THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY FY 2018 SITE SUSTAINABILITY PLAN

Plan Approval

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Date 12-8-17

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Table of Contents

Executive Summary

I Executive Summary

The Thomas Jefferson National Accelerator Facility (Jefferson Lab), a nuclear physics user facility, provides unique capabilities for the study of nuclear physics. Jefferson Lab maintains core capabilities in Nuclear Physics, Accelerator Science, Applied Nuclear Science and Technology, and Large Scale User Facilities/Advanced Instrumentation to support not only its own research program, but broader missions as part of the Department of Energy (DOE) laboratory system, applying these technologies in the national interest.

Jefferson Lab has achieved significant progress and remains on target to meet or exceed both interim and long term sustainability goals for Scopes 1, 2 and 3 Green House Gas (GHG) emissions, Data Center Power Utilization Effectiveness (PUE), Renewable and Clean energy use, Fleet, Waste, Electronics, and Acquisition goal categories. Strategies have been identified and are in progress to achieve other significant sustainability goals, including Energy Intensity, High Performance Sustainable Building Guiding Principles compliance and Water Intensity goals, as defined in the DOE Strategic Sustainability Performance Plan (SSPP). The Jefferson Lab sustainability goals are integrated into the Environmental Management System (EMS) in accordance with DOE O 436.1 *Departmental Sustainability.*

In FY 17, Jefferson Lab completed a major data center consolidation and renovation project that included a significant central chiller plant upgrade, and continuous PUE monitoring energy dashboard.

This project included consolidation of a Tier III computer center operating at a PUE of 2.44, and renovation and reconfiguration of a Tier I data center operating at a PUE of 1.70. As a result of the combined High Performance and Core Computing data center achieved an average PUE of 1.30.

Screenshot of new Energy Dashboard Display

Further in FY 17, Jefferson Lab advanced a Utility Energy Services Contract (UESC) program to finance energy and water efficiency projects including a campus wide interior and exterior LED lighting upgrade, chilled water system distribution improvements, industrial water reclaim system and high efficiency low-flow fixture retrofit of domestic water outlets. Completion of the UESC projects is anticipated to occur in FY 18 and will significantly contribute to achieving both Energy Intensity (BTUs / GSF) and High

Performance Sustainable Building (HPSB) Guiding Principle compliance goals. Jefferson Lab has currently achieved the HPSB goal as defined by the "square foot" metric (26.3% square feet to date), however, initiatives including the UESC energy reduction projects, a recently completed HPSB compliant new construction facility, and future building renovations will exceed the HPSB goal based on the building count measurement.

As a High Energy Mission Specific Facility (HEMSF), Jefferson Lab's recent expansion of scientific and support facilities will result in significantly increased electrical and thermal energy requirements. Consequently, achievement of the SSPP Scope 2 emission reduction target (purchased electricity) represents a significant challenge. Electricity requirements and related power costs for 12 GeV operations starting in FY 18 are projected to increase approximately 80% from the FY 08 baseline.

Major reduction of Scope 2 GHG emissions from purchased electricity requires implementation of a combined set of strategies, including:

- Renewable Energy Credits and/or Green Power Purchasing Agreement
- Electric Utility Renewable Portfolio Standard Achievement of Reduced GHG emissions per Mwh of electric generation
- Regional alternative electric energy supply and/or on-site low GHG electricity generation

As the Jefferson Lab scientific mission continues to expand, thermal energy (cooling tower water) requirements for accelerator operations are also projected to significantly increase. Similar to the projected electricity increases from 12 GeV operations, Jefferson Lab's water requirements are estimated to increase approximately 75% from the FY 07 baseline of 50 MGal. Approximately 85% of Jefferson Lab's annual consumption of potable water is primarily consumed in cooling tower operations (evaporation/blow down).

Multiple alternative water reduction strategies are under consideration. Independent consulting firms and a water assessment team from Pacific Northwest National Laboratory (PNNL) conducted on-site water consumption analysis surveys. Water intensity reduction plans are focused on providing alternative water sources to primarily satisfy thermal energy (cooling tower water) requirements. UESC water efficiency strategies include Ultra-Pure Water (UPW) system discharge, capture and reuse. Design of the UPW reject water project is complete and was awarded partial implementation funding in the recent SPOFOA. This project is designed to reuse the UPW reject water for cooling tower make-up, saving approximately 5 million gallons of potable water per year. A combination of strategies (reuse, rain water harvesting and domestic water reductions) are required for Jefferson Lab to achieve the challenging 36% water reduction by the FY 25 goal included in EO13963.

