Lawrence Livermore National Laboratory

FY2014 Site Sustainability Plan

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Acknowledgments

Responsible Organization

Facilities & Infrastructure,
Operations & Business Principal Directorate

Responsible Managers

Tom Gioconda
Carey Bailey

Publication Author and Manager

Greg Stremel

Publication Editor and Designer

Marleen Emig

Contributing Authors

Janet Adams
Andy Ashbaugh
Traci Bailey
Paul Chu
Jennifer Doman
Helen Deaguero
Noah Goldstein
Bill Howing
Heather Ottaway
Crystal Quinley
Warren Rued
Sal Ruiz
Judy Steenhoven
Allison Terrill
Curtis Tom

About the Cover

Top photo: LLNL started a comprehensive audit of its legacy electricity meters in FY2013; 72 of approximately 300 meters have been inspected. The photo shows an LLNL electrician, wearing electrical protection clothing, replacing an electricity meter.

Middle photo: A pilot project to demineralize treated well water for use as make-up water in LLNL's cooling towers began in FY2013. With this pilot, the well water now goes through an additional treatment that includes running it through a reverse osmosis unit to eliminate the possibility of the water doing harm to the cooling towers. The photo shows the reverse osmosis unit.

Bottom photo: Recycling efforts at LLNL include comingled recycling and composting stations in the Central Cafeteria, office buildings, and at special events. The photo shows the recycling area in the Central Cafeteria encouraging employees to recycle cans, bottles, paper goods, biodegradable utensils, and food scraps.

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Approved by:

Bret Knapp, Acting Director
Lawrence Livermore National Laboratory

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List of Acronyms

AC	air conditioner
AF	alternative fuel
AFV	alternative fuel vehicle
APP	Affirmative Procurement Program
ASC	Advanced Simulation and Computing Program
ASE	Alliance to Save Energy
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BTU	British thermal unit
CAC	Cold Aisle Containment
CBI	Capability Based Infrastructure
CD	critical decision
CDD	cooling degree days
CEDR	Consolidated Energy Data Report
CEM	Certified Energy Managers
CO_2	carbon dioxide
CRAC	computer room air conditioners
CVP	Central Valley Project
D&D Team	LLNL's Environmental Restoration Department Decontamination and Demolition Team
DC Pro	Data Center Energy Profiler
DFB	distinguishable from background
DOE	U.S. Department of Energy
DOT	Department of Transportation
e-IWS	electronic Integration Worksheet System
E85	ethanol fuel
EACCS	East Alameda County Conservation Strategy
EDC	Enterprise Data Center
EFA	Environmental Functional Area
EISA	Energy Independence and Security Act
EMF	Emergency Management Facility
EMP	Environmental Management Plan

EMS	Environmental Management System
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPACT	Energy Policy Act
EPEAT	Electronic Product Environmental Assessment Tool
EPP	Environmental Affirmative Procurement Program
ES&H	Environment, Safety and Health
ESGF	Earth System Grid Federation
ESPC	Energy Savings Performance Contract
FEMP	Federal Energy Management Program
FIMS	Facility Information Management System
FIRP	Facility and Infrastructure Recapitalization Program
FMR	Functional Management Review
FY	fiscal year
GBCI	Green Building Certification Institute
GHG	greenhouse gas
GP	guiding principles
GSA	General Services Administration
GSF	gross square foot/feet
HDD	heating degree days
HPC	high performance computing
HPCIC	High Performance Computing Innovation Center
HPSB	high performance sustainable building
HVAC	heating, ventilating, and air conditioning
ICPT	Integrated Contractor Purchasing Team
IGPP	Institutional General Plant Projects
ILA	industrial, landscaping, and agricultural
IPCC	Intergovernmental Panel on Climate Change
ISMS	Integrated Safety Management System
ISO	International Organization for Standardization
IT	information technology

kgals	one thousand gallons
kW	kilowatt
kWh	kilowatt-hour
LBNL	Lawrence Berkeley National Laboratory
lbs	pounds
LCW	low conductivity water
LEED	Leadership in Energy and Environmental Design
LFO	Livermore Field Office
LLNL	Lawrence Livermore National Laboratory
LLNS	Lawrence Livermore National Security, LLC
LOS	lighting occupancy sensor
LVOC	Livermore Valley Open Campus
MBtu	one million British thermal units
MPS	Managed Print Services Program
MUSD	Maintenance and Utility Services Department
MW	megawatts
MWh	megawatt hours
NEPA	National Environmental Policy Act
NIF	National Ignition Facility
NNSA	National Nuclear Security Administration
NPDES	National Pollutant Discharge Elimination System
P2	pollution prevention
PC	personal computer
PCMDI	Program for Climate Model Diagnosis and Inter-comparison
PG&E	Pacific Gas & Electric
PPA	Power Purchase Agreement
PUE	power utilization effectiveness
PV	photovoltaic
R&D	research and development
REC	renewable energy credits
ROI	return on investment
SC13	Supercomputing 2013

SCM	LLNL Supply Chain Management Department
SF	square foot/feet
SF_6	sulfur hexafluoride
Site 200	LLNL Main Livermore Site
Site 300	LLNL High-Explosives Experimental Test Site
SLAC	Stanford Linear Accelerator Center
SSP	Site Sustainability Plan
SSPP	DOE Strategic Sustainability Performance Plan
SWEIS	Site-Wide Environmental Impact Statement
SWPPP	Storm Water Pollution Prevention Plans
T&D	transmission and distribution
TYSP	Twenty-Five Year Site Plan
USGBC	U.S. Green Building Council
WAPA	Western Area Power Administration

1.0 Executive Summary

This document is presented as the Site Sustainability Plan (SSP) for the Lawrence Livermore National Laboratory (LLNL), consistent with the preliminary guidance provided by the Department of Energy (DOE) received on August 22, 2013, and the final guidance received on October 2, 2013, as a deliverable for the DOE Order 436.1 *Departmental Sustainability* requirement. This SSP has been prepared prior to a full evaluation of the potential impacts associated with contract modifications established in early October 2013. Subsequent communications will be developed to detail the potential impacts.

Overview of the Lawrence Livermore National Laboratory

LLNL is a DOE Laboratory dedicated to enhancing the United States' security through the advancement of science and technology. LLNL's mission—to advance and apply science and technology for the benefit of the nation—specifically aims to ensure the safety, security, and reliability of the U.S. nuclear deterrent; reduce or counter threats to national and global security; enhance the energy and environmental security of the nation; and strengthen the nation's economic competitiveness.

LLNL's vision, to "push the frontiers of knowledge to build the scientific and technological foundation that will be needed to address the national security issues of the future," aligns with the nation's vision for a sustainable future. LLNL has a long history of applying science and technological solutions to the toughest and most important problems affecting national and global security and is recognized for its excellence in business and operations, as well as for its responsible stewardship of the resources entrusted to us. LLNL has long engaged in the practice of sustainability, which is integral to the Laboratory's mission, and the mission is vital to the Nation's sustainable future.

LLNL is certified in environmental management (ISO 14001) and occupational health and safety management (ISO 18001), and quality management (ISO 9001).

Site Management Vision

LLNL's vision for site sustainability is to supply its programs with optimal conditions for success, while undergoing continual improvement to existing energy infrastructure; to collaborate with growing mission areas to identify ways to innovate towards more energy efficient solutions for energy-intensive facilities; to pursue innovative renewable energy generation, both for on-site use and as an ongoing research area; and to incorporate energy efficiency improvements into the ongoing energy management and facility operations of LLNL.

Major Planning Assumptions and Issues

LLNL is planning for growth in mission-based facilities in the upcoming decade. In FY2013, LLNL, along with many other federal facilities, faces a lapse in FY2014 appropriations followed by a continuing resolution that provides funding to the federal government to January 15, 2014. In FY2013-Q2 the threat of sequestration and continuing resolution caused LLNL to postpone work that was not critical to programmatic mission, and the financial climate did not improve throughout the remainder of FY2013. With a government shutdown and continuing resolution in FY2014, LLNL's current financial situation is more constrained than in the previous fiscal year. At the time of the LLNL FY2014 Site Sustainability Plan submittal, continuing resolution and sequestration is limiting appropriations from the federal government.

Further compounding the FY2014 picture, the LLNL Operations and Business Principal Directorate, the organization that has provided most of the indirect funding for LLNL's sustainability projects, has had to redirect funding to other higher priority activities:

- Twenty-five natural gas boilers are at risk of becoming non-compliant with the Bay Area Air Quality Management District (BAAQMD). LLNL management has made it a priority to ensure the boilers are in compliance. Therefore, LLNL has committed $7M to bring all the boilers into BAAQMD compliance.
- Due to budget cuts, the F&I Maintenance and Utilities Services Department (MUSD) has been underfunding the preventative maintenance program since LLNL's contract transition in 2007. An adequately funded preventative maintenance program is essential to keeping real property and programmatic equipment in efficient operating condition. LLNL has obligated an additional $8M in indirect funding to the preventative maintenance program.
- Third party financing options are currently being considered, such as a utility energy service contract with the local utility Pacific Gas & Electric (PG&E). The focus of this effort would be the performance of Energy Independence and Security Act (EISA) facility energy and water audits and a selection of short-payback energy conservation measures projects from the audit recommendations, along with some noteworthy sustainability projects from LLNL's master list.

As a result of the impacts described above, LLNL does not expect to make significant progress on the sustainability goals for the Laboratory, including greenhouse gas reduction, energy intensity reduction, and water intensity goals. LLNL understands the importance of continuing to make progress towards the government's sustainability goals, and hopes to resume funding important sustainability activities in FY2015 and renew progress on greenhouse gas, energy and water goals.

Approaches to Site Management

The Laboratory strives to be a leader in responsible environmental stewardship and sustainability and incorporates sustainability and environmental management into the planning and performance of day-to-day operations and non-routine activities. LLNL's Environmental Management System (EMS) provides a framework for integrating environmental considerations into daily work processes, based on an international standard (ISO 14001), to guide efforts to achieve this goal and continually improve environmental performance. EMS is comprised of four main elements: an environmental policy, planning, implementation, and review and improvement. LLNL's EMS Environmental Management Plans (EMPs) detail the objectives, corresponding commitments, and tracking metrics for Sustainable Acquisition, Municipal Waste Reduction, Greenhouse Gas Reduction, Energy Conservation, Water Conservation, Fossil Fuel Consumption, Hazardous Materials Use/Hazardous Waste Generation, and Ecological Resources Disturbances.

LLNL is dedicated to developing "green" buildings; four buildings are currently Leadership in Energy and Environmental Design (LEED) certified, and one new building is in the LEED certification process. An additional fourteen buildings have met the guiding principles for the federal High Performance Sustainable Buildings (HPSB) guidelines. As new facilities are constructed, they will meet the HPSB or LEED Gold requirements.

The daily site electrical and natural gas demand at Site 200 and Site 300 is significant. LLNL uses 60+ megawatts of electricity during peak times and 132 MBtu of natural gas each day. In FY2012, LLNL prepared a Sustainability Investment Strategy document. In that document it was stated more than $100M would be needed to meet all of the government's sustainability goals. It would take *significantly* more investment dollars than that to allow LLNL to become a "net zero energy" site.

Funding Strategies

New and existing resources will be leveraged as much as possible in order to help achieve LLNL's sustainability goals. Resources such as the Facility and Infrastructure Recapitalization Program (FIRP) were sunsetted in FY2013. FIRP helped LLNL replace equipment past its service life with modern, energy-efficient equipment.

A new National Nuclear Security Administration (NNSA) program, Capability Based Infrastructure (CBI), will provide life-extension projects for enduring facilities and infrastructure such as boiler and chiller improvements, and heating, ventilation, and air conditioning systems. When practical, these projects will ensure that the most energy- and water-efficient equipment is utilized. Release of these appropriations is pending continuing resolution.

The indirect (overhead) funding that was utilized in past years to help replace aged equipment will no longer be available in FY2014. As stated above, these funds have been redirected to preventative maintenance and boiler compliance activities. This work will result in more efficient operations of equipment and new reductions to greenhouse gas, energy intensity, and water intensity. In FY2014, LLNL plans to replace older boilers with high-efficiency, condensing models in seven buildings and retrofitting boilers in eight buildings. Indirect funding has been requested to fund EISA evaluations and improvements, HPSB and LEED evaluations, and perform other sustainability projects.

Successes and Challenges

LLNL had a number of successes and challenges in FY2013. Some highlights include:

- Received accolades from the EPA-sponsored Federal Green Challenge 2013 for waste reduction and pollution prevention efforts during the previous year
- Received 2013 NNSA Sustainability Best In Class Award: Getting Connected to Build a Holistic Waste Reduction Program (Innovation and Holistic Approach category)
- Received 2013 NNSA Sustainability Best In Class Award: Active Risk Management at LLNL's NIF Results in Lower Consumption and Less Waste (Waste Reduction and Pollution Prevention Category)
- Received 2013 NNSA Environmental Stewardship Award: LLNL's Sustainable Landscape (Water Conservation category)
- Achieved ISO 9001 certification
- Constructed a pilot project to divert treated well-water effluent from the arroyo to use as make-up water at cooling tower U-133
- Earned the title, "World's most efficient supercomputer," from Green500 for the Sequoia supercomputer
- Continued to lead a robust scientific and research program that advances renewable energy research, building energy efficiency, climate change research, and greenhouse gas (GHG) mitigation
- Worked with the DOE Livermore Field Office (LFO) on a solar renewable energy project that will be located on ten acres in the northwest quadrant of LLNL's main site

Energy Challenges

LLNL is facing three ongoing energy challenges. The first is that LLNL continues to grow in mission areas that are particularly energy-intensive, such as high performance computing (HPC) and the National Ignition Facility (NIF). This is an indication of the success of the Lab's efforts in research and technology development. Programs such as these will impact LLNL's GHG emissions and potable water intensity.

The second issue is that of aging facilities. Though LLNL has consistently replaced and upgraded its basic real property with the most efficient and cost-effective equipment, the older facilities are less energy efficient than new construction.

And third, because the cost of electricity to LLNL is relatively inexpensive (~$0.05 per kWh), many energy savings opportunities that have been identified through the Energy Savings Performance Contract (ESPC) or facility audits cannot demonstrate sufficient payback to warrant the investment. Computations requested institutional funding when the free cooling project was first conceived. It was not selected for funding because the available budget was approved for other projects with more attractive payback periods.

Summary Table of Goal Targets

SSPP Goal #	DOE Goal	Performance Status	Planned Actions & Contribution	Risk of Non-Attainment
1.1	28% Scope 1 & 2 GHG reduction by FY2020 from FY2008 baseline	LLNL achieved an overall 37% reduction from FY2008 baseline, nearly doubling last year's reduction. This target was achieved mainly due to the significant reductions in SF_6 usage made over the past few years, coupled with the increased purchase of renewable energy certificates totaling nearly 17%.	LLNL will aggressively continue to pursue GHG reduction efforts through continued management of fugitive emissions from equipment using SF_6. Efforts will continue to manage gas and electric consumption through energy efficiency projects.	Low
1.2	13% Scope 3 GHG reduction by FY2020 from FY2008 baseline	In FY2013, LLNL's Scope 3 emissions were 18% below the FY2008 baseline.	Scope 3 emissions are likely to increase slightly during FY2014 due to electricity use, but still remain on target to maintain an overall 13% reduction from FY2008 baseline by FY2020.	Low
GOAL 2: Buildings, ESPC Initiative Schedule, and Regional and Local Planning				
2.1	30% energy intensity (Btu per gross square foot) reduction by FY2015 from FY2003 baseline (2013 target: 24%)	LLNL achieved 14.7% reduction in FY2013.	Additional resources are needed to meet the FY2015 goal.	High
2.2	EISA Section 432 energy and water evaluations	LLNL completed 17.5% of its EISA portfolio for the second round.	Seven facilities were evaluated by the June 30, 2013 deadline. Three additional facilities are planned for an in-house audit by the end of 2013. Additional resources are needed to execute the recommended energy conservation projects.	Medium

SSPP Goal #	DOE Goal	Performance Status	Planned Actions & Contribution	Risk of Non-Attainment
2.3	Individual buildings metering for 90% of electricity (by October 1, 2012); for 90% of steam, natural gas, and chilled water (by October 1, 2015) (2013 target: 90% and 50%, respectively)	90% of electricity achieved (FYE2012). 60% of natural gas achieved (FYE2013).	LLNL completed its effort to recommission and calibrate most of its legacy electricity meters in FY2013. A plan to repair the remaining meters and connect to the MV-90 metering system has been developed and is being implemented as funding becomes available. Additional resources are needed to meet the FY2015 goal for natural gas. Steam is not metered. Chilled water use is captured in the building's energy use.	Medium
2.4	Cool roofs, unless uneconomical, for roof replacements unless project already has CD-2 approval. New roofs must have thermal resistance of at least R-30	In FY2012, cool roofs were installed in six buildings. No additional cool roofs were installed in FY2013.	All future roof replacements and new roofs will be cool roof installations.	Low
2.5	15% of existing buildings in enduring inventory greater than 5,000 gross square feet (GSF) are compliant with the Guiding Principles (GPs) of HPSB by FY2015	Task of assessing/certifying 15% of the number of existing buildings greater than 5,000 GSF is 64% complete.	Ten additional HPSB assessments are planned for FY2014.	Low
2.6	All new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the GPs	HPSB certification process for one new construction project is underway.	New facilities greater than 5,000 GSF will be LEED Gold Certified or HPSB compliant.	Low
GOAL 3: Fleet Management				
3.1	10% annual increase in fleet alternative fuel consumption by FY2015 relative to a FY2005 baseline	FY2013 alternative fuel consumption increased 3% compared to FY2012. Overall increase compared to the FY2005 baseline is 255%.	LLNL will maintain its alternative fuel vehicle (AFV) fleet and continue to replace the existing fleet with E85 and hybrid vehicles.	Low

SSPP Goal #	DOE Goal	Performance Status	Planned Actions & Contribution	Risk of Non-Attainment
3.2	2% annual reduction in fleet petroleum consumption by FY2020 relative to a FY2005 baseline	In FY2013, LLNL's petroleum fuel consumption decreased 3%, compared to FY2012, and decreased 68% from the FY2005 baseline. LLNL well exceeds the required annual 2% reduction and the cumulative 30% through the end of FY2020.	LLNL will continue to strengthen its alternative fuel infrastructure by replacing conventional fueled vehicles with AFVs and by promoting the use of alternative fuels.	Low
3.3	100% of light-duty vehicle purchases must consist of AFVs by FY2015 and thereafter (75% FY2000–2015)	LLNL met and exceeded the required 75% replacement of fossil fuel light-duty vehicles with AFVs in FY2013. A total of 107 light-duty vehicles were scheduled to be replaced in FY2013; 106 vehicles were replaced with AFVs.	LLNL will continue replacing its fleet with AFVs as manufacturers make them available. LLNL is exploring AFV options, specifically in the area of electric vehicles.	Low
3.4	Reduce fleet inventory of non-mission critical vehicles by 35% by FY2013 relative to FY2005 baseline	In FY2013, LLNL reduced its fleet size from 817 to 789 units.	The FY2014 reduction target, in the light duty vehicle fleet, will be based on goals established by NNSA-HQ.	High
GOAL 4: Water Use Efficiency and Management				
4.1	26% potable water intensity (gallons per gross square foot) reduction by FY2020 from FY2007 baseline	In F2013, LLNL reduced its water intensity relative to the FY2007 baseline by 3.5%.	LLNL will need to direct more funding to water savings projects to meet FY2015 and FY2020 goals.	High
4.2.	20% water consumption (gal) reduction of industrial, landscaping, and agricultural (ILA) water by FY2020 from FY2010 baseline	LLNL uses potable water for ILA (non-potable water is not used for ILA).	LLNL is investigating multiple strategies for reducing potable water used for ILA, including using reclaimed water and xerophytic landscaping.	N/A
GOAL 5: Pollution Prevention and Waste Reduction				
5.1	Divert at least 50% of nonhazardous solid waste, excluding construction and demolition debris, by FY2015	LLNL consistently meets or exceeds this goal. In FY2013, LLNL diverted 75% of nonhazardous solid waste.	LLNL continues to identify new potential waste streams for diversion.	Low

SSPP Goal #	DOE Goal	Performance Status	Planned Actions & Contribution	Risk of Non-Attainment
5.2	Divert at least 50% of construction and demolition materials and debris by FY2015	LLNL consistently meets or exceeds this goal. In FY2013, LLNL diverted 77% of construction and demolition materials and debris.	Tracking of construction and demolition materials and debris continues for FY2014.	Low
GOAL 6: Sustainable Acquisition				
6.1	Procurements meet requirements by including necessary provisions and clauses (sustainable procurements/biobased procurements)	Sustainable Acquisition or Environmental Affirmative Procurement Program (EPP) clauses have been incorporated into all LLNL General Provisions for purchase orders and subcontracts, except for the Standard Research General Provisions. 99% of LLNL purchase orders and subcontracts that incorporate General Provisions meet sustainability requirements and include a sustainable acquisition clause.	LLNL will continue to include Sustainable Acquisition or Environmental Affirmative Procurement Program clauses as identified in the General Provisions in all purchase orders and subcontracts. LLNL will continue to implement, review and update Procurement Standard Practice 23.5, Environmental Affirmative Procurement and Waste Reduction Requirements as it applies to LLNL procurement activities.	Low
GOAL 7: Electronic Stewardship and Data Centers				
7.1	All data centers are metered to measure a monthly Power Utilization Effectiveness (PUE) of 100% by FY2015	LLNL has identified 61 data centers that meet the criteria to be classified as data centers to be metered by FY2015.	Only 3% of the 61 identified data centers have the means to measure PUE monthly through existing metering; the remaining have a calculated PUE. Rather than metering all 61 data centers, LLNL proposes to focus on consolidation efforts across the site, and then meter projects on remaining enduring data centers. 23 rooms have been closed since 2012 and six more are scheduled for closure in 2014. This would leave 22 rooms left to close.	High

SSPP Goal #	DOE Goal	Performance Status	Planned Actions & Contribution	Risk of Non-Attainment
7.2	Maximum annual weighted average PUE of 1.4 by FY2015	The two primary objectives of electronic stewardship are server consolidation and server virtualization. LLNL continues to collocate services into the Building 112 Enterprise Data Center (EDC).	The goal for FY2014–FY2015 is to continue consolidation in Building 112 to improve PUE; this requires resource commitment.	High
7.3	Electronic Stewardship — 100% of eligible PCs, laptops, and monitors with power management actively implemented and in use by FY2012	100% of eligible PCs, laptops, and monitors are implemented with power management functionality; monitors are powered off after 30 minutes idle time, PCs and laptops are put into stand-by mode after 30 minutes of idle time.	Continue desktop refresh program and desktop power management project.	Low
GOAL 8: Renewable Energy				
8.1	20% of annual electricity consumption from renewable sources by FY2020	FY2013 requirement was met by the purchase of 72,304 MWh RECs through the Western Area Power Administration (WAPA). LLNL is currently at 17% related to the 20% by 2020 goal.	The FY2014 requirement will be met through REC purchases. A 3 MW solar project, led by LFO, is in development.	Low

2.0 Performance Review and Plan Narrative

SSPP Goal 1.1
28% Scope 1 & 2 GHG reduction by FY2020 from a FY2008 baseline

LLNL's GHG footprint is defined by three major scopes of GHG emissions. These are depicted in Figure 2-1. LLNL quantifies emissions within each scope, as well as targets reductions according to scope-related reduction goals. LLNL owns or controls sources from all three direct GHG emissions. Scope 3 emissions are addressed under goal 1.2 in this section.

LLNL's Scope 1 emissions are the result of direct emissions associated with fuel combustion or fugitive emissions. LLNL's Scope 2 emissions are a result of indirect emissions associated with consumption of purchased or acquired electricity. All other potential Scope 2 emissions are not applicable to LLNL. Scope 1&2 GHG emissions are offset by the estimated annual GHG emissions avoided by purchased renewable energy certificates.

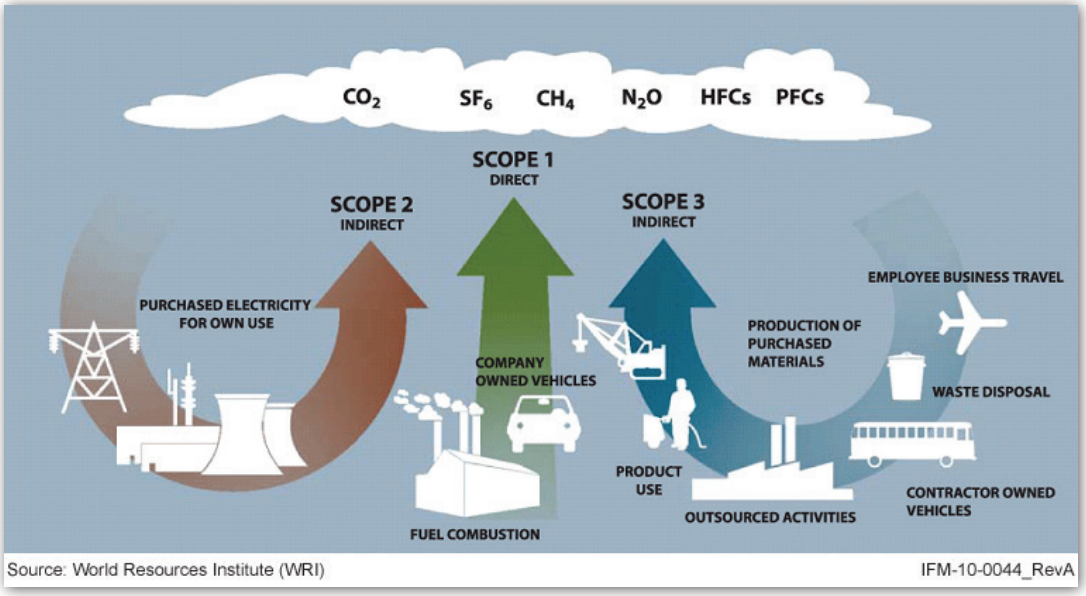

Figure 2-1. The three major scopes of GHG emissions.

LLNL's Scope 1 & 2 emissions include:

- Natural gas fuel combustion for the generation of electricity, heat, cooling, or steam (e.g., boilers, furnaces, and emergency generators)
- Combustion of fuels in mobile combustion sources including LLNL's General Services Administration (GSA)-leased vehicles, commercially leased, and agency-owned vehicles
- Fugitive emissions from fluorinated gases and refrigerants, including mixed refrigerants used in refrigeration and air conditioning equipment
- Operation of the sewage lagoon at Site 300
- Indirect emissions associated with electricity consumption
- Estimated indirect emissions avoided by purchased renewable energy certificates (emissions offset)

LLNL continues to assist DOE in working to achieve the 28% GHG reduction goals. LLNL's Site 200 and Site 300 major sources of Scope 1 & 2 GHGs are influenced primarily by the management of natural gas, fossil fuels, electricity, and fugitive emissions (SF_6 and others).

Factors influencing Scope 1 & 2 emissions are addressed in various activities and accomplishments described throughout this document, including:

- Energy intensity reduction
- Renewable energy consumption
- Reducing fleet petroleum use
- Metering
- Cool roofs
- Pollution prevention and waste reduction
- Sustainable acquisition and electronic stewardship

Overall Reduction of Scope 1 & 2 Greenhouse Gas Emissions

DOE's goal for Scope 1 & 2 is a 28% reduction in the generation of Scope 1 & 2 GHG emissions by FY2020 from the FY2008 baseline. LLNL's GHG reductions for Scope 1 & 2 are largely driven by the plans described in this document. LLNL has achieved an overall reduction of 37% from baseline for Scope 1 & 2 emissions. Aggressive reduction of SF_6 in programmatic equipment over the past few years coupled with the increased purchase of renewable energy certificates (RECs) has helped LLNL attain the FY2013 reduction goal in spite of marked increases in electrical energy use.

Performance Status

In FY2013, LLNL maintained a reduction of 37% in Scope 1 & 2 GHG emissions, relative to its FY2008 baseline. This achievement is largely due to the managed reductions in SF_6 usage and purchased RECs for incremental hydroelectric power, instituted in FY2012.

Because of its high CO_2 equivalent value and its relatively narrow range of applications, SF_6 use was specifically targeted for reduction over the past few years.

SF_6 use at LLNL falls largely under three categories:

1) electric power production and distribution,
2) small-scale research and development (R&D) applications, and
3) as a dielectric medium used in accelerators.

The main categories of focus for SF_6 reductions were in R&D applications and its use in accelerators.

LLNL's SF_6 use, inventory, and purchase data in FY2013 has steadily declined over the previous two years, reflecting the many improvements to the SF_6 management program that have taken place.

There are approximately 26 distinct uses of SF_6 at LLNL and 144 individual SF_6 containers tracked on-site. This is a slight reduction from the number of containers reported in LLNL's FY2013 SSP. The reduction is a result of a continued effort focusing on managing legacy, unwanted gas cylinders. Due to the rising cost of SF_6 gas and the perception that it may be difficult to obtain in the future, many larger users on-site continue to retain containers that may not have a current use but are of sufficient grade/purity for possible future activities.

LLNL's Chemtrack system currently only captures SF_6 containers purchased (i.e., gas cylinders), and, with one exception, does not account for volume contained in experimental apparatus. The exception is the main accelerator tank in Building 190 which, at 13,000 lbs., represents nearly half of the LLNL tracked inventory. The information presented in Figure 2-2 accounts for the Chemtrack volume as well as volumes in use as identified in project description documents.

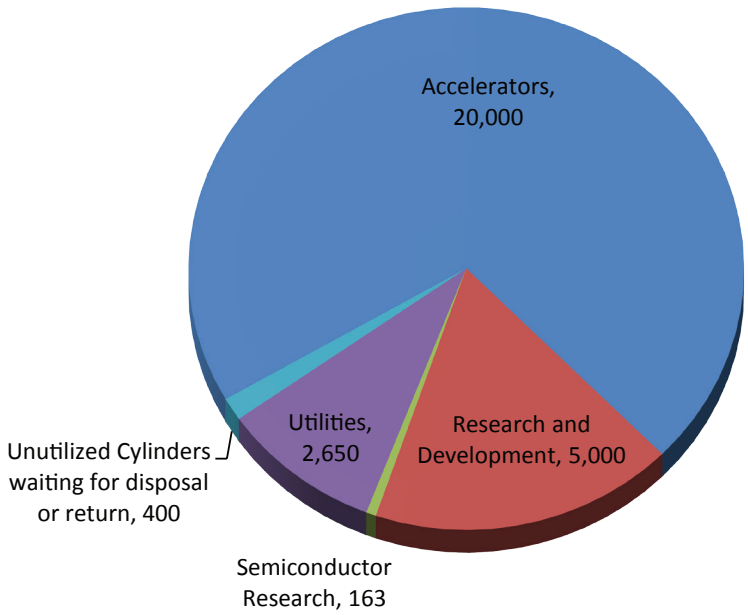

Figure 2-2. SF_6 volume by major use.

The LLNL SF_6 Management and Capture Plan (LLNL-AR-483031-REV-1) documents ongoing SF_6 use, describes current and future efforts to minimize emissions to the extent practical, and provides the basic framework for how LLNL plans to manage SF_6 operations with reduction goals in mind.

Communicating SF_6 program requirements are primarily accomplished prior to a user purchasing new SF_6 through LLNL's Controlled Items Services List and LINCS procurement system. The SF_6 user is also informed of regulation requirements and controls that may apply to their SF_6 use. SF_6 control language has been incorporated into LLNL's Electronic Integration Worksheet System (e-IWS) work control documents for the significant usages. The control language directs SF_6 users to maintain equipment in leak-tight condition, recover SF_6 from equipment for reuse where possible, and repair leaks immediately. Outgoing SF_6 cylinders are weighed prior to returning them to the vendor where the remaining SF_6 can be reclaimed for reuse or can be properly disposed of.

Over the last several years, LLNL has significantly raised the awareness on environmental issues with the continued use of SF_6. This has resulted in SF_6 being a continuing component of the greenhouse gas EMP under LLNL's EMS. In FY2011, LLNL's EMP goal was to achieve a measurable reduction in SF_6 loss during equipment maintenance. In addition, each LLNL program committed to documenting their significant SF_6 uses. In FY2012, the EMP included specific and focused reviews of existing projects using SF_6, establishing institutional controls on the ordering and inventory management of SF_6, as well as continuing to define the scope of use at LLNL. EMP efforts for FY2013 included continuing to educate SF_6 custodians and to document controls in select work control packages. The results of these efforts are a 64% reduction from the FY2008 baseline in SF_6 purchases, as shown in Figure 2-3. Note that the higher purchases in FY2009 and subsequently lower purchases in FY2010 are due to purchases normally made in FY2010 that were placed earlier at the end of FY2009.

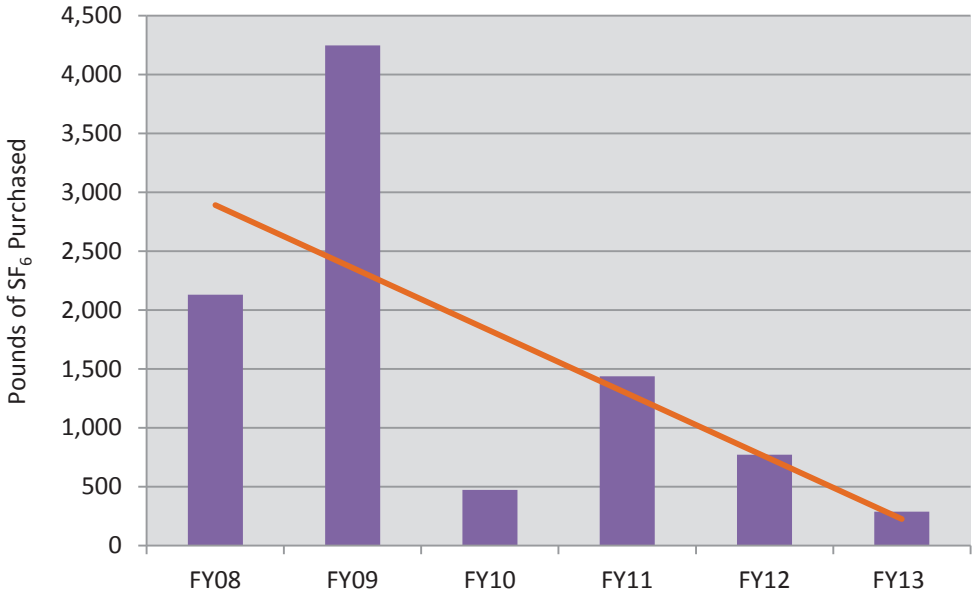

Figure 2-3. Results of EMP efforts are a 64% reduction from the FY2008 baseline in SF_6 purchases.

Plans and Projected Performance

LLNL has already successfully reduced GHG emissions through aggressive reduction and management of fugitive emissions from equipment using SF_6. Scope 1 & 2 GHG reductions for FY2014 and beyond will largely be dependent on LLNL's management of electrical energy since this is LLNL's largest contributor to Scope 1 & 2 GHG emissions. See Figure 2-4. Refer to the sections that address Goal 2.1 (energy intensity reduction) and Goal 8.1 (electrical consumption from renewable energy sources).

The measures described in this document all have the potential to assist in GHG emission reductions, and they will be carried out if deemed economically feasible and supportive of mission. Future growth of LLNL continues to be centered on energy-intensive facilities and research, including the NIF, HPC, and other program-related areas, all of which will increase LLNL's GHG emissions. It should be noted that though LLNL has been successful with the reductions in SF_6, this is only part of the picture and does not necessarily translate into overall GHG reductions.

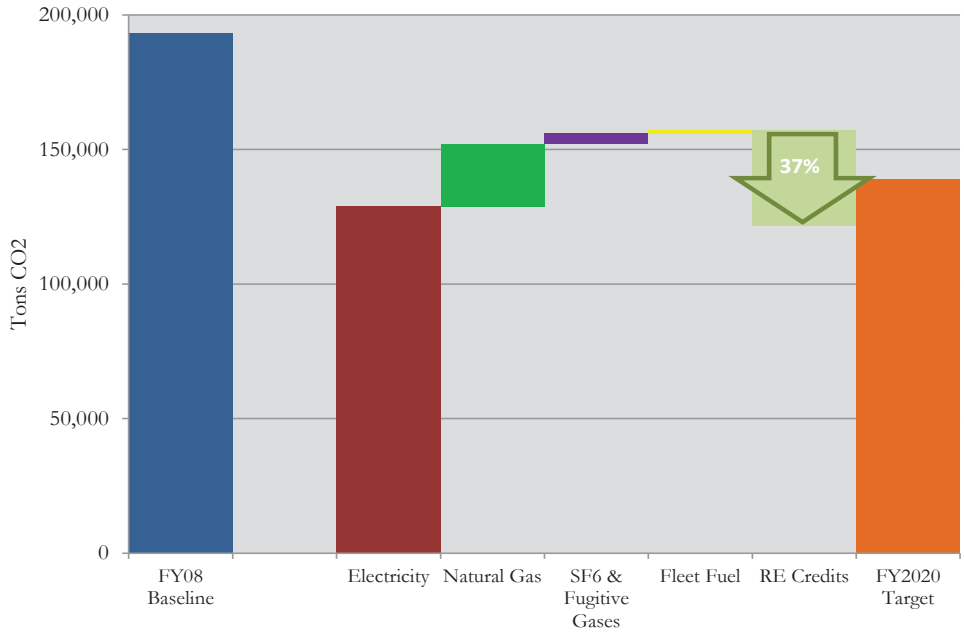

Figure 2-4. Scope 1 & 2 CO_2 reduction by source. RECs increase the Scope 1 & 2 GHG reduction to 37%.

In FY2014, LLNL will continue to roll out the program elements identified in the SF_6 Management and Capture Plan.

Ongoing efforts in FY2014 to support the regulatory reporting include maintaining documentation on R&D uses, and reporting emission data from the electrical utility usage.

Resources Required

The majority of resources required to reduce LLNL's overall Scope 1 & 2 emissions are related to activities addressed under other goals, especially those related to energy intensity reduction and renewable energy use. LLNL is not likely to achieve any additional emissions reductions unless electrical energy consumption can be reduced.

LLNL will continue to work on documenting and tracking SF_6 uses on-site.

As the LLNL SF_6 management program becomes more developed, the number of projects where alternatives to SF_6 can be used becomes smaller. However, the remaining uses, specifically those in the high-voltage applications and accelerators, are typically characterized by robust containment and transfer systems and are contained in systems that can detect significant releases fairly quickly. While the major users of SF_6 may not be able to eliminate the use of SF_6 in the near future, program management and researchers need to continue to ensure that the gas is used in a manner that minimizes the amount released.

SSPP Goal 1.2
13% Scope 3 GHG reduction by FY2020 from a FY2008 baseline

Scope 3 includes all indirect emissions not included in Scopes 1 & 2. Employee commuting and business air travel, along with transmission and distribution (T&D) losses associated with electricity use continue to account for the majority of Scope 3 emissions. LLNL's Scope 3 emissions are offset by the estimated annual GHG emissions associated with T&D losses that were avoided by purchased renewable energy certificates.

LLNL Scope 3 GHG emissions include:

- Employee commuting
- Employee business travel
  - Air travel
  - Rental or privately owned vehicle mileage
- Off-site (contracted) domestic wastewater treatment
- Off-site municipal solid waste disposal
- Electrical T&D losses
- Estimated avoided T&D losses associated with purchased renewable energy certificates (emissions offset)

Performance Status

In FY2013 the Laboratory maintained an overall reduction of 18% in Scope 3 emissions from the FY2008 baseline. The emissions reduction was primarily due to a reduction in air travel as well as a reduction in employee commuting due to a mid-year voluntary separation action. See Figure 2-5. Note that electrical energy use also impacts Scope 3 GHG emissions through T&D losses.

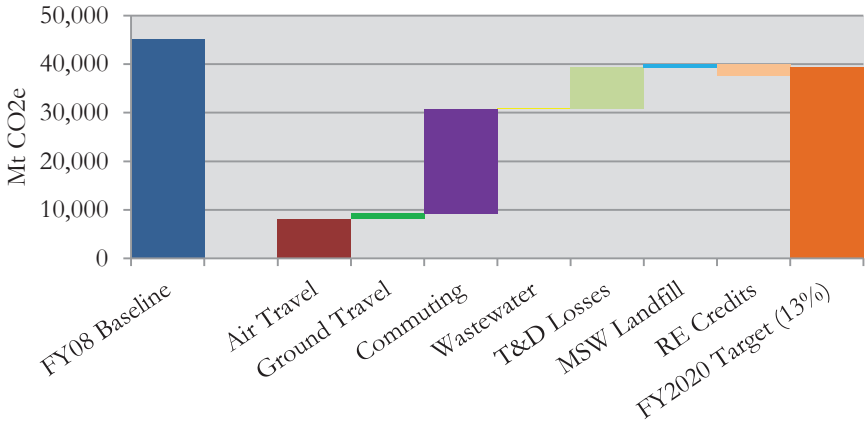

Figure 2-5. Scope 3 CO_2 reduction by source.

A commuter survey was conducted in September 2012 that included responses from both LLNL and onsite DOE/NNSA employees. The ten survey questions covered demographics (employer, work schedule), transportation use, alternatives considered, and a free form comment field. A total of 1,672 responses were recorded. Generally, with the exception of telecommuting, the LLNL responses align with the U.S. Department of Transportation (DOT) California Transportation Profile for commuting. Seventy-five percent of LLNL respondents indicated that they used a personal vehicle, 13% used a carpool or vanpool, and 4% used public transportation. A number of survey comments indicated that although telecommuting was a desirable option, it was either not available or impractical for the type of work performed. Respondents selected a flexible or alternative work schedule, telecommuting, and free guaranteed ride home for emergencies as the top incentives for considering alternative commuting options. Major deterrents to using alternative transportation included the ability to control work schedule, reliable transportation, availability for family emergencies/family care, and the extra effort and time involved in using alternatives.

The data in the Consolidated Energy Data Report (CEDR) tab 8.3 Commute has been revised to reflect a consistent methodology for calculating employee commuting. The annual U.S. DOT California Transportation Profile Chapter D Table 4-1 – Commuting to Work was used to apportion the LLNL employee population by commuting category. The DOT commuting data was compared to the results of the 2012 LLNL employee commuting survey to verify applicability of the DOT tables. The only change was merging the DOT Work From Home category into the personal vehicle category to more closely reflect the LLNL employee population.

The data in CEDR tab 7.1b Off-Site WWT has been revised to reflect that 100% of LLNL's population is served by a centralized wastewater treatment plant with nitrification/denitrification.

Plans and Projected Performance

LLNL Scope 3 emissions reductions will continue to focus on reducing employee commuting and business travel. Any efforts related to Scope 3 emissions reductions will also be impacted by electrical energy use. Annual T&D losses associated with electrical energy use generate roughly as many GHG emissions as business air travel.

Tasks associated with the greenhouse gas EMP include identifying opportunities for employee telecommuting and encouraging video-conferencing and webinar/online training instead of travel when these options are available.

Resources Required

Normal business processes are in place for this goal.

SSPP Goal 2.1
30% energy intensity reduction by FY2015 from an FY2003 baseline

Performance Status

LLNL's energy intensity was marginally lower in FY2013 compared to FY2012. At the end of FY2013, the net energy use intensity reduction savings was 14.74%, relative to the FY2003 baseline. This reduction is less than DOE's interim FY2013 goal of 24%, as stated in the SSPP. However, if the space demolished and energy consumption is adjusted from the baseline year, LLNL would be at 20.05%, moving closer to the goal. No facilities were demolished in FY2013 due to a lack of funding. The Facility Information Management System (FIMS) list of facilities excluded from the energy intensity goal is attached in the Appendices section of this plan. Figure 2-6 illustrates the savings. The Energy Usage and Cost Report is included in the Consolidated Energy Data Report (CEDR).

LLNL continues to explore its energy usage in order to better understand how to strive towards reduction. The energy chart in Figure 2-7 estimates the sources of energy by type. The energy chart was updated with FY12 data and was created by incorporating metered data, lighting estimates, and equipment inventory. HVAC systems (42%) and lighting (17%) continue to be the two largest users of energy at LLNL. The breakdown helps to indicate where specific energy conservation efforts should be directed.

LLNL continues to implement cost-effective energy conservation projects, as funding permits. In FY2013, several projects were completed to install low-cost energy conservation recommendations resulting from prior facility energy audits. Among the projects were a lighting recircuit for B112, and lighting occupancy sensor (LOS) installations at T1878, T1888, and T5627. Projects were selected based on those having the highest return on investment (ROI)

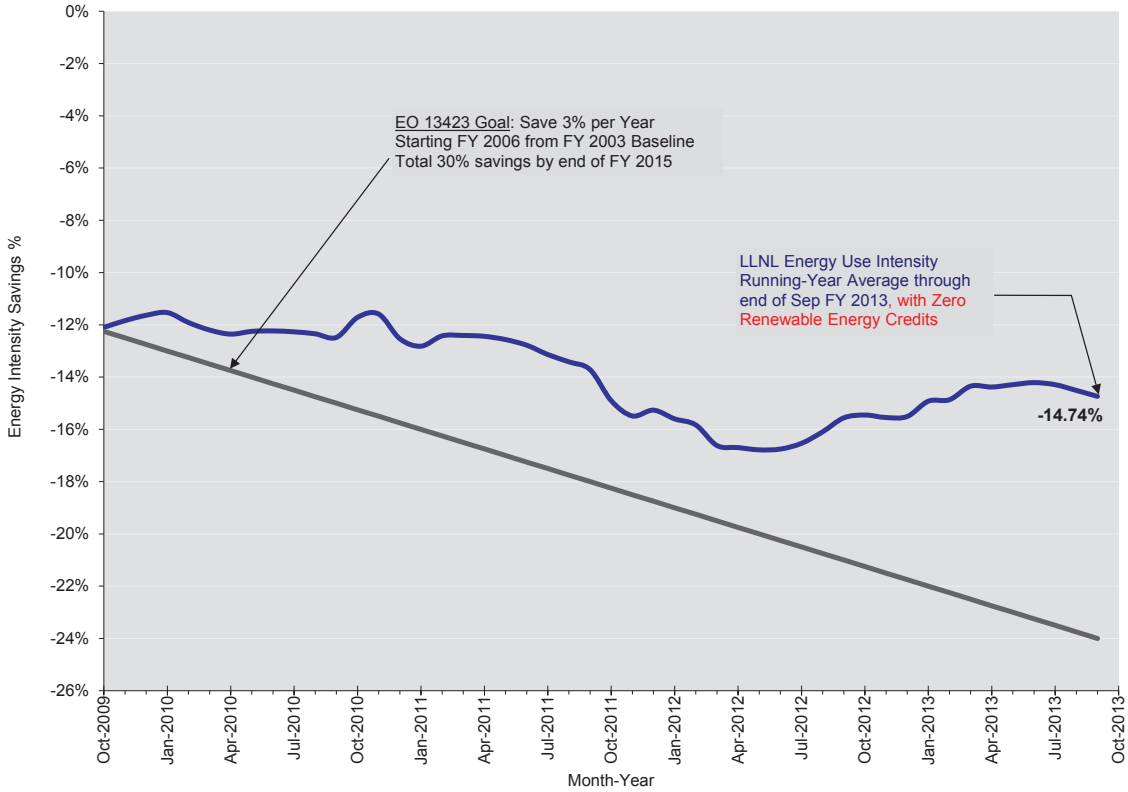

Figure 2-6. Energy use intensity savings through end of FY2013 (running year energy intensity savings with zero REC credits and FY2012 exclusions).

compared to the project costs. On the Thermostat Initiative Project, eight facilities requiring 14 thermostats and covering 16,483 gross square feet were added to the portfolio.

In FY2013, LLNL was again challenged to meet its energy intensity reduction goal. The warmer-than-normal summer was responsible for increasing the electricity consumption in the summer months, and the colder-than-normal winter was responsible for increasing our natural gas consumption in the winter months. In the summer of FY2013, there were 12% more cooling degree days (CDD) than the summer of FY2012, and for the entire year, 31% more than the base year FY2003, resulting in an increased burden on the Laboratory's HVAC cooling systems (Figure 2-8). However, if the MWh per CDD used is considered, LLNL shows a downward trend using 227 MWh per CDD in FY2013, 266 in FY2012, and 356 in the base year FY2003. In the winter of FY2013, there were 14% more heating degree days (HDD) than the winter of FY2012, and about 4% more than the base year FY2003.

In spite of the increases in cooling and heating, LLNL continued to reduce electricity usage by 16% and natural gas by 12% from the FY2003 baseline.

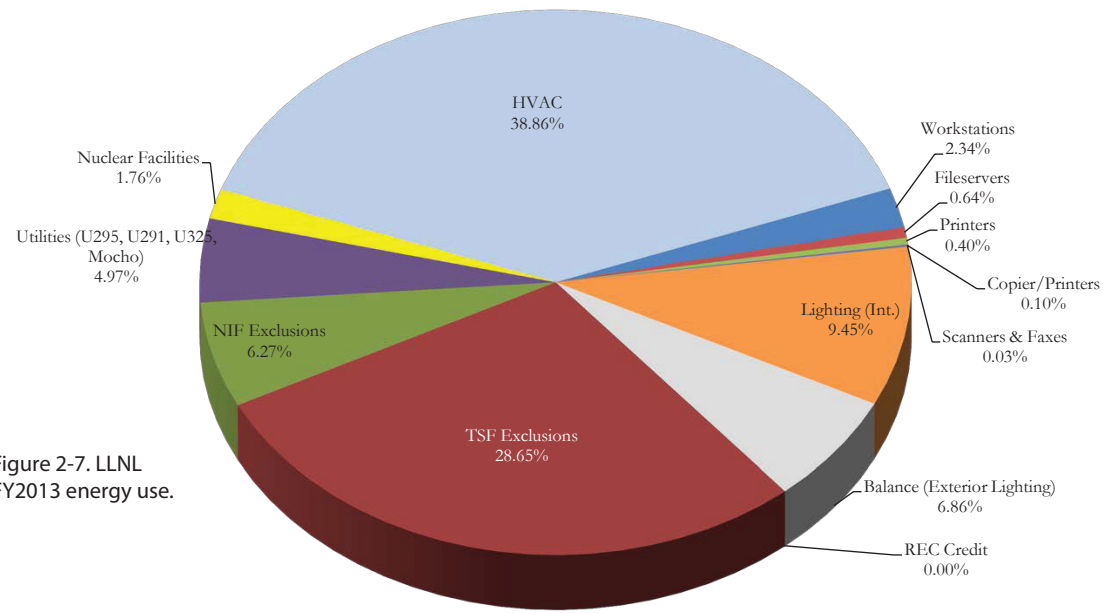

Figure 2-7. LLNL FY2013 energy use.

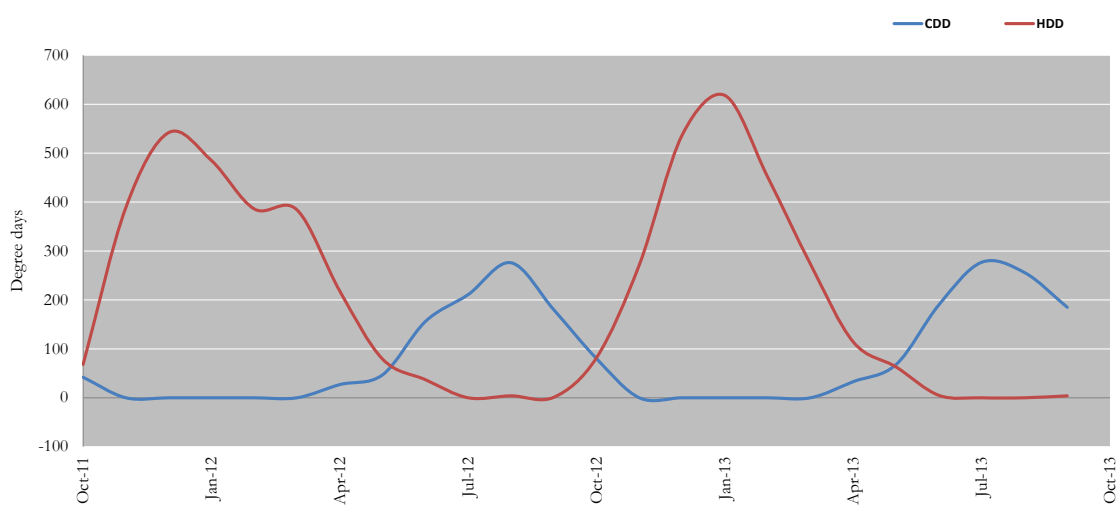

Figure 2-8. Cooling and heating degree days shown by quarters October 2011 to October 2013 (data from City of Livermore).

Plans and Projected Performance

LLNL has developed a comprehensive list of energy savings projects that includes the results from the EISA audits, compliance issues, deferred maintenance projects (that have a significant energy savings), metering evaluations, and grassroots suggestions. The list will continue to evolve and expand as new energy efficiency opportunities are identified. The list is prioritized by the energy savings return on investment (ROI) compared to the project costs. For FY2014, funding has been requested to perform projects that have an ROI of less than one year.

A Functional Management Review (FMR) was conducted in FY2014 to evaluate LLNL's electrical and mechanical maintenance programs. LLNL requested funding to address the various recommendations listed in the FMR report. The initiatives have not yet been funded.

LLNL continues to evaluate and implement grassroots suggestions for energy savings projects wherever possible and will implement them as funding permits. LLNL continues to distribute energy usage data on the metered facilities to the respective facility managers. In FY2013, when an increase in metered electricity was detected, the facility managers were engaged to find solutions for the increase. Most of the increased use was due to programmatic growth and out of service equipment that was brought back on line after being down for extended maintenance.

Employees continue to send suggestions to our Energy Management Group through the "Sustainability at LLNL" website. The LLNL internal Blog, "Idea Hub," continues to have a thread topic for sustainability. LLNL's EMS website also has a section that encourages sustainability suggestions. These ideas are evaluated, and, if deemed appropriate, are added to the comprehensive list of energy intensity savings projects. In FY2013 LLNL continued the grassroots initiative "Every Kilowattt Counts!" where facility residents are encouraged to "power down" their office, lab, and storage equipment during the holidays. In FY2013, the facility management staff re-programmed area thermostats to essentially turn off the HVAC systems over the winter holidays.

One of the DOE/IG-0869 audit recommendations was to "Implement best practices related to billing for electricity usage to the maximum extent practicable." This was LLNL's practice prior to the contract transition, but stopped to conform to DOE cost accounting standards.

In addition to reductions in energy intensity and electrical and gas utilization, the actions mentioned above also help reduce LLNL's GHG emissions.

Based on LLNL's best estimate of available resources for FY2014, it is estimated that energy intensity savings will be 15% with an energy use of 1,243B BTU for the year, considering the total building area of 6,221K SF. As funding becomes available, LLNL will attempt to exceed this goal.

The Site Actual and Projected Electricity Consumption Table is shown in Figure 2-9; the Load Forecast Chart is shown in Figure 2-10.

Figure 2-9. Site actual and projected electricity consumption (x 10^6 kWh)

Fiscal Year	*2010A*	*2011A*	*2012A*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*
Total Electricity Consumption	401	379	408	428	450	472	496	521	547	574	603	633
Baseline Load	260	250	251	263	276	290	305	320	336	353	370	389
HEMSF Facility 1 (TSF)	120	106	133	139	146	154	161	169	178	187	196	206
HEMSF Facility 2 (NIF)	21	23	25	26	27	28	30	31	33	35	36	38

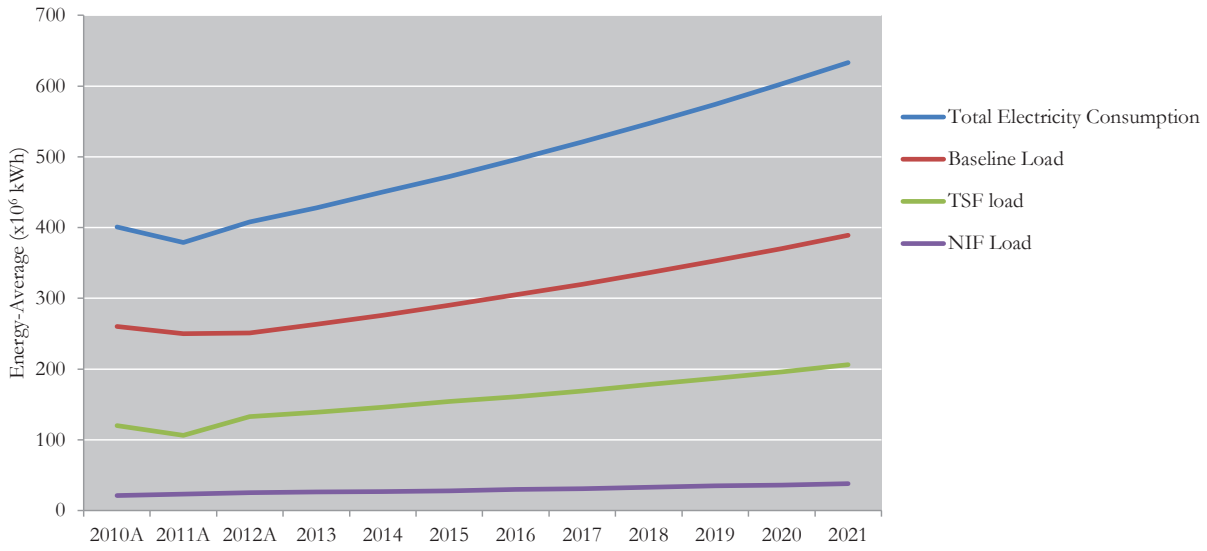

Figure 2-10. LLNL energy load forecast.

Resources Required

Funding will be required for projects identified in the CEDR, including the installation of additional programmable thermostats, interior and exterior lighting upgrade projects, and other energy conservation-related projects. LLNL is continuing to develop a strategy to justify energy conservation projects in comparison to its low cost of electricity.

Plans to reduce deferred maintenance, while at the same time increasing energy efficiency, will be implemented as funds become available. When replacing aging equipment identified in the master deferred maintenance list, new equipment will be the latest, most energy-efficient type available.

It is anticipated that funding will be directed to execute the boiler and burner replacement projects in FY2014 to avoid penalties from the BAAQMD. Additional energy intensity reduction measures are expected to remain unfunded until FY2015 or later.

Figure 2-11 lists projects that, if funded and implemented, would allow LLNL to meet its energy intensity reduction goals.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)	FY17 ($M)
Boiler Replacement Project - FY14	7	0.3	14.4	7	0	0	0
Building Automation Systems/EMCS	5	0.9	5.4	0	2	2	1
Building Envelope Modifications	4.5	0.14	32.7	0	1.5	1.5	1.5
Electric Motors and Drives, Variable Speed Motors and Drives	2	0.54	4.4	0	0.7	0.7	0.7
Site-wide Lighting Improvements, Exterior	3	0.4	6.5	0	1	1	1
Site-wide Lighting Improvements, Interior	5	3.8	1.3	0	0	0	5

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Figure 2-11. Proposed projects in support of SSPP Goal 2.1.

