 2025	MET Purchased RECs to meet goal.	Continue purchasing RECs and evaluate ESPC/PPA opportunities	NA

DOE Goal #	DOE Goal	Performance Status through FY2015	Planned Actions & Contribution	Risk of Non-attainment
Goal 4: Water Use Efficiency and Management				
4.1	36% potable water intensity (Gal per gross square foot) reduction by FY 2025 from a FY 2007 baseline (2015 target: 16%)	EXCEEDED FY15 goal MET new goal	Continue to identify water conservation opportunities. Maintain previous savings.	NA
4.2	30% water consumption (Gal) reduction of industrial, landscaping, and agricultural (ILA) water by FY 2025 from a FY 2010 baseline (2014 target: 10%)	IN PROGRESS Exceeded goal for previous 4 years. FY15 water use exceeded goal level	Mission-critical operational use of industrial water caused FY15 increase. Will continue to seek and maximize opportunities to reduce industrial water use.	Moderate. Additional water conservation opportunities are limited.
Goal 5: Fleet Management				
5.1	20% reduction in annual petroleum consumption by FY2015 relative to a FY05 baseline; maintain 20% reduction thereafter. (2015 target: 20%)	EXCEEDED	Continue to manage fleet composition and emphasize alternative fuel use.	NA
5.2	10% increase in annual alternative fuel consumption by FY15 relative to a FY05 baseline; maintain 10% increase thereafter. (2015 target: 10%)	EXCEEDED	Continue to manage fleet composition and emphasize alternative fuel use.	NA
5.3	30% reduction in fleet-wide per-mile greenhouse gas emissions reduction by FY 2025 from a FY14 baseline. (2015 target: N/A; 2017 target: 4%)	New Goal Note: FY15 fleet GHG intensity is down 49.2% from FY08.	Continue to manage fleet composition and emphasize alternative fuel use.	Low.
5.4	75% of light duty vehicle acquisitions must consist of alternative fuel vehicles (AFV). (2015 target: 75%)	MET	Continue to emphasize AFV and alternative fuel use.	NA

DOE Goal #	DOE Goal	Performance Status through FY2015	Planned Actions & Contribution	Risk of Non-attainment
5.5	50% of passenger vehicle acquisitions consist of zero emission or plug-in hybrid electric vehicles by FY 2025. (2015 target: N/A)	New Goal	Work with GSA to identify opportunities in vehicle lease program. Limited number of passenger vehicles.	NA
Goal 6: Sustainable Acquisition				
6.1	Promote sustainable acquisition and procurement to the maximum extent practicable, ensuring BioPreferred and biobased provisions and clauses are included in 95% of applicable contracts.	MET	Continue to integrate sustainable acquisition information into applicable contracting documents.	NA
Goal 7: Pollution Prevention & Waste Reduction				
7.1	Divert at least 50% of non-hazardous solid waste, excluding construction and demolition debris.	EXCEEDED FY15 MSW recycling rate was 74.1%	Continue existing programs and expand as appropriate.	NA
7.2	Divert at least 50% of construction and demolition materials and debris.	EXCEEDED FY15 C&D recycling rate was 85.8%	Continue existing programs and expand as appropriate.	NA
Goal 8: Energy Performance Contracts				
8.1	Annual targets for performance contracting to be implemented in FY 2017 and annually thereafter as part of the planning of section	ON TARGET	Currently investigation new ESPC/PPA opportunities.	NA
Goal 9: Electronic Stewardship				
9.1	Purchases – 95% of eligible acquisitions each year are EPEAT-registered products	EXCEEDED	EPEAT products specified as default	NA
9.2	Power management – 100% of eligible PCs, laptops, and monitors have power management enabled	IN PROGRESS for desktops & laptops MET for monitors	Plans to procure power management software for Macs.	Moderate.

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9.3	Automatic duplexing – 100% of eligible computers and imaging equipment have automatic duplexing enabled	IN PROGRESS	Specify purchase of duplex-capable networked printers as older units are retired.	Moderate. Dependent on operational funds for replacement & upgrades.
9.4	End of Life – 100% of used electronics are reused or recycled using environmentally sound disposition options each year	MET	Continue to re-use electronic assets internally & recycle through UNICOR	NA
<i>Goal 10: Climate Change Resilience</i>				
10.1	Update policies to incentivize planning for, and addressing the impacts of climate change.	DOE GHG and climate adaptation goals are integrated into lab-wide ISO-14001 certified environmental management system (EMS).		
10.2	Update emergency response procedures and protocols to account for projected climate change, including extreme weather events.	Existing Emergency Plan includes various weather-related emergencies. Plan is tested and exercised during major weather events.		
10.3	Ensure workforce protocols and policies reflect projected human health and safety impacts of climate change.	Existing ES&H directives address weather-related risks. Continue to revise and update ES&H directives as necessary.		
10.4	Ensure site/lab management demonstrates commitment to adaptation efforts through internal communications and policies.	DOE GHG and climate adaptation goals are integrated into lab-wide ISO-14001 certified environmental management system (EMS).		
10.5	Ensure that site/lab climate adaptation and resilience policies and programs reflect best available current climate change science, updated as necessary.	Continue to participate in state and regional climate change initiatives. Monitor developments in climate science and update policies and programs as necessary.		