SC Supplemental Guidance (Comprehensive Scorecard)

SC Supplemental Guidance

Greenhouse Gas Inventory

Scope 1 & 2 Greenhouse Gas Emissions

Goal: Reduce direct GHG emissions by 50 percent by FY 2025 relative to FY 2008 baseline. Interim target (FY 2017): -25%

Current Performance: -31%

	FY 2008	FY 2017	% Change
Facility Energy	65,763.20	61,908.30	-5.90%
Non-Fleet V&E Fuel	59.5	4.1	-93.1%
Fleet Fuel	58.8	26.4	-55.1%
Fugitive Emissions	1,822.1	851.6	-53.3%
On-site Landfills	0.0	0.00	N/A
On-site WWT	0.0	0.00	N/A
Renewables	0.0	0.00	N/A
RECs	0.0	-16,023.4	N/A
Total (MtCO2e)	67,703.6	46,767.0	-30.9%

Scope 3 Greenhouse Gas Emissions

Goal: Reduce indirect GHG emissions by 25 percent by FY 2025 relative to FY 2008 baseline. Interim Target (Fy 2017): -9.0%

Current Performance: -27%

	FY 2008	FY 2017	% Change
T&D Losses*	4,258.0	2,936.8	-31.0%
Air Travel	855.5	661.8	-22.6%
Ground Travel	135.3	55.4	-59.1%
Commute	1,374.3	1,341.8	-2.4%
Off-site MSW	348.0	81.3	-76.6%
Off-Site WWT	3.5	3.3	-5.7%
Total (MtCO2e)	6,974.6	5,080.4	-27.2%

Energy Intensity

Goal: The latest energy intensity reduction goal, requires a reductiion in intensity energy intensity for goal subject facilities by FY 2025 relative to a FY 2003 baseline

Interim Target (FY 2017): -5.0 %

Current Performance: -2%

	FY 2015	FY 2017	% Change
Purchased Utilities (MMBtu)	26,916.6	28,874.4	7.3%
Purchased Renewables (MMBtu)	0.0	0.0	N/A
Goal-subject GSF	299,813.0	329,409.0	9.9%
Energy Intensity (Btu/GSF)	89,778.1	87,655.2	-2.4%

Renewable Electricity

Goal: By FY 2025, use 30 percent renewable energy as a percentage of overall facility electricity use.

Interim Target (FY 2017): 10 %

Current Performance: 14%

	FY 2017 Electricity	FY 2017 Ren	% of Total
Grid Electricity	154,813	0.00	N/A
On-Site renewable energy	0	0.00	N/A
Purchased Green Electricity	0	0.00	N/A
Renewable Energy Certificates	N/A	22,000	14.2%
Total (MWH)	154,813	22,000	14.2%

Clean Energy

Goal: By FY 2025, use 25 percent renewable energy as a percentage of overall facility electric and thermal energy use.

Interim Target (FY 2017): 10.0 %

Current Performance: 16%

	FY '17 Energy	FY '17 Clean	% of Total
Grid Electricity	528,222	0	N/A
On-Site renewable energy	24,495	0	N/A
On-Site renewable energy	6,552	13,105	200%
Renewable Energy Certificates	N/A	75,064	N/A
Total(MMBTU)			

Potable Water Intensity

Goal: Reduce potable water intensity by 36 percent by FY 2025 relative to FY 2007 baseline. Interim Target (FY 2017): -20.0 %

Current Performance: -1%

	FY 2007	FY 2017	% Change
Water Consumption (million gal)	49.1	60.6	23.4%
Aquifer Recharge (million gal)	0.0	0.0	N/A
Total GSF	769,380.0	953,979.0	24.0%
Water Intensity (Gal/GSF)	63.8	63.5	-0.5%

High Performance Sustainable Buildings

Goal: Ensure 17 percent by building count comply with the Guiding Principles for sustainable buildings by FY 2025.
Interim Target (FY 2017): 15.0 %

Current Performance: 7.4%

	Building Count	GSF
Guiding Principles Certified	2	216,310
Total Applicable*	27	867,645
Performance (%)	7.41%	24.93%

Fleet Greenhouse Gas Emissions/Mile

Goal: Reduce per-mile greenhouse gas emissions by 30 percent by FY 2025 relative to FY 2014 baseline
Interim Target (FY 2017): -4.0 %

Current Performance: -8%

	FY '14	FY'17	% Change
Fleet Fuel (MTCO2e)	28.4	26.4	-7%
Fleet Miles (X 1000)	71.1	71.9	1.10%
GHG / Mile (gCO2e / mile)	400	367	-8.30%

Fleet Petroleum

Goal: Reduce fleet petroleum use by 20 percent by FY 2015 and thereafter relative to FY 2005 baseline. Interim Target (FY 2017): -20.0 %

Current Performance: -37%

	FY 2005	FY 2017	% Change
Gasoline	4,159	2,046	-50.8%
Diesel	143	664	364.3%
Biodiesel*	0	0	N/A
Total Petroleum (GGE)	4,302	2,710	-37.0%

Fleet Alternative Fuel

Goal: Increase fleet alternative fuel use by 10 percent by FY 2015 and thereafter relative o FY 2005 baseline.