SSPP Goal 2.2
EISA Section 432 energy and water evaluations

The second round of EISA facility audits was started in FY2013. LLNL's strategy for these audits excluded the major high-energy users (i.e., Livermore Computing Facility–B453 and NIF). This will allow for other facilities to be audited where low-cost or no-cost measures can still be identified. It is not practical to audit a LEED facility such as B453 where a continuous improvement program is in place and mission electrical demands are a high priority. In fact, a "Free Cooling Project" has been designed for B453 and is ready for construction once funding has been secured.

Seven facilities (B117, B121, B131, B321A, B361, B439, and B482) were audited this year. These facilities represent 17.5% of our EISA portfolio for the second round of audits. Three additional facilities (B132S, B133, and B381) are being planned for an in-house audit by the end of the calendar year. That will bring the LLNL total to 25%, equaling the suggested goal for the year.

Energy audits to meet EISA Section 432 and efforts to increase efficiency (e.g. combining energy audits with condition assessment surveys), along with recommissioning/retrocommissioning, are continually being evaluated. Meetings with managers of facilities identified with an increase in electricity are being held to discuss the recent energy audit recommendations to plan a path forward, beginning with those recommendations that offer the most energy savings opportunities.

There are three qualified Certified Energy Managers (CEM) working for LLNL. As funds become available, LLNL hopes to increase the number of CEMs as some Facility Managers or Facility Points of Contact are being encouraged to enroll in the program.

In FY2014, LLNL has requested funding to implement EISA audit finding measures. The local utility has agreed to participate in energy audits that comply with EISA standard, for no additional cost to LLNL.

SSPP Goal 2.3
Individual buildings or processes metering for 90% of electricity (by October 1, 2012); for 90% of steam, natural gas, and chilled water (by October 1, 2015)

Performance Status

The Metering Plan was updated in November 2013 and aligns with the October 2013 NNSA Guidelines. LLNL's commitment to support the DOE Strategic Sustainability Performance Plan (SSPP) and comply with Energy Policy Act (EPACT) 2005 and EISA 2007 regulations is further exemplified in the latest issue of its Metering Plan. LLNL is committed to monitor and reduce its energy usage and find innovative ways to lead the complex while at the same time meeting its mission goals.

LLNL's metering portfolio, as of October 1, 2013, is shown in Figure 2-12.

		Number of Meters	Number of Buildings
Electricity			
	Advanced Individual	114	116
	Advanced Shared	134	247
	Standard	58	27
	No Meter	0	21
	Total	308	411
Natural Gas			
	Equipment Meters	18	14
	Building Meters	18	14
	No Meter	0	0
	Total	36	28
Water			
	Advanced	14	0
	Standard	13	1
	Total	27	1

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Figure 2-12. LLNL is currently developing a complete water meter deployment plan. Due to the low water use, a measurement plan for water use at Site 300 has not been in place since 2007.

Plans and Projected Performance

Below is a summary of how LLNL's performance compared to the SSPP goals.

SSPP Metering Stretch Goals	FY2013 Performance Status	Planned Actions and Key Issues
Install electricity meters on individual buildings or processes at each site so that these individually metered buildings and processes account for at least 90% by October 1, 2012.	90% achieved as of the end of FY12.	The LLNL plan to recommission and calibrate all legacy electricity meters was started in FY2013. A plan to repair remaining meters and connect them to the MV-90 metering system has been developed and is being implemented.
Install natural gas, steam and chilled water meters on individual buildings or processes so that these individually metered buildings and processes account for at least 90% by October 1, 2015 (90% for each utility).	90% stretch goal: 90% site projected percentage to be achieved by FY2015, 50% target by the end of FY2013.	As of FY2013, LLNL meters approximately 60% of its natural gas use at the site. LLNL is in the process of replacing boilers for BAAQMD compliance. Gas meters will be installed if not currently present. Steam is not metered, and chilled water use is captured in the building's energy use. Additional resources are needed to meet the stretch goal of 90% by FY2015.

Resources Required

LLNL has requested funding for additional metering projects in FY2014. Figure 2-13 lists projects that, if funded, will ensure that LLNL facilities that use 90% of its energy and natural gas meet SSPP Goal 2.3.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)	FY17 ($M)
Natural Gas Metering	3.6	0.065	54	1.2	1.2	1.2	0
Water Metering	1.5	0.025	59	0.5	0.5	0.5	0

Figure 2-13. Proposed projects in support of SSPP Goal 2.3.

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Auditing LLNL Electrical Meter Infrastructure

In FY2013, LLNL started a comprehensive audit of its legacy electricity meters; 72 of approximately 300 meters have been inspected. The audit, along with the implementation of a stronger routine maintenance program, helped LLNL meet its metering goal.

The meters found to be nonfunctional will be repaired or replaced as funding becomes available, and the audit will continue until all meters have been inspected.

At the start of the project 72 electric meters were not functioning correctly. As a result of the audit:

- 13 meters were repaired, and now communicate with the MV-90 metering system
- 20 meters are now being read manually
- 14 meters have been deemed nonoperational and are slated for repair
- 16 meters no longer monitor a load and have been removed from service
- 6 meters have never been entered into the metering system
- 3 meters are on "standby"

Replacement electricity meter that communicates with the LLNL's MV-90 metering system.

In FY2014, a scoping plan will be developed to estimate a budgetary cost for the major repairs. Minor repairs are being implemented during regular maintenance activities.

Nonfunctioning legacy meters.

LLNL electrician, wearing electrical protection clothing, replacing an electricity meter.

SSPP Goal 2.4
Cool roofs, unless uneconomical, for roof replacements unless project already has CD-2 approval. New roofs must have thermal resistance of at least R-30.

Performance Status

LLNL's roof replacement plan includes replacing end-of-life roofs with cool roofs, unless doing so proves uneconomical. Approximately 225,000 SF of cool roofs have been installed on a total of fifteen buildings. Due to fiscal constraints, the roof replacements identified in LLNL's FY2013 SSP were delayed to out-years.

Plans and Projected Performance

No roof replacement projects are planned for FY2014. All future roof replacements and new roofs at LLNL are planned to be cool roof installations.

Resources Required

Figure 2-14 lists projects that, if funded and implemented, would allow LLNL to meet its cool roof installation goals.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)	FY17 ($M)
Cool Roofs - FY14	0	0	0	0	0	0	0
Cool Roofs - FY15	1	0.04	32.1	0	1	0	0
Cool Roofs - FY16	2	0.05	46.4	0	0	2	0
Cool Roofs - FY17	3	0.06	45.2	0	0	0	3

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Figure 2-14. Proposed projects in support of SSPP Goal 2.4.

SSPP Goal 2.5
15% of existing buildings greater than 5,000 gross square feet (GSF) are compliant with the Guiding Principles (GPs) of HPSB by FY 2015

Performance Status

Four LEED building certifications (B142, B264, B451, and B453) were completed in 2008–2011; ten initial building assessments using the DOE HPSB Assessment Tool were completed in 2011–2012; and assessments for Buildings 1739, 1878, 5627 and 6925 were completed in 2013. These eighteen buildings have met the requirements of the five HPSB Guiding Principles: Integrated Design, Energy Performance, Water Use Reduction, Indoor Environmental Quality, and Materials Conservation (Figure 2-15), either through the use of the HPSB Assessment Tool or the LEED Existing Building: Operations and Maintenance rating system.

Assessments are on track to meet the FY2015 15% goal. The current number of buildings over 5,000 square feet in the enduring inventory is 186 with a total square footage of 6,458,369; fifteen percent of this is 28 buildings with a total square footage of 968,755. At FYE2013, eighteen buildings have been assessed using the LEED system or the HPSB Assessment Tool (64% complete), with a total square footage of 517,631 (80% complete). An additional ten assessments are needed to achieve the 15% goal.

Figure 2-15. The Five Guiding Principles of High Performance Sustainable Building.

Plans and Projected Performance

Building 311 is scheduled for U.S. Green Building Council (USGBC) LEED submittal in FY2014/FY2015. The estimated cost of development of the submittal packages of this building is estimated at $60K, which includes staff time for researching building history, building assessments, completion of USGBC LEED templates, and providing all required support documentation. An initial survey of the lighting and HVAC systems identified and implemented opportunities for lower cost improvements that had a positive effect on the building's overall energy savings; currently, additional funding is being sought to make the remaining changes. A small portion of the funding is set aside for the registration and review fees charged by USGBC/Green Building Certification Institute (GBCI). Existing campus-wide documentation, primarily based on LLNL's EMPs, will continue to be utilized in the building assessment documentation process. Funding has been requested for this effort.

In FY2014, Buildings 155, 161, 211, 2727, 2775, 2825, 4525, 4726, 4728, and 694 are scheduled for DOE HPSB assessments which are embedded in the EPA Portfolio Manager benchmarking website. The facilities will be assessed and all relevant information will be reported using the HPSB Assessment Tool. This includes tracking all energy usage, building ventilation and overall systems' performance, irrigation studies for possible water savings, and demonstrating that green cleaning, integrated pest management, and low-emitting materials are in use.

Resources Required

The overall scope of this project is anticipated to require a multi-year effort, and scheduling of upcoming projects is based primarily on staff availability; there is no dedicated HPSB staff at this time. Funding needed to complete the long-range tasks will be requested in future fiscal years.

The estimated cost of development of the submittal packages for Building 311 is estimated at $60K. The estimated cost of development of the HPSB submittal packages of ten buildings is estimated at $6K each.

Pending funding, additional staff may be hired and/or current staff will be trained to aid in completing more USGBC LEED/HPSB assessment templates and providing all required support documentation.

Funding has been requested to complete the remaining scope required for LLNL to meet its HPSB goal in each of the 19 remaining buildings, listed in Figure 2-16.

Building Name	GSP	Remaining Scope	Target Year	Estimated Cost ($)
B155	21,742	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	28,000
B161	6,105	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2014	12,000
B211	14,122	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	20,000
T2727	5,090	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2014	12,000
T2775	9,875	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	18,000
T2825	5,959	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	12,000
T4525	5,736	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	12,000
T4726	9,384	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	18,000
T4728	6,762	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	12,000
B694	10,590	All HPSB documentation	FY2014	6,000
		Lighting occupancy sensor design, procurement, and installation	FY2015	19,000
B311	40,951	All LEED documentation and research	FY2014/15	60,000
T1677	28,576	Lighting occupancy sensor design, procurement, and installation	FY2014	36,000
T1739	5,646	Lighting occupancy sensor design, procurement, and installation	FY2014	12,000
T1889	16,821	Lighting occupancy sensor design, procurement, and installation	FY2014	22,000
T3724	19,810	Lighting occupancy sensor design, procurement, and installation	FY2014	26,000
T3725	19,867	Lighting occupancy sensor design, procurement, and installation	FY2014	26,000
T3726	19,824	Lighting occupancy sensor design, procurement, and installation	FY2014	26,000
T4675	11,142	Lighting occupancy sensor design, procurement, and installation	FY2014	19,000
T6925	5,873	Lighting occupancy sensor design, procurement, and installation	FY2014	12,000
Total				**462,000**

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Figure 2-16. List of projects that, if funded and implemented, would allow LLNL to meet its HPSB goal.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)
HPSB Certification	0.46	0	N/A	0.29	0.17

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Figure 2-17. Proposed projects in support of SSPP Goal 2.5.

SSPP Goal 2.6
All new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the Guiding Principles (GPs)

Performance Status

All new construction greater than 5,000 GSF will comply with the GPs (e.g., HPSB, LEED, etc).

Plans and Projected Performance

LEED Gold certification process is underway for one new construction project, Building 654 (HPC Data Center). The design portion of the project is complete, and preliminary utility improvements have begun.

Resources Required

Line item funding is being requested for construction of the new Emergency Management Facility (EMF) in FY2016/18. In FY2013, LLNL expressed interest in using Institutional General Plant Projects (IGPP) funding to construct one new building each year, for the next three years (Figure 2-18). Due to fiscal constraints, the projects will be delayed at least one additional year to FY2015.

New buildings will be constructed to meet either LEED Gold or achieve HPSB certification. To achieve LEED Gold certification, construction costs are generally 10% higher than usual. While the new construction projects have the potential to be candidate "net-zero" facilities, the upcharge for "net-zero" facilities and the availability of additional funding is unknown at this time.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)	FY17 ($M)
IGPP Funded Generic Office Building	30	N/A	N/A	0	10	10	10
B654 HPC Data Center	10	N/A	N/A	10	0	0	0
Emergency Management Facility (line line item funded)	22.5	N/A	N/A	0	5	1	16.5

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Figure 2-18. Proposed new construction projects.

SSPP Goal 2.8
Regional and local planning

Per SSP guidance, Goal 2.8 is discussed in this section after 8.1

SSPP Goal 3.1
10% annual increase in fleet alternative fuel consumption by FY2015 relative to a FY2005 baseline

Performance Status

LLNL continues to focus its alternative-fuel strategy primarily on the use of ethanol fuel (E85) as its fuel of choice. In 2007, LLNL built an ethanol fuel station with a 12,000-gallon underground tank at a cost of $1.3 million. Subsequently, LLNL restructured its fleet to be composed of E85-compatible vehicles. In FY2013, LLNL's use of alternative fuels (AF) increased 3% relative to the previous year's consumption. As shown in the graph below, LLNL has entered the maturity stage on AF consumption and year-over-year increases will be small increments at best. The graph also reflects a reduction in the overall government fleet size with corresponding fluctuation in AF consumption. We are working with GSA to identify other vehicle AF type that would be appropriate for use at the Laboratory, including electric vehicles.

Plans and Projected Performance

LLNL continues to maintain its fleet of electric vehicles on-site, and looks forward to developing approaches to expand the low-GHG fleet, as funds become available.

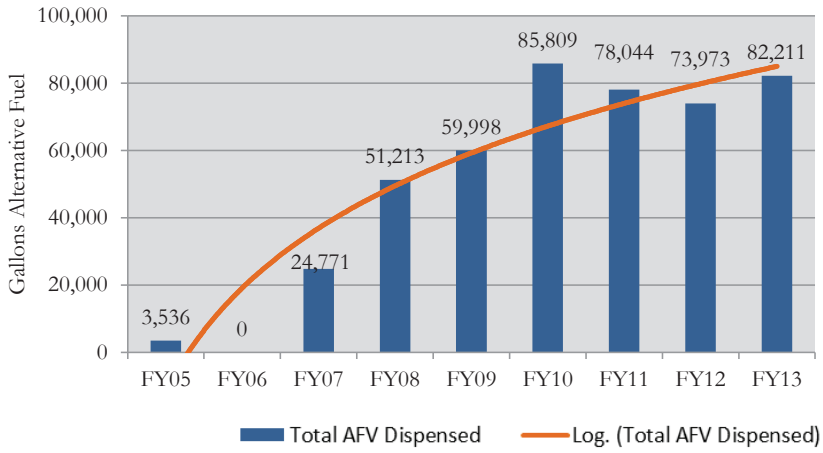

Figure 2-19. Total alternative fuel dispensed.

SSPP Goal 3.2
2% annual reduction in fleet petroleum consumption by FY2020 relative to a FY2005 baseline

Performance Status

In FY2013, LLNL decreased its petroleum fuel consumption by 68% relative to the FY2005 baseline, well exceeding the required 2% annual reduction and 30% cumulative reduction through FYE2020. This reduction was achieved by replacing unleaded vehicles with AFVs, reducing miles driven, reducing the fleet of government vehicles. Figure 2-20 shows the reduction of the overall government fleet.

Plans and Projected Performance

LLNL will continue to strengthen its alternative fuel infrastructure by replacing conventional fueled vehicles with AFVs and by promoting the use of alternative fuels.

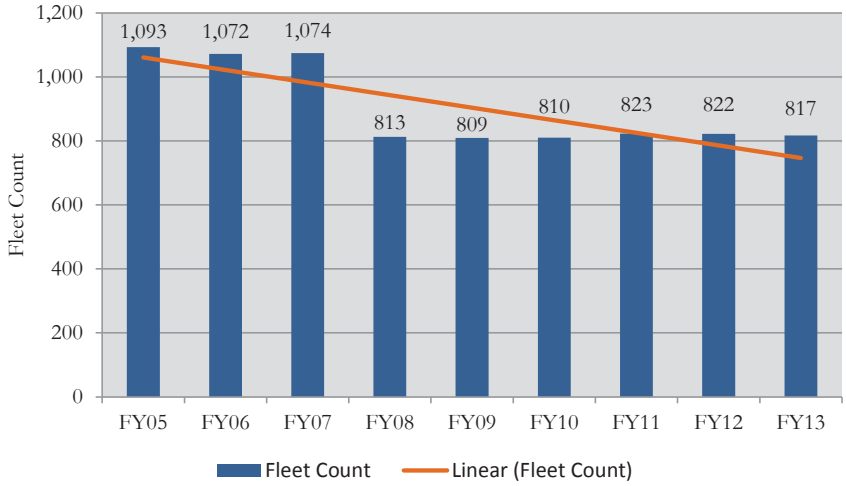

Figure 2-20. LLNL fleet reduction.

SSPP Goal 3.3
100% of light duty vehicle purchases must consist of alternative fuel vehicles (AFV) by FY2015 and thereafter (75% FY2000-2015)

Performance Status

In FY2013, LLNL met and exceeded the required 75% replacement of fossil-fuel light-duty vehicles with AFVs. LLNL requested replacement of 107 vehicles of which GSA was able to order 106 AFVs. LLNL's current alternative-fuel fleet accounts for 86.6% of its total light-duty vehicles.

Plans and Projected Performance

LLNL will continue replacing its fleet with AFVs as manufacturers make them available and exploring different alternative fueled vehicle options, specifically in the area of electric vehicles. LLNL will continue with its primary E-85 alternative fuel vehicle strategy.

The laboratory is preparing to launch a personal vehicle charging program in FY2014. The program is designed to allow employees to charge their vehicles using existing Livermore site designated charging locations for a monthly fee. Employees who choose to participate will be asked to sign an end user agreement that provides details and terms of the program requirements. As presently designed, end user will pay a monthly fee which provides them with access to a designated charging station. A limited number of charging stations will be available under the program and their use will be allocated on a first-come, first-served basis.

This program is in response to employee requests and in support of NNSA and the Lab's site sustainability efforts.

SSPP Goal 3.4
Reduce fleet inventory of non-mission critical vehicles by 35% by FY2013 relative to a FY2005 baseline

Performance Status

In FY2013, LLNL's Fleet Management committed to conducting a motor vehicle review to establish the "right size" fleet required to accomplish its mission consistent with budget constraints. As a result, LLNL reduced its fleet size from 817 to 789 units. In an ongoing effort to right-size its government vehicle fleet, LLNL annually surveys and analyzes its fleet to determine vehicle functionality, usage, type, and options.

Plans and Projected Performance

NNSA HQ–Fleet will submit one NNSA fleet management plan that incorporates each site's accomplishment. LLNL will report status on Goal 3.4 to the collective NNSA/DOE fleet goal.

SSPP Goal 4.1
26% potable water intensity reduction by FY2020 from a FY2007 baseline

Performance Status

In FY2013, LLNL's potable water intensity savings from the FY2008 baseline was 3.4%. This is less than DOE's FY2013 target of 12%. LLNL's lack of progress in the potable water intensity savings area is primarily due to the following four factors:

- Increase in Livermore Computing Facility–B453 programmatic operations
- Increase in cooling degree days (CDD) due to a warmer-than-normal spring
- Increased irrigation water use due to a warmer-than-normal summer and very little rainfall throughout the year. FY2013 was one of the driest years on record for Northern California. In the summer months, up to 50% of LLNL's potable water use can be attributed to irrigation.
- Leaks in the potable water distribution system

FY2013 was a warmer year than FY2012, (150 more CDDs than in FY2012, and 330 more than base year FY2007) equating directly into higher cooling demand. As the chillers and air conditioning units respond to the demand, more water is also required in the cooling towers. Though LLNL achieved a 3.5% water use reduction in FY2013, below the federal goal of 12% (Figure 2-21), if the cooling tower kgals per CDD is considered, LLNL used approximately 57 kgals per CDD in FY2013 versus 66 for FY2012, and 70 for the base year FY2007, indicating a more efficient use of cooling tower water. The water consumption and cost data report is included in the CEDR.

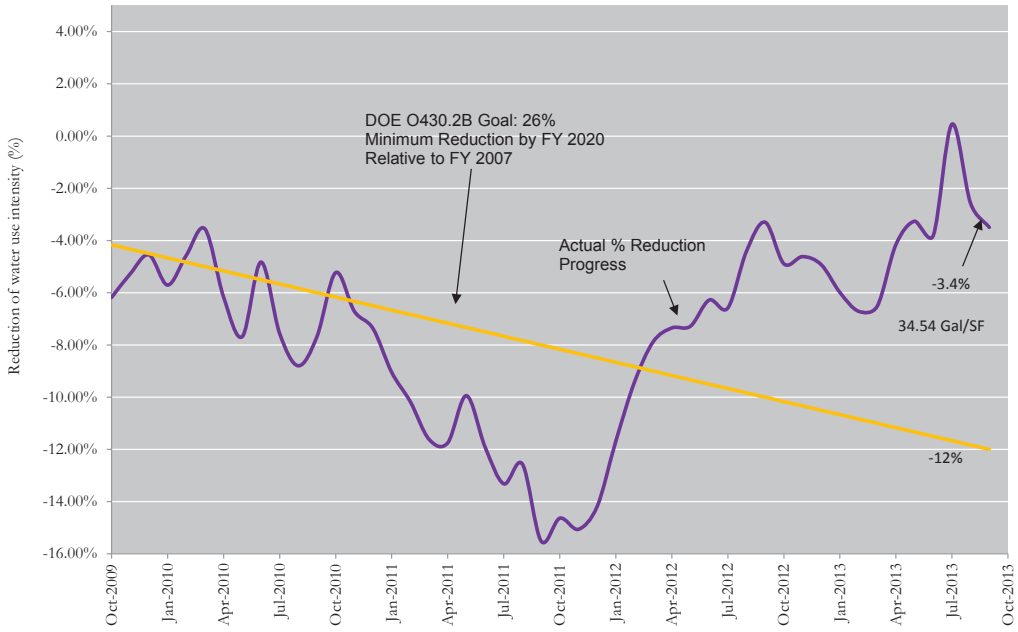

Figure 2-21. Potable water reduction progress at FYE2013.

Potable water use at LLNL's cooling towers increased nearly 10% (9,420 kgals) from FY2012. This was mainly due to the mission growth at the Livermore Computing Facility–B453 where an additional 9,155 kgals were needed in the cooling towers to support the Livermore HPC mission. If the HPC mission growth effect were factored out, LLNL's water reduction savings would be 7.2%.

In FY2013, three new smart irrigation controllers were installed at LLNL, bringing the total to fourteen and covering approximately 35-40% of the site's landscaping area. It is estimated that compared to traditional standard irrigation controllers, smart controllers save an additional 18% of LLNL's potable water. The smart system controllers use a computer program that references data from on-site weather stations that measure wind, rain, temperature, and evaporation. That information, along with a factor for vegetation type, is used to adjust the amount of water needed in a particular area. Additional smart controllers will be installed in the future as funding allows.

In FY2013, several significant water leaks were identified in the LLNL Site 200 closed-loop low conductivity water (LCW) distribution system. An estimated 6,500 kgals of water was lost to the ground, accounting for approximately 2.7% of LLNL's water use in FY2013.

The Laboratory applies various intensity level of landscaping as appropriate to the contextual environment, ranging from special use to transitional and natural settings. As stated in the 2011 Sustainable Landscape Concept Plan, one of the site landscaping goals is to reduce the amount of irrigation water-intensive lawn. The use of turf would be limited to only certain special aesthetic and recreational applications; other lawn areas with no specific functional requirements would be converted to drought tolerant/Livermore valley compatible planting.

LLNL will continue to do incremental landscape and irrigation modifications to reduce water use as funding allows, reducing lawn areas and optimizing irrigation efficiency with alternate sustainable landscaping. LLNL has converted over 20,000 GSF of turf areas in FY2013 to drought tolerant planting, and expects a 50% reduction in irrigation water use for the converted areas after the new landscaping has been established.

A breakdown of LLNL potable water consumption is illustrated in Figure 2-22. The cooling tower make-up component is currently 44%, while the irrigation component is approximately 24%.

Current LLNL practice is to meter areas or zones of greatest water use, such as the cooling towers and irrigation zones, rather than at individual buildings as it would be prohibitively expensive. All five cooling tower make-up water systems at LLNL are furnished with standard water meters. LLNL plans to upgrade all water meters to advanced water meters, pending funding. This will allow a more timely and accurate accounting of the total cooling tower make-up water load.

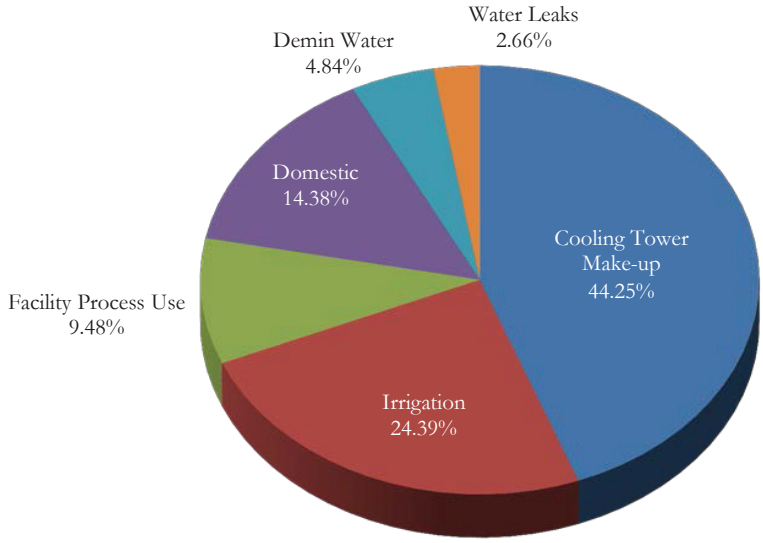

Figure 2-22. LLNL FY2013 potable water use breakdown.

There are several factors that will make it difficult to meet the FY2020 goal without additional resources to execute the needed water savings projects. Some challenges in the future include:

- The main supplier of LLNL potable water (Hetch Hetchy) has an annual shutdown for maintenance which directly impacts the amount of water LLNL must use as make-up water accepted in its cooling towers. At least 1% of LLNL's total annual consumption will be needed because the alternate supplier's (Zone 7) water quality has less desirable attributes and allows for only a few cycles before needing to be replaced at the cooling towers. In addition, this imposes an added burden to LLNL's sewer system, as the extra blowdown from the cooling towers is discharged to the sanitary sewer system.
- Continued Livermore Computing mission growth requires additional cooling tower make-up. Unlike energy intensity calculations, there are no exclusions for mission growth for water reduction.

Plans and Projected Performance

There are several water conservation projects underway, or being planned, that will assist the Laboratory in meeting the federal water reduction goal.

- The Water Testbed Project continues to harvest rooftop rainwater at Building 471 for irrigation use in the area. Other candidate areas are being identified as funding becomes available.
- In keeping with its high standard of environmental stewardship and commitment to meeting DOE's water intensity reduction goals, LLNL continues to evaluate ways to identify, monitor, and mitigate inefficiencies in its water distribution systems. This will have an additional benefit of reducing electrical energy expended in water distribution across the site.
- LLNL's search for the most advanced and efficient leak detection technologies has created an opportunity to collaborate with industry leaders who employ the latest technological and environmentally sound methods to detect, locate, and correct leaks. Additional resources are required to pursue improved leak detection strategies currently available. However, with the low cost of water, LLNL is sensitive to investing funds in long payback projects that may not consistently yield the desired results.
- LLNL has proactively identified the benefit of adding continuous leak detection systems, such as geophonic data-loggers, that will be integrated into future water meter projects. These devices will be integrated into the meters' communication system to remotely monitor the water distribution infrastructure and provide graphical data that will alert system operators to any leaks. Major resources are needed to further advance a continuous leak detection system initiative.
- In FY2014, LLNL plans to install a xeriscaping project at Building 361 converting nearly 30,000 SF of turf. This project is in line with LLNL's Sustainable Landscape Concept Plan.

Potential projects to meet LLNL's water intensity reduction goal are shown in the "Potable Water Savings Approaches to Meet Goal" highlight in this section.

Based on LLNL's best estimate of available resources for FY2014, it is estimated that water intensity savings will be 4.5%, with a potable water use of 241,000 kgals for the year, considering the total building area of 7M SF. As opportunities become available, LLNL will strive to exceed the federal water reduction goal.

LLNL Uses Treated Well Water

...in cooling towers

In FY2013, LLNL initiated a pilot project to demineralize treated well water for use as make-up water in its cooling towers. The well water now goes through an additional treatment that includes running it through a reverse osmosis unit to eliminate the possibility of the water doing harm to the cooling towers. Until recently, treated well water was discharged to the arroyo.

As the percentage of water use is greatest at the cooling towers, a conversion to treated water now assists LLNL in meeting its water reduction goals. Using recycled treated well water as make-up water is estimated to save at least 5,500 kgals annually. The pilot project was completed FYE2013 and is expected to be fully deployed by the end of the calendar year. A photo of the reverse osmosis unit is shown at right.

...for irrigation

Another plan to evaluate the use of recycled and treated well water for irrigation is being considered. Treated well water is diverted to the reverse osmosis system where it is purified for use in the cooling tower. The treated well water will be blended with potable water to ensure a nondeleterious effect to the landscaping. Resources are needed to fully evaluate this plan.

Resources Required

In FY2014, LLNL has requested funding to complete the water intensity reduction measures shown in Figure 2-23. These projects, if funded and implemented, would allow LLNL to meet its water intensity reduction goal.

Goal 4.1

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)	FY17 ($M)	FY18 ($M)	FY19 ($M)	FY20 ($M)
Plumbing Improvements - FY15	1	0.03	33.9	0	1	0	0	0	0	0
Plumbing Improvements - FY16	2	0.03	71.8	0	0	2	0	0	0	0
Plumbing Improvements - FY17	2	0.03	71.8	0	0	0	2	0	0	0
Install 'smart' irrigation controllers - FY17	1	0.03	29.8	0	0	0	1	0	0	0
Modular Sewage Plant	9.9	0.79	12.3	0	0	0	0	3.3	3.3	3.3

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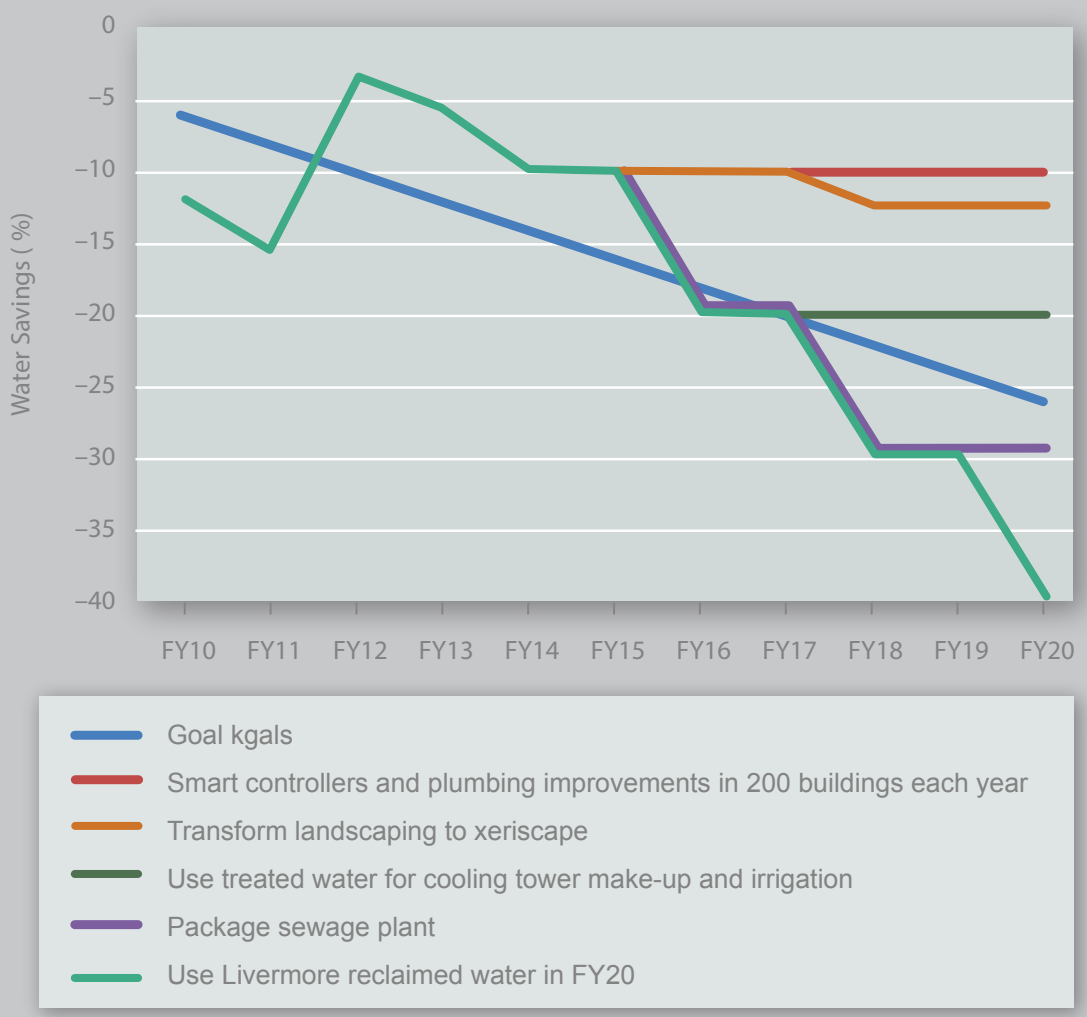
Figure 2-23. Proposed projects in support of SSPP Goal 4.1

Potable Water Savings Approaches to Meet Goal

Past, present, and proposed

Smart controllers, plumbing improvements and a modular sewage treatment plant or other forms of reclaimed water use are being evaluated to help LLNL meet its water intensity reduction goal.



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SSPP Goal 4.2
20% water consumption reduction of industrial, landscaping, and agricultural (ILA) water by FY2020 from a FY2010 baseline

Performance Status

LLNL uses potable water for industrial (i.e., cooling tower make-up) and landscaping irrigation at Site 200. At Site 300, potable well water is used for all purposes. A planned conversion from well water to Hetch-Hetchy water is near completion and will be started up in 2014.

The 20% water consumption reduction of ILA water goal does not strictly apply to LLNL since, by definition, ILA is non-potable water. However, LLNL is committed to reducing industrial use of potable water at the cooling towers and for landscape irrigation. As a subset of the water reduction savings, the portion attributable to ILA can also be tracked.

Storm Water Management

The management and control of storm water runoff quantity, timing, and water quality have become important considerations in low impact development and sustainability. Storm water management is a component of LLNL's EMS through various environmental aspects including ground water discharges, inadvertent releases, water use, and land resource use. LLNL also considers storm water management an element in water conservation and green building.

LLNL's storm water program has been designed to address regulatory requirements and DOE Orders. Storm water discharges at both Site 200 and Site 300 are regulated by the State of California under the authority of the Clean Water Act, using industrial and construction storm water National Pollutant Discharge Elimination System (NPDES) permits. The State also regulates storm water discharges under Porter-Cologne Water Quality Control Act using Waste Discharge Requirements. LLNL's storm water programs must also comply with DOE Orders, as specified in Contract DE-AC52-07NA27344. LLNL implements the storm water programs through its ES&H Manual and Storm Water Pollution Prevention Plans (SWPPP).

In December 2007, Congress enacted EISA, which established storm water runoff requirements for development and redevelopment projects. Section 438 of this Act requires all projects at federal facilities adding more than 5,000 square feet of new development or redevelopment to restore the predevelopment hydrology to the maximum extent feasible. LLNL has begun to use site planning, design, construction, and maintenance strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow. This ensures that no adverse impacts to the site hydrology occur as a result of construction activities. In December of 2009, the U.S. EPA published the "Technical Guidance on Implementing the Storm Water Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act" (EPA Guidance), which provides recommendations for implementing low-impact development strategies for runoff control.

In addition, the state-wide Storm Water General Permit for Construction Activities 2009-0009-DWQ (Construction General Permit) was reissued by the State of California in July 2010. This permit revision added additional water balance and runoff requirements for construction designs at sites of one acre or more to protect storm water quality. Construction SWPPPs are prepared for each individual project and specify all best management practices required by the Construction General Permit.

Storm Water Management Performance Status

New construction at LLNL will include storm water controls consistent with EISA 438 and EPA Guidance to the maximum extent technically feasible.

Storm Water Management Planned Actions

LLNL continues to identify other water conservation activities, including additional rainwater harvesting projects. Consistent with EISA 438 and low impact development, LLNL is including water balance considerations into designs for the East Campus Site Improvement project. This project will include a number of low impact development designs to meet or exceed the 95th percentile storm, consistent with the EPA Guidance.

The State of California is in the process of revising the Industrial General Storm Water Permit. LLNL will apply for permit coverage under the revised permit when it is promulgated.

Storm Water Management Resources Required

As LLNL develops and redevelops areas of the site, storm water runoff management will be integrated into the planning process. This may incur a 15-30% increase in landscape and runoff management costs. As significant construction or renovation is scheduled for FY2014, additional resources required will be identified during the design phase.

Resources Required

Projects that, if funded and implemented, would allow LLNL to meet its ILA water consumption reduction goal are listed in Goal 4.1 in this section.

SSPP Goals 5.1 and 5.2
Divert at least 50% of non-hazardous solid waste by FY2015

LLNL's pollution prevention (P2) efforts have been guided by federal Executive Orders (EO), and are firmly entrenched in many of its management practices. Many of the goals have been in place at LLNL and have been exceeded. Pollution prevention is a key component of LLNL's Environmental Management System, which includes training for all employees. DOE's SSPP P2 goals and a summary of LLNL's status and plans are listed below.

- Goal: Divert at least 50% of routine non-hazardous solid waste from landfill by the end of FY15.

  LLNL status: LLNL consistently meets or exceeds this goal. In FY2013, LLNL diverted 75%.
- Goal: Divert at least 50% of construction and demolition materials and debris by the end of FY15.

  LLNL status: LLNL consistently meets or exceeds this goal. In FY2013, LLNL diverted 77%.

Performance Status

Paper Use

LLLNL continues to focus on reducing printing paper and to purchase uncoated paper containing at least 30% post-consumer fiber in accordance with EO 13514 goals; Figure 2-24 highlights LLNL's progress in reducing paper usage. The Laboratory is identifying opportunities to go paperless where ever possible. The slight increase in reams of paper purchased per person during the last quarter of FY2013 was due to two large quantity purchases made with available end-of-year funds.

The Managed Print Services Program (MPS) is an effort to manage business machines (i.e. copiers, printers, fax machines, and scanners) to increase operational efficiency and reduce LLNL's environmental footprint. Equipment selections include environmental benefits such as double-sided (duplex) printing and scanning capabilities to reduce paper usage, and use solid ink technology instead of traditional toner cartridges. MPS has been implemented in the Operations and Business Principal Directorate, the Computations Directorate, and the Director's Office.

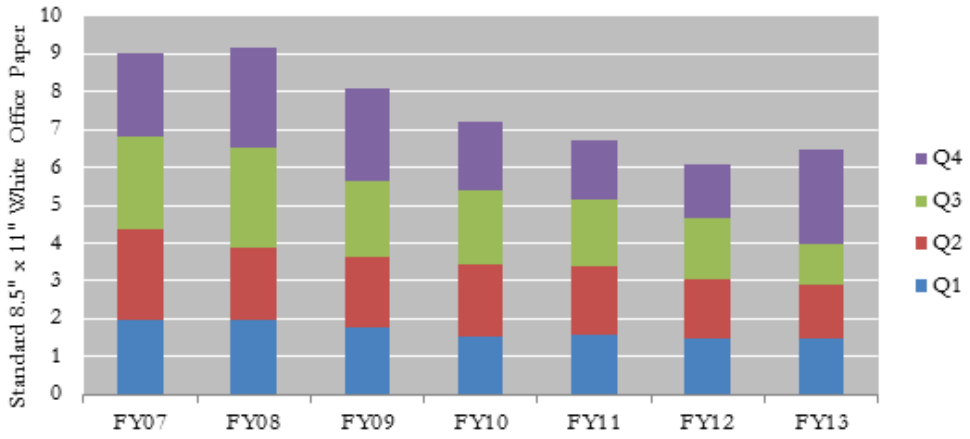


Figure 2-24. LLNL progress in reducing white office paper usage (reams per person purchased).

Waste Minimization and Recycling

LLNL regularly exceeds the EO 13514 goal that specifies that federal agencies divert at least 50% of routine non-hazardous solid waste, excluding construction and demolition debris, by the end of FY2015. LLNL continues its comingled recycling and composting program in 15 buildings (about 30% of LLNL's population) and in both on-site cafeterias. During FY2013, 65 metric tons of compostable waste and 44 metric tons of comingled recycling were collected under this program.

LLNL's Environmental Restoration Department Decontamination and Demolition Team (D&D Team) employs an assets-for-value strategy to maximize diversion of waste and material from deconstruction and demolition projects, while minimizing costs. This strategy uses the residual value of existing facilities and equipment as a partial off-set to demolition costs, and facilitates the recycling of materials from decontamination and demolition projects.

Other accomplishments in waste management include the following:

- Increasing the recyclable content of procured items
- Raising awareness through awards, outreach, and numerous Laboratory events
- Identifying recycling pathways for additional materials (e.g., plastics)
- Expanding plastics recycling to include scraps from the LLNL plastics shop and recyclable plastics from other programmatic areas
- Increasing reuse opportunities, especially through the creation of ReUseIt service

LLNL does not anticipate any changes in site population in FY2013 that could impact waste generation. There is potential for implementation of projects under a new housekeeping initiative that may include removal of several trailers that will result in demolition-related wastes. However, it is expected that much of the waste from these projects will be recyclable.

Figure 2-25. LLNL comingled recycling and composting station in the Central Cafeteria.

Green Events

LLNL conducted eight Green Events in FY2013 at which compostable and recyclable materials were separated from the total waste.

The result was a diversion of an additional 1,348 pounds of compost and 156 pounds of comingled recycling from the landfill.

An employee disposes a paper plate in a compost container during a holiday party.

A Hawaiian-themed picnic featured a waste disposal area for recycling cans, bottles, composting paper plates, biodegradable utensils, and food scraps.

Compost–Recycle–Landfill waste station at an LLNL/Sandia Farmers' Market.

Toxic Chemical Reduction

Using a priority-based approach, LLNL addressed the chemical usage reduction requirements of EO 13514 that focused on toxic, hazardous, and GHG-contributing chemical emissions. Twenty-seven chemicals were selected as "priority" chemicals in 2008 and continue to be tracked and reported regularly (Figure 2-26).

During FY2013, the LLNL Chemical Management Working Group continued to work toward reducing the chemical and gas cylinder inventory over 10 years of age. The Targeted Legacy Chemical Inventory Pilot Process developed in FY2012 was implemented at seven facilities in FY2013. The process includes review of chemical inventory data by the responsible line management and chemical custodians to designate legacy chemicals with no foreseeable need, and review by P2 personnel to identify chemicals for possible repurposing. These data are then uploaded onto inventory tablets/scanners that flagged the designated chemicals to be removed from the facility as the Chemical Inventory Technicians perform the inventory scanning. The Targeted Legacy Chemical Inventory Process completed in FY2013 resulted in a reduction of 3,466 chemicals and transfer of 94 chemicals to new users. LLNL intends to continue the Targeted Legacy Chemical Inventory Process in FY2014.

Integrated Pest Management and Landscaping Practices

An integrated pest management program has been implemented, including sustainable landscaping practices.

Materials Not Cleared for Unrestricted Release

A Distinguishable from Background (DFB) Radioactivity Determination for Waste document was drafted in FY2013 to revise the process for certifying non-radioactive or radioactive waste. In FY2013 the DFB process for accelerator facilities was implemented at most of LLNL's accelerator facilities.

Plans and Projected Performance

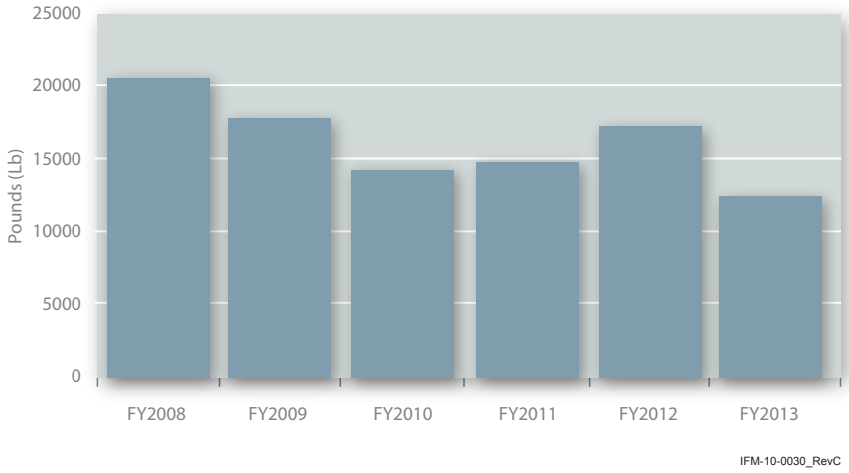
LLNL plans to continue to reduce pollution and increase recycling during FY2014 by:

- Raising awareness through awards, outreach, and Laboratory events
- Continuing to reduce high risk chemical inventory for chemicals that do not have a foreseeable mission use
- Increasing focus on reuse opportunities, especially through the Craigslist-type ReUseIt service now available to all employees

Resources Required

Normal business processes are in place for LLNL to meet this goal.

Figure 2-26. LLNL continues to track priority chemicals regularly.



ReUseIt Program

LLNL launched a new internal Craigslist-like service called ReUseIt to encourage reuse of property and material.

ReUseIt is an online self-service application that facilitates peer-to-peer awareness and communication of available property and material for reuse, which should result in less waste and save on procurement costs. Through ReUseIt employees may add items, browse for items, subscribe to categories to find available items they may want, and add items they may be looking for.

Property and material owners looking to excess items can upload photos and a description of the items for all Lab employees to see. Employees wishing to take possession of an item contacts the owner to arrange for a transfer.

SSPP Goal 6.1
Procurements meet sustainability requirements by including necessary provisions and clauses (sustainable/biobased procurements)

According to LLNL policy, LLNL shall ensure 95% of new contract actions, including task orders under new contracts and existing contracts, require, to the extent possible, the supply or use of products and services that are energy efficient (ENERGY STAR or Federal Energy Management Program (FEMP)-designated), water efficient, bio-based environmentally preferable (including Electronic Product Environmental Assessment Tool (EPEAT)–registered products), non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives; and LLNL shall update affirmative procurement plans (also known as green purchasing plans or environmentally preferable purchasing plans), policies, and programs to ensure that all federally-mandated designated products and services are included in all relevant acquisitions.

Performance Status

LLNL has implemented an Affirmative Procurement Program (APP) which ensures environmentally preferable products and services, recycled content products, and bio-based products are purchased to the maximum extent practicable and are consistent with federal law and related procurement requirements, including EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management, and the DOE Affirmative Procurement Program Guidance. LLNL mandates these program requirements be followed as a part of the Integrated Safety Management System (ISMS) (ES&H Manual Volume III, Part 30: General Environmental Controls, Document 30.1 Managing Environmental Aspects through Pollution Prevention). Sustainable Acquisition or Environmental Affirmative Procurement Program (EPP) clauses requiring subcontractors to utilize environmentally preferable products/services and recovered/recycled content are incorporated into all LLNL General Provisions for purchase orders and subcontracts, except for the Standard Research General Provisions which apply to subcontracts awarded for basic or applied research and/or development work. To assist in complying with these requirements, LLNL continues to implement Procurement Standard Practice 23.5, Environmental Affirmative Procurement and Waste Reduction Requirements. This Standard Practice describes the requirements for acquiring environmentally preferable products and services, products with recycled content, and bio-based products, to promote cost-effective waste reduction in Laboratory subcontracts; it is reviewed annually to ensure all regulatory revisions, updates, and changes have been incorporated.

Sustainable Acquisition Highlights

- EPEAT — 99% of all computers, monitors, imaging equipment, and televisions purchased during FY2013 successfully met the EPEAT criteria.
- LLNL continues to manage sustainable Integrated Contractor Purchasing Team (ICPT) agreements with Fisher Scientific, Grainger Industrial Supply, Holman's Inc., and VWR International Scientific Products. These agreements offer special promotional pricing to the DOE Contractor Complex for environmentally preferable products.
- LLNL continues to award subcontracts to suppliers who offer DOT critical carbon steel drums made out of 15% recycled content material.
- Subcontracts were awarded to suppliers who manufacture metal waste boxes containing 22% recycled content material.
- Computer supplier subcontractors were asked by LLNL to include EPEAT rating description fields on their websites.

- LLNL's Supply Chain Management Department (SCM) continues to require the major suppliers of desktops, laptops, and computer monitors to issue EPEAT reports on a quarterly basis directly to the Sustainability Performance Program Manager and the Contract Administrator. In FY2013, suppliers were also asked to report purchases of EPEAT qualified imaging equipment and televisions. Receiving detailed reports more frequently throughout the fiscal year assists the Environmental Functional Area (EFA) in analyzing and projecting the total EPEAT buys for the year.
- In cooperation with SCM, The Office City now provides a punchout list that identifies recycled content items to its customers. The catalog, which allows LLNL's Technical Release Representatives (TRRs) to see and search for recycled products, went live on December 14, 2012.
- SCM continues to include quarterly reporting requirements in new subcontracts awarded for multi-function devices (copiers/printers).

Plans and Projected Performance

LLNL will continue to support the purchase of environmentally preferable products and services, recycled content products, and bio-based products, to the maximum extent practicable, by ensuring the clauses identified in the General Provisions are included in all purchase orders and subcontracts.

LLNL will also continue to review and update Standard Practice 23.5 in accordance with LLNL's prime contract requirements.

Resources Required

Normal business processes are in place for LLNL to meet this goal. Administrative resources are required to ensure green-related clauses/articles are incorporated into purchase order and subcontract pro-forma documents and to update Standard Practices, as required.

Monitoring and reporting on EPEAT performance and raising overall awareness for sustainable acquisition continues to require EFA resources. As additional categories are added to EPEAT (such as imaging equipment, televisions, and servers) associated increases in tracking and informational outreach will be needed.

SSPP Goal 7.1
All data centers are metered to measure a monthly Power Utilization Effectiveness (PUE) of 100% by FY2015

Performance Status

LLNL continues to follow the strategy of consolidating data centers first, and metering the remaining enduring data centers in buildings 112, 439, 451 and 453 afterwards. LLNL has identified 61 data centers that meet the criteria to be classified as data centers that are to be metered by FY2015. In FY2013, 23 rooms/data centers were consolidated into Building 112.

Plans and Projected Performance

In addition to the data centers that are currently metered, HPC at LLNL has identified that power management is critical to the success of energy management in HPC. The solution has been to implement a centralized system of real time data, from the rack to the entire site, to achieve power management. LLNL is creating an operational, event, and real time data management infrastructure of all external and internal data sources. This requires overcoming challenges: understanding how different types of hardware and software impact power utilization, correlating multiple types of data sources, coordinating with multiple owners of the data, accessing the data, selecting the best interface, comparing and viewing the data on a common platform, and creating various dashboards. Upon completion, this can be leveraged to all LLNL data centers. Details are discussed in the Goal 7.2 narrative in this document.

Metering projects will be developed where data is calculated to allow for improvements.

Resources Required

Based on the enduring data centers, LLNL estimates that a minimum of $3-5M of infrastructure investments is needed in order to meet the requirement to fully meter all enduring data centers at LLNL once consolidation is complete. Until funding can be secured, LLNL will continue to calculate PUE on an annual basis to evaluate energy intensity. LLNL will continue to benchmark and model enduring facilities as was performed at Building 112. This is described in the Goal 7.2 narrative in this document.

SSPP Goal 7.2
Maximum annual weighted average PUE of 1.4 by FY2015

Performance Status

Efforts in reducing energy consumption through server consolidation and server virtualization continued, resulting in a reduced amount of physical hardware needed and its associated energy costs. Since 2009, more than 1,725 servers from 31 facilities have been consolidated into the Building 112 Enterprise Data Center (EDC). LLNL is on target to deploy over 625 virtual machines (VMs) through the vitalization project for the coming year. LLNL also optimized virtualization by establishing an infrastructure-on-demand (IoD) service where on-site personnel can quickly provision server resources on demand. Currently, over 100 VMs have been created using the IoD.

In addition to server virtualization, LLNL has implemented a myCloud file synchronization service which leverages a high-availability, on-site cloud data storage environment for up to 3,000 initial on-site personnel. LLNL estimates a $5M cost reduction to the total cost of ownership when the consolidation and virtualization of approximately 700 servers has been completed.

Other methods of optimizing cooling and improving energy efficiency in the EDC have been investigated. A case study was initiated to analyze the benefits of installing a Cold Aisle Containment (CAC) system, raising the temperature and reducing occupancy lighting, enabling the EDC to reduce the PUE (Figure 2-27).

Fire Marshall-approved CAC systems have been installed in several key LLNL Data Center facilities including the Building 112 EDC colocation, the Building 115 Enterprise Redundant Data Center (ERDC) backup (Figure 2-28), and the Building 256 the network switch facility (Figure 2-29).

LLNL was invited to present the results of the CAC case study—which analyzed the air flow improvements—at the 2013 Building Industry Consulting Services, International BISCI winter conference. Also presenting was the director of DOE's FEMP and the president of the international Alliance to Save Energy (ASE) organization. Topics including energy efficiency in data center solutions, and incentives and policies to meet this challenge, were discussed.

Figure 2-27.
CAC installation in the EDC.

Figure 2-28.
CAC installation in the ERDC.

Figure 2-29.
CAC installation in the network core.

During FY2012, LLNL partnered with DOE's Office of the Chief Information Officer's Green Information Technology (IT) Program and Lawrence Berkeley National Laboratory (LBNL) to create an energy model of existing data center power and cooling parameters to evaluate optimization scenarios. Building 112 was selected to evaluate optimization scenarios, investigate efficiency improvements, improve operational set points, make building improvements, and identify consolidations. The detailed study indicated three areas of focus to improve overall PUE (shown in Figure 2-30). The largest reduction in PUE is realized from the consolidation into Building 112 and increasing the IT load. The payback of this initiative is immediate, while the second two projects require an investment of $2M with a payback of up to eight years.

The balance of LLNL data centers that will not be consolidated into other spaces will be entered into the Data Center Energy Profiler (DC Pro), and data center models will be created to continue to identify the next series of energy-efficient measures. The PUE for the enduring data centers have been calculated and can be referenced in the CEDR.

For LLNL, data centers continued to use ASHRAE TC 9.9 best practices:

- Raised set points of computer room air conditioners (CRACs) and computer room air handlers.
- Sealed and cleaned subfloor area and removed all unneeded obstructions.
- Installed chimneys on all CRAC units to reduce short cycling and improve HVAC efficiency.
- Monitored, adjusted, and balanced HVAC systems to efficiently support information technology devices within acceptable ASHRAE and manufacturing guidelines.
- Used temperature recording devices and infrared imaging to identify and trend HVAC aberrations as well as to confirm remediation.
- Relocated CRACs to improve efficiency.
- Arranged enclosures and racks in hot and cold aisle configuration.
- Used blanking panels in enclosures to reduce short cycling.
- Used cabling grommets to transition and seal cutouts on computer tiles.
- Installed flexible strip curtains or doors at end of aisle to reduce short cycling.
- Used appropriate diffusers or floor tiles.
- Positioned supply and returns to minimize mixing and short cycling.
- Raised the access floor height to increase air volume and static pressure.

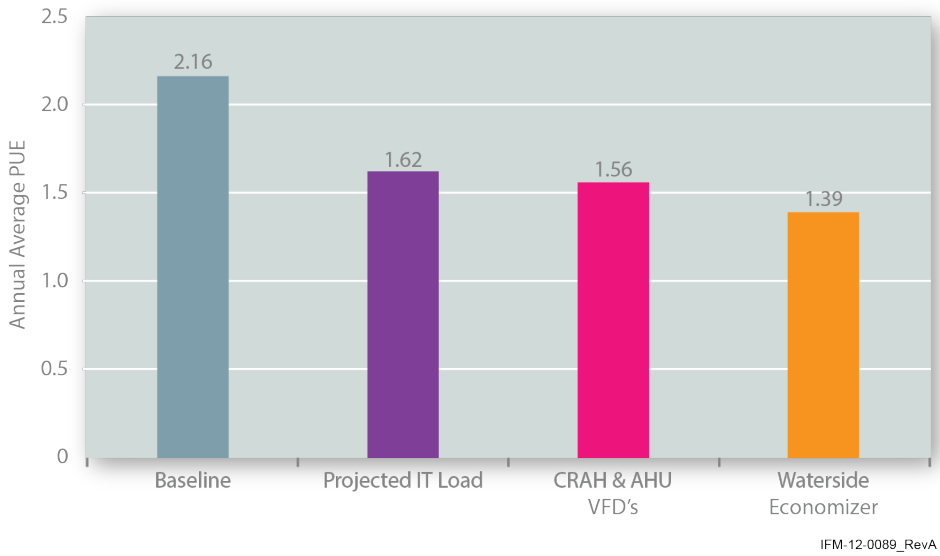


Figure 2-30. PUE reduction when projects from study are implemented.

Advanced energy-efficient computing requires revising the techniques of parallel processing, where multiple processors run at once to solve a problem. Efficient computing necessitates that individual processors work to their optimal efficiency for the task at hand; some would need to be powered down if they were not needed or if their complimentary processors were not yet done with their tasks. This is a departure from the traditional parallel computing perspective.

Plans and Projected Performance

The goal for FY2014-15 is to continue to consolidate in Building 112 to improve LLNL's overall PUE.

All enduring data centers will be benchmarked and modeled to identify efficiencies to provide improved PUE.

LLNL will continue to optimize the efficiency of HPC with the Sequoia platform and the new Vulcan platform. A combination of liquid-cooling and air-cooling techniques will be utilized for installation of Sequoia, with over 90% of the machine being liquid-cooled.

LLNL is heavily involved in the Energy Efficiency HPC Working Group, which participates in many HPC events. One such event is the DOE HPC Power Management Best Practices Workshop where HPC challenges and best practices are identified. The Working Group meets monthly and is comprised of nearly 100 contributing members from the HPC industry, including national laboratories, universities, and vendors. This working group is also working with the Green Top 500 list to develop the required metering to attain standardized energy levels during Linpack runs.

Because HPC computational efficiency is an ongoing contribution to mission excellence, LLNL will continue to research and develop techniques to improve the energy efficiency of the highly energy intensive HPC. LLNL is involved in a number of efforts that not only aim to reduce the energy use of HPC, but promote new standards of quantifying efficiency gains beyond gross energy use. It aims to drive the DOE complex to adopt the approach to use computational efficiency as a viable alternative to measuring advances in HPC sustainable stewardship.

Resources Required

Normal business processes are in place for LLNL to continue server consolidation efforts. Funding has been requested to complete installation of Cold Aisle Containment. Figure 2-31 lists projects that, if funded and implemented, would allow LLNL to meet its PUE goal.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)
Cold Aisle Containment — B112	120	28	4.3	75	45	0
Cold Aisle Containment — B115	45	14	3.2	0	15	30
Cold Aisle Containment — B256	30	7	4.3	0	0	30

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Figure 2-31. Proposed projects in support of SSPP Goal 7.2.

LLNL Supercomputing Recognized at SC13

The Laboratory's green computing and industry outreach programs were recognized with awards from HPCWire at Supercomputing 2013 (SC13) in Denver, Colorado.

The Computation Directorate and Advanced Simulation and Computing (ASC) program's effort to make the Lab's High Performance Computing (HPC) facilities as energy efficient as possible received a Reader's Choice Award, selected by readers of HPCWire. The award was for "Best Application of 'Green Computing' in HPC." Anna Maria Bailey, LLNL HPC facilities manager, and Becky Springmeyer of ASC, received the award from Tom Tabor, publisher of HPCWire.

Fred Steitz received an Editor's Choice Award from HPCWire editors for the Lab's outreach to industry through the High Performance Computing Innovation Center (HPCIC) and special programs such as the HPC4energy Incubator. Streitz, who is HPCIC director, also received the award from Tabor in DOE's SC13 booth. The award was for "Best HPC Collaboration Between Government and Industry."

LLNL computer scientist Dean Williams' climate project was selected for one of the first ever "Enlighten Your Research" collaborations by five of the world's leading national research and education networks. "International Networking for Climate," led by Williams is a project that complements the Earth System Grid Federation (ESGF) effort, which Williams also leads. This work offers researchers the ability to access climate data at replication sites around the world. These sites include the Program for Climate Model Diagnosis and Intercomparison, or PCMDI, at LLNL; the Center for Environmental Data Archival, or CEDA, UK; the German Climate Computing Center, or DKRZ, DE; the National Computational Infrastructure, Australia; and the Royal Netherlands Meteorological Institute, or KNMI, NL. The goal is to improve the end-to-end Internet connections between sites to 4 gigabits per second by 2014.

From left to right: Anna Maria Bailey, HPC facilities manager; Tom Tabor, publisher of HPCWire; Fred Streitz, HPCIC director; and Becky Springmeyer of the Advanced Simulation and Computing program.

The LLNL team won an HPCWire award for "Best Application of 'Green Computing' in HPC" and another for "Best HPC Collaboration Between Government and Industry."

SSPP Goal 7.3
Electronic stewardship —100% of eligible PCs, laptops, and monitors with power management actively implemented and in use by FY2012

Performance Status

LLNL continues to make progress in automating the electronic stewardship of its personal computing environment. Power management is actively managed on all eligible PCs, laptops, and monitors. The Laboratory reduced its power consumption by decommissioning 3,000 active desktop, laptop, and server systems. The result was a 13% reduction in the total number of systems consuming power. An additional 5.5% of existing systems were added to power management through new procurements. All new standard PCs, laptops, and monitors adhere to ENERGY STAR and EPEAT Gold requirements.

Plans and Projected Performance

LLNL will continue its power management on all eligible PCs, laptops, and monitors. As computers are replaced, new systems will continue to be automatically included in the power management program.

Funding Strategy

Figure 2-32 lists projects that, if funded and implemented, would allow LLNL to meet its electronic stewardship goal.

Project	Project Cost ($M)	Annual Savings ($M)	Simple Payback (Yrs)	FY14 ($M)	FY15 ($M)	FY16 ($M)
Macintosh Power Management	0.15	0.013	12	0	0	0

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Figure 2-32. Proposed projects in support of SSPP Goal 7.3.

SSPP Goal 8.1
20% of annual electricity consumption from renewable sources by FY2020 and thereafter (7.5% FY2013)

Performance Status

Due to the low cost of purchased power, installing renewable energy at LLNL has been a challenge. LLNL is a member of the Northern California Sites Electric Power Consortium (the Consortium). The Consortium includes LLNL, Lawrence Berkeley National Laboratory (LBNL), and Stanford Linear Accelerator Center (SLAC). The Consortium currently utilizes two sources of power to meet its annual energy requirements: 1) the Central Valley Project (CVP) Base Resource allocation of hydropower; and 2) wholesale market power purchases. WAPA is the Consortium's procurement agent, and makes any required wholesale purchases on the Consortium's behalf.

The wholesale power rates are considerably less expensive when compared to local public utilities such as PG&E. These low rates have also made renewable energy development incur a longer ROI relative to projects with standard utility rates. The FY2013 requirement that 7.5% of renewable source electricity was met through the purchase of RECs. LLNL purchased 72,304 MWh of RECs in FY2013 and submitted a waiver request in 2008 that justifies substitution of RECs for on-site generated renewable energy.

In FY2011, LLNL completed a Site 300 renewable resource assessment and valuation. The report details the potential for wind and solar photovoltaic (PV) resources at LLNL's Site 300. A renewable resource assessment was completed for LLNL's Site 200 in 2008. In late 2012, DOE/NNSA issued an Opportunity Notice for a solar energy project vendor to design, develop, finance, build, operate and maintain a solar PV system at Site 200. Several proposals were received with the selected vendor proposing an approximately 10-acre 3 MW ground-mounted solar PV installation in the northwest buffer. The rate for purchasing the electricity from the system is competitive, but remains above the current WAPA price. The selected vendor and WAPA are currently finalizing the details of a Power Purchase Agreement (PPA). The current project schedule indicates that construction could begin in FY2014.

LLNL was also awarded a recent grant to balance the use of solar power at the building scale. This project will entail using a solar array at the Livermore Valley Open Campus (LVOC) and coordinating building energy management with a nearby building. This project will not result in any additional renewable credits for the LLNL site, but will aid in the knowledge of how renewable power can be used for individual buildings.

Progress has continued on the Site 300 Wind Power Prediction Project (Figure 2-33). Recent work has focused on an

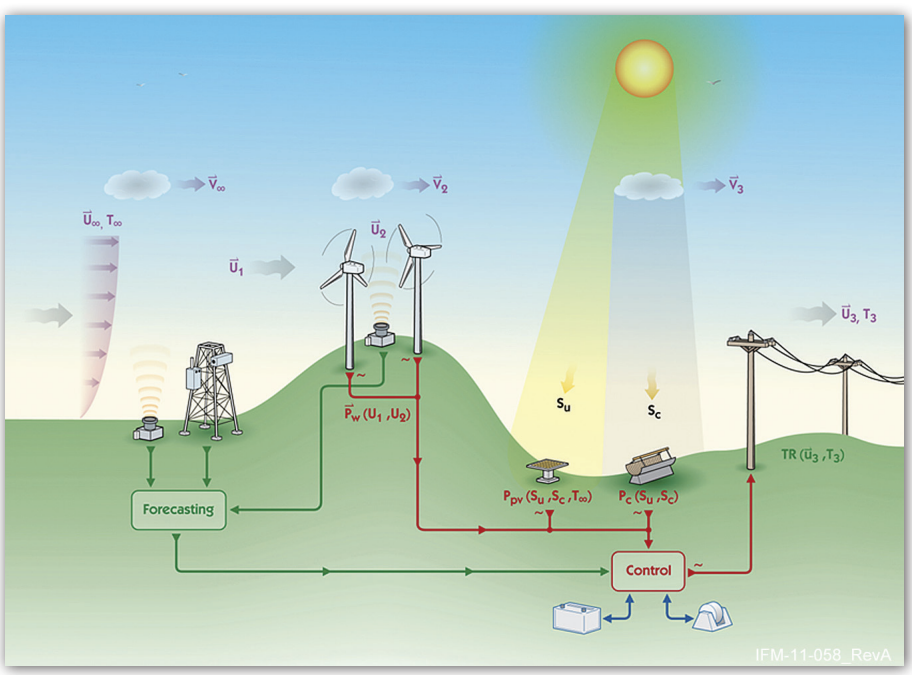


Figure 2-33. Site 300 Wind Power Prediction Project conceptual drawing.

assessment of the layout and costs for a renewable energy research facility at Site 300 which is important for research and development associated with wind and solar energy, energy storage, and how they can integrate into a smartgrid system.

LLNL is currently exploring the use of Site 300 for renewable energy research purposes. The goal of this effort would be to provide a test bed for existing renewable technology (solar and wind), to improve the multi-scale modeling of renewable resource availability and variability using high dimensional models in concert with deployed sensors, and to examine avian interactions with renewable energy systems to reduce fatalities.

LLNL has deployed solar energy at smaller a scale, including a number of pathway and parking lot lights, and environmental sensors. In FY2012, LLNL discussed renewable energy options (including fuel cell purchases) with renewable energy providers, yet the relatively high cost of these projects prohibited their actualization.

Details of the REC purchases can be found in the FY2013 CEDR on the "List of Purchased Renewable Energy" worksheet.

Plans and Projected Performance

For FY2013, LLNL will purchase RECs to comply with the renewable energy requirement. The amount of RECs purchased can decrease substantially once solar power is installed at LLNL. LLNL will continue to support LFO and the solar provider to ensure the new power generation complies with all safety and electrical plans for both sites. LLNL will continue to explore research opportunities for renewable power generation at Site 300; if these projects come to fruition, LLNL will use that power as well. Additionally, the Site 200 renewable energy goals would contribute to DOE's goals.

Even with a 3 MW PV array, LLNL will still need to purchase additional RECs. Renewable energy projects are capital intensive. In general terms, a 6 MW solar array would be required to meet the renewable energy goals for LLNL; this would require an approximate $24M investment. A 6 MW solar array would also greatly contribute to LLNL's energy reduction goals. The high cost of on-site renewable power indicates an ROI that would exceed the projected 20-year useful life of the equipment. When compared to WAPA rates, renewable energy only becomes economically feasible when the producer is a private entity eligible for tax credits, tax exemptions, depreciation, and other assorted incentives. A PPA with a private entity is being pursued for the proposed Site 200 solar PV project and appears to be the best option for renewable energy at LLNL. The private entity would design, install, own, operate, and maintain a "behind the meter" renewable energy project. The additional funds needed to subsidize a PPA for renewable energy purchases would depend on the size, type, and location of renewable energy at LLNL.

Current plans for a new computing facility have incorporated air cooling for its needs, as opposed to using traditional water cooling, and the corresponding energy needed for cooling. The new computing facility will be HPSB compliant. This innovative design will not increase LLNL's water use, and will require less electrical demand than a traditional design.

Solar water heating has not been incorporated into LLNL new buildings plans. Hot water heating is a relatively low energy use, relative to the impact of electricity used for cooling and computation. New building designs that increase the electric efficiency of computation will help off-set LLNL's increasing need for power to support expanding mission.

For the next fiscal year, LLNL will accomplish the following:

- Continue to support the DOE LFO in its pursuit of on-site renewable energy at Site 200.
- Continue exploring scientific opportunities in renewable energy.
- Continue discussions with renewable energy providers on innovative opportunities in renewable energy for LLNL.
- Continue collaboration in the Northern California DOE Laboratory Consortium.

SSPP Goal 2.8
Regional and local planning

Executive Order 13514 instructs federal agencies including DOE to meet the following regional and local planning goals:

- Participate in regional transportation planning, recognition of existing community transportation infrastructure, and incorporation of such efforts into site policy and guidance documents.
- Ensure planning for new federal facilities or new leases includes consideration of sites that are pedestrian friendly, are near existing employment centers, are accessible to public transit, emphasize existing central cities and, in rural communities, existing or planned town centers.
- Identify and analyze impacts from energy usage and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for proposals for new or expanded federal facilities under the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.).
- Coordinate with regional programs for federal, state, tribal, and local ecosystem, watershed, and environmental management.
- Identify regional transportation planning, ecosystem, watershed, and environmental management initiatives affecting sites and opportunities to work with local authorities to align energy policies and siting of renewable energy infrastructure.

Local Planning Coordination

LLNL continues to maintain good relationships with local community planning and government groups, including the cities of Livermore and Tracy, as well as the counties of Alameda, Contra Costa, and San Joaquin. Interactions include frequent meetings with City of Livermore planners to discuss the collaborative R&D initiative LVOC proposal, discussions with water officials in Livermore to discuss wastewater issues, and participation in stakeholder groups to discuss environmental issues. LLNL staff is also assisting the City of Livermore to develop their Climate Action Plan and will share site success in GHG reduction as local best practices.

Transportation

The Laboratory recognizes the existing community transportation infrastructure and works with multiple local and state agencies on transportation planning, providing input on the selection of future Livermore stations served by regional Bay Area Rapid Transit (BART), and promoting public transit commuting ridership. Such collaborative planning allows LLNL to develop anticipated needs of providing appropriate internal means for commuters to connect easily with public transit. The Laboratory's on-site shuttle schedule aligns with the local transit service (Wheels), connecting commute routes to the ACE Train Station, Livermore downtown transit center, and the Dublin BART station.

The bicycle remains a popular seasonal method of commuting due to increasing awareness of personal fitness and energy conservation, and increased housing that has developed close to LLNL. Local bike lanes lead directly onto the Laboratory site; the Bay Area weather and the relatively flat site terrain also contribute to bicycling and walking as major modes of internal travel on-site.

As a major employer in the community, LLNL is committed to promoting energy conservation and supports commuters by providing certain on-site conveniences to those who use alternate modes of transportation rather than the single-occupant vehicle:

- Permitting access for vanpools to route through "Limited" security areas.
- Maintaining a database to facilitate rideshare and vanpool matching.
- Providing preferential parking spaces for vanpool vehicles.
- Offering free bicycle safety helmets to on-site riders and bicycle commuters.
- Providing power charging stations as a pilot program for personal electric vehicles.
- Providing on-site taxi shuttle service.

Plans and Projected Performance

Sustainable site development encompasses an integrated approach to the planning of future on-site facilities and infrastructure, consistent with the LLNL Ten Year Site Plan (TYSP), striving for enhanced site stewardship and integration with the surrounding community. The Laboratory encourages walking and bicycling as a means of travel within the site; long-range site development envisions continuous improvement of a bicycle- and pedestrian-friendly environment.

- Future facilities development will be physically scaled and organized to maximize the potential of walking and bicycling on-site: quick trips on foot typically measure about one quarter mile, while the typical bicycling distance is about one-half mile.
- Sidewalks and landscaped pathways will provide safe and direct travel for pedestrians segregated from vehicle traffic; bicycle travel is accommodated by bike lanes or shared-use pathways wherever feasible.
- LLNL supplies and maintains approximately 600 unassigned bicycles for employees' use on-site. Riders leave bicycles at destinations; bicycles are redistributed daily around the site.
- On-site taxi shuttle stop locations will be planned to be within a quarter mile radius from major on-site destinations.
- LLNL continues to pursue civil improvement projects to expand the site-wide integrated pathway network for pedestrians and bicycles, providing landscaped linkages between major destinations.

A discussed in Goal 4.1, LLNL's approach to landscaping is to strive for a campus-like environment and be responsive to a sustainable design appropriate for the location and function utilizing drought-tolerant and native planting, hardscape, and smart irrigation control systems; the objective is to reduce irrigation water use and optimize plant growth and maintenance efforts. LLNL has converted over 20,000 GSF of turf areas in FY2013 with drought tolerant planting, and expects a 50% reduction in irrigation water use for the converted areas after the new landscaping has been established.

Land use on-site would evolve with opportunities to implement sustainability projects within the Laboratory and Site 300 boundaries, such as the planned 10-acre site for a 3 MW ground-mounted solar array installation at the northwest security buffer of Site 200. Under a collaboration initiative with the Laboratory, academia, private sector and outside agencies on R&D in green transportation, energy and high performance computing, the planned LVOC would foster the creation of over 5,000 jobs and have a fiscal effect of more than $1B in the region over the next five years. With the recent annexation of 1,022 acres east of the Laboratory to the City of Livermore, future urban growth is expected to enhance a sustainable community.

Energy

LLNL supported DOE/NNSA in preparing a Supplement Analysis under the National Environmental Policy Act (NEPA) for the five-year review of the Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations of LLNL. Environmental impacts from ongoing operations and new or modified projects or modifications in site operations were analyzed, as well as cumulative impacts in utilities and energy use.

Renewable Energy

An LFO/LLNL project team is working with the National Renewable Energy Laboratory and Western Area Power Administration on a project to install a 3 MW ground-mounted solar PV system; current project schedule anticipates construction to begin in FY2014. Further details are discussed in Goal 8.1 in this document.

Environmental Planning

Many aspects of site planning at the Laboratory are coordinated with DOE/NNSA's National Environmental Policy Act (NEPA) process and LEED project guidelines. The LLNL Environmental Management Program addresses environmentally sensitive resources, storm water retention, alternate irrigation water sources, and land use provisions to accommodate activities ranging from recreation to recycling of materials.

LLNL participates in the following regional ecosystem/environmental planning projects:

Implementation Committee Member: East Alameda County Conservation Strategy

LLNL participates as a regional/local stakeholder in the implementation of the East Alameda County Conservation Strategy (EACCS). The EACCS provides a framework for long-term habitat protection and endangered species conservation.

Large-Flowered Fiddleneck Restoration

The large-flowered fiddleneck is a federally listed endangered species with an extremely limited distribution (Figure 2-34). Only two native populations of this species are known to occur; one population is located at LLNL's Site 300, and the second is located on nearby private land. Two introduced experimental populations (one at Site 300 and a second on property owned by the East Bay Regional Parks) are also maintained by occasional seed bank enhancement. LLNL participates in regional large-flowered fiddleneck recovery efforts including efforts to maintain the experimental populations and research on the effects of fire frequency on large-flowered fiddleneck abundance.

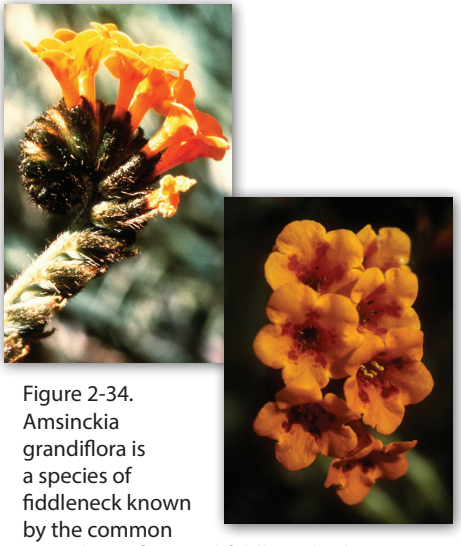


Figure 2-34. Amsinckia grandiflora is a species of fiddleneck known by the common name large-flowered fiddleneck. This wildflower is endemic to California and is considered a critically endangered species on the state and national level. The last remaining native populations are on and near the grasslands at LLNL's Site 300.

SSPP Goal 9
Climate Change

As part of its mission to assist the nation and its partners in energy and environmental security, LLNL seeks to advance science to better understand climate change and its impacts and develop technologies supportive of a carbon-free energy future. LLNL contributes to efforts in climate change adaptation in two ways: advancing climate science, and delivering expert opinion and advice on the impacts of climate change to its different stakeholders.

Advancing Climate Science

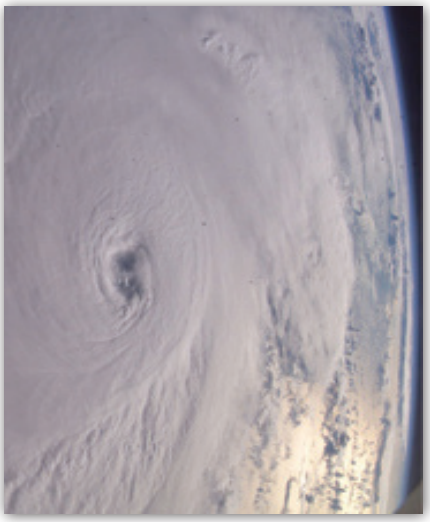
LLNL's Program for Climate Model Diagnosis and Intercomparison (PCMDI) is the cornerstone of the scientific community's climate change research. Since 1989, PCMDI has been leading efforts to develop improved methods and tools for the diagnosis and intercomparison of general circulation models that simulate the global climate. These models of climate change, from collaborators worldwide, are used to determine the potential impacts of climate change on the civilization and to assess the potential impacts of that change. PCMDI enables a non-biased comparison of techniques and model results resulting in a level of rigor in climate modeling that is unsurpassed. As a result of PCMDI's contributions, the Intergovernmental Panel on Climate Change (IPCC), who reports on scientific conclusions from climate change modeling, was awarded the Nobel Prize in 2007.

Stakeholder Guidance on Climate Change Adaptation

LLNL scientists have long been working with stakeholders on efforts to quantify the impacts and risks of climate change to the human and natural environment as well as on the economy and international and domestic security. In addition to working with its federal partners (e.g. the Departments of Defense, Agriculture, Homeland Security, and Intelligence Agencies), LLNL scientists have contributed to climate change adaptation planning efforts by the Department of Energy's Sustainability Performance Office, the City of Livermore, and the San Francisco Bay Area.

Developing Resilience to Climate Change Adaptation for the LLNL Site

There are numerous ways that climate change could impact the LLNL site, directly and indirectly. These include heat waves, wildfires, sea level change, and water resources. The degree to which these impacts affect the Laboratory varies.



The table below summarizes how impacts from climate changes can trigger site-relevant events, the relative degree of those events, and ongoing actions for adapting to those impacts. It should be noted that LLNL climate scientists have reported that forecasts at the local scale can be highly uncertain. In particular, multiple climate and weather forecasts for the San Francisco Bay Area have shown divergent trends in temperature and precipitation forecasts. While the LLNL site may see no change to average local temperature or precipitation, LLNL is prepared for a multitude of climate change impacts in the following ways:

Climate Impact	**Regional Impact**	**Site-relevant events**	**Degree of importance of those events**	**LLNL adaptation to those events**
Heat waves	Increased local temperature	Greater cooling needs in facilities; increased costs and GHGs expended in cooling facilities	Medium	LLNL is working to make its facilities more responsive to temperature changes, and building more efficient facilities that will use less energy in the future.
Heat waves	California-wide strains on the electrical system	Black-outs or brown-outs of local electrical grid	High	LLNL has sufficient electrical backup for the site as part of its electric plan.
Wildfires	Increased risk to Site 300	Reduction of activities at Site 300	Low	Site 300 constantly manages its open space through controlled burns and other approaches.
Sea level change	Increase sea level of San Francisco Bay	Transportation challenges to staff, suppliers, and stakeholders	Low	LLNL works with local transportation organizations to provide alerts and planning assistance to its employees.
Water resources	Drought	Reduced water availability for cooling water. Zone 7 water supply is vulnerable to drought, and recent endangered species rulings in the Sacramento Delta affect the amount of water that can be released to downstream users including Zone 7.	Medium	LLNL is able to access two separate and different water sources: one from the Sierra Nevada, one from a local source. It is unlikely that both sources will be impacted. In addition, LLNL is exploring non-water based cooling techniques for future facility electrical cooling needs.
Water resources	Drought	Reduced water availability for vegetation	Low	LLNL is progressing towards drought-resistant landscaping, and captures rainwater through the Water Conservation Test Bed Project.

Climate Impact	Regional Impact	Site-relevant events	Degree of importance of those events	LLNL adaptation to those events
Water resources	Flood	Site flooding and impacts to local transportation	Medium	LLNL is in constant communication with local and regional planning departments—including water runoff—and long-term planning is a part of the discussions.
Water resources	Water quality	Impacts to Hetch Hetchy water supply. This could be triggered by changes to wildfire runoff at the Hetch Hetchy dam resulting in less pure water, necessitating fewer cycles of water in cooling towers, and greater overall water use.	Low	LLNL has the ability to tap into both Hetch Hetchy and Zone 7 water. In addition, LLNL is piloting using locally pumped water for cooling towers; this will make the site more resilient to this impact.

External Stakeholder Assistance to Climate Change Adaptation

As part of its mission to assist the nation and its partners in energy and environmental security, LLNL contributes to efforts in climate change adaptation in two ways, in advancing climate science, and in delivering expert opinion and advice on the impacts of climate change to its different stakeholders.

Consolidated Energy Data Report (CEDR)

1.1 CEDR Content

1.2 Performance Summary

2.1 Energy Management Data Report (Funds, Meters, Training)

2.2 Sustainable Acquisition

3.1 Facilities Utility/Fuel Consumption and Cost (Energy & Water)

3.2a Operating On-Site Renewable Energy Systems

3.2b Purchased Renewable Energy

3.3 Conservation and Renewable Energy Measures

3.4 Building Inventory Changes

4.1 Source Energy Savings Credit

5.1 Data Centers

5.2 Electronic Stewardship — Acquisition and Disposition

5.3 Electronic Stewardship — Operations

6.1 Fugitive Emissions: Mixed Refrigerants

6.2 Fugitive Emissions: Fluorinated Gases and Others

6.3 Industrial Process Emissions by Process

7.1a Fugitive Emissions: On-Site Wastewater Treatment

7.1b Contracted Wastewater Treatment

8.1 Business Air Travel

8.2 Business Ground Travel

8.3 Employee Commuting

9.1a Fugitive Emissions: On-Site Landfills & Municipal Solid Waste Facilities

9.1b Fugitive Emissions: Off-Site Landfills & Municipal Solid Waste Facilities

9.1c Diversion of Municipal Solid Waste & Construction & Demolition Debris

10 Fleet Fuel

11 Covered Facilities

CEDR Content

The Consolidated Energy Data Report (CEDR) consists of 27 worksheets that should be completed by each site, as applicable, and included as part each site's SSP in a MS Excel electronic format. The CEDR is due to the SPO no later than December 6th.

Worksheet		Overview	Action
1.1	Content	Stand-alone overview of the CEDR tabs.	None.
1.2	Performance Summary	Summary table of goals performance.	None.
1.3	Factors and Drop-down Keys	Reference tab containing all factors and drop-down menus information for all tabs.	None.
2.1	Funds, Meters, Training	Collects information on energy and water spending, and metering status.	If applicable, complete cells with blue text.
2.2	Sustainable Acquisition	Collects information on review of relevant contracts for sustainable acquisition requirements	Review pre-populated historical data and update with FY 2013 data.
3.1	Energy & Water	Collects quarterly consumption and associated cost information for facilities, non-fleet vehicles and equipment, and fully serviced leases (voluntary) for each fiscal year since FY 2003. Do not report on-site generated and purchased renewable energy or on-site generated non-renewable energy in this tab. Conventional hydropower should be reported in this tab but separate from regular electricity for correct GHG and EUI accounting; do not report conventional hydropower in the renewable tabs.	Review pre-populated historical data and update with FY 2013 data.
3.2a	Operating On-Site Renewables	Houses the list of active renewable energy systems at DOE sites to track progress towards renewable energy requirements in EPAct2005 and DOE O 436.1. Also used towards developing the site's GHG inventory.	Review pre-populated data and update as necessary.
3.2b	Purchased Renewables	Collects renewable energy purchases to track progress towards renewable energy requirements in EPAct 2005 and DOE O 436.1. Also used towards developing the site's GHG inventory.	Review pre-populated historical data and update with FY 2013 data.
3.3	Conservation & RE Measures	Tracks planned energy and water conservation measures, in addition to future renewable energy systems. Also used to project future energy/water consumption along with performance towards goals.	Review pre-populated data and update as necessary.
3.4	Bldg Inventory Changes	Tracks demolition and new construction projects along with construction requirements for meeting HPSB, EPAct 2005 30 percent better than ASHRAE, and stormwater design. Also used to project future energy/water consumption. Note some of the information may be captured in the new FIMS module, please ensure consistency.	Review pre-populated data and update as necessary.
4.1	Source Energy Savings Credit	Part of the Annual Energy Report to adjust site energy use accounting from projects — especially combined heat and power — that would change the accounting of site vs. source energy.	Complete worksheet, if applicable.
5.1	Data Centers	Inventory of DOE data centers along with basic energy management metrics.	Complete worksheet, if not using DOEGRIT.
5.2	Electronics Acq&Disp	Collects data on electronic acquisition (i.e. EPEAT, FEMP-Designated) and sound electronics disposition	Review pre-populated historical data and update with FY 2013 data.
5.3	Electronics O&M	Collects data on power management for computers and monitors, as well as duplex printing utilization for printers and multi-function devices.	Review pre-populated historical data and update with FY 2013 data.
6.1	Mixed Refrigerants	Collects and calculates fugitive emission data for refrigerants and fluorinated gases.	Review pre-populated historical data and update with FY 2013 data.
6.2	Fugitive F-gases	Collects and calculates fugitive emission data for fluorinated gases and other fugitive emissions.	Review pre-populated historical data and update with FY 2013 data.
6.3	Industrial Process	Collects and calculates GHG emission data for industrial process by process.	Review pre-populated historical data and update with FY 2013 data.
7.1a	On-Site Wastewater	Collects and calculates fugitive emissions data for on-site wastewater treatment.	Review pre-populated historical data and update with FY 2013 data.
7.1b	Contr. Wastewater	Collects and calculates GHG emissions resulting from contracted off-site wastewater treatment, excluding electricity.	Review pre-populated historical data and update with FY 2013 data.
8.1	Air Bus Travel	Collects and calculates emissions for prime contractor employee business air travel.	Review pre-populated historical data and update with FY 2013 data.
8.2	Ground Bus Travel	Collects and calculates emissions for prime contractor employee business ground travel.	Review pre-populated historical data and update with FY 2013 data.
8.3	Commuter Travel	Collects and calculates emissions for prime contractor employee commuting.	Review pre-populated historical data and update with FY 2013 data.
9.1a	On-Site Landfill MSW	Calculates emissions for on-site landfill and feeds to 9.1c	Review pre-populated historical data and update with FY 2013 data.
9.1b	Off-Site Landfill MSW	Calculates emissions for contracted/off-site municipal solid waste disposal and feeds to 9.1c	Review pre-populated historical data and update with FY 2013 data.
9.1c	MSW & C&D Diversion	Calculates MSW and construction and demolition diversion rates	Review pre-populated data and update as necessary.
10	Fleet Fuel (Optional)	Calculates emissions for fleet fuel consumption based on FAST data.	Optional - Download and paste FAST data.
11	Covered Facilities	List of covered facilities with anticipated evaluation dates and type/level.	Select covered facilities and complete associated data columns.

Performance Summary

The table below summarized performance for several sustainability goals based on information reported in this workbook. All tabs must be fully completed to populate this table for FY 2013 goal performance! Performance for goals 1.1, 3.1, and 3.2 will not be complete for 2013 if Tab 10 Fleet Fuel (Optional) is not entered and "Current FY" is chosen in cell F6 below. Tab 10 remains optional, and will be filled in by SPO following the close of FAST to complete the DOE GHG Inventory.

Note: 2013 performance is not considered final until DOE's GHG Inventory is approved by FEMP.

If Tab 10 Fleet Fuel (Optional) has been updated with FY 2013 data, select "Current FY" in cell F6 to have the performance estimates based on latest data, otherwise leave as is.

Last FY

SSPP Goal #	DOE Goal	Baseline	FY 2012	FY 2013	Performance Status (FY 2013)
1.1	28% Scope 1 & 2 GHG reduction by FY 2020 from a FY 2008 baseline	193,414.6	116,661.8	121,660.8	-37.1%
1.2*	13% Scope 3 GHG reduction by FY 2020 from a FY 2008 baseline	45,994.1	37,921.4	37,512.0	-18.4%
2.1	30% energy intensity reduction by FY 2015 from a FY 2003 baseline *(Note: Estimates without REC credit)*	234,800	198,493	200,277	-14.7%
	Goal Energy (10^6 Btu)	1,467,727	1,235,645	1,245,972	
	Goal Square Footage (x1,000)	6,251	6,225	6,221	
2.3a	Individual buildings or processes metering for 90% of electricity (by October 1, 2012)			90.0%	90.0%
2.3b	Individual buildings or processes metering for 90% of natural gas (by October 1, 2015)			60.0%	60.0%
2.3c	Individual buildings or processes metering for 90% of steam (by October 1, 2015)			0.0%	0.0%
2.3d	Individual buildings or processes metering for 90% of chilled water (by October 1, 2015)			0.0%	0.0%
3.1	10% annual increase in fleet alternative fuel consumption by FY 2015 relative to a FY 2005 baseline	3,160	58,531	58,531	1752.2%
3.2	2% annual reduction in fleet petroleum consumption by FY 2020 relative to a FY 2005 baseline *(Note: Estimates without biodiesel credit)*	355,266	117,884	117,884	-66.8%
4.1	26% water intensity reduction by FY 2020 from a FY 2007 baseline	35.8	34.1	34.6	-3.4%
	Potable Water Consumption (10^6 Gal)	255	241	244	
	Total Gross Square Footage (x1,000)	7,104	7,052	7,042	
4.2	20% water consumption reduction of industrial, landscaping, and agricultural (ILA) water by FY 2020 from a FY 2010 baseline	0	0	0	#DIV/0!
5.1	Divert at least 50% of non-hazardous solid waste, excluding construction and demolition debris, by FY 2015		69.6%	73.3%	73.3%

SSPP Goal #	DOE Goal	Baseline	FY 2012	FY 2013	Performance Status (FY 2013)
5.2	Divert at least 50% of construction and demolition materials and debris by FY 2015		57.4%	75.2%	75.2%
6.1	Procurements meet requirements by including necessary provisions and clauses (Sustainable Procurements / Biobased Procurements)		100.0%	100.0%	100.0%
7.3	100% of eligible PCs, laptops, and monitors with power management actively implemented and in use by FY 2012		100.0%	100.0%	100.0%
8	20% of annual electricity consumption from renewable sources by FY 2020 and thereafter (5% FY 2010 – 2012, 7.5% 2013)		16.2%	16.8%	16.8%
	Renewable Electricity Usage (MWh)		66,215	72,343	
	Total Electricity Usage (MWh)		408,050	429,546	

* Sites which report Purchased Renewable Energy may notice minor discrepencies in Goal 1.2 Scope 3 GHGs compared to previously distributed scorecards. SPO is working with FEMP to resolve these discrepencies.

Energy Management Data Report

Requirement(s): See tables

Instructions: If applicable, complete cells with blue text and highlight the cell. The information requested is for completing DOE's Annual Energy Report.

Source: Site/Lab

ENERGY EFFICIENCY IMPROVEMENTS AND FUNDING

1-1. E.O. 13514/OMB Circular A-11 Direct Agency Obligations

	FY 2013		Projected FY 2014		Projected FY 2015	
		(Thou. $)		(Thou. $)		(Thou. $)
Direct obligations for facility energy efficiency improvements, including facility surveys/audits		$0.0		$0.0		$0.0
Estimated annual energy savings anticipated from obligations (Million BTU)	0.0	$0.0	0.0	$0.0	0.0	$0.0
Estimated annual water savings anticipated from obligations (Thousands Gal)	0.0	$0.0	0.0	$0.0	0.0	$0.0

1-2. E.O. 13514/OMB Circular A-11 Awarded Energy Savings Performance Contracts (ESPCs)

	Annual savings (10^6 BTU)	(Number/Thou. $)
Number of ESPC Task/Delivery Orders awarded in fiscal year & annual energy (Million BTU) savings	0.0	0.0
Investment value of ESPC Task/Delivery Orders awarded in fiscal year		$0.0
Amount privately financed under ESPC Task/Delivery Orders awarded in fiscal year		$0.0
Cumulative guaranteed cost savings of ESPCs awarded in fiscal year relative to the baseline spending		$0.0
Total contract award value of ESPCs awarded in fiscal year (sum of contractor payments for debt repayment, M&V, and other negotiated performance period services)		$0.0
Total payments made to all ESPC contractors in fiscal year		$0.0

1-3. E.O. 13514/OMB Circular A-11 Awarded Utility Energy Services Contracts (UESCs)

	Annual savings (10^6 BTU)	(Number/Thou. $)
Number of UESC Task/Delivery Orders awarded in fiscal year & annual energy (Million BTU) savings	0.0	0.0
Investment value of UESC Task/Delivery Orders awarded in fiscal year		$0.0
Amount privately financed under UESC Task/Delivery Orders awarded in fiscal year		$0.0
Cumulative cost savings of UESCs awarded in fiscal year relative to the baseline spending		$0.0
Total contract award value of UESCs awarded in fiscal year (sum of payments for debt repayment and other negotiated performance period services)		$0.0
Total payments made to all UESC contractors in fiscal year		$0.0

1-4. EPAct 1992 Training

	(Number)	(Thou. $)
Number of personnel trained in FY 2013/Expenditure	0	$0.0

Energy Management Data Report

Requirement(s): See tables

Instructions: If applicable, complete cells with blue text and highlight the cell. The information requested is for completing DOE's Annual Energy Report.

Source: Site/Lab

1-5a. EPAct 2005 Metering Of Electricity Use

(Note: If a building has an advanced and a standard meter, only account for the advanced meter. If a building has multiple meters, ensure the utility metered is accounted/reported only once)

	# of "Appropriate " Buildings Per EPAct 2005	Standard Meters			Advanced Meters			Total		Total % of Electricity Metered
Fiscal Year		# of Buildings with Standard Meters	Estimated Amount of Purchased Electricity Metered (kWh/Yr)	Estimated Amount of On-Site Generate Electricity Metered (kWh/Yr)	# of Buildings with Advanced Meters	Estimated Amount of Purchased Electricity Metered (kWh/Yr)	Estimated Amount of On-Site Generate Electricity Metered (kWh/Yr)	# of Appropriate Buildings with Dedicated Meters	Cumulative % of "Appropriate" Buildings Metered	
2013 Report	143	27	9,960,373	0	116	369,782,634	0	143.0	100.0%	90.0%
2014 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2015 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2016 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%

1-5b. EISA 2007 Metering Of Natural Gas Use

(Note: If a building has an advanced and a standard meter, only account for the advanced meter. If a building has multip

	# of "Appropriate " Buildings Per EPAct 2005	Standard Meters			Advanced Meters			Total		Total % of Natural Gas Metered
Fiscal Year		# of Buildings with Standard Meters	Estimated Amount of Purchased Natural Gas Metered (CF/Yr)	Estimated Amount of On-Site Generate Natural Gas Metered (CF/Yr)	# of Buildings with Advanced Meters	Estimated Amount of Purchased Natural Gas Metered (CF/Yr)	Estimated Amount of On-Site Generate Natural Gas Metered (CF/Yr)	# of Appropriate Buildings with Dedicated Meters	Cumulative % of "Appropriate" Buildings Metered	
2013 Report	28	14	87,119,041	0	14	167,761,000	0	28.0	100.0%	60.0%
2014 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2015 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2016 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%

1-5c. EISA 2007 Metering Of Steam Use N/A

(Note: If a building has an advanced and a standard meter, only account for the advanced meter. If a building has multiple meters, ensure the utility metered is accounted/reported only once)

	# of "Appropriate " Buildings Per EPAct 2005	Standard Meters			Advanced Meters			Total		Total % of Steam Metered
Fiscal Year		# of Buildings with Standard Meters	Estimated Amount of Purchased Steam Metered (Btu/Yr)	Estimated Amount of On-Site Generate Steam Metered (Btu/Yr)	# of Buildings with Advanced Meters	Estimated Amount of Purchased Steam Metered (Btu/Yr)	Estimated Amount of On-Site Generate Steam Metered (Btu/Yr)	# of Appropriate Buildings with Dedicated Meters	Cumulative % of "Appropriate" Buildings Metered	
2013 Report	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2014 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2015 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2016 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%

1-5d. DOE O 436.1 & SSPP Metering Of Chilled Water Use N/A

(Note: If a building has an advanced and a standard meter, only account for the advanced meter. If a building has multiple meters, ensure the utility metered is accounted/reported only once)

	# of "Appropriate " Buildings Per EPAct 2005	Standard Meters			Advanced Meters			Total		Total % of Chilled Water Metered
Fiscal Year		# of Buildings with Standard Meters	Estimated Amount of Purchased Chilled Water Metered (Btu/Yr)	Estimated Amount of On-Site Generate Chilled Water Metered (Btu/Yr)	# of Buildings with Advanced Meters	Estimated Amount of Purchased Chilled Water Metered (Btu/Yr)	Estimated Amount of On-Site Generate Chilled Water Metered (Btu/Yr)	# of Appropriate Buildings with Dedicated Meters	Cumulative % of "Appropriate" Buildings Metered	
2013 Report	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2014 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2015 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2016 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%

1-5e. Water Management Best Practice Metering Of Water Use

(Note: If a building has an advanced and a standard meter, only account for the advanced meter. If a building has multiple meters, ensure the utility metered is accounted/reported only once)

	# of "Appropriate " Buildings Per EPAct 2005	Standard Meters			Advanced Meters			Total		Total % of Water Metered
Fiscal Year		# of Buildings with Standard Meters	Estimated Amount of Purchased Water Metered (Gal/Yr)	Estimated Amount of On-Site Captured Water Metered (Gal/Yr)	# of Buildings with Advanced Meters	Estimated Amount of Purchased Water Metered (Gal/Yr)	Estimated Amount of On-Site Captured Water Metered (Gal/Yr)	# of Appropriate Buildings with Dedicated Meters	Cumulative % of "Appropriate" Buildings Metered	
2013 Report	25	13	107,786,608	0	12	14,659,876	0	25.0	100.0%	50.0%
2014 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2015 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%
2016 Planned	0	0	0	0	0	0	0	0.0	#DIV/0!	0.0%

Sustainable Acquisition - Contract Review

Requirement(s): E.O. 13514, E.O. 13423, EPAct 2005, EISA 2007

Instructions: Please enter FY 2013 data related to review of contracts for sustainable acquisition clauses. FY 2012 data from PPTRS has been included as an example of the updated format. If available, please enter the methodology used to determine the entered data.

Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Methodology

Contract Review

PSO	Site #	Site	FY	Acquisition Category	Number of New Contract Actions	Number Reviewed	Number without Opportunity for any Sustainable Acquisition	Number Meeting All Sustainable Acquisition Requirements	Percentage of Relevant Contracts Meeting All Requirements	Additional Information	SPO Comments
NNSA	112	LLNL	2012	Construction	143	143	0	143	100.0%	Generated a LINCS report that identified all of the subcontract actions that occurred in FY12. New awards were segregated from the Modifications that were issued to existing subcontracts. The new award actions were reviewed to identify new subcontracts issued for construction and custodial activities. The General Provisions for these subcontracts were reviewed to see if they contain the sustainable acquisition clause. If so, the action was identified as a new contract action meeting sustainable acquisition requirements. Modified contracts were also reviewed and all meet sustainable acquisition requirements.	From PPTRS
NNSA	112	LLNL	2012	Custodial	0	0	0	0	--	Generated a LINCS report that identified all of the subcontract actions that occurred in FY12. New awards were segregated from the Modifications that were issued to existing subcontracts. The new award actions were reviewed to identify new subcontracts issued for construction and custodial activities. The General Provisions for these subcontracts were reviewed to see if they contain the sustainable acquisition clause. If so, the action was identified as a new contract action meeting sustainable acquisition requirements. Modified contracts were also reviewed to ensure they contain the sustainable acquisition clause. No new custodial awards or modifications were issued in FY12.	From PPTRS
NNSA	112	LLNL	2012	Other (Optional)	0	0	0	0	--		From PPTRS
NNSA	112	LLNL	2013	Construction	34	34	0	34	100.0%	The new award actions were reviewed to identify new subcontracts issued for construction. The General Provisions for these subcontracts were reviewed to see if they contain the sustainable acquisition clause. If so, the action was identified as a new contract action meeting sustainable acquisition requirements.	
NNSA	112	LLNL	2013	Custodial	0	0	0	0	--		
NNSA	112	LLNL	2013	Other (Optional)					--		

Facilities Utility/Fuel Consumption and Cost

Requirement(s): NECPA, EPAct 2005, EISA 2007, DOE O 436.1, E.O. 13514
Instructions: Provide FY 2013 quarterly consumption and associated cost information for facilities, non-fleet vehicles and equipment, and fully serviced leases (voluntary in FY 2013) by utility/fuel type and address SPO requests. Conventional hydropower should be reported in this tab but separate from regular electricity for correct GHG and EUI accounting; do not report conventional hydropower in the renewable tabs. On-site non-renewable energy should not be reported in this tab. On-site generated and purchased renewable energy should be reported in tabs 3.2a and 3.2b, respectively. FY 2013 square footage should be estimated based on FIMS reports 008, 047, and 063. The SPO will update estimated square footage, if need be, based on the FIMS snapshot in mid-November. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column. For additional guidance see comments in row 9 of each column and the CEDR Technical Support Document.
Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Utility/Fuel Consumption and Cost													Notes		Estimated GHG Emissions			
PSO	Site #	Site	Category	Subcategory	Usage Unit	FY	QTR	Usage Amount	BTU x 10^6	Cost (1,000 $)	$/Unit	Main Site Zip Code	Additional Information	SPO Notes	Scope	Anthropogenic $MtCO_2e$	Biogenic $MtCO_2e$	Scope 3 - T&D Loss, $MtCO_2e$
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2003	1	70,057.000	239,034.484	$2,523.420	$ 0.04	94550			2	23,110.331	0.000	1,522.301
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2003	1	4.430	611.340	$3.721	$ 0.84	94550			1	45.367	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2003	1	120,043.403	123,404.618	$565.652	$ 0.00	94550			1	6,549.330	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2003	1	7,398.390	25,243.307	$266.486	$ 0.04	94550			2	2,440.573	0.000	160.763
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2003	1	386.086	396.896	$1.819	$ 0.00	94550			1	21.064	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2003	2	70,200.000	239,522.400	$2,218.059	$ 0.03	94550			2	23,157.504	0.000	1,525.408
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2003	2	6.019	830.622	$7.361	$ 1.22	94550			1	61.640	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2003	2	136,098.000	139,908.744	$882.715	$ 0.01	94550			1	7,425.237	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2003	2	6,563.918	22,396.088	$207.395	$ 0.03	94550			2	2,165.299	0.000	142.630
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2003	2	435.236	447.423	$2.823	$ 0.01	94550			1	23.746	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2003	3	74,884.000	255,504.208	$2,879.837	$ 0.04	94550			2	24,702.657	0.000	1,627.189
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2003	3	1.958	270.204	$1.851	$ 0.95	94550			1	20.052	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2003	3	110,309.000	113,397.652	$646.862	$ 0.01	94550			1	6,018.240	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2003	3	5,576.671	19,027.601	$214.464	$ 0.04	94550			2	1,839.626	0.000	121.178
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2003	3	377.889	388.470	$2.216	$ 0.01	94550			1	20.617	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2003	4	80,391.000	274,294.092	$3,293.201	$ 0.04	94550			2	26,519.300	0.000	1,746.853
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2003	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2003	4	78,744.000	80,948.832	449.200	$ 0.01	94550			1	4,296.116	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2003	4	6,250.969	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2003	4	6,851.293	23,376.612	280.662	$ 0.04	94550			2	2,260.097	0.000	148.875
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2003	4	240.343	247.073	1.371	$ 0.01	94550			1	13.113	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2003	4	772.946	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2004	1	80,172.000	273,546.864	3,026.057	$ 0.04	94550			2	26,447.057	0.000	1,742.094
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2004	1	2.424	334.512	3.030	$ 1.25	94550			1	24.824	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2004	1	1.340	123.280	1.901	$ 1.42	94550			1	7.795	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2004	1	127,970.000	131,553.160	676.321	$ 0.01	94550			1	6,981.789	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2004	1	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2004	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2004	2	80,956.000	276,221.872	2,947.645	$ 0.04	94550			2	26,705.682	0.000	1,759.130
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2004	2	3.594	495.972	4.258	$ 1.18	94550			1	36.806	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2004	2	2.070	190.440	3.121	$ 1.51	94550			1	12.041	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2004	2	145,995.000	150,082.860	892.188	$ 0.01	94550			1	7,965.198	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2004	2	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2004	2	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2004	3	86,284.000	294,401.008	3,031.647	$ 0.04	94550			2	28,463.277	0.000	1,874.905
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2004	3	1.495	206.310	2.262	$ 1.51	94550			1	15.310	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2004	3	1.490	137.080	1.916	$ 1.29	94550			1	8.667	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2004	3	106,817.000	109,807.876	635.695	$ 0.01	94550			1	5,827.724	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2004	3	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2004	3	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2004	4	92,078.000	314,170.136	3,491.934	$ 0.04	94550			2	30,374.596	0.000	2,000.805
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2004	4	0.142	19.596	0.220	$ 1.55	94550			1	1.454	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2004	4	0.180	16.560	0.270	$ 1.50	94550			1	1.047	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2004	4	85,274.000	87,661.672	552.533	$ 0.01	94550			1	4,652.380	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2004	4	7,235.023	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2004	4	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2004	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2004	4	0.000	0.000		NA	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2005	1	84,641.000	288,795.092	3,143.510	$ 0.04	94550			2	27,921.286	0.000	1,839.203

Utility/Fuel Consumption and Cost													Notes		Estimated GHG Emissions			
PSO	Site #	Site	Category	Subcategory	Usage Unit	FY	QTR	Usage Amount	BTU x 10^6	Cost (1,000 $)	$/Unit	Main Site Zip Code	Additional Information	SPO Notes	Scope	Anthropogenic $MtCO_2e$	Biogenic $MtCO_2e$	Scope 3 - T&D Loss, $MtCO_2e$
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2005	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2005	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2005	1	140,865.000	144,809.220	1,035.218	$ 0.01	94550			1	7,685.315	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2005	1	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2005	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2005	2	83,237.000	284,004.644	3,564.238	$ 0.04	94550			2	27,458.136	0.000	1,808.695
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2005	2	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2005	2	2.260	207.920	3.865	$ 1.71	94550			1	13.147	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2005	2	143,486.000	147,503.608	971.960	$ 0.01	94550			1	7,828.311	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2005	2	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2005	2	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2005	3	88,286.000	301,231.832	4,869.963	$ 0.06	94550			2	29,123.695	0.000	1,918.407
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2005	3	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2005	3	1.610	148.120	2.661	$ 1.65	94550			1	9.365	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2005	3	111,807.000	114,937.596	789.697	$ 0.01	94550			1	6,099.968	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2005	3	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2005	3	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2005	4	99,968.000	341,090.816	5,641.050	$ 0.06	94550			2	32,977.341	0.000	2,172.250
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2005	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2005	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2005	4	83,156.000	85,484.368	665.950	$ 0.01	94550			1	4,536.826	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2005	4	7,266.700	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2005	4	0.000	0.000	0.000	NA	94550			2	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2005	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2005	4	0.000	0.000		NA	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2006	1	81,580.380	278,352.257	4,553.038	$ 0.06	94550			2	26,911.652	0.000	1,772.697
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2006	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2006	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2006	1	120,273.700	123,641.364	1,337.570	$ 0.01	94550			1	6,561.894	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2006	1	16,572.390	56,544.995	922.088	$ 0.06	94550			2	5,466.883	0.000	360.109
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2006	1	1,740.277	1,789.005	19.354	$ 0.01	94550			1	94.946	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2006	2	76,163.030	259,868.258	4,250.560	$ 0.06	94550			2	25,124.582	0.000	1,654.981
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2006	2	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2006	2	3.290	302.680	5.513	$ 1.68	94550			1	19.138	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2006	2	144,022.100	148,054.719	1,247.555	$ 0.01	94550			1	7,857.560	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2006	2	19,348.030	66,015.478	1,076.524	$ 0.06	94550			2	6,382.508	0.000	420.422
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2006	2	2,083.898	2,142.247	18.051	$ 0.01	94550			1	113.693	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2006	3	80,130.410	273,404.959	2,279.348	$ 0.03	94550			2	26,433.337	0.000	1,741.190
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2006	3	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2006	3	1.420	130.640	2.175	$ 1.53	94550			1	8.260	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2006	3	101,908.500	104,761.938	677.902	$ 0.01	94550			1	5,559.926	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2006	3	19,530.130	66,636.804	553.820	$ 0.03	94550			2	6,442.579	0.000	424.379
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2006	3	1,474.535	1,515.822	9.808	$ 0.01	94550			1	80.448	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2006	4	83,118.300	283,599.640	4,631.270	$ 0.06	94550			2	27,418.979	0.000	1,806.116
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2006	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2006	4	0.400	36.800	0.627	$ 1.57	94550			1	2.327	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2006	4	87,861.380	90,321.499	599.458	$ 0.01	94550			1	4,793.543	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2006	4	6,994.439	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2006	4	20,317.300	69,322.628	1,046.544	$ 0.05	94550			2	6,702.250	0.000	441.484
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2006	4	1,271.000	1,306.588	8.630	$ 0.01	94550			1	69.343	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2006	4	241.197	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2007	1	69,315.250	236,503.633	3,592.310	$ 0.05	94550			2	22,865.643	0.000	1,506.183
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2007	1	1.411	129.812	2.288	$ 1.62	94550			1	8.208	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2007	1	133,086.500	136,812.922	947.870	$ 0.01	94550			1	7,260.935	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2007	1	27,825.350	94,940.094	1,465.277	$ 0.05	94550			2	9,178.998	0.000	604.630
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2007	1	3,964.107	4,075.102	28.233	$ 0.01	94550			1	216.274	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2007	1	51.280	0.000	167.746	$ 3.27	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2007	2	70,677.450	241,151.459	4,835.460	$ 0.07	94550			2	23,315.005	0.000	1,535.783

Utility/Fuel Consumption and Cost													Notes		Estimated GHG Emissions			
PSO	Site #	Site	Category	Subcategory	Usage Unit	FY	QTR	Usage Amount	BTU x 10^6	Cost (1,000 $)	$/Unit	Main Site Zip Code	Additional Information	SPO Notes	Scope	Anthropogenic $MtCO_2e$	Biogenic $MtCO_2e$	Scope 3 - T&D Loss, $MtCO_2e$
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2007	2	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2007	2	145,213.200	149,279.170	1,100.130	$ 0.01	94550			1	7,922.544	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2007	2	25,890.950	88,339.921	1,363.411	$ 0.05	94550			2	8,540.880	0.000	562.596
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2007	2	2,627.492	2,701.062	19.906	$ 0.01	94550			1	143.351	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2007	2	22.939	0.000	130.299	$ 5.68	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2007	3	71,115.480	242,646.018	4,798.430	$ 0.07	94550			2	23,459.501	0.000	1,545.301
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2007	3	3.366	309.672	4.987	$ 1.48	94550			1	19.580	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2007	3	106,221.600	109,195.805	832.740	$ 0.01	94550			1	5,795.240	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2007	3	28,423.280	96,980.231	1,496.763	$ 0.05	94550			2	9,376.242	0.000	617.622
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2007	3	2,633.252	2,706.983	20.644	$ 0.01	94550			1	143.665	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2007	3	78.904	0.000	216.680	$ 2.75	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2007	4	76,978.930	262,652.109	6,061.950	$ 0.08	94550			2	25,393.730	0.000	1,672.710
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2007	4	0.514	47.288	0.822	$ 1.60	94550			1	2.990	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2007	4	83,016.800	85,341.270	546.430	$ 0.01	94550			1	4,529.232	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2007	4	6,060.980	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2007	4	30,232.300	103,152.608	1,592.026	$ 0.05	94550			2	9,973.000	0.000	656.931
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2007	4	2,718.885	2,795.014	17.896	$ 0.01	94550			1	148.337	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2007	4	1,043.234	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2007	4	101.385	0.000	350.188	$ 3.45	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2008	1	66,285.000	226,164.420	3,868.000	$ 0.06	94550			2	21,866.028	0.000	1,440.337
NNSA	112	LLNL	Buildings	Fuel Oil	1,000 Gallons	2008	1	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2008	1	0.588	54.096	0.764	$ 1.30	94550			1	3.420	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2008	1	131,909.000	135,602.452	1,010.000	$ 0.01	94550			1	7,196.693	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2008	1	33,783.000	115,267.596	1,944.000	$ 0.06	94550			2	11,144.301	0.000	734.086
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2008	1	2,719.000	2,795.132	21.000	$ 0.01	94550			1	148.343	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2008	1	45.248	0.000	191.346	$ 4.23	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2008	2	65,442.000	223,288.104	3,800.000	$ 0.06	94550			2	21,587.940	0.000	1,422.019
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2008	2	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2008	2	147,338.000	151,463.464	1,254.000	$ 0.01	94550			1	8,038.469	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2008	2	32,405.000	110,565.860	1,864.000	$ 0.06	94550			2	10,689.728	0.000	704.143
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2008	2	3,342.000	3,435.576	28.000	$ 0.01	94550			1	182.333	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2008	2	37.169	0.000	154.323	$ 4.15	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2008	3	64,048.000	218,531.776	3,742.000	$ 0.06	94550			2	21,128.088	0.000	1,391.728
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2008	3	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2008	3	103,633.000	106,534.724	1,134.000	$ 0.01	94550			1	5,654.011	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2008	3	33,882.000	115,605.384	1,949.000	$ 0.06	94550			2	11,176.959	0.000	736.237
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2008	3	3,530.000	3,628.840	39.000	$ 0.01	94550			1	192.590	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2008	3	75.128	0.000	317.187	$ 4.22	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2008	4	66,056.000	225,383.072	3,877.000	$ 0.06	94550			2	21,790.485	0.000	1,435.361
NNSA	112	LLNL	Buildings	LPG	1,000 Gallons	2008	4	0.000	0.000	0.000	NA	94550			1	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2008	4	76,438.000	78,578.264	745.000	$ 0.01	94550			1	4,170.306	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2008	4	6,288.900	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2008	4	34,984.000	119,365.408	2,013.000	$ 0.06	94550			2	11,540.486	0.000	760.183
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2008	4	3,253.000	3,344.084	32.000	$ 0.01	94550			1	177.477	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2008	4	821.026	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2008	4	88.310	0.000	431.846	$ 4.89	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2009	1	63,326.000	216,068.312	4,057.000	$ 0.06	94550			2	20,889.916	0.000	1,376.040
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2009	1	118,011.000	121,315.308	819.000	$ 0.01	94550			1	6,438.446	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2009	1	36,477.000	124,459.524	2,337.000	$ 0.06	94550			2	12,032.995	0.000	792.625
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2009	1	3,701.000	3,804.628	26.000	$ 0.01	94550			1	201.919	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2009	1	43.557	0.000	213.423	$ 4.90	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2009	2	62,318.000	212,629.016	3,994.000	$ 0.06	94550			2	20,557.398	0.000	1,354.136
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2009	2	132,495.000	136,204.860	728.000	$ 0.01	94550			1	7,228.664	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2009	2	33,591.000	114,612.492	2,153.000	$ 0.06	94550			2	11,080.965	0.000	729.914
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2009	2	2,995.000	3,078.860	16.000	$ 0.01	94550			1	163.401	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2009	2	32.253	0.000	152.723	$ 4.74	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2009	3	64,060.000	218,572.720	3,354.000	$ 0.05	94550			2	21,132.047	0.000	1,391.989
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2009	3	93,866.000	96,494.248	371.000	$ 0.00	94550			1	5,121.143	0.000	0.000