Interim Target (FY 2017): 10.0 %

Current Performance: 192%

	FY 2005	FY 2017	% Change
E-85	540	1,576	191.90%
Biodiesel	0	0	N/A
CNG	0	0	N/A
Other	0	0	N/A
Total Alternative (GGE)	540	1,576	191.90%

Municipal Solid Waste Diversion

Goal: Divert at least 50 percent of non-hazardous solid waste (excluding construction and demolition debris)

Interim Target (FY 2017): 50.0 %

Current Performance: 72%

	FY 2017	%
Off-Site Landfills	93.5	24.7%
On-Site Landfills	N/A	N/A
Waste to Energy*	12.9	3.4%
Non-diverted	106.4	28.1%
Diverted Waste	272.0	71.9%
On-site composted	0.0	0.0%
Off-site composted	0.0	0.0%
Total Diverted	272.0	71.9%
Total Waste (metric	378.4	100.0%

Construction & Demolition Diversion

Goal: Divert at least 50 percent of construction and demolition materials and debris
Interim Target (FY 2017): 50.0 %

Current Performance: 94%

	FY 2017	%
Landfilled C&D Waste	7.5	5.7%
Diverted C&D Waste	123.3	94.3%
Total C&D Waste (metric tons)	130.8	100.0%

Electronics Acquisition

Goal: 100 percent of eligible electronics procurements must be environmentally sustainable (eg EPEAT)
Interim Target (FY 2017): 95.0 %

Current Performance: 100%

	EPEAT Acquired	Total Acquire	%
Monitors	64	64	100.0%
Computers	161	161	100.0%
Imaging Equipment	4	4	100.0%
Televisions	4	4	100.0%
Total Acquired	233	233	100.0%

Electronics Recycling

Goal: Dispose of 100 percent of electronics through government programs and certified recyclers
Interim Target (FY 2017): 100.0 %

Current Performance: 100%

	Amount	%
Transferred or Donated	0.000	0.0%
Recycled by Certified Recycler	20.987	100.0%
Recycled by non-Certified Recycler	0.000	0.0%
Amount disposed (e.g. landfill)	0.000	0.0%
Total Electronics Waste (metric tons)	20.987	100.0%

Power Management

Goal: Implement and actively use power management features on 100 percent of eligible computers (PCs & Laptops) and monitors
Interim Target (FY 2017): 100.0 %

Current Performance: 100%

	Total Owned	PM Enabled	Exempt	%
Monitors	861	846	15	100.0%
Computers	1,181	773	408	100.0%
Total Items	2,042	1,619	423	100.0%

Duplex Printing

Goal: Implement and actively use duplex printing features of 100 percent of eligible printers
Interim Target (FY 2017): 100.0 %

Current Performance: 100%

	Total Owned	Duplex Enable	Incapable	%
Total Printers	157	138	19	100.0%

Sustainable Acquisition

Goal: Ensure 95 percent of new contract actions for products and services meet sustainable acquisition requirements
Interim Target (FY 2017): 95.0 %

Current Performance: 100%

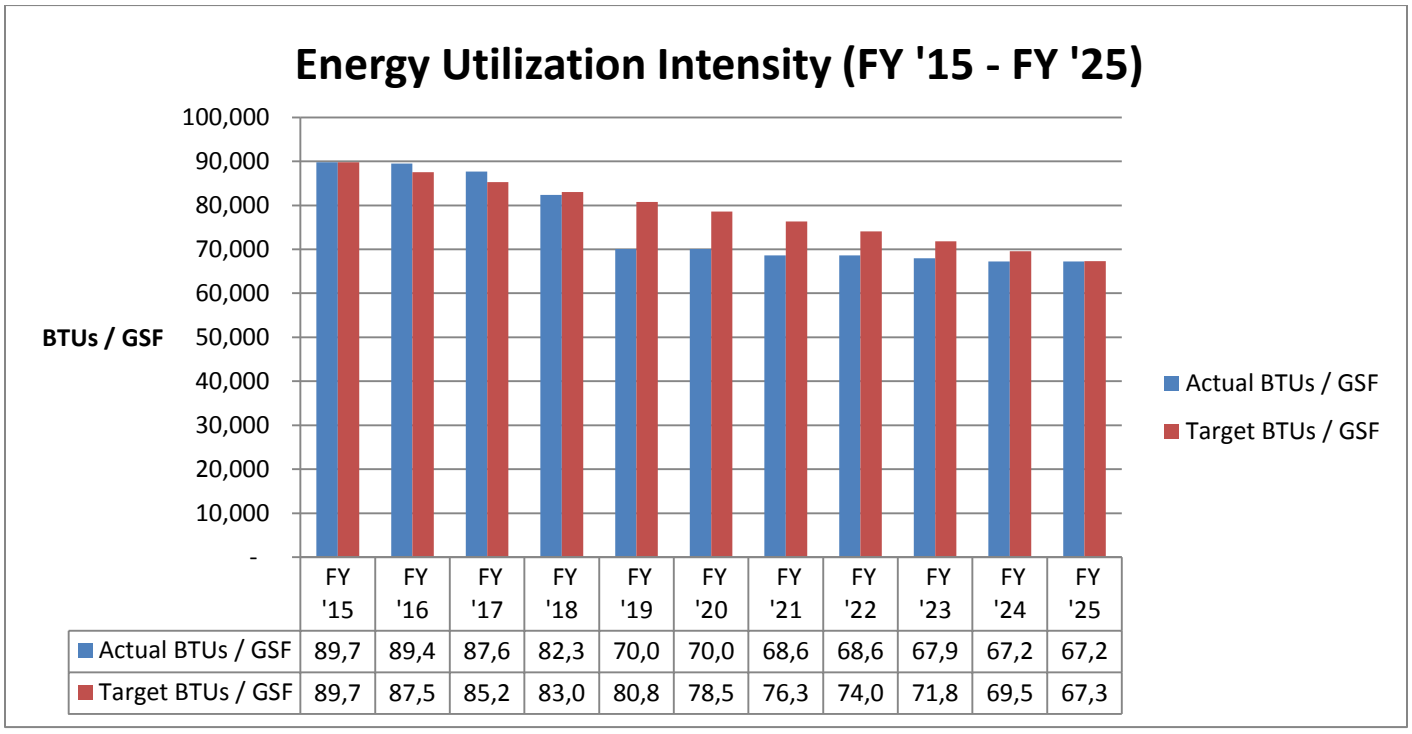
	Contracts Reviewed	Contracts Wit	Contracts I	%
Number of Contracts	4	1	3	100.0%