Utility/Fuel Consumption and Cost														Notes		Estimated GHG Emissions			
PSO	Site #	Site	Category	Subcategory	Usage Unit	FY	QTR	Usage Amount	BTU x 10^6	Cost (1,000 $)	$/Unit	Main Site Zip Code	Additional Information	SPO Notes	Scope	Anthropogenic $MtCO_2e$	Biogenic $MtCO_2e$	Scope 3 - T&D Loss, $MtCO_2e$
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2009	3	34,924.000	119,160.688	1,828.000	$ 0.05	94550			2	11,520.693	0.000	758.880
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2009	3	2,777.000	2,854.756	11.000	$ 0.00	94550			1	151.508	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2009	3	62.500	0.000	305.859	$ 4.89	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2009	4	70,332.000	239,972.784	4,659.000	$ 0.07	94550			2	23,201.048	0.000	1,528.276
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2009	4	71,166.000	73,158.648	264.000	$ 0.00	94550			1	3,882.676	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2009	4	6,230.158	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2009	4	34,732.000	118,505.584	2,301.000	$ 0.07	94550			2	11,457.356	0.000	754.708
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2009	4	2,185.000	2,246.180	8.000	$ 0.00	94550			1	119.209	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2009	4	826.708	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2009	4	101.138	0.000	459.445	$ 4.54	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2010	1	65,703.000	224,178.636	4,449.000	$ 0.07	94550			2	21,674.038	0.000	1,427.691
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2010	1	124,649.000	128,139.172	667.000	$ 0.01	94550			1	6,800.602	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2010	1	34,741.000	118,536.292	2,353.000	$ 0.07	94550			2	11,460.325	0.000	754.903
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2010	1	3,531.000	3,629.868	19.000	$ 0.01	94550			1	192.644	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2010	1	44.854	0.000	201.551	$ 4.49	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2010	2	62,843.000	214,420.316	4,344.000	$ 0.07	94550			2	20,730.584	0.000	1,365.544
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2010	2	125,803.000	129,325.484	797.000	$ 0.01	94550			1	6,863.562	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2010	2	33,688.000	114,943.456	2,329.000	$ 0.07	94550			2	11,112.963	0.000	732.022
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2010	2	3,198.000	3,287.544	20.000	$ 0.01	94550			1	174.477	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2010	2	34.750	0.000	162.362	$ 4.67	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2010	3	63,861.000	217,893.732	4,700.000	$ 0.07	94550			2	21,066.401	0.000	1,387.665
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2010	3	97,065.000	99,782.820	475.000	$ 0.00	94550			1	5,295.674	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2010	3	35,051.000	119,594.012	2,580.000	$ 0.07	94550			2	11,562.588	0.000	761.639
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2010	3	2,716.000	2,792.048	13.000	$ 0.00	94550			1	148.180	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2010	3	59.302	0.000	265.918	$ 4.48	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2010	4	67,875.000	231,589.500	5,326.000	$ 0.08	94550			2	22,390.535	0.000	1,474.887
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2010	4	79,626.000	81,855.528	279.000	$ 0.00	94550			1	4,344.237	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2010	4	6,265.845	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2010	4	37,060.000	126,448.720	2,908.000	$ 0.08	94550			2	12,225.315	0.000	805.294
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2010	4	2,317.000	2,381.876	8.000	$ 0.00	94550			1	126.411	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2010	4	826.798	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2010	4	93.953	0.000	275.898	$ 2.94	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2011	1	63,461.000	216,528.932	4,439.000	$ 0.07	94550			2	19,675.789	0.000	1,296.064
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2011	1	114,907.000	118,124.396	544.000	$ 0.00	94550			1	6,269.098	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2011	1	34,771.748	118,641.204	2,432.000	$ 0.07	94550			2	10,780.819	0.000	710.143
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2011	1	3,074.000	3,160.072	15.000	$ 0.00	94550			1	167.711	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2011	1	44.157	0.000	297.879	$ 6.75	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2011	2	59,710.000	203,730.520	4,322.000	$ 0.07	94550			2	18,512.809	0.000	1,219.457
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2011	2	132,246.000	135,948.888	625.000	$ 0.00	94550			1	7,215.079	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2011	2	30,907.000	105,454.684	2,237.000	$ 0.07	94550			2	9,582.572	0.000	631.214
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2011	2	3,583.000	3,683.324	17.000	$ 0.00	94550			1	195.481	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2011	2	24.125	0.000	126.401	$ 5.24	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2011	3	61,232.000	208,923.584	2,814.000	$ 0.05	94550			2	18,984.698	0.000	1,250.541
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2011	3	100,003.000	102,803.084	505.000	$ 0.01	94550			1	5,455.965	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2011	3	31,266.000	106,679.592	2,098.000	$ 0.07	94550			2	9,693.878	0.000	638.545
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2011	3	3,016.000	3,100.448	15.000	$ 0.00	94550			1	164.547	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2011	3	58.563	0.000	305.497	$ 5.22	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2011	4	65,814.000	224,557.368	2,814.000	$ 0.04	94550			2	20,405.326	0.000	1,344.119
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2011	4	72,335.000	74,360.380	362.000	$ 0.01	94550			1	3,946.454	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2011	4	6,214.581	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2011	4	31,817.000	108,559.604	1,361.000	$ 0.04	94550			2	9,864.713	0.000	649.799
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2011	4	2,823.000	2,902.044	14.000	$ 0.00	94550			1	154.017	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2011	4	821.196	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2011	4	83.988	0.000	508.326	$ 6.05	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2012	1	60,679.000	207,036.748	3,835.000	$ 0.06	94550			2	18,198.660	0.000	1,198.764
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2012	1	106,233.000	109,207.524	405.000	$ 0.00	94550			1	5,795.862	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2012	1	30,213.000	103,086.756	1,910.000	$ 0.06	94550			2	9,061.391	0.000	596.883
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2012	1	10,004.000	10,284.112	38.000	$ 0.00	94550			1	545.798	0.000	0.000

Utility/Fuel Consumption and Cost														Notes		Estimated GHG Emissions			
PSO	Site #	Site	Category	Subcategory	Usage Unit	FY	QTR	Usage Amount	BTU x 10^6	Cost (1,000 $)	$/Unit	Main Site Zip Code	Additional Information	SPO Notes	Scope	Anthropogenic $MtCO_2e$	Biogenic $MtCO_2e$	Scope 3 - T&D Loss, $MtCO_2e$
NNSA	112	LLNL	Water	Potable	Million Gallons	2012	1	46.052	0.000	265.044	$ 5.76	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2012	2	57,974.000	197,807.288	3,258.000	$ 0.06	94550			2	17,387.385	0.000	1,145.324
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2012	2	113,578.000	116,758.184	353.000	$ 0.00	94550			1	6,196.590	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2012	2	36,016.000	122,886.592	2,024.000	$ 0.06	94550			2	10,801.809	0.000	711.526
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2012	2	11,027.000	11,335.756	34.000	$ 0.00	94550			1	601.611	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2012	2	39.838	0.000	233.949	$ 5.87	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2012	3	62,781.000	214,208.772	3,045.000	$ 0.05	94550			2	18,829.086	0.000	1,240.291
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2012	3	82,554.000	84,865.512	218.000	$ 0.00	94550			1	4,503.982	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2012	3	47,852.000	163,271.024	2,321.000	$ 0.05	94550			2	14,351.626	0.000	945.356
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2012	3	10,106.000	10,388.968	27.000	$ 0.00	94550			1	551.363	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2012	3	62.545	0.000	386.266	$ 6.18	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2012	4	69,107.000	235,793.084	2,559.000	$ 0.04	94550			2	20,726.361	0.000	1,365.266
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2012	4	68,062.000	69,967.736	138.000	$ 0.00	94550			1	3,713.328	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2012	4	6,225.119	0.000		$ -	94550		SPO Note: Different Sq.Ft - CEDR vs FIMS Snapshot (6,129.000 vs 6,225.199). Site confirmed use FIMS - updated.	NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2012	4	43,408.000	148,108.096	1,607.000	$ 0.04	94550			2	13,018.795	0.000	857.561
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2012	4	9,866.000	10,142.248	20.000	$ 0.00	94550			1	538.269	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2012	4	826.878	0.000		$ -	94550		SPO Note: Different Sq.Ft - CEDR vs FIMS Snapshot (821.196 vs 826.878). Site confirmed use FIMS - updated.	NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2012	4	92.344	0.000	648.233	$ 7.02	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2013	1	60,174.000	205,313.688	3,281.000	$ 0.05	94550			2	18,047.202	0.000	1,188.787
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2013	1	108,637.000	111,678.836	415.000	$ 0.00	94550			1	5,927.019	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2013	1	47,861.000	163,301.732	2,609.000	$ 0.05	94550			2	14,354.325	0.000	945.534
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2013	1	9,517.000	9,783.476	36.000	$ 0.00	94550			1	519.229	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2013	1	45.274	0.000	317.200	$ 7.01	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2013	2	59,451.000	202,846.812	3,243.000	$ 0.05	94550			2	17,830.362	0.000	1,174.504
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2013	2	124,856.000	128,351.968	468.000	$ 0.00	94550			1	6,811.896	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2013	2	45,987.000	156,907.644	2,508.000	$ 0.05	94550			2	13,792.281	0.000	908.511
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2013	2	10,106.000	10,388.968	38.000	$ 0.00	94550			1	551.363	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2013	2	35.821	0.000	222.000	$ 6.20	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2013	3	61,917.000	211,260.804	3,604.000	$ 0.06	94550			2	18,569.958	0.000	1,223.222
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2013	3	87,098.000	89,536.744	378.000	$ 0.00	94550			1	4,751.894	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2013	3	44,815.000	152,908.780	2,609.000	$ 0.06	94550			2	13,440.778	0.000	885.357
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2013	3	7,219.000	7,421.132	31.000	$ 0.00	94550			1	393.854	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2013	3	69.376	0.000	487.150	$ 7.02	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Buildings	Electricity - Grid	Megawatt Hour	2013	4	65,467.000	223,373.404	3,900.000	$ 0.06	94550			2	19,634.663	0.000	1,293.355
NNSA	112	LLNL	Buildings	Natural Gas	1,000 Cubic Feet	2013	4	71,605.000	73,609.940	286.000	$ 0.00	94550			1	3,906.627	0.000	0.000
NNSA	112	LLNL	Buildings	Square Feet	1,000 Square Feet	2013	4	6,221.260	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Excluded	Electricity - Grid	Megawatt Hour	2013	4	43,854.000	149,629.848	2,613.000	$ 0.06	94550			2	13,152.558	0.000	866.372
NNSA	112	LLNL	Excluded	Natural Gas	1,000 Cubic Feet	2013	4	7,597.000	7,809.716	31.000	$ 0.00	94550			1	414.477	0.000	0.000
NNSA	112	LLNL	Excluded	Square Feet	1,000 Square Feet	2013	4	821.196	0.000		$ -	94550			NA	0.000	0.000	0.000
NNSA	112	LLNL	Water	Potable	Million Gallons	2013	4	93.136	0.000	692.287	$ 7.43	94550			NA	0.000	0.000	0.000

List of Operating On-Site Renewable Energy Systems

Requirement(s): EPAct 2005, DOE O 436.1, E.O. 13423, E.O. 13514
Instructions: Update the list of currently operating on-site renewable energy systems and address SPO requests. For additional guidance see comments in row 9 of each column and the CEDR Technical Support Document. Purchased renewable energy should be listed in the "Purchased RE" worksheet. Newly proposed or potential on-site renewable energy systems should be listed in the "Conservation & RE Measures" worksheet. Edited and new
Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

System Information													Production/Consumption Information								Cost	Biomass Fuel Information					Notes	
PSO	Site #	Site	System Description/ Name	Location Description (e.g., building name, etc.)	System Location (Zip Code)	Year Installed (YYYY)	End Use Category	Siting Status - On Federal or Indian Land?	% of RECs Retained	On or Off Grid?	Does the site own the T&D system that delivers the electricity?	Scope 1 or 2 System?	Generator Nameplate Capacity (MW)	System Type/ Category	Estimated Annual Renewable Electricity Output (MWh/Yr)	Estimated Annual Renewable Electricity Consumed (MWh/Yr)	Estimated EPAct 2005 Bonus (MWh/Yr)	Estimated Annual GHG Emissions Avoided ($MtCO_2e$/ Yr)	Estimated Annual Renewable Thermal Output (10^6 BTU/Yr)	Estimated Annual Renewable Thermal Consumed (10^6 BTU/Yr)	Implementation Cost ($)	Principal Biomass Fuel Type	Principal Biomass Fuel Use (10^6 BTU/Yr)	Secondary/ Blend Fuel Type	Secondary/ Blend Fuel Use (10^6 BTU/Yr)	Fuel Costs ($)	Additional Information	SPO Notes
NNSA	112	LLNL	Photovoltaic	Discovery Visitor's Center, T1800, Lake Hausmann	94550	2003	Goal Subject	On Federal Land, On User Site	100%	Electric Off Grid	Yes	Scope 1	0.001027	Solar Photovoltaic	16.740	16.740	16.740	8.243										
NNSA	112	LLNL	Photovoltaic	Site-300	94550	2001	Goal Subject	On Federal Land, On User Site	100%	Electric Off Grid	Yes	Scope 1	0.000171	Solar Photovoltaic	3.000	3.000	3.000	1.477										

List of Purchased Renewable Energy

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): EPAct 2005, DOE O 436.1, E.O. 13423, E.O. 13514

Instructions: Update the list of purchased renewable energy resources and address SPO requests. Conventional hydropower should be reported in tab 3.1 for correct accounting; do not report conventional hydropower in this tab. For additional guidance see comments in row 9 of each column and the CEDR Technical Support Document. On-site operational renewable energy should be listed in the "Operating On-Site Renewables" worksheet. Edited and new data cells should be highlighted.

Source: Site/Lab

Purchase Information										Consumption Information						Cost		Notes	
PSO	Site #	Site	Type of Renewable Energy Purchased	System Type/ Category	Source Location (Zip Code)	Service Year (YYYY)	Purchase Year (FY)	End Use Category	Siting Status - On Federal or Indian Land?	Total Renewable Electricity Purchased (MWh/Yr)	Estimated Annual GHG Emissions Avoided ($MtCO_2e$/Yr)	Scope 3 - T&D Loss, $MtCO_2e$	Purchased Renewable Energy Biomass Emissions MtCO2e	FY 2008 Anthropogenic MtCO2e	Total Renewable Thermal Purchased (10^6 BTU/Yr)	Annual Cost ($)	$/Unit	Additional Information	SPO Notes
NNSA	112	LLNL	Renewable Energy Credits	Wind	59036		2008	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	14,614.000	8,885.781	585.314	0.000	0.000		$ 13,786.00	$ 0.94		
NNSA	112	LLNL	Renewable Energy Credits	Wind	58413		2009	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	14,933.000	14,702.992	968.498	0.000	0.000		$ 15,600.00	$ 1.04		
NNSA	112	LLNL	Renewable Energy Credits	Wind	58413		2010	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	32,995.000	32,486.788	2,139.931	0.000	0.000		$ 37,119.38	$ 1.13		
NNSA	112	LLNL	Renewable Energy Credits	Wind	79566		2011	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	33,424.000	16,651.886	1,096.873	0.000	0.000		$ 32,000.00	$ 0.96		
NNSA	112	LLNL	Renewable Energy Credits	Wind	79566	Before 1999	2012	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	33,799.000	17,756.341	1,169.625	0.000	0.000		$ 33,799.00	$ 1.00		
NNSA	112	LLNL	Renewable Energy Credits	Incremental Hydropower	96019	Before 1999	2012	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	32,377.000	14,625.082	963.366	0.000	0.000		$ 4,856.55	$ 0.15		
NNSA	112	LLNL	Renewable Energy Credits	Wind	79566	Before 1999	2013	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	38,095.000	20,013.250	1,318.289	0.000	0.000		$ 58,667.00	$ 1.54		
NNSA	112	LLNL	Renewable Energy Credits	Incremental Hydropower	96019	Before 1999	2013	Goal Subject	NOT on Federal or Indian Land, Transmitted to User Site	34,209.000	15,452.619	1,017.877	0.000	0.000		$ 5,131.00	$ 0.15		

Conservation and Renewable Energy Measures List

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of conservations and renewable energy measures/projects and address SPO requests. For additional guidance see comments in row 10/11 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted.
Special Note: Information provided in this table will be used to report on EISA Section 432 June snapshot reporting.

Source: Site/Lab June 2012 EISA Sec 432 report

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Measure/Project Description												Funding Overview			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Measure Location (Zip Code)	Is this a multiple or single facility ECM?	Does the measure contribute to the reduction of deferred maintenance?	Is this effort/measure beyond typical O&M improvement to meet a goal?	Funding Source/Type (Actual or Potential)	Starting Year of Measure Implementation (Anticipated or Actual - YYYY)
NNSA	112	LLNL	NNSA-0112-0003	2009	No	TC40	Identified	Data Center Efficiency	Virtual Servers: Collocate server and storage equipment and close down remote servers rooms to reduce electrical, mechanical and maintenance costs. 86 virtual machines will be installed in B112 and will allow the removal of 700 physical servers.			No	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0004	2009	No	LLNL-TC13-01	Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape. Recycle treated groundwater and rainwater collected from building roofs for irrigation. Upgrade irrigation system with 'smart' water controllers. Buildings 071, 111, 113, 121, 170, 482, 581.		Multiple	No	Yes	GPP	2011
NNSA	112	LLNL	NNSA-0112-0006	2009	No	LLNL-TC5-02	Identified	Lighting Improvements	Lighting Improvements - Interior: Install computer energy analysis hardware and software to monitor and control environmental conditions such as lighting and HVAC. Install motion detectors for indoor lighting and replace older inefficient lamps with energy efficient lamps. Multiple buildings.		Multiple	No	Yes	Other	2011
NNSA	112	LLNL	NNSA-0112-0007	2009	No	LLNL-TC5-01	Identified	Lighting Improvements	Lighting Improvements - Exterior: Replace outdoor standard lighting with PV and LED lighting fixures to reduce energy consumption. Multiple buildings.		Multiple	No	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0008	2009	No	LLNL-E-01	Identified	Photovoltaic	Renewable Energy Photovoltaic System: Install concentrated photovoltaic systems to carry up to 25% of LLNL's Power use.			No	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0009	2009	No	LLNL-E-02	Identified	Wind	Renewable Energy - Wind Power : Install 5MW Wind turbine generators at Site 300 to make it fully self sufficient.			No	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0010	2009	No	TC30	Identified	Other	Facilities Footprint Consolidation		Multiple	Yes	No	Disposition	2007
NNSA	112	LLNL	NNSA-0112-0011	2009	No	LLNL-W-04	Identified	Water and Sewer Conservation Systems	Integration of cooling tower operations: This project will optimize the operations of the sites cooling towers to minimize water and power usage while maintaining reliability.		Multiple	Yes	No	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0012	2009	No	LLNL-TC-04	Identified	Boiler Plant Improvements	Boiler Replacement Project: Replace boilers in vaious buildings across site with new efficient boilers that also comply with newly-adopted SF Bay Area Air Quality Management District site emmision reduction requirements. Multiple buildings.		Multiple	Yes	No	M&R Indirect	2011
NNSA	112	LLNL	NNSA-0112-0013	2009	No	TC5	Identified	Lighting Improvements	B132N/S lighting retrofit		Multiple	Yes	No	M&R Indirect	2010
NNSA	112	LLNL	NNSA-0112-0016	2009	No	4.4	Identified	Other	High efficiency air filters		Multiple	Yes	No	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0017	2009	No	5.1	Identified	Lighting Improvements	Lighting upgrades		Multiple	Yes	No	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0018	2009	No	8.1	Identified	Electric Motors and Drives	Motor replacement with high effciency motors		Multiple	Yes	No	Unknown	2011

Conservation and Renewable Energy Measures List

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of conservations and renewable energy measures/projects and address SPO requests. For additional guidance see comments in row 10/11 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted.
Special Note: Information provided in this table will be used to report on EISA Section 432 June snapshot reporting.

Source: Site/Lab June 2012 EISA Sec 432 report

Measure/Project Description													Measurement & Verification				
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(q)	(r)	(s)	(t)	(u)	(v)		(w)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Completion/ Operational Year of Measure (Anticipated or Actual -- YYYY)	Estimated Service Life	Estimated Implementation Cost ($)	Are there plans to measure and verify the performance of this measure?	If M&V has been conducted, provide type and date. Type of M&V	MM	YYYY	Is this a energy saving measure or renewable energy system?
NNSA	112	LLNL	NNSA-0112-0003	2009	No	TC40	Identified	Data Center Efficiency	Virtual Servers: Collocate server and storage equipment and close down remote servers rooms to reduce electrical, mechanical and maintenance costs. 86 virtual machines will be installed in B112 and will allow the removal of 700 physical servers.	2013	6	$560,000	No				Energy Saving E
NNSA	112	LLNL	NNSA-0112-0004	2009	No	LLNL-TC13-01	Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape. Recycle treated groundwater and rainwater collected from building roofs for irrigation. Upgrade irrigation system with 'smart' water controllers. Buildings 071, 111, 113, 121, 170, 482, 581.	2013	15	$5,000,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0006	2009	No	LLNL-TC5-02	Identified	Lighting Improvements	Lighting Improvements - Interior: Install computer energy analysis hardware and software to monitor and control environmental conditions such as lighting and HVAC. Install motion detectors for indoor lighting and replace older inefficient lamps with energy efficient lamps. Multiple buildings.	2013	24	$5,000,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0007	2009	No	LLNL-TC5-01	Identified	Lighting Improvements	Lighting Improvements - Exterior: Replace outdoor standard lighting with PV and LED lighting fixures to reduce energy consumption. Multiple buildings.	2013	10	$5,000,000					Fuel Switching R
NNSA	112	LLNL	NNSA-0112-0008	2009	No	LLNL-E-01	Identified	Photovoltaic	Renewable Energy Photovoltaic System: Install concentrated photovoltaic systems to carry up to 25% of LLNL's Power use.	2013	15	$35,000,000					Fuel Switching R
NNSA	112	LLNL	NNSA-0112-0009	2009	No	LLNL-E-02	Identified	Wind	Renewable Energy - Wind Power : Install 5MW Wind turbine generators at Site 300 to make it fully self sufficient.	2013	15	$15,000,000					Fuel Switching R
NNSA	112	LLNL	NNSA-0112-0010	2009	No	TC30	Identified	Other	Facilities Footprint Consolidation	2015	25	$80,000,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0011	2009	No	LLNL-W-04	Identified	Water and Sewer Conservation Systems	Integration of cooling tower operations: This project will optimize the operations of the sites cooling towers to minimize water and power usage while maintaining reliability.	2013	20	$500,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0012	2009	No	LLNL-TC-04	Identified	Boiler Plant Improvements	Boiler Replacement Project: Replace boilers in vaious buildings across site with new efficient boilers that also comply with newly-adopted SF Bay Area Air Quality Management District site emmision reduction requirements. Multiple buildings.	2013	20	$9,000,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0013	2009	No	TC5	Identified	Lighting Improvements	B132N/S lighting retrofit	2013	25	$60,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0016	2009	No	4.4	Identified	Other	High efficiency air filters	2013	25	$1,332,473					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0017	2009	No	5.1	Identified	Lighting Improvements	Lighting upgrades	2013	25	$2,869,670					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0018	2009	No	8.1	Identified	Electric Motors and Drives	Motor replacement with high effciency motors	2013	25	$1,111,073					Energy Saving E

Conservation and Renewable Energy Measures List

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of conservations and renewable energy measures/projects and address SPO requests. For additional guidance see comments in row 10/11 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted.
Special Note: Information provided in this table will be used to report on EISA Section 432 June snapshot reporting.

Source: Site/Lab June 2012 EISA Sec 432 report

Measure/Project Description										Source Savings/Renewable Energy					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(x)	(y)	(z)	(aa)	(ab)	(ac)
										Provide estimated energy saved or switched for each energy type, as applicable. If there are no savings associated w estimated savings are unknown at this time enter "TBD".					
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Electricity Saved (MWh/Yr)	Estimated Annual Fuel Oil Saved (10^3 Gal/Yr)	Estimated Annual Natural Gas Saved (10^3 Cf/Yr)	Estimated Annual LPG/Propane Saved (10^3 Gal/Yr)	Estimated Annual Coal Saved (Short Ton/Yr)	Estimated Annual Steam Saved (10^9 BTU/Yr)
NNSA	112	LLNL	NNSA-0112-0003	2009	No	TC40	Identified	Data Center Efficiency	Virtual Servers: Collocate server and storage equipment and close down remote servers rooms to reduce electrical, mechanical and maintenance costs. 86 virtual machines will be installed in B112 and will allow the removal of 700 physical servers.	2,491.208	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0004	2009	No	LLNL-TC13-01	Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape. Recycle treated groundwater and rainwater collected from building roofs for irrigation. Upgrade irrigation system with 'smart' water controllers. Buildings 071, 111, 113, 121, 170, 482, 581.	95.454	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0006	2009	No	LLNL-TC5-02	Identified	Lighting Improvements	Lighting Improvements - Interior: Install computer energy analysis hardware and software to monitor and control environmental conditions such as lighting and HVAC. Install motion detectors for indoor lighting and replace older inefficient lamps with energy efficient lamps. Multiple buildings.	20,000.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0007	2009	No	LLNL-TC5-01	Identified	Lighting Improvements	Lighting Improvements - Exterior: Replace outdoor standard lighting with PV and LED lighting fixures to reduce energy consumption. Multiple buildings.	20,000.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0008	2009	No	LLNL-E-01	Identified	Photovoltaic	Renewable Energy Photovoltaic System: Install concentrated photovoltaic systems to carry up to 25% of LLNL's Power use.	59,285.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0009	2009	No	LLNL-E-02	Identified	Wind	Renewable Energy - Wind Power : Install 5MW Wind turbine generators at Site 300 to make it fully self sufficient.	13,000.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0010	2009	No	TC30	Identified	Other	Facilities Footprint Consolidation	22,928.963	0.000	0.000	410.613	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0011	2009	No	LLNL-W-04	Identified	Water and Sewer Conservation Systems	Integration of cooling tower operations: This project will optimize the operations of the sites cooling towers to minimize water and power usage while maintaining reliability.	4,574.443	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0012	2009	No	LLNL-TC-04	Identified	Boiler Plant Improvements	Boiler Replacement Project: Replace boilers in vaious buildings across site with new efficient boilers that also comply with newly-adopted SF Bay Area Air Quality Management District site emmision reduction requirements. Multiple buildings.	2,074.713	0.000	0.000	159.350	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0013	2009	No	TC5	Identified	Lighting Improvements	B132N/S lighting retrofit	117.006	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0016	2009	No	4.4	Identified	Other	High efficiency air filters	1,548.066	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0017	2009	No	5.1	Identified	Lighting Improvements	Lighting upgrades	195.487	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0018	2009	No	8.1	Identified	Electric Motors and Drives	Motor replacement with high effciency motors	1,589.683	0.000	0.000	0.000	0.000	0.000

Conservation and Renewable Energy Measures List

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of conservations and renewable energy measures/projects and address SPO requests. For additional guidance see comments in row 10/11 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted.
Special Note: Information provided in this table will be used to report on EISA Section 432 June snapshot reporting.

Source: Site/Lab June 2012 EISA Sec 432 report

Measure/Project Description										Output					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ad)	(ae)	(af)	(ag)	(ah)	(ai)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	with the measure enter "0". If Estimated Annual Other Saved (10^9 BTU/Yr)	If "Other", what is "Other"?	Estimated Annual Potable Water Savings (10^3 Gal/Yr)	Estimated Annual ILA (Non-Potable Freshwater) Savings (10^3 Gal/Yr)	Estimated Annual Renewable Electricity Output (MWh/Yr)	Estimated Annual Renewable Thermal Output (10^9 BTU/Yr)
NNSA	112	LLNL	NNSA-0112-0003	2009	No	TC40	Identified	Data Center Efficiency	Virtual Servers: Collocate server and storage equipment and close down remote servers rooms to reduce electrical, mechanical and maintenance costs. 86 virtual machines will be installed in B112 and will allow the removal of 700 physical servers.	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0004	2009	No	LLNL-TC13-01	Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape. Recycle treated groundwater and rainwater collected from building roofs for irrigation. Upgrade irrigation system with 'smart' water controllers. Buildings 071, 111, 113, 121, 170, 482, 581.	0.000		24,000.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0006	2009	No	LLNL-TC5-02	Identified	Lighting Improvements	Lighting Improvements - Interior: Install computer energy analysis hardware and software to monitor and control environmental conditions such as lighting and HVAC. Install motion detectors for indoor lighting and replace older inefficient lamps with energy efficient lamps. Multiple buildings.	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0007	2009	No	LLNL-TC5-01	Identified	Lighting Improvements	Lighting Improvements - Exterior: Replace outdoor standard lighting with PV and LED lighting fixures to reduce energy consumption. Multiple buildings.	0.000		0.000	0.000	20,000.000	0.000
NNSA	112	LLNL	NNSA-0112-0008	2009	No	LLNL-E-01	Identified	Photovoltaic	Renewable Energy Photovoltaic System: Install concentrated photovoltaic systems to carry up to 25% of LLNL's Power use.	0.000		0.000	0.000	59,400.000	0.000
NNSA	112	LLNL	NNSA-0112-0009	2009	No	LLNL-E-02	Identified	Wind	Renewable Energy - Wind Power : Install 5MW Wind turbine generators at Site 300 to make it fully self sufficient.	0.000		0.000	0.000	13,000.000	0.000
NNSA	112	LLNL	NNSA-0112-0010	2009	No	TC30	Identified	Other	Facilities Footprint Consolidation	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0011	2009	No	LLNL-W-04	Identified	Water and Sewer Conservation Systems	Integration of cooling tower operations: This project will optimize the operations of the sites cooling towers to minimize water and power usage while maintaining reliability.	0.000		5,411.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0012	2009	No	LLNL-TC-04	Identified	Boiler Plant Improvements	Boiler Replacement Project: Replace boilers in vaious buildings across site with new efficient boilers that also comply with newly-adopted SF Bay Area Air Quality Management District site emmision reduction requirements. Multiple buildings.	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0013	2009	No	TC5	Identified	Lighting Improvements	B132N/S lighting retrofit	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0016	2009	No	4.4	Identified	Other	High efficiency air filters	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0017	2009	No	5.1	Identified	Lighting Improvements	Lighting upgrades	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0018	2009	No	8.1	Identified	Electric Motors and Drives	Motor replacement with high effciency motors	0.000		0.000	0.000	0.000	0.000

Conservation and Renewable Energy Measures List

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of conservations and renewable energy measures/projects and address SPO requests. For additional guidance see comments in row 10/11 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted.
Special Note: Information provided in this table will be used to report on EISA Section 432 June snapshot reporting.

Source: Site/Lab June 2012 EISA Sec 432 report

Measure/Project Description										Cost Savings				Note	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(aj)	(ak)	(al)	(am)	(an)	(ao)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Energy Cost Savings ($/Yr)	Estimated Annual Water Cost Savings ($/Yr)	Estimated Annual Cost Savings ($/Yr) from switching to a renewable energy source	Estimated Annual Ancillary Cost Savings ($/Yr)	Site Priority	Additional Information
NNSA	112	LLNL	NNSA-0112-0003	2009	No	TC40	Identified	Data Center Efficiency	Virtual Servers: Collocate server and storage equipment and close down remote servers rooms to reduce electrical, mechanical and maintenance costs. 86 virtual machines will be installed in B112 and will allow the removal of 700 physical servers.	$250,000	$0	$0	$0	1	
NNSA	112	LLNL	NNSA-0112-0004	2009	No	LLNL-TC13-01	Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape. Recycle treated groundwater and rainwater collected from building roofs for irrigation. Upgrade irrigation system with 'smart' water controllers. Buildings 071, 111, 113, 121, 170, 482, 581.	$6,682	$120,000	$0	$0	4	
NNSA	112	LLNL	NNSA-0112-0006	2009	No	LLNL-TC5-02	Identified	Lighting Improvements	Lighting Improvements - Interior: Install computer energy analysis hardware and software to monitor and control environmental conditions such as lighting and HVAC. Install motion detectors for indoor lighting and replace older inefficient lamps with energy efficient lamps. Multiple buildings.	$1,400,000	$0	$0	$0	2	Not a Renewable Energy Project
NNSA	112	LLNL	NNSA-0112-0007	2009	No	LLNL-TC5-01	Identified	Lighting Improvements	Lighting Improvements - Exterior: Replace outdoor standard lighting with PV and LED lighting fixures to reduce energy consumption. Multiple buildings.	$1,400,000	$0	$1,400,000	$0	3	
NNSA	112	LLNL	NNSA-0112-0008	2009	No	LLNL-E-01	Identified	Photovoltaic	Renewable Energy Photovoltaic System: Install concentrated photovoltaic systems to carry up to 25% of LLNL's Power use.	$4,150,000	$0	$4,150,000	$0		
NNSA	112	LLNL	NNSA-0112-0009	2009	No	LLNL-E-02	Identified	Wind	Renewable Energy - Wind Power : Install 5MW Wind turbine generators at Site 300 to make it fully self sufficient.	$910,000	$0	$910,000	$0		
NNSA	112	LLNL	NNSA-0112-0010	2009	No	TC30	Identified	Other	Facilities Footprint Consolidation	$2,380,000	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0011	2009	No	LLNL-W-04	Identified	Water and Sewer Conservation Systems	Integration of cooling tower operations: This project will optimize the operations of the sites cooling towers to minimize water and power usage while maintaining reliability.	$320,213	$27,056	$0	$0		Not a renewable energy system
NNSA	112	LLNL	NNSA-0112-0012	2009	No	LLNL-TC-04	Identified	Boiler Plant Improvements	Boiler Replacement Project: Replace boilers in vaious buildings across site with new efficient boilers that also comply with newly-adopted SF Bay Area Air Quality Management District site emmision reduction requirements. Multiple buildings.	$100,000	$0	$0	$0	8	
NNSA	112	LLNL	NNSA-0112-0013	2009	No	TC5	Identified	Lighting Improvements	B132N/S lighting retrofit	$9,239	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0016	2009	No	4.4	Identified	Other	High efficiency air filters	$86,049	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0017	2009	No	5.1	Identified	Lighting Improvements	Lighting upgrades	$227,287	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0018	2009	No	8.1	Identified	Electric Motors and Drives	Motor replacement with high effciency motors	$88,368	$0	$0	$0		

Conservation and Renewable Energy Measures List

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of conservations and renewable energy measures/projects and address SPO requests. For additional guidance see comments in row 10/11 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted.
Special Note: Information provided in this table will be used to report on EISA Section 432 June snapshot reporting.

Source: Site/Lab June 2012 EISA Sec 432 report

Measure/Project Description														
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ap)	(aq)			
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Bldg # (Optional)	SPO Comments/Notes	Calculated Present Value (PV)	Input % Savings from electricity Column AT	Calculated Savings to Investment Ratio (SIR)
NNSA	112	LLNL	NNSA-0112-0003	2009	No	TC40	Identified	Data Center Efficiency	Virtual Servers: Collocate server and storage equipment and close down remote servers rooms to reduce electrical, mechanical and maintenance costs. 86 virtual machines will be installed in B112 and will allow the removal of 700 physical servers.			1,365,000	100%	2.438
NNSA	112	LLNL	NNSA-0112-0004	2009	No	LLNL-TC13-01	Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape. Recycle treated groundwater and rainwater collected from building roofs for irrigation. Upgrade irrigation system with 'smart' water controllers. Buildings 071, 111, 113, 121, 170, 482, 581.			1,514,989	100%	0.303
NNSA	112	LLNL	NNSA-0112-0006	2009	No	LLNL-TC5-02	Identified	Lighting Improvements	Lighting Improvements - Interior: Install computer energy analysis hardware and software to monitor and control environmental conditions such as lighting and HVAC. Install motion detectors for indoor lighting and replace older inefficient lamps with energy efficient lamps. Multiple buildings.			25,004,000	100%	5.001
NNSA	112	LLNL	NNSA-0112-0007	2009	No	LLNL-TC5-01	Identified	Lighting Improvements	Lighting Improvements - Exterior: Replace outdoor standard lighting with PV and LED lighting fixures to reduce energy consumption. Multiple buildings.			24,108,000	100%	4.822
NNSA	112	LLNL	NNSA-0112-0008	2009	No	LLNL-E-01	Identified	Photovoltaic	Renewable Energy Photovoltaic System: Install concentrated photovoltaic systems to carry up to 25% of LLNL's Power use.			100,596,000	100%	2.874
NNSA	112	LLNL	NNSA-0112-0009	2009	No	LLNL-E-02	Identified	Wind	Renewable Energy - Wind Power : Install 5MW Wind turbine generators at Site 300 to make it fully self sufficient.			22,058,400	100%	1.471
NNSA	112	LLNL	NNSA-0112-0010	2009	No	TC30	Identified	Other	Facilities Footprint Consolidation			43,887,200	100%	0.549
NNSA	112	LLNL	NNSA-0112-0011	2009	No	LLNL-W-04	Identified	Water and Sewer Conservation Systems	Integration of cooling tower operations: This project will optimize the operations of the sites cooling towers to minimize water and power usage while maintaining reliability.			5,365,895	100%	10.732
NNSA	112	LLNL	NNSA-0112-0012	2009	No	LLNL-TC-04	Identified	Boiler Plant Improvements	Boiler Replacement Project: Replace boilers in vaious buildings across site with new efficient boilers that also comply with newly-adopted SF Bay Area Air Quality Management District site emmision reduction requirements. Multiple buildings.			1,550,000	100%	0.172
NNSA	112	LLNL	NNSA-0112-0013	2009	No	TC5	Identified	Lighting Improvements	B132N/S lighting retrofit			170,367	100%	2.839
NNSA	112	LLNL	NNSA-0112-0016	2009	No	4.4	Identified	Other	High efficiency air filters			1,586,744	100%	1.191
NNSA	112	LLNL	NNSA-0112-0017	2009	No	5.1	Identified	Lighting Improvements	Lighting upgrades			4,191,172	100%	1.461
NNSA	112	LLNL	NNSA-0112-0018	2009	No	8.1	Identified	Electric Motors and Drives	Motor replacement with high effciency motors			1,629,506	100%	1.467

Measure/Project Description												Funding Overview			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Measure Location (Zip Code)	Is this a multiple or single facility ECM?	Does the measure contribute to the reduction of deferred maintenance?	Is this effort/measure beyond typical O&M improvement to meet a goal?	Funding Source/Type (Actual or Potential)	Starting Year of Measure Implementation (Anticipated or Actual - YYYY)
NNSA	112	LLNL	NNSA-0112-0019	2009	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0020	2009	No	13.1	Identified	Water and Sewer Conservation Systems	Plumbing Fixture Replacement: Replace fixtures with motion activated, low flow water conservation systems. Multiple buildings.		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0021	2009	No	13.2	Identified	Water and Sewer Conservation Systems	Water efficient irrigation		Multiple	No	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0022	2009	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0028	2009	No	4.3	Identified	Heating, Ventilating, and Air Conditioning (HVAC)	Fume hood modification		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0005	2010	No		Identified	Data Center Efficiency	Terascale B-453 Free Cooling: - Modify existing HVAC system to utilize seasonal and nighttime cool outside air to provide free cooling, in lieu of mechanically cooled air, to the high performance computing center space.		Single	No	Yes	Unknown	2013
NNSA	112	LLNL	NNSA-0112-0029	2010	No		Identified	Building Envelope Modifications	Building Envelope Replacement: Replace single pane windows with double pane windows, replace damaged siding and inefficient insulation. Buildings 170, 181, 551E, 551W,		Multiple	Yes	Yes	M&R Indirect	2011
NNSA	112	LLNL	NNSA-0112-0030	2010	No		Identified	Renewable Energy Assessment	Renewable Energy Project Development: Feasibility planning to develop solar, wind and fuel cells packages for third party financing. Projects include 10 MW solar panels at Site 200 and 10 MW solar panels at Site 300, 30 MW wind farm at Site 300, and three 400KW fuel cell units that will tie into the 13.8KV electrical system at Site 200.			No	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0031	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape.		Multiple	Yes	No	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0032	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Upgrade irrigation system with 'smart' water controllers.		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0033	2010	No	3.1	Identified	Building Automation Systems/EMCS	Energy Management Control System Improvement		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0034	2010	No	4.4	Identified	Other	High efficiency air filters		Multiple	Yes	No	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0035	2010	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives		Multiple	Yes		Unknown	2011
NNSA	112	LLNL	NNSA-0112-0036	2010	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert		Multiple	Yes	Yes	Unknown	2011
NNSA	112	LLNL	NNSA-0112-0037	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B113 (HVAC & Lighting)		Single	No	No	Unknown	2012
NNSA	112	LLNL	NNSA-0112-0038	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B115 (HVAC & Lighting) ON HOLD		Single	No	No	Unknown	2012

Measure/Project Description													Measurement & Verification				
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(q)	(r)	(s)	(t)	(u)	(v)		(w)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Completion/ Operational Year of Measure (Anticipated or Actual -- YYYY)	Estimated Service Life	Estimated Implementation Cost ($)	Are there plans to measure and verify the performance of this measure?	If M&V has been conducted, provide type and date. Type of M&V	MM	YYYY	Is this a energy saving measure or renewable energy system?
NNSA	112	LLNL	NNSA-0112-0019	2009	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	2013	25	$1,992,522					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0020	2009	No	13.1	Identified	Water and Sewer Conservation Systems	Plumbing Fixture Replacement: Replace fixtures with motion activated, low flow water conservation systems. Multiple buildings.	2013	25	$1,000,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0021	2009	No	13.2	Identified	Water and Sewer Conservation Systems	Water efficient irrigation	2013	25	$663,048					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0022	2009	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	2013	25	$388,044					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0028	2009	No	4.3	Identified	Heating, Ventilating, and Air Conditioning (HVAC)	Fume hood modification	2013	25	$3,527,081					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0005	2010	No		Identified	Data Center Efficiency	Terascale B-453 Free Cooling: - Modify existing HVAC system to utilize seasonal and nighttime cool outside air to provide free cooling, in lieu of mechanically cooled air, to the high performance computing center space.	2014	25	$6,500,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0029	2010	No		Identified	Building Envelope Modifications	Building Envelope Replacement: Replace single pane windows with double pane windows, replace damaged siding and inefficient insulation. Buildings 170, 181, 551E, 551W,	2013	30	$4,500,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0030	2010	No		Identified	Renewable Energy Assessment	Renewable Energy Project Development: Feasibility planning to develop solar, wind and fuel cells packages for third party financing. Projects include 10 MW solar panels at Site 200 and 10 MW solar panels at Site 300, 30 MW wind farm at Site 300, and three 400KW fuel cell units that will tie into the 13.8KV electrical system at Site 200.	2013	N/A	$400,000					Fuel Switching R
NNSA	112	LLNL	NNSA-0112-0031	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape.	2013	30	$200,000					Water Saving EC
NNSA	112	LLNL	NNSA-0112-0032	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Upgrade irrigation system with 'smart' water controllers.	2013	20	$100,000					Water Saving EC
NNSA	112	LLNL	NNSA-0112-0033	2010	No	3.1	Identified	Building Automation Systems/EMCS	Energy Management Control System Improvement	2013	25	$3,489,118					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0034	2010	No	4.4	Identified	Other	High efficiency air filters	2013	25	$444,158					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0035	2010	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	2013	25	$199,252					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0036	2010	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	2013	25	$201,783					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0037	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B113 (HVAC & Lighting)	2013	10	$97,285					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0038	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B115 (HVAC & Lighting) ON HOLD	2013	10	$31,052					Energy Saving E

Measure/Project Description										Source Savings/Renewable Energy					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(x)	(y)	(z)	(aa)	(ab)	(ac)
										Provide estimated energy saved or switched for each energy type, as applicable. If there are no savings associated w estimated savings are unknown at this time enter "TBD".					
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Electricity Saved (MWh/Yr)	Estimated Annual Fuel Oil Saved (10^3 Gal/Yr)	Estimated Annual Natural Gas Saved (10^3 Cf/Yr)	Estimated Annual LPG/Propane Saved (10^3 Gal/Yr)	Estimated Annual Coal Saved (Short Ton/Yr)	Estimated Annual Steam Saved (10^9 BTU/Yr)
NNSA	112	LLNL	NNSA-0112-0019	2009	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	4,681.419	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0020	2009	No	13.1	Identified	Water and Sewer Conservation Systems	Plumbing Fixture Replacement: Replace fixtures with motion activated, low flow water conservation systems. Multiple buildings.	10.702	0.000	0.000	0.192	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0021	2009	No	13.2	Identified	Water and Sewer Conservation Systems	Water efficient irrigation	6.055	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0022	2009	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	486.803	0.000	0.000	8.718	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0028	2009	No	4.3	Identified	Heating, Ventilating, and Air Conditioning (HVAC)	Fume hood modification	11,029.066	0.000	0.000	197.509	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0005	2010	No		Identified	Data Center Efficiency	Terascale B-453 Free Cooling: - Modify existing HVAC system to utilize seasonal and nighttime cool outside air to provide free cooling, in lieu of mechanically cooled air, to the high performance computing center space.	12,017.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0029	2010	No		Identified	Building Envelope Modifications	Building Envelope Replacement: Replace single pane windows with double pane windows, replace damaged siding and inefficient insulation. Buildings 170, 181, 551E, 551W,	1,428.571	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0030	2010	No		Identified	Renewable Energy Assessment	Renewable Energy Project Development: Feasibility planning to develop solar, wind and fuel cells packages for third party financing. Projects include 10 MW solar panels at Site 200 and 10 MW solar panels at Site 300, 30 MW wind farm at Site 300, and three 400KW fuel cell units that will tie into the 13.8KV electrical system at Site 200.	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0031	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape.	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0032	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Upgrade irrigation system with 'smart' water controllers.	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0033	2010	No	3.1	Identified	Building Automation Systems/EMCS	Energy Management Control System Improvement	8,821.158	0.000	0.000	157.970	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0034	2010	No	4.4	Identified	Other	High efficiency air filters	1,548.066	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0035	2010	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	4,681.419	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0036	2010	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	486.803	0.000	0.000	8.718	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0037	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B113 (HVAC & Lighting)	551.280	0.000	5,490.300	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0038	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B115 (HVAC & Lighting) ON HOLD	309.780	0.000	1,845.200	0.000	0.000	0.000

Measure/Project Description										Output					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ad)	(ae)	(af)	(ag)	(ah)	(ai)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	with the measure enter "0". If Estimated Annual Other Saved (10^9 BTU/Yr)	If "Other", what is "Other"?	Estimated Annual Potable Water Savings (10^3 Gal/Yr)	Estimated Annual ILA (Non-Potable Freshwater) Savings (10^3 Gal/Yr)	Estimated Annual Renewable Electricity Output (MWh/Yr)	Estimated Annual Renewable Thermal Output (10^9 BTU/Yr)
NNSA	112	LLNL	NNSA-0112-0019	2009	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0020	2009	No	13.1	Identified	Water and Sewer Conservation Systems	Plumbing Fixture Replacement: Replace fixtures with motion activated, low flow water conservation systems. Multiple buildings.	0.000		15,869.600	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0021	2009	No	13.2	Identified	Water and Sewer Conservation Systems	Water efficient irrigation	0.000		6,055.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0022	2009	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0028	2009	No	4.3	Identified	Heating, Ventilating, and Air Conditioning (HVAC)	Fume hood modification	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0005	2010	No		Identified	Data Center Efficiency	Terascale B-453 Free Cooling: - Modify existing HVAC system to utilize seasonal and nighttime cool outside air to provide free cooling, in lieu of mechanically cooled air, to the high performance computing center space.	0.000		6,570.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0029	2010	No		Identified	Building Envelope Modifications	Building Envelope Replacement: Replace single pane windows with double pane windows, replace damaged siding and inefficient insulation. Buildings 170, 181, 551E, 551W,	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0030	2010	No		Identified	Renewable Energy Assessment	Renewable Energy Project Development: Feasibility planning to develop solar, wind and fuel cells packages for third party financing. Projects include 10 MW solar panels at Site 200 and 10 MW solar panels at Site 300, 30 MW wind farm at Site 300, and three 400KW fuel cell units that will tie into the 13.8KV electrical system at Site 200.	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0031	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape.	0.000		5,000.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0032	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Upgrade irrigation system with 'smart' water controllers.	0.000		2,500.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0033	2010	No	3.1	Identified	Building Automation Systems/EMCS	Energy Management Control System Improvement	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0034	2010	No	4.4	Identified	Other	High efficiency air filters	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0035	2010	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0036	2010	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0037	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B113 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0038	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B115 (HVAC & Lighting) ON HOLD	0.000		0.000	0.000	0.000	0.000

Measure/Project Description										Cost Savings				Note	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(aj)	(ak)	(al)	(am)	(an)	(ao)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Energy Cost Savings ($/Yr)	Estimated Annual Water Cost Savings ($/Yr)	Estimated Annual Cost Savings ($/Yr) from switching to a renewable energy source	Estimated Annual Ancillary Cost Savings ($/Yr)	Site Priority	Additional Information
NNSA	112	LLNL	NNSA-0112-0019	2009	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	$260,208	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0020	2009	No	13.1	Identified	Water and Sewer Conservation Systems	Plumbing Fixture Replacement: Replace fixtures with motion activated, low flow water conservation systems. Multiple buildings.	$163,346	$79,348	$0	$0	9	
NNSA	112	LLNL	NNSA-0112-0021	2009	No	13.2	Identified	Water and Sewer Conservation Systems	Water efficient irrigation	$6,055	$30,275	$0	$0		
NNSA	112	LLNL	NNSA-0112-0022	2009	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	$40,127	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0028	2009	No	4.3	Identified	Heating, Ventilating, and Air Conditioning (HVAC)	Fume hood modification	$650,977	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0005	2010	No		Identified	Data Center Efficiency	Terascale B-453 Free Cooling: - Modify existing HVAC system to utilize seasonal and nighttime cool outside air to provide free cooling, in lieu of mechanically cooled air, to the high performance computing center space.	$525,000	$57,850	$0	$0	6	B453
NNSA	112	LLNL	NNSA-0112-0029	2010	No		Identified	Building Envelope Modifications	Building Envelope Replacement: Replace single pane windows with double pane windows, replace damaged siding and inefficient insulation. Buildings 170, 181, 551E, 551W,	$30,000	$0	$0	$0	7	Buildings 170, 181, 551E, 551W,
NNSA	112	LLNL	NNSA-0112-0030	2010	No		Identified	Renewable Energy Assessment	Renewable Energy Project Development: Feasibility planning to develop solar, wind and fuel cells packages for third party financing. Projects include 10 MW solar panels at Site 200 and 10 MW solar panels at Site 300, 30 MW wind farm at Site 300, and three 400KW fuel cell units that will tie into the 13.8KV electrical system at Site 200.	$0	$0	$0	$0	10	
NNSA	112	LLNL	NNSA-0112-0031	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape.	$0	$25,000	$0	$0	11	
NNSA	112	LLNL	NNSA-0112-0032	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Upgrade irrigation system with 'smart' water controllers.	$0	$12,500	$0	$0	12	
NNSA	112	LLNL	NNSA-0112-0033	2010	No	3.1	Identified	Building Automation Systems/EMCS	Energy Management Control System Improvement	$986,543	$0	$0	$0		B115, B117, B125, B170, B191, B411, B438, B439, B543
NNSA	112	LLNL	NNSA-0112-0034	2010	No	4.4	Identified	Other	High efficiency air filters	$11,620	$0	$0	$0		B391, B543
NNSA	112	LLNL	NNSA-0112-0035	2010	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives	$41,416	$0	$0	$0		B391, B691
NNSA	112	LLNL	NNSA-0112-0036	2010	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert	$27,867	$0	$0	$0		B115, B117, B181, B191, B194, B391, B411, B438, B471, B543, B583, B691, U325
NNSA	112	LLNL	NNSA-0112-0037	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B113 (HVAC & Lighting)	$81,263	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0038	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B115 (HVAC & Lighting) ON HOLD	$36,103	$0	$0	$0		ON HOLD

Measure/Project Description														
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ap)	(aq)			
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Bldg # (Optional)	SPO Comments/Notes	Calculated Present Value (PV)	Input % Savings from electricity Column AT	Calculated Savings to Investment Ratio (SIR)
NNSA	112	LLNL	NNSA-0112-0019	2009	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives			4,798,236	100%	2.408
NNSA	112	LLNL	NNSA-0112-0020	2009	No	13.1	Identified	Water and Sewer Conservation Systems	Plumbing Fixture Replacement: Replace fixtures with motion activated, low flow water conservation systems. Multiple buildings.			4,393,542	100%	4.394
NNSA	112	LLNL	NNSA-0112-0021	2009	No	13.2	Identified	Water and Sewer Conservation Systems	Water efficient irrigation			638,742	100%	0.963
NNSA	112	LLNL	NNSA-0112-0022	2009	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert			739,942	100%	1.907
NNSA	112	LLNL	NNSA-0112-0028	2009	No	4.3	Identified	Heating, Ventilating, and Air Conditioning (HVAC)	Fume hood modification			12,004,016	100%	3.403
NNSA	112	LLNL	NNSA-0112-0005	2010	No		Identified	Data Center Efficiency	Terascale B-453 Free Cooling: - Modify existing HVAC system to utilize seasonal and nighttime cool outside air to provide free cooling, in lieu of mechanically cooled air, to the high performance computing center space.			10,688,169	100%	1.644
NNSA	112	LLNL	NNSA-0112-0029	2010	No		Identified	Building Envelope Modifications	Building Envelope Replacement: Replace single pane windows with double pane windows, replace damaged siding and inefficient insulation. Buildings 170, 181, 551E, 551W,			635,700	100%	0.141
NNSA	112	LLNL	NNSA-0112-0030	2010	No		Identified	Renewable Energy Assessment	Renewable Energy Project Development: Feasibility planning to develop solar, wind and fuel cells packages for third party financing. Projects include 10 MW solar panels at Site 200 and 10 MW solar panels at Site 300, 30 MW wind farm at Site 300, and three 400KW fuel cell units that will tie into the 13.8KV electrical system at Site 200.			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0031	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Install drought-tolerant plants and landscape.			490,000	100%	2.450
NNSA	112	LLNL	NNSA-0112-0032	2010	No		Identified	Water and Sewer Conservation Systems	Water Conservation Systems: Upgrade irrigation system with 'smart' water controllers.			186,000	100%	1.860
NNSA	112	LLNL	NNSA-0112-0033	2010	No	3.1	Identified	Building Automation Systems/EMCS	Energy Management Control System Improvement			18,191,853	100%	5.214
NNSA	112	LLNL	NNSA-0112-0034	2010	No	4.4	Identified	Other	High efficiency air filters			214,273	100%	0.482
NNSA	112	LLNL	NNSA-0112-0035	2010	No	8.2	Identified	Electric Motors and Drives	Variable speed motors or drives			763,711	100%	3.833
NNSA	112	LLNL	NNSA-0112-0036	2010	No	17.1	Identified	Commissioning, Re/Retro-commissioning	Retro-commissioning services LEED EB Cert			513,867	100%	2.547
NNSA	112	LLNL	NNSA-0112-0037	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B113 (HVAC & Lighting)			706,175	100%	7.259
NNSA	112	LLNL	NNSA-0112-0038	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B115 (HVAC & Lighting) ON HOLD			313,735	100%	10.104

Measure/Project Description												Funding Overview			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Measure Location (Zip Code)	Is this a multiple or single facility ECM?	Does the measure contribute to the reduction of deferred maintenance?	Is this effort/measure beyond typical O&M improvement to meet a goal?	Funding Source/Type (Actual or Potential)	Starting Year of Measure Implementation (Anticipated or Actual - YYYY)
NNSA	112	LLNL	NNSA-0112-0039	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B170 (HVAC) COMPLETED		Single	No	No	Unknown	2012
NNSA	112	LLNL	NNSA-0112-0040	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B191 (HVAC)		Single	No	Yes	Unknown	2013
NNSA	112	LLNL	NNSA-0112-0041	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U291 (Operations)		Single	No	Yes	Unknown	2012
NNSA	112	LLNL	NNSA-0112-0042	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B391 ((HVAC)		Single	No	No	Unknown	2012
NNSA	112	LLNL	NNSA-0112-0043	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B471 (HVAC) COMPLETED		Single	No	No	Unknown	2012
NNSA	112	LLNL	NNSA-0112-0044	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B691 (HVAC)		Single	No	Yes	Unknown	2012
NNSA	112	LLNL	NNSA-0112-0014	2009	No	LLNL-W-01	Verified	Water and Sewer Conservation Systems	Water Reclamation System: Install a modular sewage treatment system to provide irrigation water. Upgrade the irrigation piping system for reclaimed water distribution.			No	Yes	Unknown	2013
NNSA	112	LLNL	NNSA-0112-0015	2009	No	TC30	Cancelled	Other	Facilities Footprint Consolidation		Multiple			N/A	
NNSA	112	LLNL	NNSA-0112-0023	2009	No	N/A	Cancelled	Boiler Plant Improvements	Secure boilers		N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	NNSA-0112-0024	2009	No	N/A	Cancelled	Data Center Efficiency	PC shutdown		N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	NNSA-0112-0025	2009	No	N/A	Cancelled	Boiler Plant Improvements	Boiler replacement project		N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	NNSA-0112-0026	2009	No	N/A	Cancelled	Other	Cold and dark facilities		N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	NNSA-0112-0027	2009	No	N/A	Cancelled	Energy Related Process Improvements	Vending machine energy management controls		N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	NNSA-0112-0045	2012	No		Awarded/Approved	Heating, Ventilating, and Air Conditioning (HVAC)	Thermostat Initiative: Install 700 programmable thermostats at 95 facilities COMPLETED		Multiple	No	Yes	M&R Indirect	2011
NNSA	112	LLNL	NNSA-0112-0046	2012	No		Awarded/Approved	Lighting Improvements	Lighting Improvements - Exterior: Replace 200 exterior parking and street lighting with LED lighting fixures to reduce energy consumption. COMPLETED		Multiple	No	Yes	M&R Indirect	2011
NNSA	112	LLNL	NNSA-0112-0047	2012	No		Awarded/Approved	Water and Sewer Conservation Systems	Install 1,800 sink aerators at restrooms and kitchen faucets.		Multiple	No	Yes	M&R Indirect	2011
NNSA	112	LLNL	NNSA-0112-0048	2012	No		Awarded/Approved	Lighting Improvements	Lighting Occupancy Sensor Test and Survey COMPLETED		Multiple	No	No	M&R Indirect	2011
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B112 (HVAC & Lighting)		Single	No	No	TBD	2013
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U325 (Operations)		Single	No	No	TBD	2013