Energy Management

Performance Status

25% Energy Intensity (BTU per Gross square Foot) Reduction Achieving 2.5% reductions annually by FY 25 from an FY 15 Baseline

Jefferson Lab's Energy Utilization Intensity (EUI) new baseline was established in FY '15 at 89,778 BTUs/Square Foot (30.1% reduction compared to the previous FY 03 baseline of 128,442 BTUs/Square Foot). Jefferson Lab achieved the 30% reduction goal by 2015 defined in EO 13514. Jefferson Lab has achieved an additional 2.4% reduction (87,665 BTUs / Square Foot) from the new 2015 baseline defined in EO 13693. Further BTUs / Square Foot reductions will occur as identified Energy Conservation Measures (ECM) projects and building renovations are implemented enabling Jefferson Lab to achieve both interim and a 25% EUI reduction by FY 25 as indicated in the below chart.



	FY '15	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
Actual BTUs / GSF	89,7	89,4	87,6	82,3	70,0	70,0	68,6	68,6	67,9	67,2	67,2
Target BTUs / GSF	89,7	87,5	85,2	83,0	80,8	78,5	76,3	74,0	71,8	69,5	67,3

Plans and Projected Performance

Jefferson Lab plans to implement Energy Conservation Measure (ECM) projects in existing goal subject buildings that will significantly reduce EUI to achieve the 25% reduction goal defined in EO 13693.

EUI reduction projects planned in FY 18, included in a Utility Energy Services Contract target:

- Interior and Exterior LED Lighting Upgrades
- Advanced Lighting Controls
- Chilled Water Distribution Efficiency Improvements
- Central Chilled Water System Efficiency Improvements

Data Center Efficiency

Goal: Establish a power usage effectiveness (PUE) target in the range of 1.2 – 1.4 for new data centers and less than 1.5 for existing data centers.

As described in the Executive Summary section of this document, in FY 2017 Jefferson Lab completed a major multi-year consolidation, reconfiguration and renovation project involving two formerly independent data center areas.

The primary goals identified and achieved for this project included:

- Implement energy conservation strategies to reduce PUE to 1.4 and enable real-time monitoring of PUE values and trends.
- Design a floor plan that accommodates up to 1 MW of computing power to include both High Performance Computing (HPC) and CORE computing systems.
- Create an isolated space dedicated to CORE computing with the capability to implement TIER III cooling and electrical systems.
- Ensure construction is phased such that the data center remains fully operational for the duration of the project.

This project included consolidation of an existing Tier III computer center operating at a PUE of 2.44, and renovation and reconfiguration of an existing Tier I data center operating at a PUE of 1.70.

Multiple energy conservation strategies were implemented to achieve PUE reduction, including:

- Hot aisle containment
- Highly efficient upgraded computer room air handling units
- Increased data center supply temperature and improved humidity control
- Efficient uninterrupted power supplies
- Real time monitoring and continuous calculation of the data center PUE integrated with existing building management system.

Results of this successful project provide:

- IT expansion capability for the next ten years+
- Significant energy and water consumption reduction (elimination of a cooling tower dedicated to one of the former data center areas)
- **Average PUE of approximately 1.3, significantly below 1.5 PUE target for existing data centers**

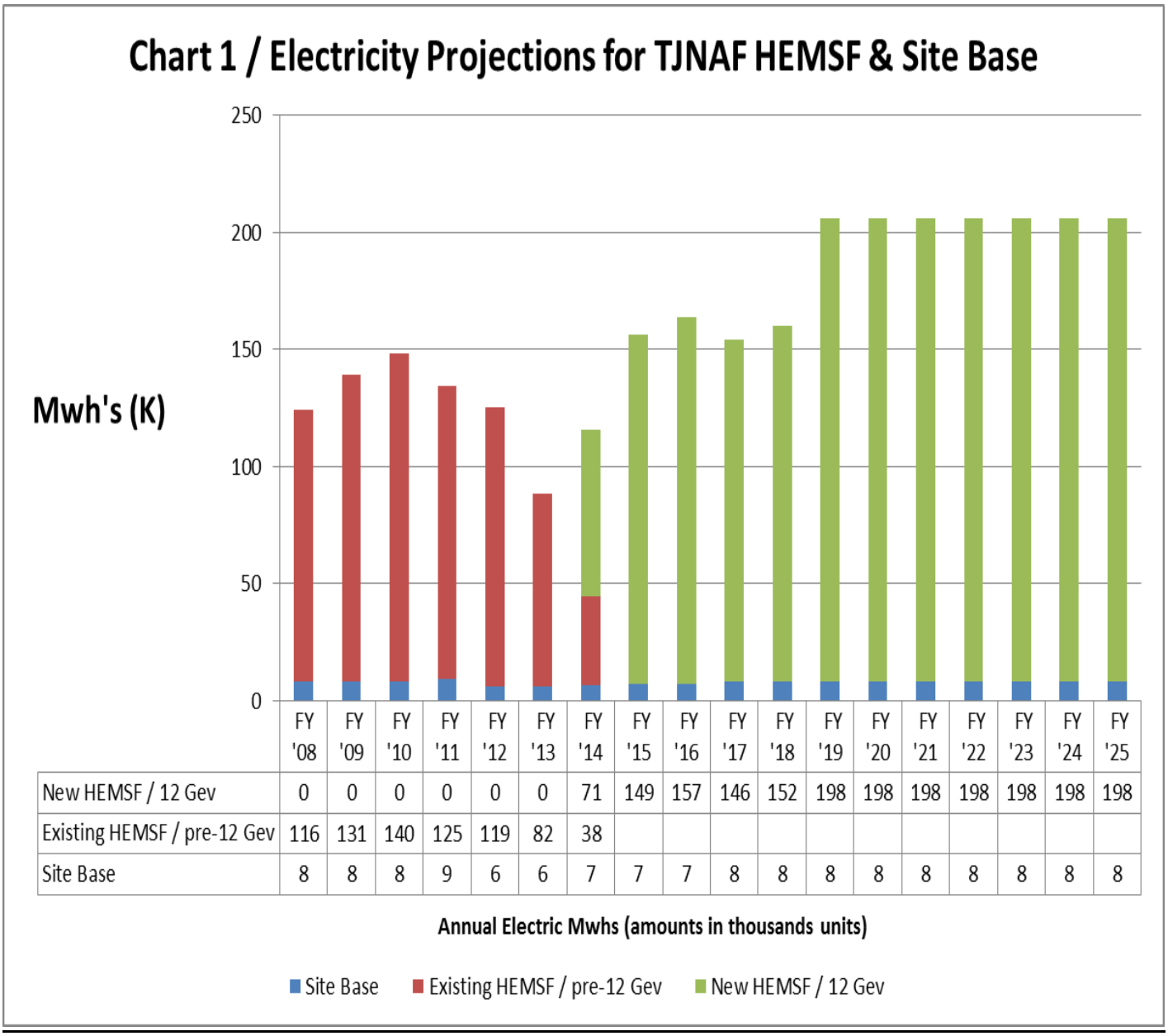
SC Supplemental Guidance

Guidance

Energy Intensity: Include a chart (or table) that shows EUI for non-excluded buildings (i.e., goal subject ones) greater than 5,000 gsf with an EUI of 150K BTU/GSF or above.

N/A Jefferson Lab goal subject buildings do not exceed 150K BTUs / GSF.

Electricity Use Projections Chart 1 indicates historic actual and projected electricity cost through FY '25 for HEMSF and site base facilities.