Measure/Project Description													Measurement & Verification				
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(q)	(r)	(s)	(t)	(u)	(v)		(w)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Completion/ Operational Year of Measure (Anticipated or Actual -- YYYY)	Estimated Service Life	Estimated Implementation Cost ($)	Are there plans to measure and verify the performance of this measure?	If M&V has been conducted, provide type and date. Type of M&V	MM	YYYY	Is this a energy saving measure or renewable energy system?
NNSA	112	LLNL	NNSA-0112-0039	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B170 (HVAC) COMPLETED	2012	10	$66,734					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0040	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B191 (HVAC)	2013	10	$324,453					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0041	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U291 (Operations)	2012	10	$442,248					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0042	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B391 ((HVAC)	2012	10	$137,509					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0043	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B471 (HVAC) COMPLETED	2012	10	$5,406					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0044	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B691 (HVAC)	2012	10	$50,477					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0014	2009	No	LLNL-W-01	Verified	Water and Sewer Conservation Systems	Water Reclamation System: Install a modular sewage treatment system to provide irrigation water. Upgrade the irrigation piping system for reclaimed water distribution.	2015	25	$9,800,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0015	2009	No	TC30	Cancelled	Other	Facilities Footprint Consolidation			$15,000,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0023	2009	No	N/A	Cancelled	Boiler Plant Improvements	Secure boilers	N/A	N/A	$150,000	No				Energy Saving E
NNSA	112	LLNL	NNSA-0112-0024	2009	No	N/A	Cancelled	Data Center Efficiency	PC shutdown	N/A	N/A	$5,000	No				Energy Saving E
NNSA	112	LLNL	NNSA-0112-0025	2009	No	N/A	Cancelled	Boiler Plant Improvements	Boiler replacement project	N/A	N/A	$9,000,000	No				Energy Saving E
NNSA	112	LLNL	NNSA-0112-0026	2009	No	N/A	Cancelled	Other	Cold and dark facilities	N/A	N/A		No				Energy Saving E
NNSA	112	LLNL	NNSA-0112-0027	2009	No	N/A	Cancelled	Energy Related Process Improvements	Vending machine energy management controls	N/A	N/A	$22,000	No				Energy Saving E
NNSA	112	LLNL	NNSA-0112-0045	2012	No		Awarded/Approved	Heating, Ventilating, and Air Conditioning (HVAC)	Thermostat Initiative: Install 700 programmable thermostats at 95 facilities COMPLETED	2011	15	$328,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0046	2012	No		Awarded/Approved	Lighting Improvements	Lighting Improvements - Exterior: Replace 200 exterior parking and street lighting with LED lighting fixures to reduce energy consumption. COMPLETED	2011	15	$225,000					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0047	2012	No		Awarded/Approved	Water and Sewer Conservation Systems	Install 1,800 sink aerators at restrooms and kitchen faucets.	2013	15	$10,000					Water Saving EC
NNSA	112	LLNL	NNSA-0112-0048	2012	No		Awarded/Approved	Lighting Improvements	Lighting Occupancy Sensor Test and Survey COMPLETED	2012	25	$60,000					Energy Saving E
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B112 (HVAC & Lighting)	2013	15	$1,040,026					Energy Saving E
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U325 (Operations)	2013	15	$212,800					Energy Saving E

Measure/Project Description										Source Savings/Renewable Energy					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(x)	(y)	(z)	(aa)	(ab)	(ac)
										Provide estimated energy saved or switched for each energy type, as applicable. If there are no savings associated v estimated savings are unknown at this time enter "TBD".					
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Electricity Saved (MWh/Yr)	Estimated Annual Fuel Oil Saved (10^3 Gal/Yr)	Estimated Annual Natural Gas Saved (10^3 Cf/Yr)	Estimated Annual LPG/Propane Saved (10^3 Gal/Yr)	Estimated Annual Coal Saved (Short Ton/Yr)	Estimated Annual Steam Saved (10^9 BTU/Yr)
NNSA	112	LLNL	NNSA-0112-0039	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B170 (HVAC) COMPLETED	167.380	0.000	3,415.200	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0040	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B191 (HVAC)	737.920	0.000	6,202.200	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0041	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U291 (Operations)	3,796.040	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0042	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B391 ((HVAC)	1,551.010	0.000	4,021.900	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0043	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B471 (HVAC) COMPLETED	206.040	0.000	1,982.700	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0044	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B691 (HVAC)	480.810	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0014	2009	No	LLNL-W-01	Verified	Water and Sewer Conservation Systems	Water Reclamation System: Install a modular sewage treatment system to provide irrigation water. Upgrade the irrigation piping system for reclaimed water distribution.	254.804	0.000	0.000	4.563	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0015	2009	No	TC30	Cancelled	Other	Facilities Footprint Consolidation	22,928.963	0.000	0.000	410.613	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0023	2009	No	N/A	Cancelled	Boiler Plant Improvements	Secure boilers	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0024	2009	No	N/A	Cancelled	Data Center Efficiency	PC shutdown	4.991	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0025	2009	No	N/A	Cancelled	Boiler Plant Improvements	Boiler replacement project	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0026	2009	No	N/A	Cancelled	Other	Cold and dark facilities	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0027	2009	No	N/A	Cancelled	Energy Related Process Improvements	Vending machine energy management controls	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0045	2012	No		Awarded/Approved	Heating, Ventilating, and Air Conditioning (HVAC)	Thermostat Initiative: Install 700 programmable thermostats at 95 facilities COMPLETED	1,700.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0046	2012	No		Awarded/Approved	Lighting Improvements	Lighting Improvements - Exterior: Replace 200 exterior parking and street lighting with LED lighting fixures to reduce energy consumption. COMPLETED	184.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0047	2012	No		Awarded/Approved	Water and Sewer Conservation Systems	Install 1,800 sink aerators at restrooms and kitchen faucets.	0.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0048	2012	No		Awarded/Approved	Lighting Improvements	Lighting Occupancy Sensor Test and Survey COMPLETED	500.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B112 (HVAC & Lighting)	2,550.001	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U325 (Operations)	3,472.920	0.000	0.000	0.000	0.000	0.000

Measure/Project Description										Output					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ad)	(ae)	(af)	(ag)	(ah)	(ai)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	with the measure enter "0". If Estimated Annual Other Saved (10^9 BTU/Yr)	If "Other", what is "Other"?	Estimated Annual Potable Water Savings (10^3 Gal/Yr)	Estimated Annual ILA (Non-Potable Freshwater) Savings (10^3 Gal/Yr)	Estimated Annual Renewable Electricity Output (MWh/Yr)	Estimated Annual Renewable Thermal Output (10^9 BTU/Yr)
NNSA	112	LLNL	NNSA-0112-0039	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B170 (HVAC) COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0040	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B191 (HVAC)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0041	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U291 (Operations)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0042	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B391 ((HVAC)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0043	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B471 (HVAC) COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0044	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B691 (HVAC)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0014	2009	No	LLNL-W-01	Verified	Water and Sewer Conservation Systems	Water Reclamation System: Install a modular sewage treatment system to provide irrigation water. Upgrade the irrigation piping system for reclaimed water distribution.	0.000		95,000.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0015	2009	No	TC30	Cancelled	Other	Facilities Footprint Consolidation	0.000				0.000	
NNSA	112	LLNL	NNSA-0112-0023	2009	No	N/A	Cancelled	Boiler Plant Improvements	Secure boilers	0.000		0.000	0.000	0.000	
NNSA	112	LLNL	NNSA-0112-0024	2009	No	N/A	Cancelled	Data Center Efficiency	PC shutdown	0.000		0.000	0.000	0.000	
NNSA	112	LLNL	NNSA-0112-0025	2009	No	N/A	Cancelled	Boiler Plant Improvements	Boiler replacement project	0.000		0.000	0.000	0.000	
NNSA	112	LLNL	NNSA-0112-0026	2009	No	N/A	Cancelled	Other	Cold and dark facilities	0.000		0.000	0.000	0.000	
NNSA	112	LLNL	NNSA-0112-0027	2009	No	N/A	Cancelled	Energy Related Process Improvements	Vending machine energy management controls	0.000		0.000	0.000	0.000	
NNSA	112	LLNL	NNSA-0112-0045	2012	No		Awarded/Approved	Heating, Ventilating, and Air Conditioning (HVAC)	Thermostat Initiative: Install 700 programmable thermostats at 95 facilities COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0046	2012	No		Awarded/Approved	Lighting Improvements	Lighting Improvements - Exterior: Replace 200 exterior parking and street lighting with LED lighting fixures to reduce energy consumption. COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0047	2012	No		Awarded/Approved	Water and Sewer Conservation Systems	Install 1,800 sink aerators at restrooms and kitchen faucets.	0.000		2,000.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0048	2012	No		Awarded/Approved	Lighting Improvements	Lighting Occupancy Sensor Test and Survey COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B112 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U325 (Operations)	0.000		0.000	0.000	0.000	0.000

Measure/Project Description										Cost Savings				Note	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(aj)	(ak)	(al)	(am)	(an)	(ao)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Energy Cost Savings ($/Yr)	Estimated Annual Water Cost Savings ($/Yr)	Estimated Annual Cost Savings ($/Yr) from switching to a renewable energy source	Estimated Annual Ancillary Cost Savings ($/Yr)	Site Priority	Additional Information
NNSA	112	LLNL	NNSA-0112-0039	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B170 (HVAC) COMPLETED	$38,151	$0	$0	$0		COMPLETED
NNSA	112	LLNL	NNSA-0112-0040	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B191 (HVAC)	$106,941	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0041	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U291 (Operations)	$268,077	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0042	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B391 ((HVAC)	$153,067	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0043	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B471 (HVAC) COMPLETED	$29,837	$0	$0	$0		COMPLETED
NNSA	112	LLNL	NNSA-0112-0044	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B691 (HVAC)	$33,956	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0014	2009	No	LLNL-W-01	Verified	Water and Sewer Conservation Systems	Water Reclamation System: Install a modular sewage treatment system to provide irrigation water. Upgrade the irrigation piping system for reclaimed water distribution.	$26,449	$475,000	$0	$0	5	
NNSA	112	LLNL	NNSA-0112-0015	2009	No	TC30	Cancelled	Other	Facilities Footprint Consolidation	$2,450,000			$0	Duplicate	Cancelled
NNSA	112	LLNL	NNSA-0112-0023	2009	No	N/A	Cancelled	Boiler Plant Improvements	Secure boilers	$0	$0		$0		Cancelled
NNSA	112	LLNL	NNSA-0112-0024	2009	No	N/A	Cancelled	Data Center Efficiency	PC shutdown	$0	$0		$0		Cancelled
NNSA	112	LLNL	NNSA-0112-0025	2009	No	N/A	Cancelled	Boiler Plant Improvements	Boiler replacement project	$0	$0		$0		Cancelled
NNSA	112	LLNL	NNSA-0112-0026	2009	No	N/A	Cancelled	Other	Cold and dark facilities	$0	$0		$0		Cancelled
NNSA	112	LLNL	NNSA-0112-0027	2009	No	N/A	Cancelled	Energy Related Process Improvements	Vending machine energy management controls	$0	$0		$0		Cancelled
NNSA	112	LLNL	NNSA-0112-0045	2012	No		Awarded/Approved	Heating, Ventilating, and Air Conditioning (HVAC)	Thermostat Initiative: Install 700 programmable thermostats at 95 facilities COMPLETED	$119,000	$0	$0	$0		COMPLETED
NNSA	112	LLNL	NNSA-0112-0046	2012	No		Awarded/Approved	Lighting Improvements	Lighting Improvements - Exterior: Replace 200 exterior parking and street lighting with LED lighting fixures to reduce energy consumption. COMPLETED	$12,880	$0	$0	$0		COMPLETED
NNSA	112	LLNL	NNSA-0112-0047	2012	No		Awarded/Approved	Water and Sewer Conservation Systems	Install 1,800 sink aerators at restrooms and kitchen faucets.	$0	$26,000	$0	$0		
NNSA	112	LLNL	NNSA-0112-0048	2012	No		Awarded/Approved	Lighting Improvements	Lighting Occupancy Sensor Test and Survey COMPLETED	$35,000	$0	$0	$0		COMPLETED
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B112 (HVAC & Lighting)	$179,383	$0	$0	$0		
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U325 (Operations)	$245,258	$0	$0	$0		

Measure/Project Description														
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ap)	(aq)			
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Bldg # (Optional)	SPO Comments/Notes	Calculated Present Value (PV)	Input % Savings from electricity Column AT	Calculated Savings to Investment Ratio (SIR)
NNSA	112	LLNL	NNSA-0112-0039	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B170 (HVAC) COMPLETED			331,532	100%	4.968
NNSA	112	LLNL	NNSA-0112-0040	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B191 (HVAC)			929,317	100%	2.864
NNSA	112	LLNL	NNSA-0112-0041	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U291 (Operations)			2,329,589	100%	5.268
NNSA	112	LLNL	NNSA-0112-0042	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B391 ((HVAC)			1,330,152	100%	9.673
NNSA	112	LLNL	NNSA-0112-0043	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B471 (HVAC) COMPLETED			259,284	100%	47.962
NNSA	112	LLNL	NNSA-0112-0044	2011	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B691 (HVAC)			295,078	100%	5.846
NNSA	112	LLNL	NNSA-0112-0014	2009	No	LLNL-W-01	Verified	Water and Sewer Conservation Systems	Water Reclamation System: Install a modular sewage treatment system to provide irrigation water. Upgrade the irrigation piping system for reclaimed water distribution.			8,757,470	100%	0.894
NNSA	112	LLNL	NNSA-0112-0015	2009	No	TC30	Cancelled	Other	Facilities Footprint Consolidation			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0023	2009	No	N/A	Cancelled	Boiler Plant Improvements	Secure boilers			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0024	2009	No	N/A	Cancelled	Data Center Efficiency	PC shutdown			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0025	2009	No	N/A	Cancelled	Boiler Plant Improvements	Boiler replacement project			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0026	2009	No	N/A	Cancelled	Other	Cold and dark facilities			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0027	2009	No	N/A	Cancelled	Energy Related Process Improvements	Vending machine energy management controls			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL	NNSA-0112-0045	2012	No		Awarded/Approved	Heating, Ventilating, and Air Conditioning (HVAC)	Thermostat Initiative: Install 700 programmable thermostats at 95 facilities COMPLETED		Request: Completion year on or before 2012, please verify/update conservation measure status	1,463,700	100%	4.463
NNSA	112	LLNL	NNSA-0112-0046	2012	No		Awarded/Approved	Lighting Improvements	Lighting Improvements - Exterior: Replace 200 exterior parking and street lighting with LED lighting fixures to reduce energy consumption. COMPLETED		Request: Completion year on or before 2012, please verify/update conservation measure status	158,424	100%	0.704
NNSA	112	LLNL	NNSA-0112-0047	2012	No		Awarded/Approved	Water and Sewer Conservation Systems	Install 1,800 sink aerators at restrooms and kitchen faucets.			310,440	100%	31.044
NNSA	112	LLNL	NNSA-0112-0048	2012	No		Awarded/Approved	Lighting Improvements	Lighting Occupancy Sensor Test and Survey COMPLETED			645,400	100%	10.757
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B112 (HVAC & Lighting)			2,206,411	100%	2.121
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - U325 (Operations)			3,016,673	100%	14.176

Measure/Project Description												Funding Overview			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Measure Location (Zip Code)	Is this a multiple or single facility ECM?	Does the measure contribute to the reduction of deferred maintenance?	Is this effort/measure beyond typical O&M improvement to meet a goal?	Funding Source/Type (Actual or Potential)	Starting Year of Measure Implementation (Anticipated or Actual - YYYY)
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B153 (HVAC & Lighting)		Single	No	No	TBD	2013
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B231 (HVAC & Lighting)		Single	No	No	TBD	2013
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B151 (HVAC & Lighting)		Single	No	No	TBD	2013
NNSA	112	LLNL		2012	No		Cancelled	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - OS454 (Operations)		Single	No	No	TBD	N/A
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B298 (HVAC & Lighting)		Single	No	No	TBD	2013
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B490 (HVAC & Lighting)		Single	No	No	TBD	2013
NNSA	112	LLNL	NNSA-0112-0001	2009	No	3.1	Awarded/Approved	Building Automation Systems/EMCS	Energy Management Control System Improvement COMPLETED		Multiple	Yes	Yes	ESPC	2008
NNSA	112	LLNL	NNSA-0112-0002	2009	No	3.2	Awarded/Approved	Advanced Metering Systems	Electrical Metering Installation COMPLETED		Multiple	Yes	Yes	ESPC	2008
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B117 (HVAC & Lighting)		Single	No	No	TBD	2014
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B121 (HVAC, Lighting & Water)		Single	No	No	TBD	2014
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B131 (HVAC, Lighting & Water)		Single	No	No	TBD	2014
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B321A (HVAC, Lighting & Water)		Single	No	No	TBD	2014
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B361 (HVAC, Lighting & Water)		Single	No	No	TBD	2014
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B439 (HVAC, Lighting & Water)		Single	No	No	TBD	2014
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B482 (HVAC, Lighting & Water)		Single	No	No	TBD	2014

Measure/Project Description													Measurement & Verification				
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(q)	(r)	(s)	(t)	(u)	(v)		(w)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Completion/ Operational Year of Measure (Anticipated or Actual -- YYYY)	Estimated Service Life	Estimated Implementation Cost ($)	Are there plans to measure and verify the performance of this measure?	If M&V has been conducted, provide type and date. Type of M&V	MM	YYYY	Is this a energy saving measure or renewable energy system?
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B153 (HVAC & Lighting)	2013	15	$105,888					Energy Saving E
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B231 (HVAC & Lighting)	2013	15	$1,322,000					Energy Saving E
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B151 (HVAC & Lighting)	2013	15	$1,125,463					Energy Saving E
NNSA	112	LLNL		2012	No		Cancelled	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - OS454 (Operations)	N/A	N/A	N/A	No				Energy Saving E
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B298 (HVAC & Lighting)	2013	15	$587,729					Energy Saving E
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B490 (HVAC & Lighting)	2013	15	$1,121,419					Energy Saving E
NNSA	112	LLNL	NNSA-0112-0001	2009	No	3.1	Awarded/Approved	Building Automation Systems/EMCS	Energy Management Control System Improvement COMPLETED	2012	25	$5,820,050	Yes	B - Retrofit	Dec	2013	Energy Saving E
NNSA	112	LLNL	NNSA-0112-0002	2009	No	3.2	Awarded/Approved	Advanced Metering Systems	Electrical Metering Installation COMPLETED	2012	25	$2,365,076	Yes	A - Retrofit	Mar	2013	Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B117 (HVAC & Lighting)	2014	15	$280,000					Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B121 (HVAC, Lighting & Water)	2014	15	$149,800					Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B131 (HVAC, Lighting & Water)	2014	15	$185,200					Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B321A (HVAC, Lighting & Water)	2014	15	$239,700					Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B361 (HVAC, Lighting & Water)	2014	15	$258,800					Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B439 (HVAC, Lighting & Water)	2014	15	$403,000					Energy Saving E
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B482 (HVAC, Lighting & Water)	2014	15	$519,000					Energy Saving E

Measure/Project Description										Source Savings/Renewable Energy					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(x)	(y)	(z)	(aa)	(ab)	(ac)
										Provide estimated energy saved or switched for each energy type, as applicable. If there are no savings associated v estimated savings are unknown at this time enter "TBD".					
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Electricity Saved (MWh/Yr)	Estimated Annual Fuel Oil Saved (10^3 Gal/Yr)	Estimated Annual Natural Gas Saved (10^3 Cf/Yr)	Estimated Annual LPG/Propane Saved (10^3 Gal/Yr)	Estimated Annual Coal Saved (Short Ton/Yr)	Estimated Annual Steam Saved (10^9 BTU/Yr)
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B153 (HVAC & Lighting)	383.955	0.000	786.809	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B231 (HVAC & Lighting)	1,573.051	0.000	4,236.663	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B151 (HVAC & Lighting)	1.371.585	0.000	15,037.924	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Cancelled	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - OS454 (Operations)	N/A	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B298 (HVAC & Lighting)	2,188.103	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B490 (HVAC & Lighting)	1,359.517	0.000	8,144.035	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0001	2009	No	3.1	Awarded/Approved	Building Automation Systems/EMCS	Energy Management Control System Improvement COMPLETED	8,821.158	0.000	0.000	157.970	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0002	2009	No	3.2	Awarded/Approved	Advanced Metering Systems	Electrical Metering Installation COMPLETED	5,071.805	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B117 (HVAC & Lighting)	607.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B121 (HVAC, Lighting & Water)	362.400	0.000	38.797	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B131 (HVAC, Lighting & Water)	1,037.200	0.000	727.449	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B321A (HVAC, Lighting & Water)	738.800	0.000	3,606.499	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B361 (HVAC, Lighting & Water)	314.826	0.000	7,362.464	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B439 (HVAC, Lighting & Water)	1,146.000	0.000	0.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B482 (HVAC, Lighting & Water)	978.212	0.000	640.155	0.000	0.000	0.000

Measure/Project Description										Output					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ad)	(ae)	(af)	(ag)	(ah)	(ai)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	with the measure enter "0". If Estimated Annual Other Saved (10^9 BTU/Yr)	If "Other", what is "Other"?	Estimated Annual Potable Water Savings (10^3 Gal/Yr)	Estimated Annual ILA (Non-Potable Freshwater) Savings (10^3 Gal/Yr)	Estimated Annual Renewable Electricity Output (MWh/Yr)	Estimated Annual Renewable Thermal Output (10^9 BTU/Yr)
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B153 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B231 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B151 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Cancelled	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - OS454 (Operations)	N/A	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B298 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B490 (HVAC & Lighting)	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0001	2009	No	3.1	Awarded/Approved	Building Automation Systems/EMCS	Energy Management Control System Improvement COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL	NNSA-0112-0002	2009	No	3.2	Awarded/Approved	Advanced Metering Systems	Electrical Metering Installation COMPLETED	0.000		0.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B117 (HVAC & Lighting)	0.000		1,010.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B121 (HVAC, Lighting & Water)	0.000		95.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B131 (HVAC, Lighting & Water)	0.000		325.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B321A (HVAC, Lighting & Water)	0.000		40.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B361 (HVAC, Lighting & Water)	0.000		1,359.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B439 (HVAC, Lighting & Water)	0.000		2,160.000	0.000	0.000	0.000
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B482 (HVAC, Lighting & Water)	0.000		2,871.000	0.000	0.000	0.000

Measure/Project Description										Cost Savings				Note	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(aj)	(ak)	(al)	(am)	(an)	(ao)
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Estimated Annual Energy Cost Savings ($/Yr)	Estimated Annual Water Cost Savings ($/Yr)	Estimated Annual Cost Savings ($/Yr) from switching to a renewable energy source	Estimated Annual Ancillary Cost Savings ($/Yr)	Site Priority	Additional Information
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B153 (HVAC & Lighting)	$33,300	$0	$0	$0		
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B231 (HVAC & Lighting)	$158,034	$0	$0	$0		
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B151 (HVAC & Lighting)	$216,398	$0	$0	$0		
NNSA	112	LLNL		2012	No		Cancelled	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - OS454 (Operations)	N/A	N/A	N/A	N/A		Impacts mission, not recommended for implementation at this time.
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B298 (HVAC & Lighting)	$154,525	$0	$0	$0		
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B490 (HVAC & Lighting)	$160,746	$0	$0	$0		
NNSA	112	LLNL	NNSA-0112-0001	2009	No	3.1	Awarded/Approved	Building Automation Systems/EMCS	Energy Management Control System Improvement COMPLETED	$937,572	$0	$0	$0		COMPLETED
NNSA	112	LLNL	NNSA-0112-0002	2009	No	3.2	Awarded/Approved	Advanced Metering Systems	Electrical Metering Installation COMPLETED	$358,060	$0	$0	$0		COMPLETED
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B117 (HVAC & Lighting)	$47,800	$5,050	$0	$0		
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B121 (HVAC, Lighting & Water)	$26,600	$475	$0	$0		
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B131 (HVAC, Lighting & Water)	$83,700	$1,625	$0	$0		
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B321A (HVAC, Lighting & Water)	$81,300	$200	$0	$0		
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B361 (HVAC, Lighting & Water)	$87,760	$6,795	$0	$0		
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B439 (HVAC, Lighting & Water)	$91,600	$10,800	$0	$0		
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B482 (HVAC, Lighting & Water)	$91,600	$14,355	$0	$0		

Measure/Project Description														
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(ap)	(aq)			
PSO	Site #	Site	HQ Measure #	If Covered, EISA S432 Reporting Year (YYYY)	Has this measure been included in an official DOE budget requests? If yes, provide Project/ Measure #	Site Project #	Conservation Measure(s) Status	Conservation Measure(s) Type	Conservation Measure(s) Name or Description	Bldg # (Optional)	SPO Comments/Notes	Calculated Present Value (PV)	Input % Savings from electricity Column AT	Calculated Savings to Investment Ratio (SIR)
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B153 (HVAC & Lighting)			409,590	100%	3.868
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B231 (HVAC & Lighting)			1,943,818	100%	1.470
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B151 (HVAC & Lighting)			2,661,695	100%	2.365
NNSA	112	LLNL		2012	No		Cancelled	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - OS454 (Operations)			DATA MISSING/WRONG	100%	DATA MISSING/WRONG
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B298 (HVAC & Lighting)			1,900,658	100%	3.234
NNSA	112	LLNL		2012	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B490 (HVAC & Lighting)			1,977,176	100%	1.763
NNSA	112	LLNL	NNSA-0112-0001	2009	No	3.1	Awarded/Approved	Building Automation Systems/EMCS	Energy Management Control System Improvement COMPLETED		Request: Completion year on or before 2012, please verify/update conservation measure status. In addition, if project is operational, ensure to update M&V type and date. Note, ESPC funded projects have M&V built in as part of the contract/agreement.	17,288,828	100%	2.971
NNSA	112	LLNL	NNSA-0112-0002	2009	No	3.2	Awarded/Approved	Advanced Metering Systems	Electrical Metering Installation COMPLETED		Request: Completion year on or before 2012, please verify/update conservation measure status. In addition, if project is operational, ensure to update M&V type and date. Note, ESPC funded projects have M&V built in as part of the contract/agreement.	6,602,626	100%	2.792
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B117 (HVAC & Lighting)			648,237	100%	2.315
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B121 (HVAC, Lighting & Water)			332,852	100%	2.222
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B131 (HVAC, Lighting & Water)			1,048,913	100%	5.664
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B321A (HVAC, Lighting & Water)			1,002,378	100%	4.182
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B361 (HVAC, Lighting & Water)			1,160,580	100%	4.484
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B439 (HVAC, Lighting & Water)			1,255,632	100%	3.116
NNSA	112	LLNL		2013	No		Identified	Audit/Evaluation (Energy, Water)	Facility Audit Recommendations - B482 (HVAC, Lighting & Water)			1,298,079	100%	2.501

Building Inventory Changes, HPSB Compliance and Projected Utilities Consumption

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): EPAct 2005, EISA 2007, DOE O 436.1

Instructions: Update this worksheet with information on new building construction, major renovation, replacements, and buildings that are to be disposed of in the near future, and address SPO requests. For additional guidance see comments in row 9 of each column and the CEDR Technical Support Document. Edited and new data cells should be highlighted. Note some of the information may be captured in the new FIMS module, please ensure consistency.

Source: Site/Lab

Basic Information																			For compliance with Sec 438 of EISA	For compliance with DOE O 436.1	Complete this section if *new* building project was CD-1 or lower on 10/1/06		Complete this section if construction has	Notes	
PSO	Site #	Site	Project ID	Building/ Project Name	Location (Zip Code)	Planned or Actual CD-2 Date (MM/YY)	Current CD Status	HQ Approved Change (Y/N)	Total Project Cost ($ M)	Number/ Type of Facilities	Facility Change Status	Anticipated Electricity Usage (kWh/Yr)	Anticipated Natural Gas Usage (10^3 Cubic Feet/Yr)	Anticipated Potable Water Usage (10^3 Gal/Yr)	Anticipated ILA Water Usage (10^3 Gal/Yr)	Excluded from Energy Intensity?	Expected Building Occupancy or Removal Year (YYYY)	Anticipated Square Footage	If > 5,000 sq ft, will it maintain or restore pre-development hydrology?	What GP equivalency will the building achieve?	Estimated percentage below ASHRAE Std 90.1 in terms of energy use	If not at least 30% below ASHRAE Std 90.1, will design achieve maximum level of energy efficiency that is life-cycle cost-effective?	In terms of energy use, percentage below ANSI/ ASHRAE/ IESNA Standard 90.1 achieved	Additional Information	SPO Comments / Notes
NNSA	112	LLNL		Building 654/HPCC	94550					1/Datacenter	New									LEED® Gold					
NNSA	112	LLNL		Building 031/EMF	94550	10/16	CD-0			1/Emergency Operations Center	New							17,000		LEED® Gold					

Source Energy Savings Credit

Requirement(s): E.O. 13123

Instructions: Optional, complete the tables below for projects that increase site energy use but save source energy. For additional guidance see: http://www.eere.energy.gov/femp/pdfs/sec502e_%20guidance.pdf. Edited and new data cells should be highlighted.

Source: Site/Lab

EPACT Goal Subject Buildings

Name of Project Saving Source Energy in FY 2013 (insert additional rows as necessary)	Annual Site Energy Increase with the Project	Annual Source Energy Saved with the Project	Adjustment to Annual Site Energy
	(10^6 BTU/Yr)	(10^6 BTU/Yr)	(10^6 BTU/Yr)
Project No. 1	0.0	0.0	0.0
Project No. 2	0.0	0.0	0.0
Project No. 3	0.0	0.0	0.0
Totals	**0.0**	**0.0**	**0.0**

EPACT Excluded Buildings

Name of Project Saving Source Energy in FY 2013 (insert additional rows as necessary)	Annual Site Energy Increase with the Project	Annual Source Energy Saved with the Project	Adjustment to Annual Site Energy
	(10^6 BTU/Yr)	(10^6 BTU/Yr)	(10^6 BTU/Yr)
Project No. 1	0.0	0.0	0.0
Project No. 2	0.0	0.0	0.0
Project No. 3	0.0	0.0	0.0
Totals	**0.0**	**0.0**	**0.0**

Data Centers

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Update the list of data centers and complete all fields, if not using DOEGRIT. For additional guidance see comments in row 9 of each column and the CEDR Technical Support Document.

Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Basic Information

PSO	Site #	Site	GOCO / FED	Data Center Name	Data Center Function	Assigned DCEP POC	Data Center POC	Target Date for Closure (CY)	Phase of Closure	Street Address	Street Address 2	City	State	Zip Code	Country	Gross Floor Area (Sq.Ft.)
NNSA	112.00	LLNL	GOCO	B-111 R-170	General	Paul C Dickinson (925-422-9130)	Scott M Taylor (925-423-9220)	Q4 / 2013	Stage 4: Migration Execution	7000 East Ave		Livermore	Ca	94550	USA	794.00
NNSA	112.00	LLNL	GOCO	B-111 R-178	General	Paul C Dickinson (925-422-9130)	Scott M Taylor (925-423-9220)	Q4 / 2014	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	564.00
NNSA	112.00	LLNL	GOCO	B-112 R-1250	General	William E Maciel (925-423-1900)	Andy Ashbaugh (925-422-1137)			7000 East Ave		Livermore	Ca	94550	USA	#######
NNSA	112.00	LLNL	GOCO	B-112 R-B126	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	914.00
NNSA	112.00	LLNL	GOCO	B-112 R-B137	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,076.00
NNSA	112.00	LLNL	GOCO	B-112 R-B140	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,960.00
NNSA	112.00	LLNL	GOCO	B-112 R-B140A	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	560.00
NNSA	112.00	LLNL	GOCO	B-112 R-B151	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,069.00
NNSA	112.00	LLNL	GOCO	B-115 R-1410	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	2,413.00
NNSA	112.00	LLNL	GOCO	B-115 R-1465	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	1,443.00
NNSA	112.00	LLNL	GOCO	B-115 R-1469	General	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	904.00
NNSA	112.00	LLNL	GOCO	B-115 R-1475	General	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	972.00
NNSA	112.00	LLNL	GOCO	B-115 R-1506	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	3,178.00
NNSA	112.00	LLNL	GOCO	B-117 R-1812	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	1,094.00
NNSA	112.00	LLNL	GOCO	B-117 R-1824	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	1,611.00
NNSA	112.00	LLNL	GOCO	B-117 R-1907	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	2,677.00

IT Facilities, Energy															
Facility Cost ($/Sq.Ft. /Yr)	Electricity Included in Cost? (Y/N)	Ownership Type	Data Center Tier / Type	Electricity Metered (Y/N)	Total Data Center (Facility) Power	Average Data Center Electricity Usage (kWh)	Total Data Center IT Power Capacity (kW)	Average IT Electricity Usage (kWh)	Cost Per kWh (if known)	Watts per Sq.ft.	Estimated Power Usage Effectiveness (PUE)	Has A DC Pro Assessment been Conducted?	Current Rack Count (#)	Sq. Ft. per Rack	Super Computers or HPC Systems
26.02	No	1: Agency Owned	2: Tier II	No	225.00	50.00	125.00	12.00	0.06	15.11	4.17	No	12.00	66.17	
26.02	No	1: Agency Owned	2: Tier II	No	225.00	60.00	225.00	17.00	0.06	30.14	3.53	No	15.00	37.60	
29.62	Yes	1: Agency Owned	3: Tier III	Yes	7,000.00	850.00	569.50	440.00	0.06	28.43	1.93	Yes	250.00	61.90	
29.06	Yes	1: Agency Owned	2: Tier II	No	225.00	80.00	65.00	35.00	0.06	38.29	2.29	No		Incomplete	
29.06	Yes	1: Agency Owned	2: Tier II	No	225.00	80.00	65.00	35.00	0.06	32.53	2.29	No		Incomplete	
29.06	Yes	1: Agency Owned	2: Tier II	No	500.00	160.00	125.00	70.00	0.06	35.71	2.29	No		Incomplete	
29.06	Yes	1: Agency Owned	2: Tier II	No	125.00	62.50	65.00	25.00	0.06	44.64	2.50	No		Incomplete	
29.06	Yes	1: Agency Owned	2: Tier II	No	225.00	80.00	65.00	35.00	0.06	32.74	2.29	No		Incomplete	
31.67	No	1: Agency Owned	2: Tier II	No	550.00	47.41	350.00	27.09	0.06	11.23	1.75	No	19.00	127.00	17.00
31.67	No	1: Agency Owned	2: Tier II	No	350.00	28.30	250.00	16.17	0.06	11.21	1.75	No	6.00	240.50	6.00
31.67	No	1: Agency Owned	2: Tier II	No	350.00	2.00	200.00	1.00	0.06	1.11	2.00	No	1.00	904.00	220.00
31.67	No	1: Agency Owned	2: Tier II	No	400.00	45.00	250.00	25.00	0.06	25.72	1.80	No	19.00	51.16	10.00
31.67	No	1: Agency Owned	2: Tier II	No	700.00	62.48	550.00	35.70	0.06	11.23	1.75	No	23.00	138.17	23.00
29.95	No	1: Agency Owned	2: Tier II	No	300.00	100.00	125.00	65.00	0.06	59.41	1.54	No	8.00	136.75	4.00
29.95	No	1: Agency Owned	2: Tier II	No	450.00	145.00	125.00	97.00	0.06	60.21	1.49	No	17.00	94.76	17.00
29.95	No	1: Agency Owned	2: Tier II	No	750.00	250.00	225.00	160.00	0.06	59.77	1.56	No	17.00	157.47	21.00

Physical Servers								Virtualization			Network Storage			Notes
Mainframes (IBM or compatible)	Mainframes (Other)	Windows Servers	Unix Servers	Linux Servers	Other	Total Physical Server Count (#)	Total Virtual Host Count (#)	Total Virtual OS Count (#)	Total Operating Systems Count (#)	Average CPU Utilization of All Physical Servers	SAN/NAS/ DAS - Total (TB)	SAN/NAS/ DAS - Used (TB)	Percent Used	Additional Information
						0.00			0.00				Incomplete	UNCLASS, PLS Office, migrating to B112
						0.00			0.00				Incomplete	CLASSIFIED, Director's Office, migrating to B132N R1480
						0.00			0.00				Incomplete	UNCLASS, Enduring Enterprise
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
0.00	0.00	0.00	0.00	0.00	0.00	17.00	0.00	0.00	17.00	0.97			Incomplete	CLASSIFIED, currently Computation, to transition to Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	6.00	0.97			Incomplete	CLASSIFIED, currently Computation, to transition to Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	220.00	0.00	0.00	220.00	0.97			Incomplete	UNCLASS, currently Computation, to transition to Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	10.00	0.97			Incomplete	UNCLASS Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	23.00	0.00	0.00	23.00	0.97			Incomplete	UNCLASS, currently Computation, to transition to Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	4.00	0.97			Incomplete	SCIF, currently Computation, to transition to Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	17.00	0.00	0.00	17.00	0.97			Incomplete	SCIF, currently Computation, to transition to Enterprise
0.00	0.00	0.00	0.00	0.00	0.00	21.00	0.00	0.00	21.00	0.97			Incomplete	SCIF, currently Computation, to transition to Enterprise

Basic Information																
PSO	**Site #**	**Site**	**GOCO / FED**	**Data Center Name**	**Data Center Function**	**Assigned DCEP POC**	**Data Center POC**	**Target Date for Closure (CY)**	**Phase of Closure**	**Street Address**	**Street Address 2**	**City**	**State**	**Zip Code**	**Country**	**Gross Floor Area (Sq.Ft.)**
NNSA	112.00	LLNL	GOCO	B-121 R-1146	General	Gregory A Cooper (925-423-8512)	Susan Boichat (925-423-1777)	Q4 / 2014	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	672.00
NNSA	112.00	LLNL	GOCO	B-121 R-1347	General	David L Parker (925-422-4607)	Brian Van Hook (925-422-2737)	Q4 / 2014	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	2,000.00
NNSA	112.00	LLNL	GOCO	B-131 R-2037A	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,140.00
NNSA	112.00	LLNL	GOCO	B-131 R-2259A	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,421.00
NNSA	112.00	LLNL	GOCO	B-131 R-2280	General	Gregory A Cooper (925-423-8512)	Brian Van Hook (925-422-2737)	Q4 / 2014	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	1,956.00
NNSA	112.00	LLNL	GOCO	B-131 R-2362	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	770.00
NNSA	112.00	LLNL	GOCO	B-132N R-1470B	General	Eric D Carlberg (925-423-0139)	Craig Baxter (925-422-9272)	Q4 / 2013	Stage 4: Migration Execution	7000 East Ave		Livermore	Ca	94550	USA	743.00
NNSA	112.00	LLNL	GOCO	B-132S R-1521	General	Eric D Carlberg (925-423-0139)	Craig Baxter (925-422-9272)	Q4 / 2015	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	743.00
NNSA	112.00	LLNL	GOCO	B-132S R-2205	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	839.00
NNSA	112.00	LLNL	GOCO	B-132S R-2500	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	500.00
NNSA	112.00	LLNL	GOCO	B-132S R-2506	General	Eric D Carlberg (925-423-0139)	Stanley D Ruppert (925-423-7552)	Q4 / 2014	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	2,204.00
NNSA	112.00	LLNL	GOCO	B-140 R-1079	HPC	Eric D Carlberg (925-423-0139)	Susan Boichat (925-423-1777)			7000 East Ave		Livermore	Ca	94550	USA	1,700.00
NNSA	112.00	LLNL	GOCO	B-170 R-1008	General	Eric D Carlberg (925-423-0139)	Ed Bush (925-423-4086)	Q4 / 2014	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	973.00
NNSA	112.00	LLNL	GOCO	B-170 R-1018	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,745.00
				B-175 R-130	General	Paul C Dickinson (925-422-9130)	Rick D Warrick (925-423-7315)	Q4 / 2015	Stage 2: Application Mapping							2,195.00
NNSA	112.00	LLNL	GOCO	B-191 R-2210	General	n/a	n/a	Q2 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	600.00
NNSA	112.00	LLNL	GOCO	B-216 R-185	Server/Telco Room	Paul C Dickinson (925-422-9130)	Travis T Martin (925-422-1089)	Q4 / 2015	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	1,039.00
NNSA	112.00	LLNL	GOCO	B-256 R-1000	Server/Telco Room	William E Maciel (925-423-1900)	David L Lima (925-422-0919)	Q4 / 2015	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	2,313.00
NNSA	112.00	LLNL	GOCO	B-271 R-B120	General	Paul C Dickinson (925-422-9130)	Rick D Warrick (925-423-7315)			7000 East Ave		Livermore	Ca	94550	USA	1,791.00

IT Facilities, Energy															
Facility Cost ($/Sq.Ft. /Yr)	Electricity Included in Cost? (Y/N)	Ownership Type	Data Center Tier / Type	Electricity Metered (Y/N)	Total Data Center (Facility) Power	Average Data Center Electricity Usage (kWh)	Total Data Center IT Power Capacity (kW)	Average IT Electricity Usage (kWh)	Cost Per kWh (if known)	Watts per Sq.ft.	Estimated Power Usage Effectiveness (PUE)	Has A DC Pro Assessment been Conducted?	Current Rack Count (#)	Sq. Ft. per Rack	Super Computers or HPC Systems
27.03	No	1: Agency Owned	2: Tier II	No	300.00	60.00	144.00	20.00	0.06	29.76	3.00	No	4.00	168.00	
27.03	No	1: Agency Owned	2: Tier II	No	450.00	175.00	225.00	59.40	0.06	29.70	2.95	No	36.00	55.56	0.00
18.64	No	1: Agency Owned	2: Tier II	No	225.00	112.50	65.00	35.00	0.06	30.70	3.21	No		Incomplete	
18.64	No	1: Agency Owned	2: Tier II	No	225.00	112.50	65.00	40.00	0.06	28.15	2.81	No		Incomplete	
19.04	No	1: Agency Owned	2: Tier II	No	400.00	220.00	225.00	90.00	0.06	46.01	2.44	No	34.00	57.53	0.00
18.64	No	1: Agency Owned	2: Tier II	No	125.00	62.50	65.00	25.00	0.06	32.47	2.50	No		Incomplete	
17.96	No	1: Agency Owned	2: Tier II	No	125.00	40.00	65.00	12.00	0.06	16.15	3.33	No	12.00	61.92	
17.96	No	1: Agency Owned	2: Tier II	No	125.00	40.00	65.00	12.00	0.06	16.15	3.33	No	12.00	61.92	
16.16	No	1: Agency Owned	2: Tier II	No	225.00	85.00	65.00	32.50	0.06	38.74	2.62	No		Incomplete	
16.16	No	1: Agency Owned	2: Tier II	No	225.00	80.00	65.00	30.00	0.06	60.00	2.67	No		Incomplete	
17.50	No	1: Agency Owned	2: Tier II	No	800.00	270.00	150.00	110.00	0.06	49.91	2.45	No	32.00	68.88	
16.02	No	1: Agency Owned	2: Tier II	No	500.00	200.00	300.00	80.00	0.06	47.06	2.50	No	41.00	41.46	
16.59	No	1: Agency Owned	2: Tier II	No	230.00	115.00	72.00	36.00	0.06	37.00	3.19	No	19.00	51.21	
13.60	No	1: Agency Owned	2: Tier II	No	450.00	165.00	125.00	75.00	0.06	42.98	2.20	No		Incomplete	
12.99	No				1,000.00	80.00	50.00	20.00					13.00		
34.29	No	1: Agency Owned	2: Tier II	No	225.00	90.00	65.00	2.00	0.06	3.33	45.00	No		Incomplete	
48.95	No	1: Agency Owned	2: Tier II	No	400.00	35.00	150.00	10.00	0.06	9.62	3.50	No	16.00	64.94	
27.88	No	1: Agency Owned	2: Tier II	No	500.00	190.00	180.00	75.00	0.06	32.43	2.53	No	80.00	28.91	
30.20	No	1: Agency Owned	2: Tier II	No	300.00	60.00	150.00	33.00	0.06	18.43	1.82	No	40.00	44.78	

Physical Servers								Virtualization			Network Storage			Notes
Mainframes (IBM or compatible)	Mainframes (Other)	Windows Servers	Unix Servers	Linux Servers	Other	Total Physical Server Count (#)	Total Virtual Host Count (#)	Total Virtual OS Count (#)	Total Operating Systems Count (#)	Average CPU Utilization of All Physical Servers	SAN/NAS/ DAS - Total (TB)	SAN/NAS/ DAS - Used (TB)	Percent Used	Additional Information
						0.00			0.00	0.15			Incomplete	SCIF, PLS Office, require Enterprise SCIF to migrate to
0.00	0.00	10.00	14.00	74.00	5.00	103.00	0.00	0.00	103.00	0.15	90.00	73.00	0.81	UNCLASS, PLS Office, closure plan to be developed FY13
						0.00			0.00	0.30			Incomplete	Shutdown or Repurposed
						0.00			0.00	0.30			Incomplete	Shutdown or Repurposed
0.00	0.00	40.00	7.00	60.00	4.00	120.00	9.00	272.00	383.00	0.30	367.00	225.00	0.61	UNCLASS, Engineering, closure plan to be developed FY13
						0.00			0.00	0.30			Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	UNCLASS, WCI, migrating to B112
						0.00			0.00				Incomplete	CLASSIFIED, WCI, requires CLASSIFIED Enterprise to migrate to
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	CLASSIFIED, GS Collateral SNSR-SRD, requires CLASSIFIED Enterprise to migrate to
						0.00			0.00				Incomplete	SCIF, Global Security
						0.00			0.00				Incomplete	UNCLASS, NARAC Facility
						0.00			0.00				Incomplete	Shutdown or Repurposed
														UNCLASS, Argus, servers to be migrated to B271 and room repurposed / reclassified
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	UNCLASS, Cyber Security, closure plan to be developed FY14
						0.00			0.00				Incomplete	UNCLASS, Telcom Node #1, servers to be migrated and room repurposed / reclassified
						0.00			0.00				Incomplete	CLASSIFIED, Protective Force and Security

Basic Information																
PSO	Site #	Site	GOCO / FED	Data Center Name	Data Center Function	Assigned DCEP POC	Data Center POC	Target Date for Closure (CY)	Phase of Closure	Street Address	Street Address 2	City	State	Zip Code	Country	Gross Floor Area (Sq.Ft.)
NNSA	112.00	LLNL	GOCO	B-439 R-1030	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	6,364.00
NNSA	112.00	LLNL	GOCO	B-451 R-1050	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	#######
NNSA	112.00	LLNL	GOCO	B-451 R-1056	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	855.00
NNSA	112.00	LLNL	GOCO	B-453 R-1211 ASL	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	1,585.00
NNSA	112.00	LLNL	GOCO	B-453 R-2100 USR	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	2,246.00
NNSA	112.00	LLNL	GOCO	B-453 R-2125 CSR	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	1,082.00
NNSA	112.00	LLNL	GOCO	B-453 R-2201 West	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	#######
NNSA	112.00	LLNL	GOCO	B-453 R-2251 East	HPC	Anna Maria Bailey (925-423-1288)	John B Sines (925-423-2617)			7000 East Ave		Livermore	Ca	94550	USA	#######
NNSA	112.00	LLNL	GOCO	B-490 R-1012	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,640.00
NNSA	112.00	LLNL	GOCO	B-490 R-1015	General	Barbara A Quivey (925-422-1545)	Eric P Ghere (925-525-4080)	Q4 / 2015	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	1,498.00
NNSA	112.00	LLNL	GOCO	B-490 R-1018	General	Barbara A Quivey (925-422-1545)	Eric P Ghere (925-525-4080)	Q4 / 2015	Stage 2: Application Mapping	7000 East Ave		Livermore	Ca	94550	USA	1,461.00
NNSA	112.00	LLNL	GOCO	B-511 R-118A	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	649.00
NNSA	112.00	LLNL	GOCO	B-543 R-1073	General	William E Maciel (925-423-1900)	Russell A Baine (925-422-3928)	Q4 / 2013	Stage 3: Migration Planning	7000 East Ave		Livermore	Ca	94550	USA	1,742.00
NNSA	112.00	LLNL	GOCO	B-551W R-1550A	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,450.00
NNSA	112.00	LLNL	GOCO	B-551W R-2266	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	560.00
NNSA	112.00	LLNL	GOCO	B-551W R-2310	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	798.00
NNSA	112.00	LLNL	GOCO	B-581 R-1016	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	774.00
NNSA	112.00	LLNL	GOCO	T-2580 R-1003	Server/Telco Room	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,387.00
NNSA	112.00	LLNL	GOCO	T-2580 R-2000	Server/Telco Room	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	561.00
NNSA	112.00	LLNL	GOCO	T-2580 R-2010	Server/Telco Room	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	879.00
NNSA	112.00	LLNL	GOCO	T-2632 R-1010	General	n/a	n/a	Q1 / 2013	Closed	7000 East Ave		Livermore	Ca	94550	USA	552.00
NNSA	112.00	LLNL	GOCO	T-3649 R-1000	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	918.00
NNSA	112.00	LLNL	GOCO	T-4377 R-104	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	595.00

IT Facilities, Energy															
Facility Cost ($/Sq.Ft. /Yr)	Electricity Included in Cost? (Y/N)	Ownership Type	Data Center Tier / Type	Electricity Metered (Y/N)	Total Data Center (Facility) Power	Average Data Center Electricity Usage (kWh)	Total Data Center IT Power Capacity (kW)	Average IT Electricity Usage (kWh)	Cost Per kWh (if known)	Watts per Sq.ft.	Estimated Power Usage Effectiveness (PUE)	Has A DC Pro Assessment been Conducted?	Current Rack Count (#)	Sq. Ft. per Rack	Super Computers or HPC Systems
37.57	No	1: Agency Owned	2: Tier II	No	2,500.00	750.00	1,000.00	500.00	0.06	78.57	1.50	No	98.00	64.94	123.00
54.04	Yes	1: Agency Owned	2: Tier II	Yes	5,500.00	1,400.00	4,000.00	1,050.00	0.06	58.09	1.33	No	204.00	88.60	276.00
54.04	Yes	1: Agency Owned	2: Tier II	Yes	400.00	11.00	225.00	8.00	0.06	9.36	1.38	No	8.00	106.88	8.00
29.11	Yes	1: Agency Owned	2: Tier II	Yes	500.00	39.00	300.00	30.00	0.06	18.93	1.30	No	9.00	176.11	
29.11	Yes	1: Agency Owned	2: Tier II	Yes	1,200.00	78.00	800.00	57.00	0.06	25.38	1.37	No	44.00	51.05	47.00
29.11	Yes	1: Agency Owned	2: Tier II	Yes	300.00	47.00	600.00	34.00	0.06	31.42	1.38	No	29.00	37.31	29.00
29.11	Yes	1: Agency Owned	2: Tier II	Yes	20,000.00	12,300.00	15,000.00	9,700.00	0.06	397.10	1.27	No	324.00	75.39	341.00
29.11	Yes	1: Agency Owned	2: Tier II	Yes	20,000.00	1,980.00	15,000.00	1,500.00	0.06	61.42	1.32	No	204.00	119.73	292.00
27.74	No	1: Agency Owned	2: Tier II	No	300.00	170.00	140.00	70.00	0.06	42.68	2.43	No		Incomplete	
29.13	No	1: Agency Owned	2: Tier II	No	800.00	400.00	500.00	250.00	0.06	166.89	1.60	No	48.00	31.21	
29.13	No	1: Agency Owned	2: Tier II	No	1,000.00	500.00	600.00	300.00	0.06	205.34	1.67	No	46.00	31.76	
14.25	No	1: Agency Owned	2: Tier II	No	50.00	25.00	16.75	6.00	0.06	9.24	4.17	No		Incomplete	
28.09	No	1: Agency Owned	2: Tier II	No	450.00	35.00	65.00	6.00	0.06	3.44	5.83	No	4.00	435.50	
16.97	No	1: Agency Owned	2: Tier II	No	225.00	100.00	65.00	30.00	0.06	20.69	3.33	No		Incomplete	
16.97	No	1: Agency Owned	2: Tier II	No	65.00	32.50	21.78	8.00	0.06	14.29	4.06	No		Incomplete	
16.97	No	1: Agency Owned	2: Tier II	No	65.00	32.50	21.78	8.00	0.06	10.03	4.06	No		Incomplete	
7.94	No	1: Agency Owned	2: Tier II	No	350.00	150.00	225.00	65.00	0.06	83.98	2.31	No		Incomplete	
17.75	No	1: Agency Owned	2: Tier II	No	225.00	9.00	65.00	3.50	0.06	2.52	2.57	No		Incomplete	
17.75	No	1: Agency Owned	2: Tier II	No	115.00	7.00	33.00	2.50	0.06	4.46	2.80	No		Incomplete	
17.75	No	1: Agency Owned	2: Tier II	No	115.00	8.00	33.00	3.00	0.06	3.41	2.67	No		Incomplete	
18.33	No	1: Agency Owned	2: Tier II	No	65.00	25.00	22.00	6.00	0.06	10.87	4.17	No		Incomplete	
10.42	No	1: Agency Owned	2: Tier II	No	125.00	60.00	40.20	12.00	0.06	13.07	5.00	No		Incomplete	
14.18	No	1: Agency Owned	2: Tier II	No	65.00	25.00	22.00	7.00	0.06	11.76	3.57	No		Incomplete	

Physical Servers							Virtualization				Network Storage			Notes
Mainframes (IBM or compatible)	Mainframes (Other)	Windows Servers	Unix Servers	Linux Servers	Other	Total Physical Server Count (#)	Total Virtual Host Count (#)	Total Virtual OS Count (#)	Total Operating Systems Count (#)	Average CPU Utilization of All Physical Servers	SAN/NAS/ DAS - Total (TB)	SAN/NAS/ DAS - Used (TB)	Percent Used	Additional Information
0.00	0.00	0.00	0.00	0.00	0.00	123.00	0.00	0.00	123.00	0.97			Incomplete	UNCLASS, Institutional / Test Bed
0.00	0.00	0.00	0.00	0.00	0.00	276.00	0.00	0.00	276.00	0.97			Incomplete	UNCLASS, Enduring Computation
0.00	0.00	0.00	0.00	0.00	0.00	8.00	0.00	0.00	8.00	0.97			Incomplete	UNCLASS, Enduring Computation, small Test Bed
						0.00			0.00	0.97			Incomplete	CLASSIFIED, Enduring Computation
0.00	0.00	0.00	0.00	0.00	0.00	47.00	0.00	0.00	47.00	0.97			Incomplete	UNCLASS, Enduring Computation
0.00	0.00	0.00	0.00	0.00	0.00	29.00	0.00	0.00	29.00	0.97			Incomplete	CLASSIFIED, Enduring Computation
0.00	0.00	0.00	0.00	0.00	0.00	341.00	0.00	0.00	341.00	0.97			Incomplete	CLASSIFIED, Enduring Computation
0.00	0.00	0.00	0.00	0.00	0.00	292.00			292.00	0.97			Incomplete	CLASSIFIED, Enduring Computation
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	UNCLASS, NIF, closure plan to be developed FY14
						0.00			0.00				Incomplete	UNCLASS, NIF, closure plan to be developed FY14
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	UNCLASS, O&B / PFS / SHMR Offices, migrating to B112
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed

Basic Information																
PSO	**Site #**	**Site**	**GOCO / FED**	**Data Center Name**	**Data Center Function**	**Assigned DCEP POC**	**Data Center POC**	**Target Date for Closure (CY)**	**Phase of Closure**	**Street Address**	**Street Address 2**	**City**	**State**	**Zip Code**	**Country**	**Gross Floor Area (Sq.Ft.)**
NNSA	112.00	LLNL	GOCO	T-4406 R-120	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	1,218.00
NNSA	112.00	LLNL	GOCO	T-4725 R-1116	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	4,268.00
NNSA	112.00	LLNL	GOCO	T-4725 R-1124	General	n/a	n/a	Q4 / 2012	Closed	7000 East Ave		Livermore	Ca	94550	USA	794.00

IT Facilities, Energy															
Facility Cost ($/Sq.Ft. /Yr)	Electricity Included in Cost? (Y/N)	Ownership Type	Data Center Tier / Type	Electricity Metered (Y/N)	Total Data Center (Facility) Power	Average Data Center Electricity Usage (kWh)	Total Data Center IT Power Capacity (kW)	Average IT Electricity Usage (kWh)	Cost Per kWh (if known)	Watts per Sq.ft.	Estimated Power Usage Effectiveness (PUE)	Has A DC Pro Assessment been Conducted?	Current Rack Count (#)	Sq. Ft. per Rack	Super Computers or HPC Systems
9.07	No	1: Agency Owned	2: Tier II	No	225.00	100.00	65.00	25.00	0.06	20.53	4.00	No		Incomplete	
16.22	No	1: Agency Owned	2: Tier II	No	800.00	200.00	225.00	70.00	0.06	16.40	2.86	No		Incomplete	
16.22	No	1: Agency Owned	2: Tier II	No	225.00	100.00	65.00	30.00	0.06	37.78	3.33	No		Incomplete	

Physical Servers							Virtualization				Network Storage			Notes
Mainframes (IBM or compatible)	Mainframes (Other)	Windows Servers	Unix Servers	Linux Servers	Other	Total Physical Server Count (#)	Total Virtual Host Count (#)	Total Virtual OS Count (#)	Total Operating Systems Count (#)	Average CPU Utilization of All Physical Servers	SAN/NAS/ DAS - Total (TB)	SAN/NAS/ DAS - Used (TB)	Percent Used	Additional Information
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed
						0.00			0.00				Incomplete	Shutdown or Repurposed

Electronic Stewardship - Acquisition and Disposal

Requirement(s): E.O. 13514, E.O. 13423
Instructions: Please complete FY 2013 electronic stewardship data related to acquisition and disposal. FY 2012 data from PPTRS has been included as an example of the updated format. Acquisition data is required to be entered only for categories which have EPEAT standards, while electronics disposal is required for all categories. "Bulk Electronics Disposal" can be chosen under the Electronic Category (Column E) to enter the weight of product recycled if the number of any individual products is unknown. If entering data for both Bulk Electronics Disposal and individual product disposal, there should be no overlap (e.g. if 8 LCD monitors are entered as recycled, the weight of those monitors should not be included in any "Bulk Electronics Disposal" entry). If available, enter any details on methedology used for collecting this data.