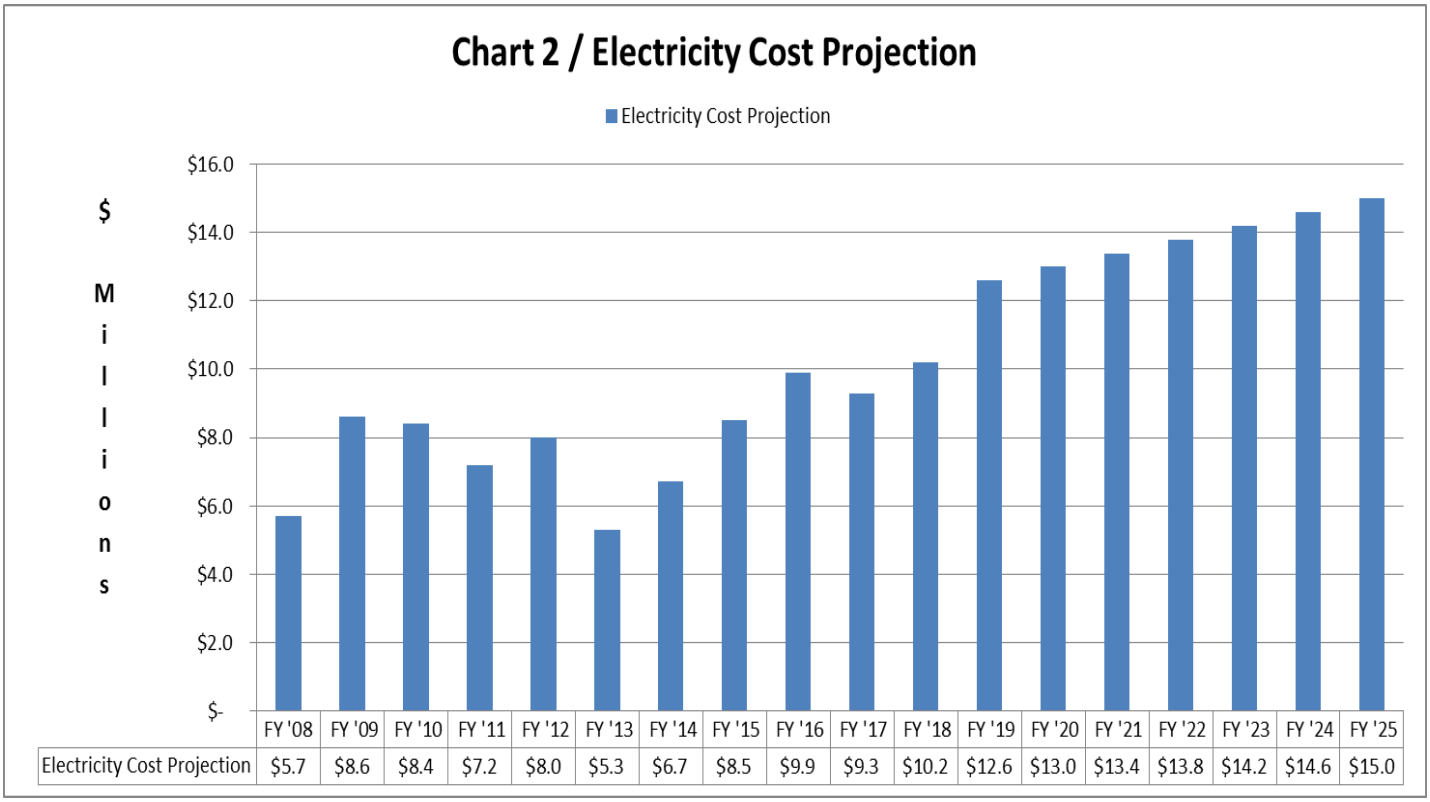


	FY '08	FY '09	FY '10	FY '11	FY '12	FY '13	FY '14	FY '15	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
New HEMSF / 12 Gev	0	0	0	0	0	0	71	149	157	146	152	198	198	198	198	198	198	198
Existing HEMSF / pre-12 Gev	116	131	140	125	119	82	38											
Site Base	8	8	8	9	6	6	7	7	7	8	8	8	8	8	8	8	8	8