Source: Site/Lab

Methodology

Basic Information					EPEAT Acquisition						
PSO	Site #	Site	FY	Electronic Category	EPEAT Qualified Product?	Required Data Entry	Total Number Acquired	# of EPEAT Bronze Acquired	# of EPEAT Silver Acquired	# of EPEAT Gold Acquired	# of ENERGY STAR (but not EPEAT) Acquired
NNSA	112	LLNL	2012	Desktop Computers	Yes	Acquisition and/or Disposal	1911	0	0	1909	0
NNSA	112	LLNL	2012	LCD Monitors	Yes	Acquisition and/or Disposal	1538	0	134	1310	12
NNSA	112	LLNL	2012	CRT Monitors	No	Acquisition and/or Disposal	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Laptop Computers	Yes	Acquisition and/or Disposal	1246	0	8	1238	0
NNSA	112	LLNL	2012	Thin Clients	Yes	Acquisition and/or Disposal	0	0	0	0	0
NNSA	112	LLNL	2012	Printers	No	Acquisition and/or Disposal	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Multifunction Devices	No	Acquisition and/or Disposal	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Televisions	No	Acquisition and/or Disposal	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Servers	No	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Mobile Phones	No	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Personal Digital Assistants	No	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2012	Bulk Electronics Disposal	N/A	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2013	Desktop Computers	Yes	Acquisition and/or Disposal	985	0	1	978	1
NNSA	112	LLNL	2013	LCD Monitors	Yes	Acquisition and/or Disposal	728	0	51	652	4
NNSA	112	LLNL	2013	CRT Monitors	No	Acquisition and/or Disposal		N/A	N/A	N/A	N/A
NNSA	112	LLNL	2013	Laptop Computers	Yes	Acquisition and/or Disposal	446	0	10	436	0
NNSA	112	LLNL	2013	Thin Clients	Yes	Acquisition and/or Disposal	0				

Basic Information					EPEAT Acquisition						
PSO	Site #	Site	FY	Electronic Category	EPEAT Qualified Product?	Required Data Entry	Total Number Acquired	# of EPEAT Bronze Acquired	# of EPEAT Silver Acquired	# of EPEAT Gold Acquired	# of ENERGY STAR (but not EPEAT) Acquired
NNSA	112	LLNL	2013	Printers	Yes	Acquisition and/or Disposal	134	103	12	0	0
NNSA	112	LLNL	2013	Multifunction Devices	Yes	Acquisition and/or Disposal	45	3	18	0	0
NNSA	112	LLNL	2013	Televisions	Yes	Acquisition and/or Disposal	21	0	5	0	
NNSA	112	LLNL	2013	Servers	No	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2013	Mobile Phones	No	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2013	Personal Digital Assistants	No	Disposal Only	N/A	N/A	N/A	N/A	N/A
NNSA	112	LLNL	2013	Bulk Electronics Disposal	N/A	Disposal Only	N/A	N/A	N/A	N/A	N/A

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

		Disposal							Notes	
Non-EPEAT Units	EPEAT %	Disposal Units	Transferred or Donated	Recycled by Certified Recycler	Recycled by non-Certified Recycler	Sent for Disposal (e.g. landfill)	Percentage Transferred/ Donated Only	Percentage Recycled or Transferred/Donated	Additional Information	SPO Comments
2	100%	# of Units	2	0	2532	0	0.1%	100%		From PPTRS.
94	94%	# of Units	0	0	1686	0	0.0%	100%		From PPTRS.
N/A	--	# of Units	0	0	240	0	0.0%	100%		From PPTRS.
0	100%	# of Units	0	0	1415	0	0.0%	100%		From PPTRS.
0	--	# of Units					--	--		From PPTRS.
N/A	--	# of Units	0	0	586	0	0.0%	100%		From PPTRS.
N/A	--	# of Units	0	0	82	0	0.0%	100%		From PPTRS.
N/A	--	# of Units	0	0	135	0	0.0%	100%		From PPTRS.
N/A	--	# of Units	0	0	421	0	0.0%	100%		From PPTRS.
N/A	--	# of Units	0	0	260	0	0.0%	100%		From PPTRS.
N/A	--	# of Units	0	0	1988	0	0.0%	100%		From PPTRS.
N/A	--	Metric Tons					--	--		From PPTRS.
6	99%	# of Units	0	0	2942	0	0.0%	100%		
25	97%	# of Units	0	0	1788	0	0.0%	100%		
0	--	# of Units	0	0	222	0	0.0%	100%		
0	100%	# of Units	12	0	1507	0	0.8%	100%		
0	--	# of Units	0	0	9	0	0.0%	100%		

		Disposal							Notes	
Non-EPEAT Units	EPEAT %	Disposal Units	Transferred or Donated	Recycled by Certified Recycler	Recycled by non-Certified Recycler	Sent for Disposal (e.g. landfill)	Percentage Transferred/ Donated Only	Percentage Recycled or Transferred/Donated	Additional Information	SPO Comments
19	86%	# of Units	0	0	674	0	0.0%	100%		
24	47%	# of Units	0	0	84	0	0.0%	100%		
16	24%	# of Units	0	0	118	0	0.0%	100%		
N/A	--	# of Units	0	0	387	0	0.0%	100%		
N/A	--	# of Units	0	0	374	0	0.0%	100%		
N/A	--	# of Units	0	0	24	0	0.0%	100%		
N/A	--	Metric Tons					--	--		

Electronic Stewardship - Operations

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): E.O. 13514, E.O. 13423

Instructions: Please enter FY 2013 data for both power management of computers and monitors and duplex printing for printers. FY 2012 data has been entered as an example of the updated format. For Column H, printers, copiers and multifunction devices (MFDs) are considered ineligible for duplex printing if they are only capable of single sided printing. Laptops, desktops, and monitors are considered exempt from power management requirements if they are running mission critical applications (e.g, facility security monitoring, uninterruptable laboratory experiments).

Source: Site/Lab

Methodology

Basic Information						Green Operation				Notes	
PSO	Site #	Site	FY	Electronic Category	Required Data Entry	Number Owned	Number Ineligible from Power Management (exempt) or Duplex Printing (incapable)	Number Using Power Management or Duplex Printing	Percentage	Additional Information	SPO Comments
NNSA	112	LLNL	2012	Printers, Copiers, MFDs	Duplex Printing	4628	122	94	2%		From PPTRS
NNSA	112	LLNL	2012	Desktop Computers	Power Management	11809	7609	4200	100%		From PPTRS
NNSA	112	LLNL	2012	CRT Monitors	Power Management	1180	1180	0	--		From PPTRS
NNSA	112	LLNL	2012	LCD Monitors	Power Management	10628	6428	4200	100%		From PPTRS
NNSA	112	LLNL	2012	Laptop Computers	Power Management	7567	5267	2300	100%		From PPTRS
NNSA	112	LLNL	2013	Desktop Computers	Power Management	9496	4657	4839	100%		
NNSA	112	LLNL	2013	CRT Monitors	Power Management	590	590	0	--		
NNSA	112	LLNL	2013	LCD Monitors	Power Management	8096	2748	5348	100%		
NNSA	112	LLNL	2013	Laptop Computers	Power Management	6019	2971	3048	100%		

Fugitive Emissions: Refrigerants and Fluorinated Gases, Mixed Refrigerants

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 refrigerant data using the default or simplified material balance approach, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Methodology

Refrigerant Information

							Default Approach	OR	Simplified Material Balance Approach				
PSO	Site #	Site	FY	Data Entry Type	Refrigerant Type	Composition	Quantity Purchased/ Issued (lbs)	Quantity Returned to Supply (lbs)	Quantity in storage at beginning of inventory year (lbs)	Quantity in storage at end of inventory year (lbs)	Sum of all refrigerant acquisitions (lbs)	Sum of all refrigerant disbursements (lbs)	Total capacity of refrigerant in equipment at beginning of inventory year (lbs)
NNSA	112	LLNL	2011	Fiscal Year	R-14	R-14	4.500	-					
NNSA	112	LLNL	2011	Fiscal Year	R-23	R-23	11.000	-					
NNSA	112	LLNL	2011	Fiscal Year	R-407C	R-32/125/134a	50.000	-					
NNSA	112	LLNL	2011	Fiscal Year	R-410A	R-32/125	500.000	-					
NNSA	112	LLNL	2011	Fiscal Year	R-C318	R-C318	30.000	-					
NNSA	112	LLNL	2012	Fiscal Year	R-23	R-23	11.000						
NNSA	112	LLNL	2012	Fiscal Year	R-134a	R-134a	45.000						
NNSA	112	LLNL	2012	Fiscal Year	R-407C	R-32/125/134a	275.000						
NNSA	112	LLNL	2012	Fiscal Year	R-C318	R-C318	70.000						
NNSA	112	LLNL	2012	Fiscal Year	R-508B	R-23/116	10.000						
NNSA	112	LLNL	2008	Fiscal Year	R-23	R-23	11.000	-					
NNSA	112	LLNL	2008	Fiscal Year	R-407C	R-32/125/134a	162.500	-					
NNSA	112	LLNL	2008	Fiscal Year	R-C318	R-C318	50.000	-					
NNSA	112	LLNL	2013	Fiscal Year	R-23	R-23	-						
NNSA	112	LLNL	2013	Fiscal Year	R-134a	R-134a	625.000						
NNSA	112	LLNL	2013	Fiscal Year	R-404A	R-125/143a/134a	24.000						
NNSA	112	LLNL	2013	Fiscal Year	R-C318	R-C318	24.000						
NNSA	112	LLNL	2013	Fiscal Year	R-508B	R-23/116	-						

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

											Notes	
		F-Gas: Type 1		F-Gas: Type 2		F-Gas: Type 3		F-Gas: Type 4				
Total capacity of refrigerant in equipment at end of inventory year (lbs)	Emitted Refrigerant Quantity (lbs)	Material	Amount (lbs)	Material	Amount (lbs)	Material	Amount (lbs)	Material	Amount (lbs)	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
	4.500	PFC-14	4.500	-	-	-	-	-	-	13.268		
	11.000	HFC-23	11.000	-	-	-	-	-	-	58.377		
	50.000	HFC-32	11.500	HFC-125	12.500	HFC-134a	26.000	-	-	34.598		
	500.000	HFC-32	250.000	HFC-125	250.000	-	-	-	-	391.223		
	30.000	PFC-c318	30.000	-	-	-	-	-	-	118.388		
	11.000	HFC-23	11.000	-	-	-	-	-	-	58.377		
	45.000	HFC-134a	45.000	-	-	-	-	-	-	26.535		
	275.000	HFC-32	63.250	HFC-125	68.750	HFC-134a	143.000	-	-	190.288		
	70.000	PFC-c318	70.000	-	-	-	-	-	-	276.238		
	10.000	HFC-23	4.600	PFC-116	5.400	-	-	-	-	46.947		
	11.000	HFC-23	11.000	-	-	-	-	-	-	58.377		
	162.500	HFC-32	37.375	HFC-125	40.625	HFC-134a	84.500	-	-	112.443		
	50.000	PFC-c318	50.000	-	-	-	-	-	-	197.313		
	-	HFC-23	-	-	-	-	-	-	-	-		
	625.000	HFC-134a	625.000	-	-	-	-	-	-	368.544		
	24.000	HFC-125	10.560	HFC-134a	0.960	HFC-143a	12.480	-	-	35.489		
	24.000	PFC-c318	24.000	-	-	-	-	-	-	94.710		
	-	HFC-23	-	PFC-116	-	-	-	-	-	-		

Fugitive Emissions: Fugitive Fluorinated Gases and Other Fugitive Emissions (Not to Include Process Emissions)

Requirement(s): DOE O 436.1, E.O. 13514
Instructions: Provide FY 2013 fugitive data using the default or simplified material balance approach, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. Do not report process emissions in this tab. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.
Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Methodology

Fugitive Gas Information																	Notes	
PSO	Site #	Site	FY	Data Entry Type	Material Type	Composition	Default Approach		O	Simplified Material Balance Approach					Quantity Emitted (lbs)	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
							Quantity Purchased/ Issued (lbs)	Quantity Returned to Supply (lbs)	Quantity in storage at beginning of inventory year (lbs)	Quantity in storage at end of inventory year (lbs)	Sum of all F-Gas acquisitions (lbs)	Sum of all F-Gas disbursements (lbs)	Total capacity of F-Gas in equipment at beginning of inventory year (lbs)	Total capacity of all F-Gas in equipment at end of inventory year (lbs)				
NNSA	112	LLNL	2011	Fiscal Year	Carbon dioxide	CO2	11,542.000	-							11,542.000	5.235		
NNSA	112	LLNL	2011	Fiscal Year	HFC-245ca	C3H3F5	0.060	-							0.060	0.015		
NNSA	112	LLNL	2011	Fiscal Year	HFC-43-10mee	CF3CFHCFHCF2CF3	212.300	-							212.300	125.187		
NNSA	112	LLNL	2011	Fiscal Year	Methane	CH4	20.290	-							20.290	0.193		
NNSA	112	LLNL	2011	Fiscal Year	Nitrous oxide	N2O	0.500	-							0.500	0.070		
NNSA	112	LLNL	2011	Fiscal Year	PFC-9-1-18	C10F18	0.050	-							0.050	0.170		
NNSA	112	LLNL	2011	Fiscal Year	Sulfur hexafluoride	SF6	1,437.000	-							1,437.000	15,578.300		
NNSA	112	LLNL	2008	Fiscal Year	Methane	CH4	4.200								4.200	0.040		
NNSA	112	LLNL	2008	Fiscal Year	Carbon dioxide	CO2	20,868.500								20,868.500	9.466		
NNSA	112	LLNL	2008	Fiscal Year	HFC-134a	CH2FCF3	1,914.000								1,914.000	1,128.628		
NNSA	112	LLNL	2008	Fiscal Year	HFC-43-10mee	CF3CFHCFHCF2CF3	196.500								196.500	115.870		
NNSA	112	LLNL	2008	Fiscal Year	Nitrous oxide	N2O	18.900								18.900	2.658		
NNSA	112	LLNL	2008	Fiscal Year	PFC-c318	C-C4F8	24.000								24.000	94.710		
NNSA	112	LLNL	2008	Fiscal Year	Sulfur hexafluoride	SF6	3,065.000								3,065.000	33,227.202		
NNSA	112	LLNL	2010	Fiscal Year	Methane	CH4	1.460								1.460	0.014		
NNSA	112	LLNL	2010	Fiscal Year	Carbon dioxide	CO2	28,368.020								28,368.020	12.868		
NNSA	112	LLNL	2010	Fiscal Year	HFC-43-10mee	CF3CFHCFHCF2CF3	199.220								199.220	117.474		
NNSA	112	LLNL	2010	Fiscal Year	PFC-c318	C-C4F8	42.000								42.000	165.743		
NNSA	112	LLNL	2010	Fiscal Year	Sulfur hexafluoride	SF6	473.550								473.550	5,133.684		SPO Request: Please review and confirm value.
NNSA	112	LLNL	2012	Fiscal Year	Sulfur hexafluoride	SF6	199.000								199.000	2,157.329		
NNSA	112	LLNL	2012	Fiscal Year	Methane	CH4	3.120								3.120	0.030		
NNSA	112	LLNL	2012	Fiscal Year	Carbon dioxide	CO2	17,480.900								17,480.900	7.929		
NNSA	112	LLNL	2012	Fiscal Year	HFC-43-10mee	CF3CFHCFHCF2CF3	39.560								39.560	23.327		
NNSA	112	LLNL	2012	Fiscal Year	HFC-245ca	C3H3F5	2.200								2.200	0.559		
NNSA	112	LLNL	2012	Fiscal Year	Carbon dioxide	CO2	687,180.870								687,180.870	311.700	311.7 Tonnes of CO2 generated as a result of controlled burns at S300.	SPO Note: Site noted usage in tonnes and hard coded anthro. Revererted to lbs, assumed 2012 based on past and entered. Same output.
NNSA	112	LLNL	2013	Fiscal Year	Sulfur hexafluoride	SF6	290.000								290.000	3,143.846		
NNSA	112	LLNL	2013	Fiscal Year	Methane	CH4	4.810								4.810	0.046		
NNSA	112	LLNL	2013	Fiscal Year	Carbon dioxide	CO2	12,197.000								12,197.000	5.532		
NNSA	112	LLNL	2013	Fiscal Year	HFC-43-10mee	CF3CFHCFHCF2CF3	435.120								435.120	256.577		
NNSA	112	LLNL	2013	Fiscal Year	HFC-245ca	C3H3F5	-								-	-		
NNSA	112	LLNL	2013	Fiscal Year	Nitrous oxide	N2O	6.000								6.000	0.844		

Industrial Process Emissions By Process (Not Reported under Tab 6.2 Fugitive F-gases)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 industrial process emission data by process, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. Report emissions at the individual process level; a laboratory is not considered a single process. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Methodology

Industrial Process Information									Notes	
PSO	Site #	Site	FY	Process Type	GHG Type	Composition	Quantity Emitted (lbs)	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
NNSA	112	LLNL				#N/A		-		
						#N/A		-		
						#N/A		-		
						#N/A		-		
						#N/A		-		
						#N/A		-		
						#N/A		-		
						#N/A		-		
						#N/A		-		

Fugitive Emissions: On-site Wastewater Treatment (Domestic Only)

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 on-site wastewater treatment plant/system data by type, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Methodology

On-Site Wastewater Treatment Information														Notes	
PSO	Site #	Site	FY	Workdays per Year	Centralized WWTP with Anaerobic Digestion (Persons)	Centralized WWTP with Nitrification / Denitrification (Persons)	Centralized WWTP without Nitrification / Denitrification (Persons)	Effluent Discharge to Rivers and Estuaries with Nitrification / Denitrification (Persons)	Effluent Discharge to Rivers and Estuaries without Nitrification / Denitrification (Persons)	Wastewater Treatment Lagoons (Persons)	Septic Systems (Persons)	Biogenic $MtCO_2e$	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
NNSA	112	LLNL	2011	230.000						78.000	76.000	-	10.448	LLNL assumptions for lagoon: 1) 69 FTE on 4/10s + 4 firemen 24/7, 2) Firefighter days per year total of 1460, 3) FTE equivalents an a 4-10 round up to 9 is 8.202, 4) Total = 78. For septic: 1) 44 FTE on 4/10s + 5 FTE 24/7 four days per week + 3 FTE 24/7 three days per week + 5 officers and 10 trainees 5 days per week at the firing range, 2) Security equivalent of 17.4, 3) FTE equivalents a 4-10 round up	
NNSA	112	LLNL	2008	230.000							110.421	-	7.200		SPO Request: Please review and provide an update. Do not have original raw data.
NNSA	112	LLNL	2010	230.000							110.421	-	7.200		SPO Request: Please review and provide an update. Do not have original raw data.
NNSA	112	LLNL	2012	184.000						72.000		-	4.056	LLNL assumptions for lagoon: 72 FTE on 4/10s	
NNSA	112	LLNL	2012	365.000						12.000		-	1.341	LLNL assumptions for lagoon: 4 firemen 24/7	
NNSA	112	LLNL	2012	184.000							38.000	-	1.982	LLNL assumptions for septic:38 FTE on 4/10s	
NNSA	112	LLNL	2012	197.000							15.000	-	0.838	LLNL assumptions for septic: 5 FTE 24/7 four days per week (8 hour shifts) Security	
NNSA	112	LLNL	2012	168.000							9.000	-	0.429	LLNL assumptions for septic 3 FTE 24/7 three days per week (8 hour shifts) Security	
NNSA	112	LLNL	2013	230.000						66.000		-	4.648	LLNL assumptions for lagoon General Services Area 66 M-Th 10 hours	
NNSA	112	LLNL	2013	230.000						12.000		-	0.845	LLNL assumptions for sewage lagoon Fire Dept. 3 shifts, 4 people, including weekends	
NNSA	112	LLNL	2013	230.000							42.000	-	2.739	LLNL assumptions for septic systems Forward Areas 42 M-Th 10 hours	
NNSA	112	LLNL	2013	230.000							15.000	-	0.978	LLNL assumptions for security officers discharging to septic 3 shifts, 5 on day (M-Th), 3 on off shift including weekends	
NNSA	112	LLNL	2013	230.000								-	-		

Contracted Wastewater Treatment (Domestic Only)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 contracted wastewater treatment plant/system data, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. If actual percentages are available from wastewater treatment plant/system contractor, site may override the current calculated percentages in columns I, K, M, and O. Finally, if historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Methodology

Contracted Wastewater Information																		Notes	
PSO	Site #	Site	FY	Workdays per Year	Centralized WWTP with Anaerobic Digestion (Persons)	Centralized WWTP with Nitrification / Denitrification		Centralized WWTP without Nitrification / Denitrification		Effluent Discharge to Rivers and Estuaries with Nitrification / Denitrification		Effluent Discharge to Rivers and Estuaries without Nitrification / Denitrification		Wastewater Treatment Lagoons		Biogenic $MtCO_2e$	Total Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
						%	Persons	%	Persons	%	Persons	%	Persons	%	Persons				
NNSA	112	LLNL	2011	230.000	6,532.0	100.0%	6,532.0	0.0%	-	0.0%	-	0.0%	-	0.0%	-	20.669	4.567	Data corrected (2009-2013) to reflect 100% nitrification/denitrification by our WWTP and to use standard HR-provided population number	
NNSA	112	LLNL	2010	230.000	6,430.0	100.0%	6,430.0	0.0%	-	0.0%	-	0.0%	-	0.0%	-	20.346	4.496	Data corrected (2009-2013) to reflect 100% nitrification/denitrification by our WWTP and to use standard HR-provided population number	
NNSA	112	LLNL	2008	230.000	7,832.0	100.0%	7,832.0	0.0%	-	0.0%	-	0.0%	-	0.0%	-	24.782	5.476	Data corrected (2009-2013) to reflect 100% nitrification/denitrification by our WWTP and to use standard HR-provided population number	
NNSA	112	LLNL	2012	230.000	6,764.0	100.0%	6,764.0	0.0%	-	0.0%	-	0.0%	-	0.0%	-	21.403	4.729	Data corrected (2009-2013) to reflect 100% nitrification/denitrification by our WWTP and to use standard HR-provided population number	
NNSA	112	LLNL	2013	230.000	6,569.0	100.0%	6,569.0	0.0%	-	0.0%	-	0.0%	-	0.0%	-	20.786	4.593		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		
						36.5%	-	63.5%	-	36.5%	-	63.5%	-	0.0%	-	-	-		

Business Air Travel

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 air travel data by flight type for the primary contractor, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. Federal business air travel information will be pulled by DOE headquarters from GovTrip. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Methodology

Air Travel Information										Notes	
PSO	Site #	Site	FY	Process Type	Flight Type	Fuel Type	Consumption/ Usage	Unit of Measure	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
NNSA	112	LLNL	2008	Air Business Travel	Unknown	Jet Fuel	35,453,275	Passenger miles	9,709.000	No raw data available at this time	SPO Request: Do not have raw data. Please provide original data, if available. Used goal seek to estimate miles as unknown to match original 08 MtCO2e estimate of: 9,709.
NNSA	112	LLNL	2010	Air Business Travel	Unknown	Jet Fuel	36,152,583	Passenger miles	9,900.508	No raw data available at this time	SPO Request: Do not have raw data. Please provide original data, if available. Used goal seek to estimate miles as unknown to match original 08 MtCO2e estimate of: 9,900.508
NNSA	112	LLNL	2011	Air Business Travel	Short Haul (< 300 miles)	Jet Fuel	12,877	Passenger miles	3.604		
NNSA	112	LLNL	2011	Air Business Travel	Medium Haul (300 mile ≤ x < 70	Jet Fuel	500,757	Passenger miles	116.102		
NNSA	112	LLNL	2011	Air Business Travel	Long Haul (≥ 700 miles)	Jet Fuel	50,138,400	Passenger miles	9,418.669		
NNSA	112	LLNL	2012	Air Business Travel	Short Haul (< 300 miles)	Jet Fuel	9,753	Passenger miles	2.855		
NNSA	112	LLNL	2012	Air Business Travel	Medium Haul (300 mile ≤ x < 70	Jet Fuel	371,246	Passenger miles	62.017		
NNSA	112	LLNL	2012	Air Business Travel	Long Haul (≥ 700 miles)	Jet Fuel	37,923,550	Passenger miles	7,248.555		
NNSA	112	LLNL	2013	Air Business Travel	Short Haul (< 300 miles)	Jet Fuel	8,306	Passenger miles	2.431		
NNSA	112	LLNL	2013	Air Business Travel	Medium Haul (300 mile ≤ x < 70	Jet Fuel	345,698	Passenger miles	57.749		
NNSA	112	LLNL	2013	Air Business Travel	Long Haul (≥ 700 miles)	Jet Fuel	41,923,003	Passenger miles	8,012.995		
				Air Business Travel		#N/A		#N/A	#N/A		
				Air Business Travel		#N/A		#N/A	#N/A		
				Air Business Travel		#N/A		#N/A	#N/A		
				Air Business Travel		#N/A		#N/A	#N/A		
				Air Business Travel		#N/A		#N/A	#N/A		
				Air Business Travel		#N/A		#N/A	#N/A		

Business Ground Travel (Domestic Only)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 ground travel data for the primary contractor, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. Federal business ground travel information will be pulled by DOE headquarters from GovTrip. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Methodology

Ground Travel Information												Notes	
PSO	Site #	Site	FY	Process Type	Vehicle Type	Fuel Type	Consumption/ Usage	Unit of Measure	Site Average Miles per Trip	Default Average Miles per Trip	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
NNSA	112	LLNL	2008	Rental Trip Mileage	Passenger Car	Gasoline	7,759	Number of Agency Business Trips	419.000	419.000	1,217.700		SPO Request: Do not have raw data. Please provide original data, if available. Used goal seek to estimate # of passenger car trips at 419 miles per trip to match original 08 MtCO2e estimate of: 1,217.7
NNSA	112	LLNL	2010	Rental Trip Mileage	Passenger Car	Gasoline	7,696	Number of Agency Business Trips	419.000	419.000	1,207.900		SPO Request: Do not have raw data. Please provide original data, if available. Used goal seek to estimate # of passenger car trips at 419 miles per trip to match original 08 MtCO2e estimate of: 1,207.9
NNSA	112	LLNL	2011	Rental Trip Mileage	Passenger Car	Gasoline	15,305	Number of Agency Business Trips	152.700	419.000	875.400		
NNSA	112	LLNL	2011	POV Mileage	Passenger Car	Gasoline	995,445	Total Reimbursed Mileage		-	372.865		
NNSA	112	LLNL	2011	Mass Transit Trip Mileage	Intercity Rail	Diesel	5	Number of Agency Business Trips	575.400	575.400	0.533		
NNSA	112	LLNL	2012	Rental Trip Mileage	Passenger Car	Gasoline	11,503	Number of Agency Business Trips	240.852	210.000	1,037.758		
NNSA	112	LLNL	2012	POV Mileage	Passenger Car	Gasoline	995,395	Total Reimbursed Mileage		-	372.846		
NNSA	112	LLNL	2013	Rental Trip Mileage	Passenger Car	Gasoline	10,301	Number of Agency Business Trips	210.000	210.000	810.276		
NNSA	112	LLNL	2013	POV Mileage	Passenger Car	Gasoline	751,369	Total Reimbursed Mileage		-	281.441		

Employee Commuting (Domestic Only)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Provide FY 2013 commuting data for both Federal and primary contractor employees, a short description of the methodology used for gathering information both in the CEDR and SSP narrative, and address SPO requests. If historical data is updated please be sure to address this in your SSP narrative, highlight the cell, and note the change in the "Additional Information" column.

Source: Site/Lab

Methodology

Ground Travel Information												Notes	
PSO	Site #	Site	FY	Process Type	Vehicle Type	Fuel Type	Consumption/ Usage	Unit of Measure	Site Number of Commute Days per Year	Default Number of Commute Days per Year	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
NNSA	112	LLNL	2008	Personal Owned Vehicles	POV Passenger Car	Gasoline	274,725	Commute (Miles / Day)	230.000	230.000	23,667.924	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2008	Car/Van Pools	Van Pool	Gasoline	41,833	Commute (Miles / Day)	230.000	230.000	1,285.266	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2008	Mass Transit	Bus	Diesel	18,069	Commute (Miles / Day)	230.000	230.000	445.375	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2008	Human Powered	Walking and/or Bicycling		9,927	Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2008	Personal Owned Vehicles	Motorcycle	Gasoline	7,885	Commute (Miles / Day)	230.000	230.000	309.464	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2009	Personal Owned Vehicles	POV Passenger Car	Gasoline	224,448	Commute (Miles / Day)	230.000	230.000	19,336.494	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2009	Car/Van Pools	Van Pool	Gasoline	34,573	Commute (Miles / Day)	230.000	230.000	1,062.212	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2009	Mass Transit	Bus	Diesel	15,245	Commute (Miles / Day)	230.000	230.000	375.767	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2009	Human Powered	Walking and/or Bicycling		8,112	Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2009	Personal Owned Vehicles	Motorcycle	Gasoline	7,198	Commute (Miles / Day)	230.000	230.000	282.501	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2010	Personal Owned Vehicles	POV Passenger Car	Gasoline	226,067	Commute (Miles / Day)	230.000	230.000	19,475.973	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2010	Car/Van Pools	Van Pool	Gasoline	33,568	Commute (Miles / Day)	230.000	230.000	1,031.335	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2010	Mass Transit	Bus	Diesel	15,041	Commute (Miles / Day)	230.000	230.000	370.739	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2010	Personal Owned Vehicles	Motorcycle	Gasoline	6,656	Commute (Miles / Day)	230.000	230.000	261.229	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2011	Personal Owned Vehicles	POV Passenger Car	Gasoline	230,302	Commute (Miles / Day)	230.000	230.000	19,840.824	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2011	Car/Van Pools	Van Pool	Gasoline	33,814	Commute (Miles / Day)	230.000	230.000	1,038.893	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2011	Mass Transit	Bus	Diesel	15,145	Commute (Miles / Day)	230.000	230.000	373.302	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2011	Human Powered	Walking and/or Bicycling		7,935	Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2011	Personal Owned Vehicles	Motorcycle	Gasoline	6,745	Commute (Miles / Day)	230.000	230.000	264.722	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2012	Personal Owned Vehicles	POV Passenger Car	Gasoline	239,228	Commute (Miles / Day)	230.000	230.000	20,609.810	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2012	Car/Van Pools	Van Pool	Gasoline	33,778	Commute (Miles / Day)	230.000	230.000	1,037.787	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2012	Mass Transit	Bus	Diesel	15,700	Commute (Miles / Day)	230.000	230.000	386.982	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2012	Human Powered	Walking and/or Bicycling		8,449	Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2012	Personal Owned Vehicles	POV Passenger Car	Gasoline	7,224	Commute (Miles / Day)	230.000	230.000	622.357	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-	All data (2008-2013) revised to use standardized methodology	
NNSA	112	LLNL	2013	Personal Owned Vehicles	POV Passenger Car	Gasoline	232,331	Commute (Miles / Day)	230.000	230.000	20,015.625		
NNSA	112	LLNL	2013	Car/Van Pools	Van Pool	Gasoline	32,804	Commute (Miles / Day)	230.000	230.000	1,007.862		
NNSA	112	LLNL	2013	Mass Transit	Bus	Diesel	15,248	Commute (Miles / Day)	230.000	230.000	375.841		
NNSA	112	LLNL	2013	Human Powered	Walking and/or Bicycling		8,206	Commute (Miles / Day)	230.000	230.000	-		
NNSA	112	LLNL	2013	Personal Owned Vehicles	Motorcycle	Gasoline	7,016	Commute (Miles / Day)	230.000	230.000	275.358		
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-		
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-		
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-		
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-		
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-		
NNSA	112	LLNL		Personal Owned Vehicles	POV Passenger Car	Gasoline		Commute (Miles / Day)	230.000	230.000	-		

Fugitive Emissions: On-site Landfills and Municipal Solid Waste Facilities (Domestic Only)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: This is a required tab for FY 2013 GHG estimates of on-site landfill/municipal solid waste emissions and GHG goal performance. Sites may elect to provide a short description of the methodology used for gathering this information. Data input has been changed to metric tons instead of short tons to be more consistent with waste diversion input on Tab 9.1c. Historic Data has been updated to reflect that change.

Source: Site/Lab

Methodology

On-Site Landfill Information																								Notes	
PSO	Site #	Site	FY	Annual Mass of Solid Waste Disposed On-site (Metric Tons)	Annual Mass of Solid Waste Disposed On-site (Short Tons)	Landfill Open Date (Year)	Landfill Close Date (Year)	Carbon dioxide (biogenic) (MT Megagram)	Methane (MT Megagram)	Percentage Uncontrolled Release (CO2 Biogenic)		Percentage Uncontrolled Release (CH4)		Landfill Gas Collection System Efficiency (CH4)		Venting Loss (CH4)		Methotropic Bacteria Oxidation Factor (CH4)		Combustion Oxidation Factor (CO2 Biogenic)		Biogenic $MtCO_2e$	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
										Site	Default	Site	Default	Site	Default	Site	Default	Site	Default	Site	Default				
NNSA	112	LLNL			0.0						100%		50%		75%		1%		10%		99%	-	-		

Fugitive Emissions: Contracted/Off-site Landfills and Municipal Solid Waste Facilities (Domestic Only)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): DOE O 436.1, E.O. 13514

Instructions: This is a required tab for FY 2013 GHG estimates of off-site landfill/municipal solid waste emissions and GHG goal performance. Sites may elect to provide a short description of the methodology used for gathering this information. Sites which send their waste to a DOE-owned landfill should report zero waste in this tab, and note the waste amount transfered to that site in the "Additional Comments" column. Data input has been changed to metric tons instead of short tons to be more consistent with waste diversion input on Tab 9.1c. Historic data has been updated to reflect that change.

Source: Site/Lab

Methodology

Contracted/Off-Site Landfill Information																													Notes	
PSO	Site #	Site	FY	Annual Mass of Solid Waste Disposed Off-site (Metric Tons)	Annual Mass of Solid Waste Disposed Off-site (Short Tons)	Degradable Organic Carbon (Megagram C/ Megagram Waste)		DOC Anaerobic Digestibility (%)		Methane Correction Factor	Methane % of Landfill Gas (%)		Methane Molecular Weight Conversion	Carbon Dioxide Molecular Weight Conversion	Carbon dioxide (biogenic) (MT Megagram)	Methane (MT Megagram)	Percentage Uncontrolled Release (CO2 Biogenic)		Percentage Uncontrolled Release (CH4)		Landfill Gas Collection System Efficiency (CH4)		Venting Loss (CH4)		Methotropic Bacteria Oxidation Factor (CH4)		Combustion Oxidation Factor (CO2 Biogenic)		Biogenic $MtCO_2e$	Anthropogenic $MtCO_2e$	Additional Information	SPO Notes
						Site	Default	Site	Default		Site	Default					Site	Default	Site	Default	Site	Default	Site	Default	Site	Default	Site	Default				
NNSA	112	LLNL	2011	833.971	919.300	0.203		50.0%		1.0	50.0%		1.333	3.667	155.188	56.432	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		212.225	671.288		
NNSA	112	LLNL	2010	906.622	999.385	0.203		50.0%		1.0	50.0%		1.333	3.667	168.707	61.348	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		230.713	729.768		
NNSA	112	LLNL	2008	906.622	999.385	0.203		50.0%		1.0	50.0%		1.333	3.667	168.707	61.348	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		230.713	729.768		
NNSA	112	LLNL	2012	754.995	832.244	0.203		50.0%		1.0	50.0%		1.333	3.667	140.492	51.088	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		192.127	607.718		
NNSA	112	LLNL	2013	643.950	709.837	0.203		50.0%		1.0	50.0%		1.333	3.667	119.828	43.574	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		163.869	518.335		
					-	0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-		
					-	0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-		
					-	0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-		
					-	0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-		
					-	0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-		

Diversion of Municipal Solid Waste and Construction & Demolition Debris

Requirement(s): E.O. 13514

Instructions: FY 2013 data on municipal solid waste (MSW) sent to a landfill should be entered in Tabs 9.1a and 9.1b, and will then be automatically imported to this tab in columns E and F. Please complete those tabs before entering FY 2013 data on MSW diversion in columns G through J, and construction and demolition diversion data in columns L and M. FY 2012 data has been included as an example of the updated format. The MSW diversion rate calculated on this tab may not be complete if multiple sub-sites are used: i.e. if Tabs 9.1a, 9.1b, and 9.1c do not all utilize the same Site Information (Columns B and C). This may occur for several sites which have reported separately in CEDR but aggregated data for PPTRS. Diversion rate will properly calculate for all data on Tab 1.2 Performance Summary.

Source: Site/Lab

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Methodology

Site				MSW Diversion							C&D Diversion			Notes	
PSO	Site #	Site	FY	Mass of Solid Waste Disposed On-site (Metric Tons)	Mass of Solid Waste Disposed Off-site (Metric Tons)	Diverted Waste (Metric Tons)	Off-Site Composting (Metric Tons)	On-site Composting (Metric Tons)	Waste to Energy (Metric Tons)	MSW Diversion Rate	Landfilled C&D Waste (Metric Tons)	Diverted C&D Waste (Metric Tons)	C&D Diversion Rate	Additional Information	SPO Comments
NNSA	112	LLNL	2012	#VALUE!	#VALUE!	1645.0	83.0	0.0	0.0	--	979.0	1318.0	57.4%		From PPTRS.
NNSA	112	LLNL	2013	#VALUE!	#VALUE!	1704.0	65.0	0.0	0.0	--	535.0	1626.0	75.2%		

Fleet Fuel (FAST Data)

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Requirement(s): NECPA, EISA 2007, DOE O 436.1, E.O. 13514

Instructions: This is an optional tab for FY 2013 GHG estimates of fleet fuel and fleet fuel goal performance. If information for FY 2013 has been entered, select "Current FY" from the drop-down list in tab 1.2, Performance Summary, to have performance estimates based on latest data, otherwise leave as is.

Source: FAST

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2000	EPACT-Covered Civilian Agencies	Yes	No	Alternative	CNG	CNG	NS	None	No	762	918	hundred cubic feet	0.83	4,165.000	No	5.055108
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2000	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	NS	E/ER	No	2704	2704	gallons	1	2,379.000	No	23.96117249
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2000	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	NS	LE	No	27703	27703	gallons	1	35,459.000	No	245.4868201
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2000	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	NS	None	No	53079	46276	gallons	1.147	40,959.000	No	491.0681082
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2000	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	NS	None	No	367732	367732	gallons	1	452,459.000	No	3258.613123
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2001	EPACT-Covered Civilian Agencies	Yes	No	Alternative	CNG	CNG	NS	None	No	274	330	hundred cubic feet	0.83	4,831.000	No	1.817716
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2001	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	NS	E/ER	No	13051	11378	gallons	1.147	12,060.000	No	120.7432295
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2001	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	NS	E/ER	No	315	315	gallons	1	387.000	No	2.791334813
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2001	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	NS	LE	No	34632	34632	gallons	1	53,623.000	No	306.8873246
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2001	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	NS	None	No	33013	28782	gallons	1.147	39,011.000	No	305.4245833
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2001	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	NS	None	No	394995	394995	gallons	1	539,361.000	No	3500.200935
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2002	EPACT-Covered Civilian Agencies	Yes	No	Alternative	CNG	CNG 3000	NS	None	No	1177	5229	gallons at 3000 psi	0.225	3,641.000	No	7.808218

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2002	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	NS	E/ER	No	14274	12445	gallons	1.147	10,453.000	No	132.0579924
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2002	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	NS	E/ER	No	659	659	gallons	1	744.000	No	5.839649657
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2002	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	NS	LE	No	38443	38443	gallons	1	48,548.000	No	340.6580452
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2002	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	NS	None	No	21497	18742	gallons	1.147	20,222.000	No	198.8826301
NNSA	112	Oakland Site Office	Lawrence Livermore National Laboratory	2002	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	NS	None	No	383734	383734	gallons	1	486,449.000	No	3400.412931
NNSA	112	Oakland Site Office - NNSA	Lawrence Livermore National Laboratory	2003	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	14523	12662	gallons	1.147	19,564.000	No	134.3616522
NNSA	112	Oakland Site Office - NNSA	Lawrence Livermore National Laboratory	2003	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	1310	1310	gallons	1	2,030.000	No	11.60840827
NNSA	112	Oakland Site Office - NNSA	Lawrence Livermore National Laboratory	2003	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	42239	42239	gallons	1	65,904.000	No	374.295845
NNSA	112	Oakland Site Office - NNSA	Lawrence Livermore National Laboratory	2003	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	23058	20103	gallons	1.147	31,160.000	No	213.3244492
NNSA	112	Oakland Site Office - NNSA	Lawrence Livermore National Laboratory	2003	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	374970	374970	gallons	1	581,204.000	No	3322.751794
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2004	EPACT-Covered Civilian Agencies	Yes	No	Alternative	CNG	CNG	CA	None	No	2988	3600	hundred cubic feet	0.83	3,970.000	No	19.822392
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2004	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	6386	5568	gallons	1.147	6,960.000	No	59.08101018
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2004	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	43019	43019	gallons	1	64,098.000	No	381.2077217
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2004	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	30765	26822	gallons	1.147	33,528.000	No	284.6268835
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2004	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	353987	353987	gallons	1	527,441.000	No	3136.813449

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2004	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	1272	1272	gallons	1	3,078.000	No	11.27167582
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	No	Alternative	Bio-diesel	B20	CA	None	No	796	707	gallons	1.126	2,436.000	No	5.892586335
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	No	Alternative	CNG	CNG	CA	None	No	2093	2522	hundred cubic feet	0.83	3,214.000	No	13.884962
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	B20	CA	None	No	3186	2829	gallons	1.126	9,742.000	Exempt	23.58515083
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	5081	4430	gallons	1.147	8,860.000	No	47.00761239
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	207	207	gallons	1	414.000	No	1.834305735
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	37255	37255	gallons	1	74,510.000	No	330.1307253
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	B20	CA	None	No	0	0	gallons	1.126	0.000	Covered	0
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	27700	24150	gallons	1.147	48,300.000	No	256.2705891
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2005	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	326594	326594	gallons	1	653,188.000	No	2894.073657
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2005	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	271	377	gallons	0.72	999.000	No	0.361862114
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2005	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	972	972	gallons	1	2,575.000	No	8.61326171
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2006	EPACT-Covered Civilian Agencies	Yes	No	Alternative	CNG	CNG	CA	None	No	935	1127	hundred cubic feet	0.83	1,824.000	No	6.20279
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2006	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	5139	4480	gallons	1.147	10,796.000	No	47.54420784
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2006	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	87	87	gallons	1	210.000	No	0.770940091

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2006	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	34096	34096	gallons	1	86,603.000	No	302.1376248
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2006	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	29991	26148	gallons	1.147	63,017.000	No	277.4661096
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2006	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	267553	267553	gallons	1	679,584.000	No	2370.888899
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2006	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	1184	1645	gallons	0.72	3,054.000	No	1.580976912
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2006	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	2779	2779	gallons	1	5,917.000	No	24.62577602
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	17835	24771	gallons	0.72	59,946.000	No	23.81480002
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	5993	5225	gallons	1.147	13,271.000	No	55.44511337
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	LE	No	266	232	gallons	1.147	589.000	No	2.460937787
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	985	985	gallons	1	2,580.000	No	8.728459655
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	27329	27329	gallons	1	71,601.000	No	242.1726639
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	31717	27652	gallons	1.147	70,235.000	No	293.4344503
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2007	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	238620	238620	gallons	1	625,184.000	No	2114.502582
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2007	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	1099	1527	gallons	0.72	3,665.000	No	1.467477725
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2007	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	2800	2800	gallons	1	7,100.000	No	24.81186501
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	36873	51213	gallons	0.72	161,321.000	No	49.23594736

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	6116	5332	gallons	1.147	19,196.000	No	56.58306581
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	LE	No	13	11	gallons	1.147	40.000	No	0.120271396
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	213	213	gallons	1	767.000	No	1.887474017
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	27551	27551	gallons	1	99,183.000	No	244.1398903
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	31584	27536	gallons	1.147	99,130.000	No	292.2039814
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2008	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	158586	158586	gallons	1	570,910.000	No	1405.290866
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2008	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	1099	1527	gallons	0.72	6,108.000	No	1.467477725
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2008	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	2800	2800	gallons	1	8,400.000	No	24.81186501
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2009	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	44386	61647	gallons	0.72	138,705.000	No	59.26794021
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2009	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	39257	34226	gallons	1.147	67,084.000	No	363.1918598
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2009	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	Yes	454	396	gallons	1.147	776.000	No	4.2002472
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2009	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	122891	122891	gallons	1	301,082.000	No	1088.983894
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2009	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	520	722	gallons	0.72	1,137.000	No	0.694347968
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2009	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	202	202	gallons	1	600.000	No	1.789998833
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	LE	No	17791	24710	gallons	0.720	62517	No	23.7560475

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	44470	61764	gallons	0.720	156265	No	59.38010412
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	5614	4895	gallons	1.147	11995	No	51.93873961
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	LE	No	253	221	gallons	1.147	542	No	2.340666391
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	LE	Yes	2736	2385	gallons	1.147	5844	No	25.31250295
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	3994	3994	gallons	1.000	11465	No	35.39235316
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	31696	27634	gallons	1.147	67708	No	293.2401658
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2010	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	96611	96611	gallons	1.000	277277	No	856.106818
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2010	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	711	711	gallons	1.000	2144	No	6.300441436
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2010	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	LA	None	No	23	23	gallons	1.000	63	No	0.203811748
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2010	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	NV	None	No	9	9	gallons	1.000	24	No	0.079752423
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	LE	No	15862	22031	gallons	0.720	70940	No	21.1802836
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	40329	56013	gallons	0.720	180362	No	53.85069078
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	6025	5254	gallons	1.147	619	No	55.74116604
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	LE	No	235	205	gallons	1.147	701	No	2.174136767
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	101	101	gallons	1.000	25	No	0.894999416

PSO	Site Num	Fleet Parent	Fleet Name	Report Year	Agency Group	EPAct-covered Agency	EO-covered Fuel	Fuel Group	Fuel Name	Fuel Type	Fuel State Abbreviation	Vehicle Exemption	Fuel Armored	Fuel Consumption (GGE)	Fuel Consumption (NU)	Fuel Natural Units	Fuel GGE Conversion Factor	Fuel Cost ($)	Diesel From B20	Anthropogenic $MtCO_2e$
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	8581	8581	gallons	1.000	31149	No	76.03950487
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	29786	25969	gallons	1.147	69262	No	275.5695223
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2011	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	94590	94590	gallons	1.000	342766	No	838.1979683
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2011	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	21	30	gallons	0.720	0	No	0.028040976
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2011	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	497	497	gallons	1.000	1794	No	4.404106039
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	LE	No	14969	20790	gallons	0.72	72,351.000	No	19.98787449
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	43381	60252	gallons	0.72	209,678.000	No	57.92597924
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	E/ER	No	7274	6342	gallons	1.147	426.000	No	67.29647166
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Diesel	DSL	CA	LE	No	3229	2815	gallons	1.147	9,715.000	No	29.87356434
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	E/ER	No	318	318	gallons	1	0.000	No	2.817918954
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	No	Petroleum	Gasoline	GAS	CA	LE	No	8085	8085	gallons	1	31,209.000	No	71.64426021
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Diesel	DSL	CA	None	No	27110	23636	gallons	1.147	67,355.000	No	250.8121181
NNSA	112	NNSA Service Center - Albuquerque	Lawrence Livermore National Laboratory	2012	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	89992	89992	gallons	1	347,163.000	No	797.4533414
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2012	EPACT-Covered Civilian Agencies	Yes	No	Alternative	E-85	E85	CA	None	No	181	251	gallons	0.72	708.000	No	0.241686504
NNSA	112	NNSA Service Center - Albuquerque	Livermore Site Office	2012	EPACT-Covered Civilian Agencies	Yes	Yes	Petroleum	Gasoline	GAS	CA	None	No	782	782	gallons	1	3,167.000	No	6.929599442

EISA Section 432 - Compliance Path

Requirement(s): EISA 2007, DOE O 436.1

Instructions: Please strategize and plan for your 4-year period by updating the FIMS list below and identifying covered facilities, estimating energy consumption, providing anticipated evaluation year and type/level including re-/retro-commissioning and benchmarking status. Sites will be provided the option to update or use information provided in December for their EISA Section 432 June snapshot reporting.

Source: Site/Lab and FIMS

Key:	
Light Green	Pre-populated data by SPO to be reviewed and updated with changes highlighted in blue.
Orange	Fields that need to reviewed and updated with changes highlighted in blue.
Yellow	Optional data field to be completed, if applicable and available.
Red	Calculated fields. No action required.

Strategy

FIMS Facility Information - *No Action/Informational Only*

Site Name	Site	Area	Seq No	Prop ID	Prop Name	Excl Part	Prop Type	GSFT	EC Bldg Fac	EC Metered	Justification	EMS Site	PSO	Lead PSO	Ownership	Outgrant Ind	Status	Est Disposition Yr	Location City	Location State
Lawrence Livermore National Laboratory	14002	001	140320	581	THE NATIONAL IGNITION FACILITY	G - Metered intensive loads	B	696,968	3,796	693,172	Electric power and natural gas consumption by these facilities is excluded, placed into the Metered Process category for these facilities. The building areas have also been placed into the Metered Process category as lighting and HVAC energy use are not	112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89561	131	ENGINEERING		B	285,308	285,308	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	127068	132N	DPRF		B	251,316	251,316	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	200806	453	TERA SCALE FACILITY	G - Metered intensive loads	B	240,598	192,598	48,000	TSF facilities include B453 and OS 454. Electric metered data has been identified via review of 1-line diagrams and coordination with dedicated electric meter reports prepared by PE / Site Utilities Division / Electric Utilities Group using the MV-90 dat	112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89562	132S	G.S		B	219,385	219,385	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89934	490	IMF MANAGED LAB FACILITY		B	216,789	216,789	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89855	391	DEVELOPMENT LABS		B	197,841	197,841	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89699	231	DEVLMT & ASSBLY ENGNG		B	142,403	142,403	-		112	NNSA	NNSA	O	N	Operating	2027	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89658	191	HEAF		B	121,028	121,028	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89547	111	DIRECTORS OFFICE		B	112,418	112,418	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89933	482	OFFICE		B	108,000	108,000	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89802	332	PU FACILITY		B	104,787	104,787	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89589	151	ISOTOPE SCIENCES FACILITY		B	96,018	96,018	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89847	381	OFFICE/RESEARCH		B	95,421	95,421	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89553	121	PAT OFFICE		B	90,759	90,759	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89702	235	WMRDF		B	88,175	88,175	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	205438	321C	MATERIALS FAB SHOP		B	78,335	78,335	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89978	543	O&B / PFS / SHMR OFFICES		B	78,261	78,261	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89951	511	MUSD / CRAFTS SHOP		B	77,078	77,078	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89868	411	SHIPPING/RECEIVING		B	71,625	71,625	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89821	361	BIOSCIENCES RESEARCH		B	68,889	68,889	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	143668	140	G.S		B	66,660	66,660	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130292	551W	BUS/NCOP/TID/SCM		B	65,776	65,776	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA

FIMS Facility Information - *No Action/Informational Only*																				
Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore Lab Site 300	14015	001	90581	865	VACANT		B	61,360	61,360	-		112	NNSA	NNSA	O	N	Operational Stand	2019	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89932	481	OFFICE		B	61,165	61,165	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89786	321A	MATERIALS FAB SHOP		B	59,515	59,515	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89897	435	VACANT		B	57,724	57,724	-		112	SC	NNSA	O	N	Shutdown Pending	2025	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89891	431	ACCELERATOR RESCH CNTR		B	54,545	54,545	-		112	NNSA	NNSA	O	N	Operating	2030	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89707	241	VACANT		B	54,369	54,369	-		112	NNSA	NNSA	O	N	Shutdown Pending	2019	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89731	261	VACANT		B	52,655	52,655	-		112	NNSA	NNSA	O	N	Shutdown Pending	2028	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89922	451	COMPUTATION FACILITY BLDG	G - Metered intensive loads	B	51,398	29,177	22,221	Electric metered data has been identified via review of 1-line diagrams and coordination with the facility management team and reports from dedicated electric meter reports prepared by PE / Site Utilities Division / Electric Utilities Group using the MV-9	112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89767	298	TARGET FABRICATION		B	47,986	47,986	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89576	141	ELECTRONIC SHOPS		B	47,342	47,342	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	137350	681	OPTICS ASSEMBLY BLDG	G - Metered intensive loads	B	46,819	-	46,819	Electric power and natural gas consumption by these facilities is excluded, placed into the Metered Process category for these facilities. The building areas have also been placed into the Metered Process category as lighting and HVAC energy use are not	112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140676	695	EPD/RHWM LIQUID WST PROCSSING		B	46,504	46,504	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	203771	112	COMPUTER CENTER		B	45,512	45,512	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89548	113	G.S		B	44,426	44,426	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90522	801A	FIRING FACILITY(FXR)		B	44,262	44,262	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89808	341	VACANT		B	44,184	44,184	-		112	NNSA	NNSA	O	N	Shutdown Pending	2020	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	125923	170	NARAC FACILITY		B	43,760	43,760	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89662	194	PAT		B	41,543	41,543	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90041	671	PROCUREMENT		B	41,476	41,476	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89985	571	NIF OFFICE		B	41,407	41,407	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130291	551E	O&B / F&I OFFICES		B	41,068	41,068	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89768	311	DOE OFFICES		B	40,951	40,951	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89893	432	IMF MANAGED LAB FACILITY		B	33,575	33,575	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89714	251	VACANT		B	31,120	31,120	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89722	253	HC DEPT OFFICES & LABS		B	30,932	30,932	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89801	331	TRITIUM FACILITY		B	30,484	30,484	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89943	494	STORAGE		B	29,961	29,961	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89812	343	IMF MANAGED OFFICE/LAB FACILITY		B	27,368	27,368	-		112	NNSA	NNSA	O	N	Operating	2020	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89593	153	MICROFABRICATI ON LAB		B	25,976	25,976	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore National Laboratory	14002	001	89542	41	LONG TERM STORAGE		B	25,555	25,555	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90040	663	HEALTH SERVICES		B	24,786	24,786	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89725	255	HC SPD LABS-OFFICES		B	21,855	21,855	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	203637	583	OFFICE		B	21,793	21,793	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	141490	155	ISF OFFICE		B	21,742	21,742	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89747	274	SECURITY ADMINISTRATION		B	21,436	21,436	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	135831	696	EPD/RHWM WST PRCSSING-SOLID		B	21,381	21,381	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89761	292	CAMS LAB FACILITY		B	20,811	20,811	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	202401	264	ESH OFFICES		B	20,461	20,461	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	201413	242	OFFICE		B	20,328	20,328	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	143756	142	PAT		B	20,306	20,306	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89711	243	E&E LAB SPACE		B	20,000	20,000	-		112	NNSA	NNSA	O	N	Shutdown Pending	2019	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90590	874	MECHANICAL SHOPS		B	19,972	19,972	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89634	174	PAT		B	19,332	19,332	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89874	415	EMPLOYEE RESOURCES		B	19,297	19,297	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89795	327	RADIOGRAPHY		B	19,100	19,100	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89942	493	SUPPORT FACILITY/STORAGE		B	19,100	19,100	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89600	162	RESEARCH/CRYSTAL GTH		B	19,042	19,042	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89676	216	CYBER SECURITY		B	18,976	18,976	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89744	271	PROTECTIVE FORCE		B	18,874	18,874	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89792	323	EMERGENCY SERVICES / FIRE STATION#1		B	18,555	18,555	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89757	281	LABORATORY		B	18,505	18,505	-		112	NNSA	NNSA	O	N	Operating	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90042	691	IMF MANAGED LAB FACILITY		B	18,437	18,437	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89682	219	IMF MANAGED OFFICE FACILITY		B	18,429	18,429	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89772	315	ESH ENVIRONMENTAL PROT		B	18,133	18,133	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89782	319	IMF MANAGED OFFICE FACILITY		B	18,048	18,048	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89677	217	VACANT		B	17,999	17,999	-		112	NNSA	NNSA	O	N	Shutdown Pending	2022	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89680	218	VACANT		B	17,956	17,956	-		112	NNSA	NNSA	O	N	Operational Stand	2022	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90589	873	PE/C&M SHOPS		B	17,452	17,452	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89549	115	COMPUTATION FACILITY BLDG		B	17,140	17,140	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89635	175	IMF MANAGED LAB		B	16,656	16,656	-		112	NNSA	NNSA	O	N	Operating	2017	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89901	438	ERD OFC-FIELD OPERATIONS		B	16,262	16,262	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	143564	471	CENTRAL CAFETERIA		B	16,086	16,086	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA

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Lawrence Livermore Lab Site 300	14015	001	90591	875	PE/SUPPLY & MAINTENANCE		B	15,171	15,171	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90016	611	AUTO FLEET MAINTENANCE		B	15,018	15,018	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133205	211	PAT		B	14,122	14,122	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89774	316	DIRECTORS OFFICE		B	14,090	14,090	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89640	181	PAT		B	13,532	13,532	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89937	491	VACANT		B	13,259	13,259	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89771	314	DIR.OFF/QA		B	13,238	13,238	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89607	166	DEVELOPMENT LAB		B	13,226	13,226	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90572	851A	FIRING FACILITY		B	12,996	12,996	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89703	239	RADIOGRAPHY		B	12,517	12,517	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89556	125	WEST CAFETERIA		B	12,513	12,513	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89878	418	MUSD PAINT SHOP		B	12,414	12,414	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89973	531	ICS OFFICE		B	12,381	12,381	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	209507	6475	HIGH PERFORMANCE COMPUTING INNOVATION CE		B	12,070	12,070	-		112	NNSA	NNSA	C	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89908	439	INSTITUTIONAL COMPUTING/ARC HIVES		B	12,055	12,055	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90044	693	EPD/RHWM WASTE STORAGE		B	12,000	12,000	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89804	335	SUPPORT FACILITY		B	11,988	11,988	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89769	312	IMF MANAGED FACILITY		B	11,482	11,482	-		112	NNSA	NNSA	O	N	Operating	2031	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89551	117	COMPUTATION FACILITY BLDG		B	11,370	11,370	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89793	324	EMERGENCY SERVICES / ALARMS OFFICE		B	11,290	11,290	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89825	364	BIOSCIENCES RESEARCH		B	10,932	10,932	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140543	262	G.S		B	10,882	10,882	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89666	197	IMF MANAGED LAB FACILITY		B	10,716	10,716	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89803	334	HETB		B	10,668	10,668	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	132382	694	EPD/RHWM OFFICE		B	10,590	10,590	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89657	190	CAMS FACILITY		B	10,252	10,252	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89746	272	PAT		B	10,124	10,124	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89606	165	OPTICS/DEVELOP MENT LAB		B	10,053	10,053	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89965	519	MUSD / HEAVY EQUIPMENT REPAIR		B	10,006	10,006	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89898	436	AXION		B	9,745	9,745	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89938	492	VACANT		B	9,550	9,550	-		112	NNSA	NNSA	O	N	Shutdown Pending		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89813	345	VACANT		B	9,467	9,467	-		112	SC	NNSA	O	N	Shutdown Pending	2020	Livermore	CA

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Lawrence Livermore National Laboratory	14002	001	89594	154	BIO SECURITY & NANOSCIENCES LAB		B	9,450	9,450	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89914	443	VACANT		B	8,953	8,953	-		112	NNSA	NNSA	O	N	Shutdown Pending	2026	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89827	365	G.S/BIO LAB		B	8,825	8,825	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89862	405	INDUSTRIAL ELECTRONICS		B	8,636	8,636	-		112	NNSA	NNSA	O	N	Shutdown Pending	2029	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89856	392	OPTICS LABORATORY		B	8,413	8,413	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89958	515	MUSD / CRAFTS STORAGE		B	8,409	8,409	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90587	871	ADMINISTRATION		B	7,928	7,928	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89888	423	PAT MACHINE SHOP		B	7,791	7,791	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89550	116	G.S		B	7,781	7,781	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89555	123	AUDITORIUM		B	7,742	7,742	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	205437	321B	MATERIALS FAB SHOP		B	7,511	7,511	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90017	612	EPD/RHWM WASTE TSDF		B	7,015	7,015	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	137313	890	SITE 300 FIRE STATION		B	6,863	6,863	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90526	805	INERT MACHNG/EXPLVS WST PACKNG		B	6,830	6,830	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89849	383	MACHINE SHOP		B	6,715	6,715	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89959	516	PE/CRAFTS FACILITY/ME		B	6,496	6,496	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89861	404	MUSD / BATTERY SHOP / WAREHOUSE		B	6,460	6,460	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89777	318	POOL CHANGE ROOM		B	6,112	6,112	-		112	NNSA	NNSA	O	N	Operating	2023	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89599	161	JUPITER LASER SUPPORT		B	6,105	6,105	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89960	517	ELECT UTILITY OFFICES		B	6,090	6,090	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89727	256	TELCOM NODE #1		B	5,937	5,937	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89952	512	MUSD / CRAFTS SUPPLIES		B	5,896	5,896	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89896	433	LABOR ONLY METAL SHOP		B	5,793	5,793	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89788	322	PLATING SHOP		B	5,704	5,704	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	205760	9998	THE AMERICAN RED CROSS	F - Lease some energy provided	B	5,682	-	5,682	Partialy leased facility should be excluded because the costs of the electrcity is shared by all tenants. The leased portion is not metered separately and the energy costs are included in the price of the lease.	112	NNSA	NNSA	C	N	Operating		Rockville	MD
Lawrence Livermore National Laboratory	14002	001	89563	133	CENTRAL PLANT/DPRF/NTTC		B	5,631	5,631	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89752	280	VACANT		B	5,341	5,341	-		112	EM	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	208115	9997	L Enfant Plaza		B	5,274	5,274	-		112	NNSA	NNSA	C	N	Operating		Washington I	DC
Lawrence Livermore National Laboratory	14002	001	125924	234	MATERIALS MGMT OFFICE		B	5,261	5,261	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89800	329	LASER WELD SHOP		B	5,150	5,150	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89918	445	VACANT		B	5,100	5,100	-		112	NNSA	NNSA	O	N	Operational Stand	2026	Livermore	CA