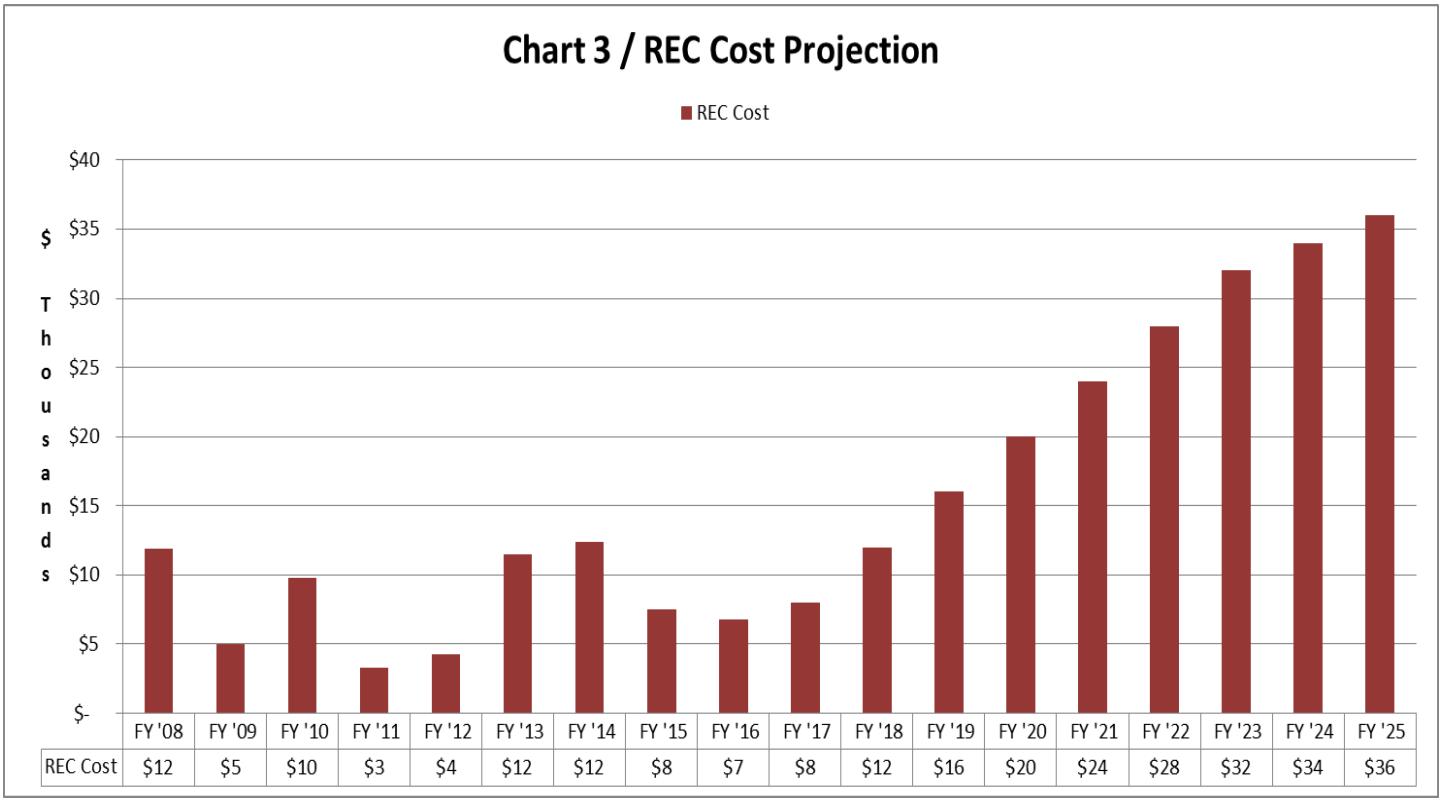
Note: Increased electricity consumption projection in FY '19 forward due to projected increase in accelerator operation to 30 weeks per year.

SC Supplemental Guidance (cont'd)

Electricity and REC Cost Projections: Chart 2 indicates historic actual and projected electricity cost through FY '25. Chart 3 indicates historic actual and projected electricity cost through FY '25. Separate charts provided to properly scale graphic representation of respective values.



	FY '08	FY '09	FY '10	FY '11	FY '12	FY '13	FY '14	FY '15	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
Electricity Cost Projection	$5.7	$8.6	$8.4	$7.2	$8.0	$5.3	$6.7	$8.5	$9.9	$9.3	$10.2	$12.6	$13.0	$13.4	$13.8	$14.2	$14.6	$15.0



	FY '08	FY '09	FY '10	FY '11	FY '12	FY '13	FY '14	FY '15	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
REC Cost	$12	$5	$10	$3	$4	$12	$12	$8	$7	$8	$12	$16	$20	$24	$28	$32	$34	$36

Water Management

Goal: Reduce potable water intensity by 36 percent by FY 2025 relative to FY 2007 baseline. Interim Target (FY 2017): -20.0 %

Performance Status

Approximately 50 million gallons of potable water or 85% of Jefferson Lab's total potable water consumption in FY 17 was required for evaporative cooling of High Energy Mission Specific Facilities. Jefferson Lab's FY 17 potable water intensity decreased approximately 1% from the FY 07 baseline, due primarily to reduced overall accelerator operations. Multiple water reduction and / or alternative water source strategies (including rainwater harvesting) have been evaluated during the past several years. To date, no alternative water sourcing strategies of significant water intensity impact have been determined to be economically feasible. Consequently, achievement of the water intensity goal remains the most significant challenge for Jefferson Lab.

Plans and Projected Performance

Potable water reduction strategies and alternative water sources, primarily for evaporative cooling tower use, are planned for implementation as cost effective.

A potable water reclaim project is scheduled for implementation in FY 18 regarding discharge water from an industrial Ultra Pure Water system. This strategy diverts water currently discharged to sanitation to make-up water supply for a major cooling tower. Estimated annual potable water reduction from this project is approximately 5 million gallons of annual consumption.

Planned water reduction projects included in a pending Utility Energy Services Contract involve retrofit of existing domestic water fixtures, and removal of an existing cooling tower further reducing annual potable water consumption by approximately 1 million gallons.

As potable water consumption for evaporative cooling is anticipated to increase significantly in future years as the scientific mission increases, additional source(s) of alternative water supply are required to achieve a 36% reduction in water intensity compared to Jefferson Lab's FY 2007 level. A potential source of alternative (non-potable) water has been identified involving a rain water harvesting project with the City of Newport News, VA. This rainwater harvesting project is estimated to provide 40+ million gallons of annual supply to satisfy Jefferson Lab's increasing water requirements and achieve the water intensity reduction goal by FY '25.

SC Supplemental Guidance

Potable Water Intensity Use: Please include a chart (or table) that shows those facilities (buildings/OSF) that have the highest potable water intensity use (gallons per gross square foot).