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Lawrence Livermore Lab Site 300	14015	001	90571	850	VACANT		B	5,095	5,095	-		112	NNSA	NNSA	O	N	Shutdown Pending	2020	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89701	233	MATERIALS MANAGEMENT		B	4,933	4,933	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90598	882	PFD COMM CENTER		B	4,912	4,912	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90030	625	EPD/RHWM WASTE TSDF		B	4,854	4,854	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89674	214	VACANT		B	4,837	4,837	-		112	NNSA	NNSA	O	N	Shutdown Pending	2022	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133961	801D	ADMINISTRATION		B	4,686	4,686	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90552	827C	CHEM PROCESS FACILITY		B	4,579	4,579	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90553	827D	CHEM PROCESS FACILITY		B	4,579	4,579	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90550	827A	CHEMISTRY BLDG		B	4,539	4,539	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134007	836B	VACANT		B	4,505	4,505	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90554	827E	CHEM PROCESS FACILITY		B	4,407	4,407	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89770	313	REGIONAL DISPATCH CENTER		B	4,352	4,352	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90584	867	BUNKER SUPPORT FACILITY		B	4,342	4,342	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	143692	610	TRUCK INSPECTION STATION		B	4,314	4,314	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90020	612A	EPD/RHWM WASTE TSDF		B	4,283	4,283	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89913	442	ERD / D&D OPERATIONS		B	4,169	4,169	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89544	71	WESTGATE BADGE OFFICE		B	4,166	4,166	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	135832	697	EPD/RHWM WRHS-CHEM EXCHG		B	4,118	4,118	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133963	806B	HE MACHINING		B	4,088	4,088	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90586	870	VACANT		B	4,000	4,000	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89636	176	PAT SHOP		B	3,973	3,973	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89845	378	LAB SPACE		B	3,840	3,840	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89671	212	VACANT		B	3,770	3,770	-		112	NNSA	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89822	362	BIOSCIENCES RESEARCH		B	3,766	3,766	-		112	SC	NNSA	O	N	Operating	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	208114	003A	S Program		B	3,750	3,750	-		112	NNSA	NNSA	C	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90022	615	DUS OFFICE		B	3,525	3,525	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89794	326	VACANT		B	3,516	3,516	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89971	523	LABOR ONLY / WELD / CARPTRY WK SHED		B	3,507	3,507	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	134011	836D	DYNAMIC TEST FACILITY		B	3,427	3,427	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90527	806A	HE MACHINING		B	3,417	3,417	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90532	810A	HE ASSEMBLY		B	3,365	3,365	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90593	877	COMPUTER TECHL SUPPORT		B	3,352	3,352	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90523	802A	VACANT		B	3,264	3,264	-		112	NNSA	NNSA	O	N	Shutdown Pending	2024	Tracy	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore National Laboratory	14002	001	89992	591	NIF STORAGE		B	3,200	3,200	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	205181	8	LLNS OFF-SITE OFFICE		B	3,156	3,156	-		112	NNSA	NNSA	C	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140857	582	SERVICE BUILDING		B	2,933	2,933	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	134010	836C	VACANT		B	2,900	2,900	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90595	879	MOTOR POOL & GARAGE		B	2,879	2,879	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90537	813	CHANGE HOUSE		B	2,870	2,870	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90596	880	VACANT		B	2,839	2,839	-		112	NNSA	NNSA	O	N	Shutdown Pending	2027	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89638	179	PAT		B	2,720	2,720	-		112		NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	137312	889	SITE 300 MEDICAL FACILITY		B	2,719	2,719	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90534	812A	VACANT		B	2,656	2,656	-		112	NNSA	NNSA	O	N	Shutdown Pending	2027	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89828	366	BIOSCIENCES RESEARCH		B	2,631	2,631	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	139832	321E	MMED BOILER ROOM		B	2,581	2,581	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90530	809A	HE PRESSING		B	2,570	2,570	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89724	254	HC BIO ASSAY LAB		B	2,488	2,488	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89957	514A	VACANT		B	2,473	2,473	-		112	EM	NNSA	O	N	Shutdown Pending	2029	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90574	854A	VACANT		B	2,458	2,458	-		112	NNSA	NNSA	O	N	Operating	2031	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90592	876	STORES & RECLAMATION		B	2,400	2,400	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90035	651	VISITOR CENTER		B	2,381	2,381	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90023	616	DONATION UTIL&SALES		B	2,273	2,273	-		112	NNSA	NNSA	O	N	Shutdown Pending	2029	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90563	836A	DYNAMIC TEST FACILITY		B	2,191	2,191	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89758	282	PAT		B	2,160	2,160	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89787	321D	EE FABRICATION		B	2,106	2,106	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90027	619	DONATION UTIL&SALES		B	2,038	2,038	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89641	182	VACANT		B	1,958	1,958	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90559	833	EPD/ERD SERVICE-R&D		B	1,892	1,892	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90588	872	PE/PAINT SHOP		B	1,887	1,887	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133990	823B	LINAC RADIOGRAPHY		B	1,842	1,842	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90567	841	PE/STORAGE - C&M SHOPS		B	1,786	1,786	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89839	373	BIO WAREHOUSE		B	1,768	1,768	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89684	221	VACANT		B	1,764	1,764	-		112	NNSA	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90557	830	VACANT		B	1,764	1,764	-		112	NNSA	NNSA	O	N	Shutdown Pending	2028	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89919	446	VACANT		B	1,743	1,743	-		112	SC	NNSA	O	N	Shutdown Pending	2025	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90524	803	EPD/ORAD STRG WRHS		B	1,719	1,719	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90560	834A	THERMAL TEST FACILITY		B	1,694	1,694	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133998	834D	VACANT		B	1,694	1,694	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore Lab Site 300	14015	001	90549	826	CHEM PROCESS FACILITY		B	1,638	1,638	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90576	856	VACANT		B	1,613	1,613	-		112	NNSA	NNSA	O	N	Shutdown Pending	2023	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	202152	368	G.S/BSL-3 LABORATORY		B	1,590	1,590	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89824	363	VACANT		B	1,584	1,584	-		112	SC	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133996	832E	MM OFFICE/SHIP&RECEIVE		B	1,581	1,581	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90528	807	HE MACHINING		B	1,575	1,575	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89841	376	VACANT		B	1,575	1,575	-		112	SC	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89552	118	TELECONFERENCE FACILITY		B	1,505	1,505	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89846	379	LAB SPACE		B	1,500	1,500	-		112	SC	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90579	859	STORAGE		B	1,500	1,500	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89775	317	NETWORKING GROUP FACILITY		B	1,426	1,426	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90548	825	CHEM PROCESS FACILITY		B	1,370	1,370	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	125728	135	G.S/STORAGE		B	1,369	1,369	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	134160	812E	LABORATORY		B	1,310	1,310	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90570	848	VACANT		B	1,300	1,300	-		112	NNSA	NNSA	O	N	Shutdown Pending	2022	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	125727	134	G.S/STORAGE		B	1,284	1,284	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	134005	834L	VACANT		B	1,281	1,281	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90541	818A	HE STORAGE FACILITY		B	1,244	1,244	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131384	816	EXPLSE WASTE STRG FAC		B	1,223	1,223	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90021	614	EPD/RHWM WASTE TSDF		B	1,221	1,221	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90562	835	EPD/ERD STORAGE		B	1,216	1,216	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90546	823A	LINAC RADIOGRAPHY		B	1,089	1,089	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90533	811	VACANT		B	1,081	1,081	-		112	NNSA	NNSA	O	N	Shutdown Pending	2026	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89972	525	LABOR ONLY ELECT		B	1,080	1,080	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140321	622	F&I CORP. YARD		B	1,033	1,033	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90564	837	VACANT		B	1,031	1,031	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134000	834E	VACANT		B	998	998	-		112	NNSA	NNSA	O	N	Shutdown Pending		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134003	834H	THERMAL TEST FACILITY		B	998	998	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89765	297	PAPER DISPOSAL		B	992	992	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	134014	851B	MACHINE SHOP		B	985	985	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89764	294	CAMS LAB FACILITY		B	970	970	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89668	198	MACHINE SHOP		B	966	966	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89554	122	PROTOCOL OFFICE		B	962	962	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133974	810B	HE ASSEMBLY		B	921	921	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA

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Lawrence Livermore Lab Site 300	14015	001	133975	810C	ASSEMBLY STORAGE		B	914	914	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133988	817H	HE PRESSING INERT STORAGE		B	890	890	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90551	827B	SERVICE SHOP		B	871	871	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90600	892	CENTRAL CONTROL POST		B	866	866	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89665	196	EPD/ORAD SRVC-MNTRNG STAT		B	853	853	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90543	819	PE/STORAGE-C&M SHOPS		B	828	828	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89915	444	VACANT		B	805	805	-		112	NNSA	NNSA	O	N	Shutdown Pending	2026	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	128200	170A	VACANT		B	800	800	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89763	293	CAMS LAB FACILITY		B	800	800	-		112	NNSA	NNSA	O	N	Operating	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89805	336	SOUTH SECURITY PORTAL		B	792	792	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89806	337	NW SECURITY PORTAL		B	792	792	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133958	801B	TECHNICAL MAINTENANCE SHOP		B	790	790	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89590	152	GENERATOR HOUSE		B	751	751	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133997	834B	VACANT		B	751	751	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	130265	834C	VACANT		B	751	751	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	138147	899B	PISTOL RANGE TRNING/OFFICE		B	688	688	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90575	855A	HE MACHINING		B	667	667	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134701	851C	FABRICATION SHOP		B	652	652	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90545	821	CHEMISTRY STORAGE		B	650	650	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134001	834F	VACANT		B	649	649	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	130264	806C	MACHINING STORAGE		B	640	640	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133981	817B	HE PRESSING CELL		B	639	639	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134046	855B	HE MACHINING		B	637	637	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89829	367	VACANT		B	629	629	-		112	SC	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	143694	809B	MECHANICAL SUPPORT		B	617	617	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134047	855C	HE MACHINING		B	612	612	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	139520	809C	HE OVEN FACILITY		B	606	606	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133989	818C	HE STORAGE FACILITY		B	578	578	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	138146	899A	GUN SHOP		B	572	572	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	130266	834K	PUMP STATION		B	545	545	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90558	832A	STORAGE		B	540	540	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134002	834G	VACANT		B	527	527	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133986	817F	HE PRESSING OVENS		B	526	526	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89968	522	LABOR ONLY RESTROOM FACILITY		B	516	516	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA

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Lawrence Livermore Lab Site 300	14015	001	134004	834J	VACANT		B	511	511	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90062	452	COMPUTATION FACILITY BLDG.		B	492	492	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90594	878	PE/MAINT SHOP STORAGE		B	488	488	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90568	843A	EPD/ERD CORP YARD		B	486	486	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89963	517A	MUSD / CUSTODIAN LAUNDRY RM		B	462	462	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90569	845A	EXPL WASTE TREATMNT FAC		B	431	431	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90539	817A	HE PRESSING CONTROL ROOM		B	417	417	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89626	173	PAT WELD SHOP		B	413	413	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	131922	843B	EPD/ERD STORAGE		B	402	402	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89664	195	EPD/ORAD SHOP		B	400	400	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89966	520	MUSD / PESTICIDE STORAGE		B	400	400	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	139177	895	EPD/ORAD OFFICE		B	380	380	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90585	869	PE/MAINT SHOP STORAGE		B	353	353	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89863	406	VACANT		B	345	345	-		112	EM	NNSA	O	N	Shutdown Pending	2029	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89791	322A	PLATING SHOP ANNEX		B	340	340	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133994	832C	STORAGE		B	335	335	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134157	812D	VACANT		B	325	325	-		112	NNSA	NNSA	O	N	Shutdown Pending	2027	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89975	533	EPD/DO STORAGE		B	320	320	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89766	297A	MUSD CLASS DOC DESTRUCTION		B	320	320	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90547	824	HE STORAGE FACILITY		B	300	300	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90580	860	STORAGE		B	298	298	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89848	382	TECH SUPPORT		B	292	292	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133564	845B	EWTF		B	290	290	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	140859	684	CHEMICAL STORAGE		B	278	278	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90003	597	ERD CORP YARD		B	260	260	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133992	828C	HE MACHINING-INACTIVE		B	258	258	-		112	NNSA	NNSA	O	N	Shutdown Pending	2025	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89945	509	MUSD SHEET MTL SHOP STO		B	254	254	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90029	624	EPD/RHWM OFFICE		B	240	240	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89663	194A	VACANT		B	240	240	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133987	817G	HE PRESSING BOILERS		B	237	237	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90555	828A	OFFICE		B	212	212	-		112	NNSA	NNSA	O	N	Shutdown Pending	2025	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90036	652	PUBLIC AFFAIRS STORAGE		B	208	208	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89605	164	MACHINE SHOP		B	207	207	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133984	817D	HE PRESSING STORAGE		B	207	207	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA

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Lawrence Livermore National Laboratory	14002	001	89931	473	VACANT		B	205	205	-		112	NNSA	NNSA	O	N	Shutdown Pending		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	204000	012D	EAST AVENUE SECURITY STORAGE		B	205	205	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133991	828B	HE MACHINING-INACTIVE		B	199	199	-		112	NNSA	NNSA	O	N	Shutdown Pending	2025	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89716	252	HC/SHIPNG/RECEIVNG SHED		B	192	192	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	133967	806D	MACHINING STORAGE		B	192	192	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133985	817E	HE PRESSING-INACTIVE		B	186	186	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89546	110	STORAGE		B	153	153	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	134179	193A	EPD/ORAD SRVC-MNTRNG STAT		B	151	151	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89946	510	MUSD / FACS / UPS BATTERY BANK		B	144	144	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	129496	196A	EPD/ORAD STORAGE		B	112	112	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90525	804	STAGING AREA		B	107	107	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	138782	312A	VACANT		B	107	107	-		112	NNSA	NNSA	O	N	Shutdown Pending	2022	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136921	597A	ERD RESTRM & SHWR FAC		B	99	99	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	129497	335A	EMRGCY RESPONSE FACILITY		B	64	64	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	129498	335B	EMRGCY RESPONSE FACILITY		B	64	64	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90072	263	VACANT		B	51	51	-		112	NNSA	NNSA	O	N	Shutdown Pending	2028	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89495	002LS	LANDSCAPING		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89503	021CA	CMPRSSED AIR SYS COMPRESSOR CTRL		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89504	022CA	CMPRSSED AIR SYS COMPRESSOR CTRL NW		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89505	023CA	CMPRD AIR SYS DIST LINES		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89506	02AL	SITEWIDE ACCELERATORS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89508	02CND	RETURN LINES / CONDENSATE		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89509	02CSL	COMM SYSTEM LINES		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	112	02EDT	ELECTRIC DIST TRANSFORMERS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89511	02EGU	UTIL ELECT GENERATORS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89512	02EPL	UTIL ELEC PRI DIST LINES		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89513	02EPT	ELEC POWER TRANSFORMERS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89514	02ESL	UTIL ELEC SEC DIST LINES		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89515	02FAS	FIRE ALARM SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89516	02FNC	ALL OTHER FENCES		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89517	02GAW	GARAGE AUTO WASH RACK		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89520	02GSD	GAS SYS DIST LINES		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore National Laboratory	14002	001	89524	02LGS	UTIL ELECT SUBSTATIONS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	1	02LLIX	LLIX CABLE SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89525	02MFE	ERD STORAGE AREA		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89526	02OST	STORAGE OIL TANKS TO-1		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89527	02PRK	ALL OTHER PARKING AREAS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89529	02RDP	ROADS PAVED		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89530	02RDU	ROADS UNPAVED & IMPROVED		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89531	02RTW	RETAINING WALLS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89532	02SAS	SECURITY ALARM SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89533	02SCL	ALL OTHER SECURITY LIGHTG		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89534	02SCS(	SEWER COLL SYST GRAVITY		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89535	02STL	ALL OTHER STREET LIGHTING		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89536	02STM	SUPPLY LINES / STEAM		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89537	02SWC	STORM WATER COLL SYS GRAV		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89538	02SWP	ALL OTHER SIDEWALKS & PATHS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89540	02TS	TRUCK SCALE		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89541	02WRS	WASTE RETENTION SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90498	15AL	SITEWIDE ACCELERATORS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90499	15CAS(	CONPRD AIR SYS COMPRESS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90500	15CSL	COMM SYSTEM LINES		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90501	15CW	WATER SYS POTBL DIST		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90502	15EDT	ELECT DIST TRANSFORMERS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90503	15EGV	UTILITY ELEC GENERATORS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90504	15EPL	UTIL PRI ELEC DIST LINES		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90505	15EPT	ELEC POWER TRANSFORMERS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90506	15ESL	UTIL ELEC SEC DIST LINES		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90507	15FAS	FIRE ALARM SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90508	15FNC	ALL OTHER FENCES		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90509	15GDS	GAS DIST SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90510	15HS	HEATING SYS / BOILERS / OIL		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90511	15LGS	UTIL ELEC SUBSTATIONS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90512	15LS	LANDSCAPING		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90513	15RW	RETAINING WALL		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90514	15RWP	ROADS WALKS PAVED AREAS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA

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Lawrence Livermore Lab Site 300	14015	001	90515	15SAS	SECURITY ALARM SYSTEM		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90516	15SCL	ALL OTHER SECURITY LIGHTGS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90517	15SCS(	SEWAGE COLL SYS GRAVITY		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90518	15SOT	STORAGE OIL TANK		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90519	15SPS	SEWAGE POND / SEPTIC & RETN TKS		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90520	15STL	ALL OTHER STREET LIGHTING		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90640	15WST	WATER STORAGE TANKS - 11		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90049	CW01	WATER SYS POT DISTRIBUTION		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90050	CW02	WATER SYS POT SUPPLY LINE		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90051	CW03	WATER SYS POT STA(ZONE7)		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90052	CW06	STORAGE WATER TANKS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90053	DW001	WATER SYS DW TREAT PLTS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90054	DW002	WATER SYS DW DIST		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90056	LCW06	CLG WATER SYS DISTRIBUTION		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	204001	OS012/	SECURITY KIOSK		S		26	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	204002	OS012I	SECURITY KIOSK		S		26	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	204003	OS012(	SECURITY KIOSK		S		26	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130229	OS041S	SECURITY KIOSK		S		60	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130228	OS071I	SECURITY KIOSK		S		132	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130227	OS113I	SECURITY KIOSK		S		34	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136771	OS122S	SECURITY KIOSK		S		217	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130225	OS122\	SECURITY KIOSK		S		60	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130204	OS169\	EPD/RHWM WASTE ACC AREA		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	201336	OS231S	SECURITY KIOSK		S		90	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136985	OS235I	SECURITY KIOSK		S		32	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136773	OS243\	SECURITY KIOSK		S		32	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90073	OS270	PROGRAMMATIC STORAGE SO PRO FORCE		S		433	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90058	OS273	LINE OF SITE VAULT		S		831	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130207	OS298/	OUTSIDE STORAGE		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130226	OS316I	SECURITY KIOSK		S		49	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	201318	OS321I	SECURITY KIOSK		S		54	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130208	OS321\	BUILDING 321 WAA		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130209	OS332\	BUILDING 332 WAA		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA

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Lawrence Livermore National Laboratory	14002	001	90059	OS338	GUARD TOWER		S		416	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130210	OS361	BIO WST ACCUMLTN AREA		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136774	OS415	SECURITY KIOSK		S		154	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	130211	OS418	BUILDING 418 WAA		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	200870	OS454	TSF COOLING TOWERS		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89944	OS495	STORAGE		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	207155	OS513	E85 FUELING STATION		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90063	OS518	GAS CYLINDER DOCK		S		3,270	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	204249	OS601	GUARD KIOSK		S		83	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	144392	OS610	SECURITY KIOSK		S		49	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	11	OS621	CNG FUEL STATION		S		824	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136775	OS651	SECURITY KIOSK		S		92	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90064	OS665	MEDICAL TRIAGE AREA		S		576	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140981	OS682	NIF CENTRAL PLANT		S		-	8,880		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140860	OS683	NIF COOLING TOWER		S		-	2,104		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	203715	OS812	MITIGATION POND		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	135317	OS845	EWTF BURN PAD		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90611	OS883	EPD/RHWM CNTNR STRG UNIT		S		3,829	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131777	OS891	MAIN GATE KIOSKS A		S		50	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90613	OS894	PROCESS AREA POST		S		152	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90615	OS896	EAST OBSERVATION POST		S		33	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90616	OS897	WEST CONTROL POST		S		294	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90617	OS898	WEST OBSERVATION POST		S		572	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90618	OS899	PISTOL RANGE		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	136722	OS899	LIVE FIRE HOUSE		S		11,140	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	138148	OS899	RIFLE RANGE		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90619	OSM1	MAGAZINE-STORAGE VAULT		S		387	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	143336	OSM10	HE STORAGE MAGAZINE		S		104	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	143203	OSM15	HE STORAGE MAGAZINE		S		120	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90620	OSM2	HE WASTE STORAGE MAGAZINE		S		538	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131778	OSM21	MAGAZINE-STORAGE VAULT		S		386	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131779	OSM22	MAGAZINE-STORAGE VAULT		S		390	-		112	NNSA	NNSA	O		Operating		Tracy	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore Lab Site 300	14015	001	131780	OSM23	MAGAZINE - STORAGE VAULT		S		369	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131781	OSM24	MAGAZINE- STORAGE VAULT		S		48	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90621	OSM3	HE WASTE STORAGE MAGAZINE		S		137	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90622	OSM30	MAGAZINE- STORAGE VAULT		S		386	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90623	OSM31	MAGAZINE- STORAGE VAULT		S		389	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90624	OSM32	MAGAZINE- STORAGE VAULT		S		389	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90625	OSM33	HE STORAGE MAGAZINE		S		139	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90626	OSM34	MAGAZINE-HE CUBCL STRGE		S		36	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90602	OSM35	MAGAZINE- STORAGE VAULT		S		386	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90603	OSM36	HE STORAGE MAGAZINE		S		386	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90604	OSM37	MAGAZINE-HE CUBCL STRGE		S		36	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	132166	OSM38	MAGAZINE- STORAGE VAULT		S		641	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90627	OSM4	HE WASTE STORAGE MAGAZINE		S		137	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	132167	OSM41	MAGAZINE- STORAGE VAULT		S		641	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131782	OSM5	HE WASTE STORAGE MAGAZINE		S		140	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90628	OSM51	HE STORAGE MAGAZINE		S		138	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134700	OSM52	MAGAZINE- STORAGE VAULT		S		492	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	203825	OSM58	STORAGE MAGAZINE		S		61	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90630	OSM7	MAGAZINE- STORAGE VAULT		S		387	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90631	OSM70	MAGAZINE- STORAGE VAULT		S		305	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90632	OSM71	MAGAZINE- STORAGE VAULT		S		136	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90633	OSM72	MAGAZINE- STORAGE VAULT		S		136	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90634	OSM8	MAGAZINE- STORAGE VAULT		S		387	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90635	OSM80	M80 READY VAULT		S		389	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	136582	OSM81	HE STORAGE MAGAZINE		S		366	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131309	OSM82	MAGAZINE - STORAGE		S		62	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90636	OSM83	M83 READY VAULT		S		422	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	136583	OSM83	EXPLOSIVES STORAGE		S		568	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	136584	OSM83	HE SHIPPING AND RECEIVING		S		572	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134140	OSM83	HE STORAGE		S		1,690	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134043	OSM85	MAGAZINE STORAGE		S		3,205	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	134139	OSM85	STORAGE		S		500	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	136585	OSM85	MAGAZINE STORAGE VAULT		S		457	-		112	NNSA	NNSA	O		Operating		Tracy	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore Lab Site 300	14015	001	135970	OSV82	CONTRL MTLS-STRG VAULT		S		297	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90066	U011	ERD TREATMNT FAC A		S		402	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90067	U042	ERD TREATMNT FAC B		S		402	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90069	U119	TELCOM NODE #11		S		2,061	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	131805	U172	TELCOM NODE #12		S		675	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90070	U187	ERD TREATMNT FAC		S		1,225	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90071	U193	SEWER DIVERSION FAC		S		72	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89745	U271T	MICROWAVE TOWER		S		-	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133599	U283	TELCOM NODE #3		S		216	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90075	U295	PUMP HOUSE		S		1,128	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133600	U299	TELCOM NODE #4		S		675	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133601	U313A	TELCOM NODE #10		S		216	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90076	U313B	HC EMRGCY COMM RADIO CTR		S		336	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	131775	U328C	PE/LCW CONTROL BLDG		S		300	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90079	U416	BOILER FACILITY		S		743	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90080	U424	ELECTRICAL SUBSTATION		S		4,456	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133602	U430	TELCOM NODE #9		S		675	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133603	U448	TELCOM NODE #8		S		675	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133604	U470	TELCOM NODE #2		S		675	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90081	U472	ERD TREATMENT FAC D		S		1,313	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133605	U599	TELCOM NODES 5&6		S		688	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136630	U6042	MOCHO POT PUMP STA HH		S		352	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136631	U6047	SANDIA WTR TNKS CNTRL STATN		S		268	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	133606	U664	TELCOM NODE #7		S		216	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90639	U815	CNTRL AIR PLANT/STRG		S		1,300	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133274	U842	INSTAL COMM HUT#1		S		411	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	129606	U844	CW BOOSTER STATION #1		S		374	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90641	U846	ELECTRICAL SUBSTATION		S		497	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	131776	U847	CW BOOSTER STATION #2		S		350	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90642	U849	COMM RADIO TRANS		S		100	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	140985	U849A	COMM RADIO TWR CNTRL BLDG		S		138	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	140983	U849B	COMM TWR GENERATOR BLDG		S		177	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	140984	U849C	COMM RADIO TWR CNTRL BLDG		S		336	-		112	NNSA	NNSA	O		Operating		Tracy	CA

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Lawrence Livermore Lab Site 300	14015	001	90643	U853	CW BOOSTER STATION #3		S		352	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	136986	U865D	ELECTRICAL SUBSTATION		S		2,450	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	133275	U866	INSTAL COMM HUT #2		S		413	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90599	U882T	S300 MICROWAVE TOWER		S		-	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	137314	U887	WELL 20 POTBL WATER WELL		S		141	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	137315	U888	WELL 18 POTBL WATER WELL		S		171	-		112	NNSA	NNSA	O		Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90061	OS394	VACANT		S		144	-		112	NNSA	NNSA	O		Shutdown Pending	2017	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	134294	OS858I	DROP TOWER - VACANT		S		-	-		112	NNSA	NNSA	O		Shutdown Pending	2023	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90535	OS812I	VACANT		S		995	-		112	NNSA	NNSA	O		Shutdown Pending	2027	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90536	OS812(	VACANT		S		1,007	-		112	NNSA	NNSA	O		Shutdown Pending	2027	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90578	OS858	DROP TOWER COMPLEX STORAGE		S		1,506	-		112	NNSA	NNSA	O		Operating	2031	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90078	U325	LCW CONTROL		S		5,072	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90074	U291	LCW STATION		S		6,981	-		112	NNSA	NNSA	O		Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89979	5475	ICS DEPT OFFICE		T	32,368	32,368	-		112	NNSA	NNSA	O	N	Operating	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89608	1677	IMF MANAGED OFFICE FACILITY		T	28,576	28,576	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89835	3725	NIF DIRECTORATE OFFICES		T	19,867	19,867	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89836	3726	NIF DIRECTORATE OFFICES		T	19,824	19,824	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89834	3724	COMPUTATION FACILITY BLDG		T	19,810	19,810	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89656	1889	INSTITUTIONALY MANAGED MULTI-TENANT FACI		T	17,380	17,380	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89738	2679	VACANT		T	12,310	12,310	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89655	1888	VACANT		T	11,520	11,520	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89925	4675	EMPLOYEE RESOURCES		T	11,287	11,287	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89648	1879	LABORATORY TRAINING CNTR		T	11,118	11,118	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89930	4729	O&B TID LIBRARY		T	10,018	10,018	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89928	4727	O&B TID LIBRARY		T	9,891	9,891	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89748	2775	SECURITY		T	9,831	9,831	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89817	3527	DOE OFFICES		T	9,782	9,782	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89926	4725	VACANT		T	9,389	9,389	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89927	4726	S&T / COMP		T	9,384	9,384	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89984	5627	LEGAL SERVICES		T	8,470	8,470	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89929	4728	COMPUTATIONS		T	6,762	6,762	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89980	5477	IMF MANAGED OFFICE FACILITY		T	6,693	6,693	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89810	3427	VACANT		T	6,365	6,365	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore National Laboratory	14002	001	89647	1878	VACANT		T	6,292	6,292	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	201480	6930	NIF OFFICE TRAILER		T	5,937	5,937	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89759	2825	OFFICE		T	5,922	5,922	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90043	6925	OFFICES		T	5,873	5,873	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89923	4525	COMPUTATION FACILITY BLDG		T	5,713	5,713	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89611	1680	VACANT		T	5,697	5,697	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89633	1739	JUPITER OFFICES		T	5,646	5,646	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89559	1280	VACANT		T	5,644	5,644	-		112	NNSA	NNSA	O	N	Shutdown Pending	2022	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89739	2684	VACANT		T	5,284	5,284	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89976	5425	VACANT		T	5,260	5,260	-		112	NNSA	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89900	4378	ERD OFFICES		T	5,180	5,180	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89977	5426	VACANT		T	5,180	5,180	-		112	EM	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89654	1887	VACANT		T	5,108	5,108	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89650	2727	LOCKS AND KEYS		T	5,090	5,090	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89890	4302	ERD OFFICES		T	5,022	5,022	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89902	4383	VACANT		T	4,988	4,988	-		112	EM	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	201479	6929	NIF OFFICE TRAILER		T	4,925	4,925	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89899	4377	ERD OFFICES		T	4,920	4,920	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89762	2925	VACANT		T	4,917	4,917	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89826	3649	BIOSCIENCES RESEARCH		T	4,800	4,800	-		112	SC	NNSA	O	N	Shutdown Pending		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89820	3577	VACANT		T	4,614	4,614	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89630	1736	SECURITY TRAINING		T	4,526	4,526	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89778	3180	VACANT		T	4,371	4,371	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89983	5626	AUDIT & OVERSIGHT		T	4,356	4,356	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89740	2685	VACANT		T	4,320	4,320	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90032	6325	VACANT		T	4,320	4,320	-		112	EM	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89604	1632	VACANT		T	4,290	4,290	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	141330	5675	STAFF RELATIONS		T	4,277	4,277	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89652	1885	VACANT		T	4,266	4,266	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89728	2580	SECURE COMMUNICATION CENTER		T	4,203	4,203	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89920	4475	VACANT		T	4,176	4,176	-		112	SC	NNSA	O	N	Shutdown Pending	2025	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89558	1277	VACANT		T	4,058	4,058	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90025	6179	EPD/RHWM OFFICE		T	3,904	3,904	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89904	4385	VACANT		T	3,744	3,744	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA

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Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore National Laboratory	14002	001	89906	4387	VACANT		T	3,658	3,658	-		112	EM	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89653	1886	ICS RECEIVING / STORAGE		T	3,643	3,643	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89588	4382	VACANT		T	3,600	3,600	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89642	1826	VACANT		T	3,590	3,590	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89609	1678	VACANT		T	3,550	3,550	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89629	1735	JUPITER MAIN OFFICE		T	3,261	3,261	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89789	3226	VACANT		T	3,077	3,077	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89953	5125	LABOR ONLY CONSTRUCTION OFFICE		T	2,912	2,912	-		112	NNSA	NNSA	O	N	Operating	2031	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89651	1884	VACANT		T	2,880	2,880	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90038	6526	PUBLIC AFFAIRS OFFICE		T	2,756	2,756	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89970	5226	VACANT		T	2,548	2,548	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89659	1925	PAT		T	2,236	2,236	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89597	1601	VACANT		T	2,228	2,228	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89735	2632	SECURITY		T	2,202	2,202	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89816	3526	HUMAN RELIABILITY PROGRAM		T	2,165	2,165	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89624	1726	JUPITER SUPPORT		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89751	2787	SECURITY FITNESS FACILITY		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140533	3340	OFFICES		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89781	6926	OFFICES		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89598	1602	VACANT		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89661	1927	VACANT		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89717	2525	VACANT		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89840	3751	VACANT		T	2,160	2,160	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89996	2728	VACANT		T	2,130	2,130	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89753	2801	VACANT		T	2,130	2,130	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89754	2802	VACANT		T	2,130	2,130	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89667	6527	VACANT		T	2,115	2,115	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89627	1730	JUPITER VISITORS		T	2,100	2,100	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90046	2552	VACANT		T	2,100	2,100	-		112	EM	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89741	2687	VACANT		T	2,100	2,100	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89994	6426	VACANT		T	2,100	2,100	-		112	NNSA	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89628	2726	OFFICE		T	2,098	2,098	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89969	5225	LABOR ONLY CONSTRUCTION OFFICE		T	1,952	1,952	-		112	NNSA	NNSA	O	N	Operating	2031	Livermore	CA

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Lawrence Livermore National Laboratory	14002	001	89860	3982	VACANT		T	1,920	1,920	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89631	6928	OFFICES		T	1,912	1,912	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89790	2627	VACANT		T	1,867	1,867	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89625	1727	JUPITER TECH SUPPORT		T	1,837	1,837	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	128145	2180	VACANT		T	1,764	1,764	-		112	NNSA	NNSA	O	N	Shutdown Pending	2022	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89941	4926	VACANT		T	1,638	1,638	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89903	4384	VACANT		T	1,577	1,577	-		112	EM	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90019	6127	EPD/RHWM OFFICE		T	1,560	1,560	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89911	4406	VACANT		T	1,560	1,560	-		112	NNSA	NNSA	O	N	Shutdown Pending	2026	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89603	1631	OFFICE		T	1,490	1,490	-		112	NNSA	NNSA	O	N	Shutdown Pending	2015	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90039	6575	PUBLIC AFFAIRS OFFICE		T	1,460	1,460	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90045	6951	EPD/RHWM SERVICE BUILDING		T	1,440	1,440	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89843	3775	VACANT		T	1,440	1,440	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89730	6870	OFFICE		T	1,416	1,416	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	208280	6931	NIF CONSTRUCTION BREAKROOM		T	1,405	1,405	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89750	2777	SECURITY ARMORY		T	1,400	1,400	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89857	3925	REDWOOD RM.-CONF./CLASSROOM		T	1,081	1,081	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90024	6178	EPD/RHWM OFF/CHANGE HOUSE		T	1,040	1,040	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90037	6525	VISITORS CTR AUDITRM		T	971	971	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	128006	8726	EPD/ERD OFFICE		T	953	953	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	132065	8826	SECURITY FITNESS		T	943	943	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	90034	6501	PUBLIC AFFAIRS OFFICE		T	908	908	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	137861	7990	DINE COLLEGE OFFICES		T	880	880	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89924	4576	COMPUTATION FACILITY BLDG		T	848	848	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	143464	6989	TOILET TRAILER		T	756	756	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89726	2554	VACANT		T	740	740	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	201383	6301	RIGGER STORAGE		T	732	732	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89743	2701	SECURITY SHOWER TRAILER		T	720	720	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89818	6206	IE STORAGE		T	684	684	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89783	3203	MATERIAL FABRICATION DIV		T	649	649	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89784	3204	VACANT		T	649	649	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	143340	4924	VACANT		T	638	638	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA

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Lawrence Livermore National Laboratory	14002	001	89949	5104	INDUSTRIAL GAS FACILITY		T	624	624	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	533	6901	TOILET TRAILER		T	520	520	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89950	5105	LABOR ONLY CONSTRUCTION		T	510	510	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90597	8806	VACANT		T	509	509	-		112	NNSA	NNSA	O	N	Shutdown Pending	2027	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	133598	3555	HUMAN RELIABILITY PROGRAM		T	508	508	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	135719	8991	INSTRUCTOR FACILITY		T	480	480	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	135819	1802	TOILET TRAILER		T	411	411	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89742	6205	MUSD HEAVY EQUIP. STORAGE		T	404	404	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	138127	519A	HEAVY EQUIPMENT STORAGE		T	401	401	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89865	6424	VACANT		T	390	390	-		112	NNSA	NNSA	O	N	Shutdown Pending	2018	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89867	4107	VACANT		T	388	388	-		112	NNSA	NNSA	O	N	Shutdown Pending	2029	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	204013	8580	BREAKROOM TRAILER		T	384	384	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	132064	8825	SHOWER FACILITY		T	370	370	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89715	2512	VACANT		T	360	360	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89991	1713	TOILET TRAILER		T	335	335	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	136739	8724	EPD/ERD SERVICE-R&D		T	322	322	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore National Laboratory	14002	001	89935	4905	VACANT		T	322	322	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89936	4906	VACANT		T	322	322	-		112	NNSA	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89907	4388	VACANT		T	320	320	-		112	EM	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89967	5207	MUSD / AC STORAGE		T	320	320	-		112	NNSA	NNSA	O	N	Shutdown Pending	2029	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89892	4316	VACANT		T	299	299	-		112	EM	NNSA	O	N	Shutdown Pending	2014	Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	90561	8340	EPD/ERD SRVC-MNTRNG TF834		T	282	282	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	90601	8990	B899 A&B WASH UP FACILITY		T	281	281	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	129504	874A	VACANT		T	279	279	-		112	NNSA	NNSA	O	N	Shutdown Pending	2027	Tracy	CA
Lawrence Livermore Lab Site 300	14015	001	129505	874B	VACANT		T	279	279	-		112	NNSA	NNSA	O	N	Shutdown Pending	2027	Tracy	CA
Lawrence Livermore National Laboratory	14002	001	135609	1714	SHOWER FACILITY		T	270	270	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	140566	4352	ERD OFC-FIELD OPERATIONS		T	240	240	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	90001	2625	VACANT		T	240	240	-		112	NNSA	NNSA	O	N	Shutdown Pending	2016	Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89832	2808	TOILET TRAILER		T	238	238	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136930	532	EPD/ORAD SERVICE BLDG		T	215	215	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	137823	501	DUS OFFICE		T	210	210	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	89921	4113	PAINT SHOP STORAGE		T	203	203	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	136929	518A	INDUSTRIAL GAS STORAGE		T	195	195	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	143411	3304	TOILET TRAILER		T	128	128	-		112	NNSA	NNSA	O	N	Shutdown Pending	2021	Livermore	CA

FIMS Facility Information - *No Action/Informational Only*																				
Site Name	**Site**	**Area**	**Seq No**	**Prop ID**	**Prop Name**	**Excl Part**	**Prop Type**	**GSFT**	**EC Bldg Fac**	**EC Metered**	**Justification**	**EMS Site**	**PSO**	**Lead PSO**	**Ownership**	**Outgrant Ind**	**Status**	**Est Disposition Yr**	**Location City**	**Location State**
Lawrence Livermore National Laboratory	14002	001	201360	231A	BEAD BLASTER-RECEIVING		T	110	110	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore National Laboratory	14002	001	202698	653	EPD SAMPLE STAGING		T	96	96	-		112	NNSA	NNSA	O	N	Operating		Livermore	CA
Lawrence Livermore Lab Site 300	14015	001	137320	886	CHEMICAL STORAGE		T	36	36	-		112	NNSA	NNSA	O	N	Operating		Tracy	CA

Covered Facility Information - *Optional to Update*									Notes	
Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
Covered	218,558.000	0.000	TBD	TBD	TBD		Completed	Portfolio Manager		Request: Provide an esti
Covered	55,220.000	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	19,105.054	0.000	TBD	TBD	TBD	No	Completed	Portfolio Manager		Request: Please update
Covered	325,601.000	0.000	TBD	TBD	TBD		Completed	Portfolio Manager		Request: Provide an esti
Covered	14,927.667	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	44,890.000	0.000	04/12	04/12	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	56,897.577	0.000	10/11	10/11	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	15,372.609	0.000	04/12	04/12	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	25,590.000	0.000	10/11	10/11	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	20,680.000	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	9,922.847	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Covered	47,200.000	0.000	04/12	04/12	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	37,030.000	0.000	TBD	TBD	TBD	No	Completed	Portfolio Manager		Request: Please update
Covered	7,850.128	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	3,674.492	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	28,000.000	0.000	TBD	TBD	TBD	No	Completed	Portfolio Manager		Request: Please update
Covered	3,806.035	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	3,007.081	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Covered	11,530.000	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	7,465.111	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	4,983.090	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update

Covered Facility Information - *Optional to Update*									Notes	
Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
Not Covered		0.000								
Covered	2,531.000	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	9,741.260	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		
Not Covered		0.000								
Not Covered		0.000								
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Covered	74,397.000	0.000	TBD	TBD	TBD		Completed	Portfolio Manager		Request: Provide an esti
Covered	17,265.570	0.000	04/12	04/12	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	4,308.373	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Covered	5,226.287	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	31,540.000	0.000	04/12	04/12	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	3,543.990	0.000	10/11	10/11	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Not Covered		0.000								
Covered	4,922.431	0.000	10/11	10/11	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	6,178.340	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Not Covered		0.000								
Not Covered		0.000								
Not Covered		0.000								
Covered	3,031.000	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Covered	3,582.740	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Covered	3,864.000	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Not Covered		0.000								
Covered	18,440.000	0.000	04/12	04/12	Walk-Through	No	Completed	Portfolio Manager		Request: Please update

Covered Facility Information - *Optional to Update*									Notes	
Covered or Not Covered?	**Estimated Total Energy Used (10^6 x Btu/Yr)**	**Estimated Total Water Used (10^3 x Gal/Yr)**	**Anticipated or Actual Energy Evaluation Date (MM/YY)**	**Anticipated or Actual Water Evaluation Date (MM/YY)**	**Anticipated or Actual Evaluation Type/Level**	**Retro/Re-Commissioning Assessment**	**Benchmarking Status**	**Benchmarking System**	**Additional Information**	**SPO Review/Requests**
Not Covered		0.000								
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Covered Facility Information - *Optional to Update*									Notes	
Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
Not Covered		0.000								
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Covered	23,130.542	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
Not Covered		0.000								
Not Covered		0.000								
Covered	7,019.518	0.000	03/13	03/13	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
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Covered	3,505.342	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
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Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
Not Covered		0.000								
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Covered	3,030.000	0.000	FY2015	FY2015	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
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Covered	4,031.565	0.000	FY2014	FY2014	Walk-Through	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
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Not Covered		0.000								
Covered	67,960.000	0.000	TBD	TBD	TBD	No	Completed	Portfolio Manager		Request: Please update
Not Covered		0.000								
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Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
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Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
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Covered Facility Information - *Optional to Update*									Notes	
Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
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Covered Facility Information - *Optional to Update*									Notes	
Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
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Covered or Not Covered?	Estimated Total Energy Used (10^6 x Btu/Yr)	Estimated Total Water Used (10^3 x Gal/Yr)	Anticipated or Actual Energy Evaluation Date (MM/YY)	Anticipated or Actual Water Evaluation Date (MM/YY)	Anticipated or Actual Evaluation Type/Level	Retro/Re-Commissioning Assessment	Benchmarking Status	Benchmarking System	Additional Information	SPO Review/Requests
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Appendices

1. DOE Building Exclusion Self-Certification Form FY2013
2. LLNL Metering Plan Update, November 2013

DOE BUILDING EXCLUSION
SELF-CERTIFICATION FORM
FY 2013

FROM: Lawrence Livermore National Laboratory
Program Office Landlord: NNSA

TO: Sustainability Performance Office

DATE: September 9, 2013

SUBJECT: SELF CERTIFICATION FORM FOR THE ENERGY INTENSITY GOAL OF EISA 2007

Each buildings or group of buildings that are to be excluded under the criteria for a Part G or Part H exclusion is/are metered for energy consumption and their consumption is reported annually.

If any building has been excluded under the criteria for Part H for impracticability then all practicable energy and water conservation measures with a payback of less than 10 years have been installed. A justification statement that explains why process-dedicated energy in the facility may impact the ability to meet the goal has been provided in the FIMS Report 063.

I certify that the buildings listed on the Excluded Buildings List produced by FIMS as Report 063 dated September 6, 2013 for Lawrence Livermore National Laboratory (page 1 of 1 attached) and the Other Structures listed in Part J (attached) meet the exclusion criteria in *Guidelines Establishing Criteria for Excluding Buildings* published by FEMP on January 27, 2006.

Karin King

DOE Site Office Official – printed name

DOE Site Office Official – signature

12/14/2013

Date

Site Contractor Contact Information:
Name: Michael Cowen
Title: Sustainability Program Manager
Phone: (925) 422-6337
eMail: cowen3@llnl.gov

Definitions of Exclusions PART B through PART H

PART B

__ Building or group of buildings is privately owned and privately occupied but happen to be co-located on Federal lands or military installations. (Privately owned buildings listed in FIMS will not be excluded in this Part.)

PART C

__ Building or group of buildings has Fully-Serviced Leases.

PART D

__ Building or group of buildings is/are essentially structures such as outside parking garages which consume essentially only lighting energy, yet are classified or categorized as buildings.

PART E

__ Building or group of buildings has energy usage that is skewed significantly due to reasons such as: buildings entering or leaving the inventory during the year, buildings down-scaled operationally to prepare for decontamination, decommissioning and disposal, and buildings undergoing major renovation and/or major asbestos removal.

PART F

__ Building or group of buildings is/are leased space where the Government may pay for some energy but not all, the space comprises only part of a building, or the expiration date of the lease limits the ability to undertake energy conservation measures.

PART G (BOTH statements in this part must be met for exclusion)

✓ Building or group of buildings is/are separately-metered energy-intensive loads that are driven by mission and operational requirements, not necessarily buildings, and not influenced by conventional building energy conservation measures.

AND

✓ Building or group of buildings is/are metered for energy consumption and their consumption will be reported annually.

PART H (BOTH statements in this part must be met for exclusion)

__ Building or group of buildings can demonstrate four critical findings at the excluded building(s): 1) Energy requirements are impracticable; 2) All Federally required energy management reports have been completed and submitted; 3) Has achieved compliance with all energy efficiency requirements; *and* 4) Implementation of all practicable, life cycle cost-effective projects.

AND

__ Building or group of buildings is/are metered for energy consumption and their consumption will be reported annually.

Part J

FIMS Site Number	Site Name	Prop Sequence	Property ID	Prop Name	EXCLUSION PART	PROPERTY TYPE	Comments
14002	Lawrence Livermore National Laboratory	200806	453	TERA SCALE FACILITY	G	B	Note 1
14002	Lawrence Livermore National Laboratory	200870	OS 454	TSF COOLING TOWERS	G	S	Note 1
14002	Lawrence Livermore National Laboratory	89922	451	COMPUTATION FACILITY BLDG	G	B	Note 2
14002	Lawrence Livermore National Laboratory	140320	581	LTAB	G	B	Note 3
14002	Lawrence Livermore National Laboratory	137350	681	OPTICS ASSMBY BLDG	G	B	Note 3
14002	Lawrence Livermore National Laboratory	140981	OS 682	NIF CENTRAL PLANT	G	S	Note 3
14002	Lawrence Livermore National Laboratory	140860	OS 683	NIF COOLING TOWER	G	S	Note 3

Note 1 TSF facilities include B453 and OS 454. Electric metered data has been identified via review of 1-line diagrams and coordination with dedicated electric meter reports prepared by PE / Site Utilities Division / Electric Utilities Group using the MV-90 data collection software. The Computations facility management team identified process and building related, non-process, meters. The computer floor (48,000-SF) will be reported as Metered Process per the Instructions for DOE Building Exclusions Self-Certification guidance, because lighting and HVAC electric power use for the computer floor are included, to some part, and are not totally metered separately. The remaining building area of 193,197-SF will be reported as Energy Consuming Buildings/Facilities. Process energy use by the TSF, B453 and the cooling tower, OS 454 will be reported under "Metered Process"; facility area is 0-SF, thus, the reporting category is moot.

Note 2 Electric metered data has been identified via review of 1-line diagrams and coordination with the facility management team and reports from dedicated electric meter reports prepared by PE / Site Utilities Division / Electric Utilities Group using the MV-90 data collection software. The Computations facility management team identified process and building related, process & non-process, meters.

Building 451 22,221 SF - to Metered Process Category = Computer Operations areas per LLNL data base

Natural Gas Usage: Virtually no reheat is used for the (process) computer area, thus, natural gas usage is NOT excluded.

Note 3 Electric power and natural gas consumption by these facilities is excluded, placed into the Metered Process category for these facilities. The building areas have also been placed into the Metered Process category as lighting and HVAC energy use are not separately metered.

581	693,002	SF - to Metered Process Category
681	46,819	SF - to Metered Process Category
OS 682	8,880	SF - to Metered Process Category
OS 683	2,104	SF - to Metered Process Category

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office NNSA

Site 14002 Lawrence Livermore National Laboratory

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
451	89922	LIVERMORE COMPUTING FACILITY	G - Metered intensive loads	Building	51,398	22,221
Electric metered data has been identified via review of 1-line diagrams and coordination with the facility management team and reports from dedicated electric meter reports prepared by PE / Site Utilities Division / Electric Utilities Group using the MV-9						
681	137350	OPTICS ASSEMBLY BLDG	G - Metered intensive loads	Building	46,819	46,819
Electric power and natural gas consumption by these facilities is excluded, placed into the Metered Process category for these facilities. The building areas have also been placed into the Metered Process category as lighting and HVAC energy use are not separately metered.						
581	140320	THE NATIONAL IGNITION FACILITY	G - Metered intensive loads	Building	696,968	693,172
Electric power and natural gas consumption by these facilities is excluded, placed into the Metered Process category for these facilities. The building areas have also been placed into the Metered Process category as lighting and HVAC energy use are not separately metered.						
453	200806	LIVERMORE COMPUTING FACILITY	G - Metered intensive loads	Building	240,598	48,000
TSF facilities include B453 and OS 454. Electric metered data has been identified via review of 1-line diagrams and coordination with dedicated electric meter reports prepared by PE / Site Utilities Division / Electric Utilities Group using the MV-90 dat						

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

Lawrence Livermore National Laboratory

Metering Plan Update

November 2013

LLNL-ABS-509151

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Section 3 Site Metering Progress and Plans 6

Section 4 Evaluation Methodology/Justification for Meter Installations 9

Section 5 Metering Implementation Plan 11

Section 6 Performance Validation 18

Appendix 1 NNSA Meter Installation Progress and Plans

Section 1. Executive Summary

Lawrence Livermore National Laboratory (LLNL) has a long history of metering electric usage. Electric meters have, for the most part, been installed at the distribution transformer rather than at the building.

NNSA's Metering Plan Guidance of August 2011 and Guidance for FY 2014 Site Metering Plan Updates highlighted the DOE 2011 Strategic Sustainability Performance Plan (SSPP) Metering Goals as follows:

- Install electricity meters on individual buildings or processes at each site so that these individually metered buildings and processes account for at least 90 percent of the site's consumption by October 1, 2012.
- Install natural gas, steam and chilled water meters on individual buildings or processes so that these individually metered buildings and processes account for at least 90 percent of the site's consumption by October 1, 2015 (90 percent for each utility).
- Individually meter all stand alone buildings that are not part of multi-building facilities for electricity, natural gas, steam, and chilled water.
- Independently meter 90% of agency data centers by October 1, 2015.

LLNL's commitment to support the DOE 2011 SSPP and comply with EPAct 2005 and EISA 2007 regulations is further exemplified in this latest issue of its Metering Plan. LLNL is committed to monitor and reduce its energy usage and find innovative ways to lead the complex while at the same time meeting its mission goals.

By the end of FY13, LLNL's metering portfolio is as follows:

		Number of Meters	Number of Buildings
Electricity			
	Advanced Ind.	116	116
	Advanced Shared	134	247
	Standard	58	27
	No Meter	0	21
	Total	308	411
Natural Gas			
	Adv. Equipment Meters	18	14
	Std. Building Meters	18	14
	Total	36	28
Water			
	Advanced	14	0
	Standard	13	1
	Total	27	1

A major significant challenge and/or risk to achieving the metering requirements by 1 October FY 2016 is the availability of funding. Metering projects are expected to compete with mission-related projects and other noteworthy energy conservation projects that are being evaluated as a result of the EISA facility audit recommendations.

Metering Investment Plan

The estimated funding required to fully implement natural gas metering is about $3.5M and potable water metering, about $1.5M. Another $700K is estimated for data center metering. This is well documented in the LLNL Multi-Year Sustainability Investment Proposal.

The projected total percentage of site wide usage that can be metered at the individual building level, funding permitting, is as follows:

Natural Gas Metering:

1 October FY14	50% of required gas meters, connected to centralized system
1 October FY15	75% of required gas meters, connected to centralized system
1 October FY16	90% of required gas meters, connected to centralized system

Potable Water Metering: LLNL does not meter potable water at the building level. Our biggest users are the Cooling Towers and Landscape irrigation respectively. The appropriate meters to be centralized are the standard water meters at the cooling towers and the advanced meters at the Irrigation Smart Controllers.

The projected total percentage of site wide usage that can be connected to a centralized system, funding permitting, is as follows:

1 October FY14	50% of Cooling Tower water meters, connected to a centralized system
1 October FY15	50% of Advanced Smart Controller meters, connected to centralized system
1 October FY16	90% of Cooling Tower and Smart Controller meters, connected to a centralized system

Section 2. Site Metering Progress and Plans Towards DOE SSPP Goals

SSPP Metering Stretch Goals	FY 2013 Performance Status	Planned Actions and Key Issues
Install electricity meters on individual buildings or processes at each site so that these individually metered buildings and processes account for at least 90% of the site's consumption by October 1, 2012.	**90% by 2012 stretch goal:** 90% site percentage was achieved as of the end of FY12.	LLNL has met FY12 stretch goal of 90%. Energy Modernization and Investment Program (EMIP) granted LLNL with $640k to re-establish communications on existing meters and add new advanced meters on buildings that are part of the 90% largest users.
Install natural gas, steam and chilled water meters on individual buildings or processes so that these individually metered buildings and processes account for at least 90% by October 1, 2015 (90% for each utility).	**90% stretch goal:** 90% site projected percentage to be achieved as of the end of FY15.	In FY13, LLNL achieved 60% natural gas metering and is continuing work towards meeting the FY15 goal. EMIP funds were utilized on both electric and gas metering in FY12. Steam use is very limited at LLNL, it is not metered and there are no plans to meter it. Chilled water use is captured in the building's energy use. LLNL projects it will meet the stretch goal of 90% by FY15, funding permitting.
Independently meter agency data centers working toward a goal of 100% by October 1, 2015.	**100% by 2015:** Enter site projected percentage to be achieved as of the end of FY 2015.	Based on new definition of greater than 500 SF and 1 rack, LLNL will not be in compliance by FY 2015. All of the areas that meet the new criteria were surveyed in FY12 and a total of 58 data centers were determined. LLNL is in the process of developing a consolidation plan, after that a data center metering plan will follow.

Section 3. Site Metering Progress and Plans (by Fiscal Year)

In FY13, LLNL metered 429,550,000 kWh using both advanced meters and standard meters. The ratio of metered data towards the DOE SSPP stretch goal is approximately 90%, meeting the goal.

Electric Metering								
	Standard meters			Advanced meters			Appropriate Buildings	
Fiscal Year	Cumulative Number of Buildings Metered	Cumulative Electricity Metered (KWh)	Cumulative % of Electricity Metered	Cumulative Number of Buildings Metered	Cumulative Electricity Metered (KWh)	Cumulative % of Electricity Metered	Number of Appropriate Buildings for Metering	Cumulative % of Appropriate Buildings Metered
2010 Report				6	179,964,951	51.3%	61	9.8%
2011 Report	17	35,926,393	9.5%	65	253,981,504	67.0%	82	100.0%
2012 Report	7	2,146,924	0.5%	109	363,525,852	89.1%	116	100.0%
2013 Report	27	9,960,373	2.3%	116	369,782,634	86.1%	143	100.0%
2014 Planned								#DIV/0!
2015 Planned								#DIV/0!

FY 2012 Total Site Electricity Consumption (KWh):	429,550,000
Progress Towards FY12 SSPP Stretch Goal:	90%

In FY13, LLNL metered 426,620 MCF of natural gas, or approximately 439,845 MM BTUs. The ratio of metered data towards the DOE SSPP stretch goal is approximately 60%. LLNL is on track to meet the DOE SSPP stretch goal of 90% by FY15.

Natural Gas Metering								
	Standard meters			Advanced meters			Appropriate Buildings	
Fiscal Year	Cumulative Number of Buildings Metered	Cumulative Natural Gas Metered (BTU[6])	Cumulative % of Natural Gas Metered	Cumulative Number of Buildings Metered	Cumulative Natural Gas Metered (BTU[6])	Cumulative % of Natural Gas Metered	Number of Appropriate Buildings for Metering	Cumulative % of Appropriate Buildings Metered
2010 Report				2		11.8%	17	11.8%
2011 Report	15	60,103	13.5%	10	184,908	41.5%	25	100%
2012 Report	15	71,395	16.8 %	11	149,294	35.2%	26	100%
2013 Report	14	89,820	20.4%	14	172,962	39.3%	28	100%
2014 Planned								#DIV/0!
2015 Planned								#DIV/0!

FY 2012 Total Natural Gas Consumption (BTU[6])	439,845
Progress Towards FY12 SSPP Stretch Goal:	60%

LLNL does not use a district-type chilled water system. In a few cases where a chilled water system serves more than one building, submeters are being planned to monitor the system separately so energy use can be more efficiently measured and tracked. In general, a building's energy use of its chilled water system is accounted for in the electricity usage for that building.

Chilled Water Metering - N/A								
	Standard meters			Advanced meters			Appropriate Buildings	
Fiscal Year	Cumulative Number of Buildings Metered	Cumulative Chilled Water Metered (BTU[6])	Cumulative % of Chilled Water Metered	Cumulative Number of Buildings Metered	Cumulative Chilled Water Metered (BTU[6])	Cumulative % of Chilled Water Metered	Number of Appropriate Buildings for Metering	Cumulative % of Appropriate Buildings Metered
2010 Report								#DIV/0!
2011 Report								#DIV/0!
2012 Report								#DIV/0!
2013 Planned								#DIV/0!
2014 Planned								#DIV/0!
2015 Planned								#DIV/0!
FY 2012 Total Chilled Water Consumption (BTU[6])					N/A			
Progress Towards FY12 SSPP Stretch Goal:			#DIV/0!					