Potable Water Use: Please include a chart (or table) that shows those facilities (buildings/OSF) that account for 80% of the site's Potable Water Usage.

These four (4) HEMSF buildings and their related cooling tower and industrial water use consume the highest gallons / GSF of all buildings at the Jefferson Lab site and also account for 88% of all potable water consumed for FY 2017.

Building	Gallons (millions)	Gross Square Feet (GSF)	Gallons / GSF
North Access	9.684	8,332	1,161.8
South Access	7.087	8,332	850.6
Compressed Helium Liquifier	16.882	22,308	766.08
Test Lab	19.806	142,010	139.5

Waste Management

Performance Status

- ✓ No Update (status quo) The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

Fleet Management

Performance Status

- ✓ No Update (status quo) The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

Clean & Renewable Energy

Performance Status

- ✓ No Update (status quo) The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

Green Buildings

Performance Status

Jefferson Lab's current compliance with High Performance Sustainable Building Guiding Principles (HPSBGP) (24.9% of GSF) exceeds the HPSB 2025 compliance goal (17% of gross square footage).

In FY 2017, construction of a new office and laboratory facility (Environmental, Safety, Health and Quality Building) was completed and occupied in July 2017. This 12,000 square foot building was designed to comply with all High Performance and Sustainable Building Guiding Principles. Energy and water efficient and sustainable features include LED lighting, solar tube daylight harvesting, highly efficient Variable Refrigerant Flow System for heating and cooling. This building was designed and constructed to consume 35.4% less energy than the ASHRAE 90.1 – 2007 baseline which exceeds HPSB GP requirements of 30%.

Jefferson Lab's initial High Performance Sustainable Building complying with the Guiding Principles was completed in FY 12. A 74,000 Sq. Ft. new construction office and laboratory project, the Technology and Engineering Development (TED) Building earned LEED Gold certification and includes many energy, water efficiency and sustainable features:

Technology and Engineering Development Building

<u>Energy and Water Efficiency</u>

- Geothermal Heat Pump System provides 80% of HVAC requirements

- Greywater Reuse system delivers 100% of sanitation water

- Solar thermal/domestic water heating system

- 44% Potable water reduction/low flow plumbing fixtures

In FY 13, Jefferson Lab completed its second new construction/major renovation project, designed to achieve LEED Gold certification. This most recent project, the Test Lab, included renovation of an existing 95,000 Sq. Ft. laboratory facility and addition of 43,600 Sq. Ft. laboratory and office area. The Test Lab facility earned LEED Gold certification in FY 14, and subsequently qualifies for Jefferson Lab's second facility to comply with the HPSB Guiding Principles.

Plans and Projected Performance

Future HPSB GP compliant facilities will be achieved through planned building renovations (i.e.: Accelerator Technical Support Building / Bldg #89), designed to achieve compliance. Further, when implemented, Energy Conservation Measures identified in the UESC program will contribute to multiple administrative and industrial buildings' compliance with HPSB GPs (i.e.: CEBAF Center / Bldg. #12, Physics Storage/Bldg #72, Services Support Center/Bldg #28, Experimental Staging / Bldg #23). These renovation and UESC-funded retrofit projects will ensure Jefferson Lab's continued progress towards 100% HPSB compliance.

Acquisition & Procurement

Performance Status

- ✓ No Update (status quo) The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

Measures, Funding, & Training

Performance Status

- ✓ No Update (status quo) The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

SC Supplemental Guidance

Funding: Please include a table of laboratory sustainability funding using the preferred categories shown in the table below.

Category	FY17 Actual	FY18 Planned/ Request	FY19 Projected	
Sustainability Projects*	0	0	0	
Sustainability Activities other than projects	0	0	0	
SPO Funded Projects (SPO funding portion only)	0	43,000	0	
Site Contribution to SPO Funded Project	0	0	0	
ESPC/UESC Contract Payments (if applicable)	0	0	150,000	
Renewable Energy Credits (REC) Purchase Costs (if applicable)	8,100	12,000	16,000	
Total	8,100	55,000	166,000	

*Projects specifically funded to meet sustainability goals. Such projects generally involve construction. Do not include contribution to SPO funded projects which is shown elsewhere in table

Travel & Commute

Performance Status

- ✓ No update (status quo). The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

Fugitives & Refrigerants

Performance Status

- ✓ No update (status quo). The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

SC Supplemental Guidance

SF6: for the few sites with emissions of SF6 of 500 lbs or more in FY16 or FY17, we are requesting you complete the table below which projects SF6 emissions by device from FY 17 to FY 20.

N/A Jefferson Lab SF6 emissions do not exceed 500 lbs.

Electronic Stewardship

Performance Status

- ✓ No update (status quo).The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.

Organizational Resilience

Performance Status

- ✓ No update (status quo). The performance of the site for this category is consistent with prior year.

Plans and Projected Performance

Jefferson Lab has achieved interim goals in this category and plans to continue similar practices to achieve results that meet or exceed requirements of this goal category.