LLNL has very little steam consumption. Steam is not being metered and there are no plans to meter in the future. However, gas consumption at the boilers is metered.

Steam Metering - N/A								
	Standard meters			Advanced meters			Appropriate Buildings	
Fiscal Year	Cumulative Number of Buildings Metered	Cumulative Steam Metered (BTU[6])	Cumulative % of Steam Metered	Cumulative Number of Buildings metered	Cumulative Steam Metered (BTU[6])	Cumulative % of Steam Metered	Number of Appropriate Buildings for Metering	Cumulative % of Appropriate Buildings Metered
2010 Report								#DIV/0!
2011 Report								#DIV/0!
2012 Report								#DIV/0!
2013 Planned								#DIV/0!
2014 Planned								#DIV/0!
2015 Planned								#DIV/0!
FY 2012 Total Steam Consumption (BTU[6])					N/A			
Progress Towards FY12 SSPP Stretch Goal:			#DIV/0!					

Data Centers - Metering

Based on the new definition of data center as being greater than 500 square feet and 1 rack, LLNL has determined that it will not be in compliance by FY 2015. LLNL's plan to survey all of the areas that meet the new data center criteria was completed in FY12. A total of 58 data centers were determined. LLNL is in the process of consolidating data centers as much as practicable, and will update the metering plan to address metering of the remaining data centers.

In FY13, 23 rooms/data centers were consolidated into B112.

Section 4. Evaluation Methodology/Justification for Meter Installations

EPAct-2005 requires that all federal buildings have their electrical usage metered by "advanced meters" to the "maximum extent practicable."

DOE interprets "maximum extent practicable" as a cost-effective meter installation. Per Federal Energy Management Program (FEMP) Document 2006.10, *DOE Building Electric Metering Guidance*, 27 September 2006, the energy savings achievable from installation of an electric meter represents 2.5% of the metered power consumption. Thus, any building/facility that has the potential to recover electric metering installation costs within a ten-year lifetime is considered to meet this criterion.

Using this criterion as a basis, all LLNL Main Site buildings were evaluated for electric metering cost-effectiveness. Electric metering cost-effectiveness is determined in two ways, by facility area and by recorded electric power use per building.

- Minimum Power Use: The minimum annual electric power use per building is determined, based on 2.5% savings and the present power rate, which will recover meter installation costs within ten years. Result: 650,000 kWH per year.
- Facility Floor Area: The average annual electric power use per facility square foot is determined by dividing total LLNL electric power use by the total square footage of buildings provided with electric power. A minimum "cost-effective" building area is calculated from this average and the minimum annual power use determined above. All buildings meeting this criterion are identified regardless of current metering capability. Minimum building area: 12,000 sf.
- Recorded Electric Power Use Per Building: Electric power use for each building using electric power at the LLNL Main Site is collected and recorded by the MV90 meter collection system. All buildings shown to use more than the minimum cost-effective amount of electric power, from above, are identified regardless of current metering capability.
- Resolution of Conflicts: Where a building is identified as "cost-effective" for a meter installation in only one of the above tests, a reasonable judgment is made as to the reliability of one test as compared to the other. In most cases, recorded annual electric power use was selected.

Existing LLNL Electric Metering

At the start of the Energy Savings Performance Contract (ESPC) Project for ECM3.2, there were 228 electric meters installed at the LLNL Main Site; a single meter serves LLNL Site 300. These numbers include permanent buildings, trailers/modulars, tents, and other structures such as waste accumulation areas, explosives magazines, electrical substations, and other utility structures.

Many large buildings at LLNL already have one or more meters which record their usage. The newer buildings have individual meters. New permanent buildings are equipped with their own dedicated meters.

Many of the existing LLNL Main Site buildings are metered in small "clusters" of buildings fed from a single distribution transformer. In approximately one dozen cases, one building comprises 90 to 99 per cent of the gross square footage of the entire cluster.

Examples of various configurations of existing electric meter installations are illustrated in Figure 1.

Approximately fourteen buildings are served directly by the Pacific Gas and Electric Company (PG&E) and are metered separately by PG&E. The largest of these PG&E accounts is at the MOCHO (water) Pumping Station and is fitted with an advanced-type electric meter. None of the other facilities served directly by PG&E meet the minimum square footage or power consumption criteria for cost-effective meter installations.

Livermore Open Valley Campus (LVOC) facilities will be powered off the LLNL grid, and not PG&E's. Each new building under LVOC is planned to have its own dedicated advanced meter.

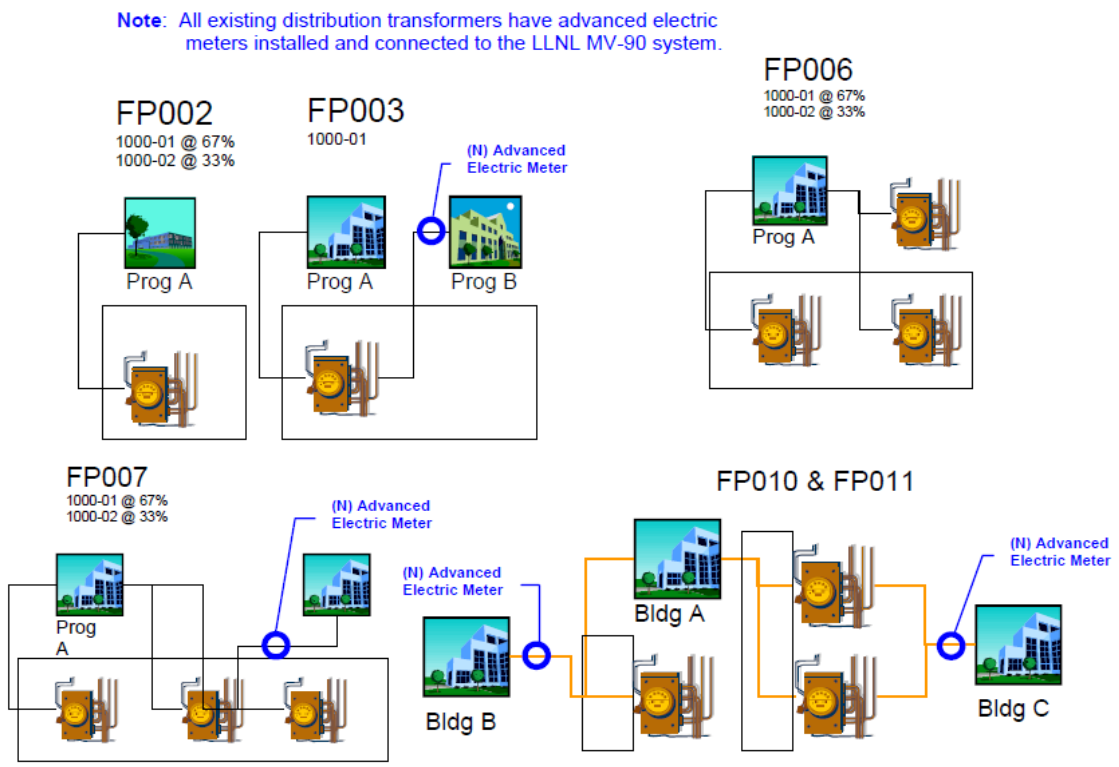


Figure – 1. Examples of LLNL Main Site Electric Meter Configurations and Advanced Meter Retrofit Approach

Section 5. Metering Implementation Plan

5-1. Prioritization and installation

The methodology for prioritizing buildings for meter application follows EPAct 2005 guidelines. First is meeting regulatory EPAct 2005 electrical metering requirements. Second is in support of High Performance Sustainability Buildings (HPSB). Third, meters to support other DOE/NNSA metering requirements. Energy Modernization and Investment Program (EMIP) granted LLNL metering funds to assist in the program. The following is a list of the facilities that are metered.

Advanced Electricity Meters - EMIP

Item	Building(s) (FIMS Name)	Property Sequence Number	GSF	EPAct 2005 Electrical ("as practicable")	Estimated Electrical Usage	EMIP Funded
1	B453	200806	240,598	Yes	75,757,080	Yes
2	B451	89922	51,398	Yes	26,123,060	Yes
3	B581	140320	693,172	Yes	20,638,011	Yes
4	B391	89855	197,171	Yes	16,675,726	Yes
5	B131	89561	284,206	Yes	11,504,000	Yes
6	OS454	200870	-	Yes	7,067,799	Yes
7	B439	89908	11,783	Yes	6,779,174	Yes
8	B321c	205438	144,840	Yes	7,449,695	Yes
9	B112	203771	45,814	Yes	6,318,923	Yes
10	B298	89767	47,986	Yes	5,060,249	Yes
11	B282	89758	2,160	Yes	108,452	Yes
12	B332	89802	104,787	Yes	4,325,050	Yes
13	B231	89699	142,403	Yes	4,505,454	Yes
14	B361	89821	68,889	Yes	3,316,054	Yes
15	B482	89933	107,941	Yes	2,908,220	Yes
16	B111	89547	112,418	Yes	2,511,899	Yes
17	B121	89553	90,759	Yes	2,300,741	Yes
18	B239	89703	12,517	Yes	1,703,587	Yes
19	B194	89662	41,543	Yes	1,810,768	Yes
20	B253	89711	30,932	Yes	1,050,041	Yes
21	B190	89657	10,086	Yes	1,027,357	Yes
22	B272	89746	9,978	Yes	485,935	Yes
23	T1677	89608	28,789	Yes	566,840	Yes
24	U325	90078	5,072	Yes	10,461,629	Yes
25	B242	201413	20,328	Yes	284,603	Yes
26	B531	89973	12,537	Yes	290,927	Yes
27	B490	89934	216,789	Yes	10,063,113	Yes
28	B334	89803	10,652	Yes	338,899	Yes
29	B132n	127068	251,316	Yes	5,144,654	Yes
30	B264	202401	20,461	Yes	334,056	Yes
31	T4727	89928	9,909	Yes	128,503	Yes
32	B321e	139832	2,581	Yes	115,352	Yes
33	T1727	89625	1,837	Yes	31,070	Yes

Gas Meters – EMIP

Item	Building(s) (FIMS Name)	Property Sequence Number	GSF	EPAct 2005 Electrical ("as practicable")	Estimated Electrical Usage	EMIP Funded
1	B112/B113	89548	45,814	N/A	N/A	YES
2	B142	143756	20,306	N/A	N/A	YES
3	B361	89821	68,889	N/A	N/A	YES
4	B121	89553	90,759	N/A	N/A	YES
5	B181	89640	13,453	N/A	N/A	YES
6	B471	143564	16,086	N/A	N/A	YES
7	OS682	140981	8,880	N/A	N/A	YES

Advanced Electricity Meters - ESPC

Item	Building(s) (FIMS Name)	Property Sequence Number	GSF	EPAct 2005 Electrical ("as practicable")	Estimated Electrical Usage	ESPC Funded
1	B116	89550	7,781	Yes	1,401,942	Yes
2	B118	89552	1,505	Yes	279,267	Yes
3	B131	89561	284,206	Yes	11,504,000	Yes
4	B141	89576	47,342	Yes	1,262,712	Yes
5	B151	89589	96,018	Yes	4,785,646	Yes
6	B155	141490	21,742	Yes	1,083,555	Yes
7	B176	89636	3,973	Yes	1,463,846	Yes
8	B181	89640	13,532	Yes	373,617	Yes
9	B194	89662	41,543	Yes	1,810,768	Yes
10	B211	133205	14,122	Yes	246,373	Yes
11	B216	89676	18,976	Yes	331,217	Yes
12	B271	89744	18,874	Yes	570,714	Yes
13	B274	89747	21,436	Yes	636,812	Yes
14	B282	89758	2,160	Yes	38,282	Yes
15	B313	89770	4,352	Yes	277,967	Yes
16	B314	89771	13,238	Yes	74,949	Yes
17	B319	89782	18,048	Yes	228,146	Yes
18	B323	89792	18,555	Yes	7,557,491	Yes
19	B324	89793	11,290	Yes	171,071	Yes
20	B327	89795	19,100	Yes	414,918	Yes
21	B329	89800	5,150	Yes	227,714	Yes
22	B361	89821	68,889	Yes	3,316,054	Yes
23	B366	89828	2,631	Yes	319,844	Yes
24	B368	202152	1,590	Yes	75,908	Yes
25	B381	89847	95,421	Yes	4,878,650	Yes
26	B383	89849	6,715	Yes	144,908	Yes
27	B391	89855	197,171	Yes	16,675,726	Yes
28	B411	89868	71,625	Yes	366,067	Yes
29	B432	89893	33,575	Yes	676,319	Yes
30	B438	89901	16,262	Yes	218,917	Yes
31	B439	89908	11,783	Yes	6,779,174	Yes
32	B451	89922	51,398	Yes	26,123,060	Yes
33	B452	90062	492	Yes	33,505	Yes
34	B490	89934	216,789	Yes	11,003,404	Yes
35	B493	89942	19,100	Yes	176,517	Yes
36	B571	89985	41,407	Yes	721,354	Yes
37	B611	90016	15,018	Yes	225,821	Yes
38	B694	132382	10,590	Yes	289,249	Yes
39	B695	140676	46,504	Yes	1,531,737	Yes
40	B696	135831	21,381	Yes	119,537	Yes
41	T1727	89625	1,837	Yes	14,153	Yes

42	T1739	89633	5,646	Yes	141,982	Yes
43	T1879	89648	11,118	Yes	102,094	Yes
44	T2580	89728	4,203	Yes	55,977	Yes
45	T6929/T6930	201479	4,925	Yes	141,544	Yes
46	B551E	1020327	40,966	Yes	745,664	Yes
47	B551W	1020328	65,776	Yes	1,009,332	Yes
48	T3726	89836	19,824	Yes	393,998	Yes
49	T4525	89923	5,713	Yes	435,507	Yes
50	T5475	89979	32,368	Yes	751,238	Yes
51	T6925	90043	5,873	Yes	160,609	Yes
52	T6926	89781	2,160	Yes	42,466	Yes
53	U291	90074	8,612	Yes	9,991,385	Yes
54	U325	90078	5,072	Yes	10,461,629	Yes
55	U328C	131775	300	Yes	618,446	Yes

5-2. Staffing/Resources

LLNL received funds for metering under EMIP in the amount of $640,000.00. The plan is to first re-connect existing meters that are no longer communicating. The meters found to be defective will be replaced with DSL-ethernet capable meters as much as practicable. Where DSL is not feasible due to impractical and/or expensive construction issues, traditional phone lines will be used. In total, EMIP funding installed 55 electricity meters and 7 gas meters.

At project completion, ESPC ECM3.2 installed 79 advanced meters at 55 facilities, 19 of which are replacement of existing meters. The total meters at LLNL (including the existing) will then equal 109 advanced meters at 109 facilities, 138 shared advanced meters at 268 facilities and 49 standard meters at 7 facilities.

5-3. Uses of Metering Data

The existing MV-90 meter collection system was upgraded as part of the ESPC project. An optional software package, Energy Enterprise Management Suite (EEM), was installed. It provides the monthly usage report notices (see Figure 3.1 below) and the actual report when the recipient clicks on the link (see Figure 3.2). In addition, EEM automatically transmits notices via email to LLNL facilities managers (FM) when their buildings experience electric power use anomalies, such as sudden increases and drops in power consumption (see Figure 3.3 below) or a Zero Alert (see Figure 3.4) where no anomalies have been detected. Such notices allow facility staff to investigate and correct and/or explain causes of power use fluctuations. The Energy Management Program will oversee this program to assure that notices are properly provided and that appropriate responses are made.

A program to assure appropriate responses are made is being evaluated. The program includes the following components:

- Train FMs and FPOCs to review metering data on a regular basis.
- For any anomaly, Energy Management Group (EMG) will make voice contact with the respective FM or facility point-of-contact (FPOC) to ensure awareness and to discuss what may be the reason for the anomaly. If anomaly is maintenance related, a work order will be called in for repairs and the building performance will be rechecked.
- Second, a face-to-face meeting and evaluation with the respective FM or FPOC if the anomaly

continues.

- Third, a facility energy audit by the energy management group and the FPOC (funding permitting).

Metering data was used in Benchmarking of buildings on Portfolio Manager as required by Section 432 of EISA 2007. This was completed in FY 2012.

LLNL does not currently bill the users, however, the monthly usage report email notice is automatically sent out to the FMs and FPOCs. This electronic notice takes the place of the traditional paper monthly usage bill.

LLNL's O&B finance department reviews the monthly utility bills from WAPA, PG&E and the water suppliers along with the metered data to verify accuracy. Energy Management group participates in this review and provides the metered data and analysis.

LLNL does not have a '*time of use or demand response*' charge with the main supplier WAPA, however, in keeping with Best Management Practice, off-peak use is always considered with non-critical programs. With PG&E, the local supplier, off-peak electricity use is the norm. An example is the Mocho Pumping Station where the supply pumps are programmed to turn on during off-peak hours to fill the water tanks, subject to a manual over-ride should an emergency require it.

Metered electric data is also used, to the maximum extent feasible, to measure and verify the energy savings achieved from ESPC ECM3.1, installation and upgrading of building automation controls in 24 of the largest LLNL Main Site buildings. In addition, the metered electric data is also being used to verify the savings achieved from implementing the recommended energy conservation projects resulting from the previous EISA Facility Audits.

Additional uses of the metered data will be explored in the future. For example, development of building HVAC system diagnostics may be possible with meters connected to the MV-90 system via Open Lab-Net due to greater communication speeds available over the present telephone modem communications. Annual Energy audits to meet EISA Section 432 and efforts to increase efficiency (e.g. combining energy audits with condition assessment surveys) along with re-commissioning/retro-commissioning are constantly being evaluated (subject to funding) and will use metering data to monitor and fine tune building HVAC systems.

The F&I Directorate is responsible for gathering, analyzing and using the metered data to the maximum extent practicable. Usage data and energy intensity information can be sent to different groups within LLNL.

The EEM system is currently monitored by the Building Environmental Specialist (BES) with LLNL oversight, however when the BES departs after one year, the Energy Management Group will take over this important task.

The Metering System will continue to be operated and maintained by LLNL. Work orders will be cut for the Electric Utilities Group to maintain and fix the meters in the MV90 system, IT personnel will assist in maintaining the software in conjunction with the MV90 and EEM vendors. The Energy Management

Group under the Sustainability Manager will operate and monitor the systems on a daily basis and see to it that all systems are working as designed.

From: Itron EEMSuite [eem-support@llnl.gov]
Sent: Thursday, September 15, 2011 4:50 PM
To: Abacherli, David T.; Akers, Jim; Westfall, Jacquelyn A. {westfall4}; anita.martin@oak.doe.gov; Anson, Jim; Bailey, Anna Maria; Bailey, Frank M.; Balatayo, Jordan I.; Barrett, Chuck; Berckart, Russ; betz5@llnl.gov; Bray, Justin; Buckman, Steve J.; Buhowsky, Brian; Burklin, Ralph; Cadwell, Kerry L.; Cardoza, Mark E.; Conner, Kevin P.; Cook, Craig Stanley; Cooper, Greg; Cote, Jeff; Cowen, Michael L.; Dean, Paul K.; Dickinson, Paul C.; Divoky, Mark E.; Duenas, Anselmo R.; Fischer, Bob; Gerber, Richard W.; greenbaum1@llnl.gov; Herbert, Jim; Higby, Doug; Holm, Chris; Howing, Bill; Johnson, Ben; Juarez, Fred; Kapit, Lee A.; Kerns, John; Kilmer, John M.; Knudsen, Steve; krause10@llnl.gov; Langland, Tom; Lavinsky, Dave; Lima, Jack A.; Lind, Susan G.; Lochner, Robert T.; Maciel, Bill; mark.zulim@oak.doe.gov; Marks, Jon; Masica, Ken; Massa, Tony; morris6@llnl.gov; Ocampo, Ruben P.; Olliff, Jesse D.; Oravetz, Tony; Poor, Susan E.; Rey, Manuel; Robison, Matt; Rocha, Roger R.; Rodriguez, Bob; Rogers, Ken; Rubio, Manny; Scott, John J.; Shah, JEET; Shier, Doug; Silva, Jimmy; Silveira, Marriann S.; Silveira, Paul L.; Simpson, Steve; Sims, Mike; Sloan, Jim; Spivey, Rich; Spragge, Maura K.; Springer, Mike; Swanson, Bob; Swyers, Paul W.; Tom, Curtis; Traini, Matt; Verges, Chris; Walker, Gary W.; Waterman, Mitch; White, Rich; Williams, Matthew T.; wilson26@llnl.gov
Subject: EEM Suite Monthly Reporting

Date last modified: 6/21/2010 10:11:26 AM

Dear Users

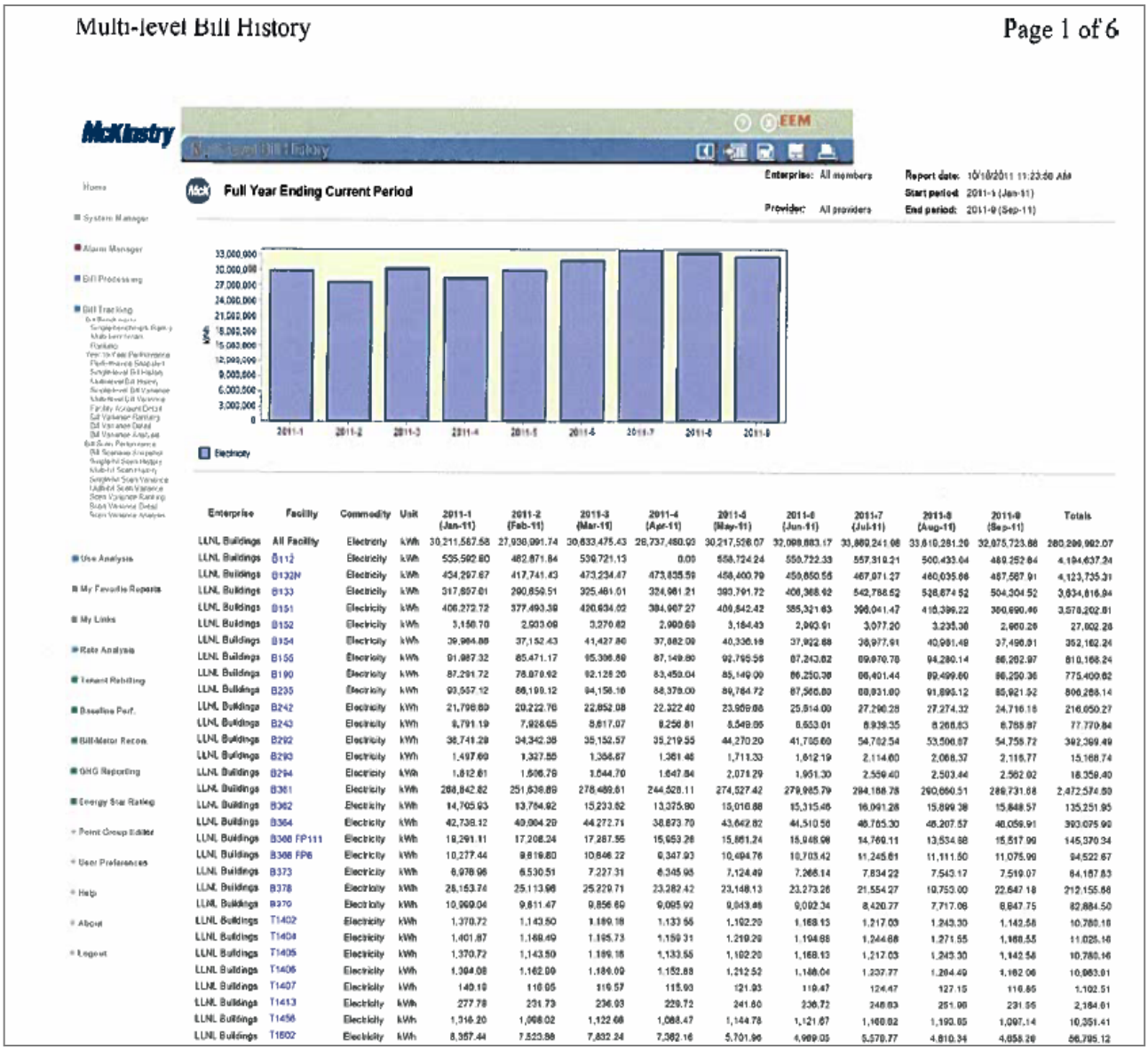
Please find below links to monthly energy use reports for buildings with which you are associated.

EEM Suites is compatible only with Internet Explorer.

Click on the link(s) below to see the reports.

http://datamine5/itron/favorites/asp/favorites_update.asp?reportID=4
http://datamine5/itron/favorites/asp/favorites_update.asp?reportID=5
http://datamine5/itron/favorites/asp/favorites_update.asp?reportID=6
http://datamine5/itron/favorites/asp/favorites_update.asp?reportID=7

Figure 3.1. Monthly use report email notice.



Multi-level Bill History

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McKinstry

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Multi-level Bill History

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Full Year Ending Current Period

Enterprise: All members

Provider: All providers

Report date: 10/18/2011 11:23:50 AM

Start period: 2011-1 (Jan-11)

End period: 2011-9 (Sep-11)

Enterprise	Facility	Commodity	Unit	2011-1 (Jan-11)	2011-2 (Feb-11)	2011-3 (Mar-11)	2011-4 (Apr-11)	2011-5 (May-11)	2011-6 (Jun-11)	2011-7 (Jul-11)	2011-8 (Aug-11)	2011-9 (Sep-11)	Totals
LLNL Buildings	All Facility	Electricity	kWh	30,211,567.58	27,936,991.74	30,633,475.43	28,737,460.93	30,217,526.07	32,098,883.17	33,862,241.08	33,610,281.20	32,075,723.88	280,299,982.07
LLNL Buildings	B112	Electricity	kWh	535,592.80	482,871.84	539,721.13	0.00	558,724.24	550,722.33	557,318.21	500,433.04	489,252.84	4,194,637.34
LLNL Buildings	B132N	Electricity	kWh	434,297.67	417,741.43	473,234.47	473,835.59	458,400.79	459,850.56	467,071.27	460,035.66	487,567.91	4,123,735.31
LLNL Buildings	B133	Electricity	kWh	317,897.01	290,859.51	325,461.01	324,981.21	393,791.72	406,368.42	542,788.52	528,874.52	504,304.52	3,634,816.94
LLNL Buildings	B151	Electricity	kWh	406,272.72	377,493.39	420,634.02	384,967.27	406,842.42	385,321.63	396,041.47	410,399.22	360,690.46	3,578,202.81
LLNL Buildings	B152	Electricity	kWh	3,158.70	2,503.06	3,270.82	2,990.69	3,184.43	2,943.91	3,077.20	3,235.38	2,960.26	27,902.26
LLNL Buildings	B154	Electricity	kWh	39,984.88	37,152.43	41,427.80	37,882.09	40,336.19	37,922.68	38,977.91	40,981.49	37,496.91	352,162.24
LLNL Buildings	B155	Electricity	kWh	91,987.32	85,471.17	95,396.89	87,149.80	92,795.58	87,243.82	89,870.78	94,280.14	86,202.97	810,168.24
LLNL Buildings	B190	Electricity	kWh	87,291.72	78,870.92	92,128.20	83,459.04	85,149.00	86,250.38	86,401.44	89,499.60	86,250.36	775,400.62
LLNL Buildings	B235	Electricity	kWh	93,557.12	86,199.12	94,158.16	88,378.00	89,764.72	87,565.80	88,931.00	91,895.12	85,921.52	800,268.14
LLNL Buildings	B242	Electricity	kWh	21,798.80	20,222.76	22,852.08	22,322.40	23,969.88	25,814.00	27,290.28	27,274.32	24,716.16	216,050.27
LLNL Buildings	B243	Electricity	kWh	8,791.19	7,928.65	8,617.07	8,256.81	8,548.95	8,653.01	8,939.35	8,268.83	8,768.97	77,770.84
LLNL Buildings	B292	Electricity	kWh	38,741.29	34,342.38	35,152.57	35,219.55	44,270.20	41,765.69	54,782.54	53,506.87	54,755.72	392,399.49
LLNL Buildings	B293	Electricity	kWh	1,497.60	1,327.55	1,356.67	1,361.46	1,713.33	1,612.19	2,114.60	2,068.37	2,116.77	15,168.74
LLNL Buildings	B294	Electricity	kWh	1,812.61	1,606.76	1,644.70	1,647.84	2,071.29	1,951.30	2,559.40	2,503.44	2,562.02	18,359.40
LLNL Buildings	B361	Electricity	kWh	268,842.82	251,636.89	278,489.61	244,528.11	274,527.42	279,985.79	294,188.78	290,660.51	289,731.68	2,472,574.50
LLNL Buildings	B362	Electricity	kWh	14,705.93	13,764.92	15,233.62	13,375.90	15,016.88	15,315.46	16,091.28	15,899.38	15,848.57	135,251.95
LLNL Buildings	B364	Electricity	kWh	42,738.12	40,004.29	44,272.71	38,873.70	43,642.82	44,510.56	46,765.30	46,207.57	46,059.91	393,075.99
LLNL Buildings	B368 FP111	Electricity	kWh	18,291.11	17,208.24	17,287.55	15,953.26	15,861.24	15,948.98	14,769.11	13,534.88	15,517.99	145,370.34
LLNL Buildings	B368 FP6	Electricity	kWh	10,277.44	9,819.80	10,846.22	9,347.93	10,494.76	10,703.42	11,245.61	11,111.50	11,075.99	94,522.67
LLNL Buildings	B373	Electricity	kWh	6,978.96	6,530.51	7,227.31	6,345.95	7,124.49	7,268.14	7,834.22	7,543.17	7,519.07	64,187.83
LLNL Buildings	B378	Electricity	kWh	26,153.74	25,113.96	25,229.71	23,282.42	23,148.13	23,273.26	21,554.27	19,753.00	22,647.18	212,155.88
LLNL Buildings	B379	Electricity	kWh	10,969.04	9,811.47	9,856.69	9,095.92	9,043.46	9,092.34	8,420.77	7,717.06	8,647.75	82,884.50
LLNL Buildings	T1402	Electricity	kWh	1,370.72	1,143.50	1,189.18	1,133.55	1,102.20	1,168.13	1,217.03	1,243.30	1,142.58	10,780.18
LLNL Buildings	T1404	Electricity	kWh	1,401.87	1,168.49	1,195.73	1,159.31	1,219.29	1,194.88	1,244.88	1,271.55	1,168.55	11,028.16
LLNL Buildings	T1405	Electricity	kWh	1,370.72	1,143.50	1,189.18	1,133.55	1,102.20	1,168.13	1,217.03	1,243.30	1,142.58	10,780.18
LLNL Buildings	T1406	Electricity	kWh	1,394.08	1,162.09	1,186.09	1,152.88	1,212.52	1,188.04	1,237.77	1,264.49	1,162.06	10,963.01
LLNL Buildings	T1407	Electricity	kWh	140.19	116.85	119.57	115.93	121.93	119.47	124.47	127.15	116.85	1,102.51
LLNL Buildings	T1413	Electricity	kWh	277.78	231.73	236.93	229.72	241.60	236.72	246.83	251.96	231.56	2,184.61
LLNL Buildings	T1456	Electricity	kWh	1,316.20	1,098.02	1,122.68	1,088.47	1,144.78	1,121.67	1,168.82	1,193.85	1,097.14	10,351.41
LLNL Buildings	T1602	Electricity	kWh	8,357.44	7,523.88	7,832.24	7,362.16	5,701.96	4,989.05	5,570.77	4,810.34	4,658.28	56,795.12

Figure 3.2 Sample usage report.

From: Itron EEMSuite [eem-support@llnl.gov]
Sent: Wednesday, August 31, 2011 7:01 AM
To: Howing, Bill; Langland, Tom; marlinb@mckinstry.com; Masica, Ken; Massa, Tony; Sims, Mike
Subject: Excessive Use Alert (399 kWh over expected use for 8/30/2011)

Excessive Use Alert

Actual Electricity use for 8/30/2011 exceeded the expected use by 10% or more for the following Facility list

Company: LLNL Buildings Enterprise: LLNL Buildings Report date: 8/31/2011 7:00:29 AM

Facility	Expected Daily Use (kWh)	Actual Daily Use (kWh)	Over Expected Use (kWh)	% Over Use
B166	548	859	311	56.89
T1631	62	97	35	56.89
T1601	92	145	52	56.89
Total	701	1,100	399	56.89

Figure 3.3. Email alert message indicating buildings that are reporting high usage above a pre-determined set point.

Howing, Bill

From: Itron EEMSuite [eem-support@llnl.gov]
Sent: Saturday, September 17, 2011 7:00 AM
To: Howing, Bill; Langland, Tom; marlinb@mckinstry.com; Masica, Ken; Massa, Tony; Sims, Mike
Subject: Excessive Use Alert (0 over the expected use for 9/16/2011)

Excessive Use Alert

Actual Electricity use for 9/16/2011 did not exceed the expected use by 10% or more for any Facility

Company: LLNL Buildings Enterprise: LLNL Buildings Report date: 9/17/2011 7:00:24 AM

Figure 3.4. Email alert message indicating no buildings exceeded the pre-determined set point.

5-4. Metering Gap Analyses

LLNL has met the statutory metering requirements of EPAct 2005 and EISA 2007 and DOE 2011 SSPP goals. No corrective actions are deemed appropriate at this time. In the event that conditions drastically change, it is LLNL's full intention to take positive steps to take corrective action.

Section 6. Performance Validation

The installation of meters by itself is considered 'revenue neutral'; however, the data collected can be used in various ways to alter and improve old, wasteful habits, and flawed perceptions. It is a convincing tool when one can actually see the change in use after implementing certain measures such as turning off unneeded lighting or turning off the AC unit during unoccupied hours.

LLNL will use the monthly reporting tool to compare the before-and-after energy use of the metered facilities. EEM has a 3D chart tool (see Figure 6.1 and Figure 6.2 below) that graphically compares a facility's use for different time periods. Figure 6.1 shows the peaks and valleys attributed to nights and weekends that were not apparent in the Figure 6.2 chart. In Figure 6.2, the load was not being shed on nights and weekends due to lack of efficient HVAC controls.

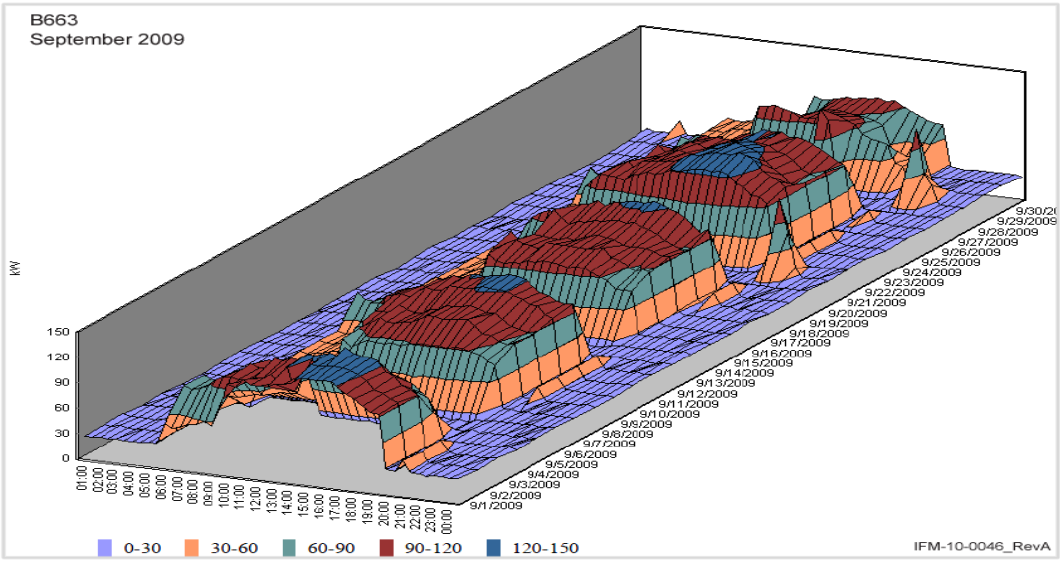

Figure 6.1: B663 energy use in September 2009.

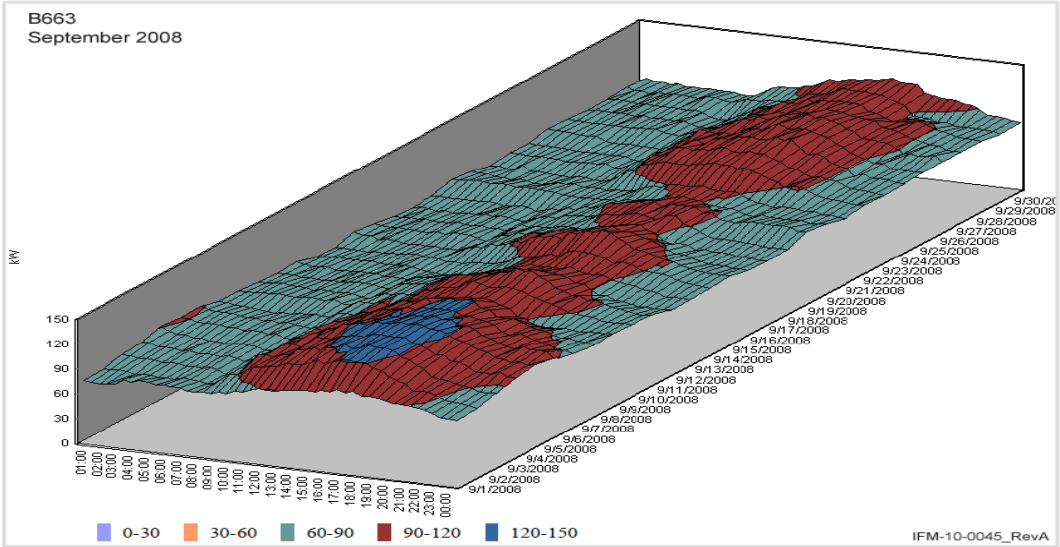

Figure 6.2: B663 energy use in September 2008.

NNSA Summary Meter Installation Progress and Plans (By Building)

Updated FY13 kWh 429,550,000 FY13 Nat Gas CF 426,620,000

					ELECTRICAL			N/A STEAM			NATURAL GAS				N/A CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	41	1000398	25,555		5 Advanced Installed	215,277																	
LLNL	71	1000562	4,166		5 Advanced Installed	135,413												5 Advanced Installed	2,034				
LLNL	110	1000952	153		1 No Meter - Not Required																		
LLNL	111	1000000	112,418		5 Advanced Installed	1,632,868					5 Advanced Installed		6,713,000										
LLNL	112	100000104	45,512		5 Advanced Installed	6,121,727															YES	YES	
LLNL	113	1000001	44,426		5 Advanced Installed	988,835					5 Advanced Installed		7,440,000										
LLNL	115	1000002	17,140		5 Advanced Installed	1,065,760															YES	YES	
LLNL	116	1000003	7,781		5 Advanced Installed	92,284																	
LLNL	117	1000329	11,370		5 Advanced Installed	3,741,676															YES	YES	
LLNL	118	1000433	1,505		5 Advanced Installed	67,910																	
LLNL	121	1000010	90,759		5 Advanced Installed	2,621,162					3 No Meter Future Advanced	2015						5 Advanced Installed					
LLNL	122	1000011	962		1 No Meter - Not Required																		
LLNL	123	1000013	7,742		1 No Meter - Not Required																		
LLNL	125	1000014	12,513		1 No Meter - Not Required																		
LLNL	131	1000018	285,308		5 Advanced Installed	11,027,108					5 Advanced Installed		25,437,000										
LLNL	133	1020382	5,631		5 Advanced Installed	4,845,570					5 Advanced Installed		30,259,000					4 Standard Installed	5,556				
LLNL	134	1020405	1,284		1 No Meter - Not Required																		
LLNL	135	1020406	1,369		1 No Meter - Not Required																		
LLNL	140	1020965	66,660		5 Advanced Installed	2,225,863					3 No Meter Future Advanced	2015											
LLNL	141	1000026	47,342		5 Advanced Installed	1,234,930																	
LLNL	142	100000076	20,306	1 Yes	5 Advanced Installed	284,067					4 Standard Installed			235,000									
LLNL	151	1000034	96,018		5 Advanced Installed	4,591,546					5 Advanced Installed		32,005,000										
LLNL	152	1000877	751		1 No Meter - Not Required																		
LLNL	153	1000530	25,976		5 Advanced Installed	3,442,771					5 Advanced Installed		13,446,000										
LLNL	154	1000528	9,450		1 No Meter - Not Required																		
LLNL	155	1021125	21,742		5 Advanced Installed	406,606																	
LLNL	161	1000038	6,105		4 Standard Installed		334,922																

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	162	1000039	19,042		1 No Meter - Not Required																		
LLNL	164	1000375	207		1 No Meter - Not Required																		
LLNL	165	1000041	10,053		1 No Meter - Not Required																		
LLNL	166	1000042	13,226		1 No Meter - Not Required																		
LLNL	170	1020414	43,760		5 Advanced Installed	1,352,139					4 Standard Installed			3,372,000				5 Advanced Installed	2,125				
LLNL	173	1000056	413		1 No Meter - Not Required																		
LLNL	174	1000061	19,332		5 Advanced Installed	1,483,081																	
LLNL	175	1000062	16,656		1 No Meter - Not Required																		
LLNL	176	1000063	3,973		5 Advanced Installed	85,092																	
	179	1000065	2,720		5 Advanced Installed	69,349																	
LLNL	181	1000429	13,532		5 Advanced Installed	353,480					3 No Meter Future Advanced	2015											
LLNL	182	1000066	2,027		1 No Meter - Not Required																		
LLNL	190	1000410	10,252		5 Advanced Installed	226,677																	
LLNL	191	1000348	121,028		5 Advanced Installed	1,793,834					4 Standard Installed			11,511,000									
LLNL	194	1000073	41,543		5 Advanced Installed	2,699,634					5 Advanced Installed		3,472,000										
LLNL	195	1000074	400		5 Advanced Installed	38,897																	
LLNL	196	1000428	853		1 No Meter - Not Required																		
LLNL	197	1000370	10,716		5 Advanced Installed	215,924																	
LLNL	198	1000075	959		5 Advanced Installed	31,814																	
	211				5 Advanced Installed	155,233																	
LLNL	212	1000081	3,770		1 No Meter - Not Required													5 Advanced Installed	203				
LLNL	214	1000083	4,837		1 No Meter - Not Required																		
LLNL	216	1000085	18,976		5 Advanced Installed	585,236																	
LLNL	217	1000086	17,999		1 No Meter - Not Required																		
LLNL	218	1000089	17,956		1 No Meter - Not Required																		
LLNL	219	1000330	18,429		4 Standard Installed		79,763																
LLNL	221	1000093	1,764		1 No Meter - Not Required																		
LLNL	231	1000105	142,403		5 Advanced Installed	4,610,194																	
LLNL	233	1000106	4,933		1 No Meter - Not Required																		

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	234	1000107	5,261		1 No Meter - Not Required																		
LLNL	235	1000108	88,175		5 Advanced Installed	449,836																	
LLNL	239	1000109	12,904		5 Advanced Installed	225,561																	
LLNL	241	1000112	54,369		1 No Meter - Not Required																		
LLNL	242	100000066	20,328		5 Advanced Installed	249,812					4 Standard Installed			107,000									
LLNL	243	1000116	20,000		4 Standard Installed		87,399																
LLNL	251	1000122	31,120		4 Standard Installed		209,865																
LLNL	252	1020018	192		1 No Meter - Not Required																		
LLNL	253	1000126	30,932		5 Advanced Installed	951,869																	
LLNL	254	1000127	2,488		4 Standard Installed		86,854																
LLNL	255	1000128	21,855		1 No Meter - Not Required													5 Advanced Installed	610				
LLNL	256	1000363	5,937		5 Advanced Installed	1,203,672																	
LLNL	261	1000130	52,655		1 No Meter - Not Required																		
LLNL	262	100000019	10,882		1 No Meter - Not Required																		
LLNL	263	100000100	51		1 No Meter - Not Required																		
LLNL	264	100000065	20,461	1 Yes	5 Advanced Installed	283,385					4 Standard Installed			262,000									
LLNL	271	1000137	18,874		1 No Meter - Not Required																		
LLNL	272	1000138	10,124		5 Advanced Installed	374,416																	
LLNL	274	1020351	21,436		5 Advanced Installed	315,150																	
LLNL	280	1020397	5,469		1 No Meter - Not Required																		
LLNL	281	1000344	18,505		1 No Meter - Not Required																		
LLNL	282	1000409	2,160		5 Advanced Installed	221,567																	
LLNL	292	1000146	20,811		1 No Meter - Not Required																		
LLNL	293	1000148	800		1 No Meter - Not Required																		
LLNL	294	1000335	970		1 No Meter - Not Required																		
LLNL	297	1010003	1,086		1 No Meter - Not Required																		
LLNL	298	1000149	47,986		5 Advanced Installed	5,071,342																	
LLNL	311	1000151	40,951		5 Advanced Installed	417,895					5 Advanced Installed		1,794,000										
LLNL	312	1000152	11,482		5 Advanced Installed	22,933																	

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
	313		4,352		5 Advanced Installed	547,649																	
LLNL	314	1000154	13,238		5 Advanced Installed	58,132																	
LLNL	315	1000326	18,133		5 Advanced Installed	165,527																	
LLNL	316	1000155	14,090		5 Advanced Installed	190,624																	
LLNL	317	1000156	1,426		1 No Meter - Not Required																		
LLNL	318	1000158	6,112		1 No Meter - Not Required																		
LLNL	319	1000161	18,048		5 Advanced Installed	217,490																	
LLNL	322	1000168	5,704		1 No Meter - Not Required																		
LLNL	323	1000170	18,555		5 Advanced Installed	228,725																	
LLNL	324	1000354	11,244		5 Advanced Installed	253,723																	
LLNL	326	1000171	3,516		1 No Meter - Not Required																		
LLNL	327	1000172	19,100		5 Advanced Installed	424,357																	
LLNL	329	1000176	5,150		5 Advanced Installed	212,293																	
LLNL	331	1000177	30,484		4 Standard Installed		1,261,735				5 Advanced Installed		5,728,000										
LLNL	332	1000178	104,787		5 Advanced Installed	4,102,468																	
LLNL	334	1000430	10,668		5 Advanced Installed	1,580,664																	
LLNL	335	1000181	11,988		1 No Meter - Not Required																		
LLNL	336	1000521	792		1 No Meter - Not Required																		
LLNL	337	1000522	792		1 No Meter - Not Required																		
LLNL	341	1000186	44,184		1 No Meter - Not Required																		
LLNL	343	1000187	27,368		1 No Meter - Not Required																		
LLNL	345	1000189	9,467		1 No Meter - Not Required																		
LLNL	361	1000193	68,889		4 Standard Installed		3,270,528				4 Standard Installed			1,521,000									
LLNL	362	1000194	3,766		1 No Meter - Not Required																		
LLNL	363	1000196	1,584		1 No Meter - Not Required																		
LLNL	364	1000197	10,932		1 No Meter - Not Required																		
LLNL	365	1000198	8,825		1 No Meter - Not Required						4 Standard Installed			1,795,000									
LLNL	366	1000199	2,631		1 No Meter - Not Required																		
LLNL	367	1000362	629		1 No Meter - Not Required																		

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	368	100000053	1,590		5 Advanced Installed	193,774																	
LLNL	373	1020240	1,768		1 No Meter - Not Required																		
LLNL	376	1000209	1,575		1 No Meter - Not Required																		
LLNL	378	1000211	3,840		1 No Meter - Not Required																		
LLNL	379	1000212	1,500		1 No Meter - Not Required																		
LLNL	381	1000213	95,421		5 Advanced Installed	5,236,891					5 Advanced Installed		18,438,000										
LLNL	382	1000380	292		1 No Meter - Not Required																		
LLNL	383	1000214	6,715		5 Advanced Installed	139,279																	
LLNL	391	1000220	197,841		5 Advanced Installed	14,210,013																	
LLNL	392	1000439	8,413		5 Advanced Installed	1,682,426																	
LLNL	404	1000226	6,460		4 Standard Installed		133,920																
LLNL	405	1000227	8,636		1 No Meter - Not Required																		
LLNL	406	1000374	345		1 No Meter - Not Required																		
LLNL	411	1000231	71,625		5 Advanced Installed	409,031																	
LLNL	415	1000236	19,297		4 Standard Installed		148,745																
LLNL	418	1000239	12,167		1 No Meter - Not Required																		
LLNL	423	1000249	7,791		1 No Meter - Not Required																		
LLNL	431	1000253	54,545		4 Standard Installed		447,281																
LLNL	432	1000254	33,575		5 Advanced Installed	900,181																	
LLNL	433	1000427	5,793		1 No Meter - Not Required																		
LLNL	435	1000257	57,724		1 No Meter - Not Required																		
LLNL	436	1000258	9,745		1 No Meter - Not Required																		
LLNL	438	1000262	16,262		1 No Meter - Not Required																		
	436		9,745		5 Advanced Installed	83,538																	
	438		16,262		5 Advanced Installed	343,981																	
LLNL	439	1000267	12,055		5 Advanced Installed	6,396,212															Yes		FY13
LLNL	442	1000269	4,169		5 Advanced Installed	30,659																	
LLNL	443	1000270	8,953		1 No Meter - Not Required																		
LLNL	444	1000271	805		1 No Meter - Not Required																		

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	445	1000273	5,100		5 Advanced Installed	31,062																	
LLNL	446	1000337	1,743		1 No Meter - Not Required																		
LLNL	451	1000274	51,398	1 Yes	5 Advanced Installed	24,430,040					5 Advanced Installed		1,833,000					5 Advanced Installed			Yes	Yes	
LLNL	452	100000054	492		5 Advanced Installed	8,978																	
LLNL	453	1020578	240,598	1 Yes	5 Advanced Installed	132,362,880					4 Standard Installed			7,727,000							Yes	Yes	
LLNL	471	100000072	16,086		5 Advanced Installed	405,059					4 Standard Installed			1,580,000				4 Standard Installed					
LLNL	473	1020158	205		1 No Meter - Not Required																		
LLNL	481	1000277	61,165		5 Advanced Installed	835,523																	
LLNL	482	1000278	108,000		5 Advanced Installed	1,950,968																	
LLNL	490	1000343	216,789		5 Advanced Installed	8,871,297					4 Standard Installed			3,844,000									
LLNL	491	1000279	13,259		4 Standard Installed		350,717																
LLNL	492	1000280	9,550		5 Advanced Installed	650,563																	
LLNL	493	1000388	19,100		5 Advanced Installed	272,477					4 Standard Installed			*705,700*									
LLNL	494	1000443	29,961		4 Standard Installed		1,481				3 No Meter Future Advanced	2015											
LLNL	501	1020844	200		1 No Meter - Not Required																		
LLNL	509	1000557	256		1 No Meter - Not Required																		
LLNL	510	1010022	144		1 No Meter - Not Required																		
LLNL	511	1000284	77,078		1 No Meter - Not Required																		
LLNL	512	1000285	8,128		1 No Meter - Not Required																		
LLNL	515	1000289	8,409		1 No Meter - Not Required																		
LLNL	516	1000290	6,496		1 No Meter - Not Required																		
LLNL	517	1000291	6,090		1 No Meter - Not Required																		
LLNL	519	1000292	9,660		1 No Meter - Not Required																		
LLNL	520	1000293	400		1 No Meter - Not Required																		
LLNL	522	1000890	515		1 No Meter - Not Required																		
LLNL	523	1000091	4,064		1 No Meter - Not Required																		
LLNL	525	1000556	1,632		1 No Meter - Not Required																		
LLNL	531	1000296	12,381		5 Advanced Installed	290,527																	
LLNL	532	1010026	215		1 No Meter - Not Required																		

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	533	1000251	320		1 No Meter - Not Required																		
LLNL	543	1000297	78,261		5 Advanced Installed	1,531,251												5 Advanced Installed	2,125				
LLNL	571	1000338	41,407	1 Yes	5 Advanced Installed	549,886																	
LLNL	581	1020565	696,968	1 Yes	5 Advanced Installed	24,409,523																	
LLNL	582	1020574	2,933		1 No Meter - Not Required																		
LLNL	583	100000095	21,793		1 No Meter - Not Required																		
LLNL	591	1000569	3,200		1 No Meter - Not Required																		
LLNL	597	1000437	260		1 No Meter - Not Required																		
LLNL	610	100000064	4,314		1 No Meter - Not Required																		
LLNL	611	1000303	15,018		5 Advanced Installed	*100,000*																	
LLNL	612	1000304	7,015		1 No Meter - Not Required																		
LLNL	614	1000307	1,221		1 No Meter - Not Required																		
LLNL	615	1000308	3,525		1 No Meter - Not Required																		
LLNL	616	1000310	2,273		1 No Meter - Not Required																		
LLNL	619	1000389	2,038		1 No Meter - Not Required																		
LLNL	622	100000001	1,033		1 No Meter - Not Required																		
LLNL	624	1000313	240		1 No Meter - Not Required																		
LLNL	625	1000314	4,854		1 No Meter - Not Required																		
LLNL	651	1000316	2,381		5 Advanced Installed	206,413																	
LLNL	652	1000542	208		1 No Meter - Not Required																		
LLNL	663	1000412	24,786		5 Advanced Installed	333,759					5 Advanced Installed		1,366,000					5 Advanced Installed					
LLNL	671	1000340	41,476	1 Yes	5 Advanced Installed	716,399																	
LLNL	681	1020566	46,819		4 Standard Installed		1,639,710																
LLNL	684	1020945	278		1 No Meter - Not Required																		
LLNL	691	1000321	18,437		5 Advanced Installed	361,515																	
LLNL	693	1000424	12,000		1 No Meter - Not Required																		
LLNL	694	1020467	10,590		5 Advanced Installed	116,859																	
LLNL	695	1020569	46,504		5 Advanced Installed	2,197,719					4 Standard Installed			24,470,000									
LLNL	696	1020570	21,381		5 Advanced Installed	123,429																	

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	697	1020571	4,118		1 No Meter - Not Required																		
LLNL	1277	1000017	4,117		1 No Meter - Not Required																		
LLNL	1280	1000188	5,644		1 No Meter - Not Required																		
LLNL	1601	1000036	2,228		1 No Meter - Not Required																		
LLNL	1602	1000037	2,160		1 No Meter - Not Required																		
LLNL	1631	1000539	1,443		1 No Meter - Not Required																		
LLNL	1632	1020234	4,290		1 No Meter - Not Required																		
LLNL	1677	1000043	28,576	1 Yes	5 Advanced Installed	382,393																	
LLNL	1678	1000385	3,550		1 No Meter - Not Required																		
LLNL	1680	1000432	5,696		1 No Meter - Not Required																		
LLNL	1713	1000336	335		1 No Meter - Not Required																		
LLNL	1714	1020577	270		1 No Meter - Not Required																		
LLNL	1726	1000054	2,160		1 No Meter - Not Required																		
LLNL	1727	1000055	1,837		5 Advanced Installed	49,045																	
LLNL	1730	1000057	2,100		1 No Meter - Not Required																		
LLNL	1735	1000059	3,261		1 No Meter - Not Required																		
LLNL	1736	1000060	4,526		1 No Meter - Not Required																		
LLNL	1739	1000449	5,646	1 Yes	5 Advanced Installed	142,915																	
LLNL	1802	1020624	411		1 No Meter - Not Required																		
LLNL	1826	1000067	3,632		1 No Meter - Not Required																		
LLNL	1878	1000070	6,292	1 Yes	4 Standard Installed		92,434																
LLNL	1879	1000071	11,118	1 Yes	4 Standard Installed		163,668																
LLNL	1884	1000372	2,880		1 No Meter - Not Required																		
LLNL	1885	1000418	4,210		1 No Meter - Not Required																		
LLNL	1886	1000399	3,643		1 No Meter - Not Required																		
LLNL	1887	1000419	5,089		1 No Meter - Not Required																		
LLNL	1888	1000180	11,520	1 Yes	4 Standard Installed		169,299																
LLNL	1889	1000520	16,821	1 Yes	4 Standard Installed		253,341																
LLNL	1925	1000349	2,236		1 No Meter - Not Required																		

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	1927	1000035	2,160		1 No Meter - Not Required																		
LLNL	2180	1000570	1,764		1 No Meter - Not Required																		
LLNL	2512	1000537	360		1 No Meter - Not Required																		
LLNL	2525	1000123	2,160		1 No Meter - Not Required																		
LLNL	2552	1000366	2,100		1 No Meter - Not Required																		
LLNL	2554	1000129	740		1 No Meter - Not Required																		
LLNL	2580	1000333	4,253		5 Advanced Installed	63,792																	
LLNL	2625	1000131	240		1 No Meter - Not Required																		
LLNL	2627	1000394	1,867		1 No Meter - Not Required																		
LLNL	2632	1000438	2,817		1 No Meter - Not Required																		
LLNL	2679	1000135	12,310		1 No Meter - Not Required																		
LLNL	2684	1000136	5,284		1 No Meter - Not Required																		
LLNL	2685	1000345	4,320		1 No Meter - Not Required																		
LLNL	2687	1000368	2,100		1 No Meter - Not Required																		
LLNL	2701	1000904	720		1 No Meter - Not Required																		
LLNL	2726	1000058	2,098		1 No Meter - Not Required																		
LLNL	2727	1000072	5,090		1 No Meter - Not Required																		
LLNL	2728	1000351	2,130		1 No Meter - Not Required																		
LLNL	2775	1000139	9,875		1 No Meter - Not Required																		
LLNL	2777	1000141	1,400		5 Advanced Installed	112,214																	
LLNL	2787	1000334	2,160		1 No Meter - Not Required																		
LLNL	2801	1000142	2,130		1 No Meter - Not Required																		
LLNL	2802	1000143	2,130		1 No Meter - Not Required																		
LLNL	2808	1020427	238		1 No Meter - Not Required																		
LLNL	2825	1000144	5,922		1 No Meter - Not Required																		
LLNL	2925	1000147	4,917		1 No Meter - Not Required																		
LLNL	3180	1000159	4,371		5 Advanced Installed	1,191																	
LLNL	3203	1000163	649		1 No Meter - Not Required																		
LLNL	3204	1000164	649		1 No Meter - Not Required																		

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A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	3226	1000169	3,077		1 No Meter - Not Required																		
LLNL	3340	100000014	2,160		1 No Meter - Not Required																		
LLNL	3427	1010023	6,365		1 No Meter - Not Required																		
LLNL	3526	1000224	2,165		1 No Meter - Not Required																		
LLNL	3527	1000442	9,782		1 No Meter - Not Required																		
LLNL	3555	1020478	508		1 No Meter - Not Required																		
LLNL	3577	1000192	4,290		1 No Meter - Not Required																		
	3649	1020396	4,800		5 Advanced Installed	77,436																	
LLNL	3724	1000204	19,810	1 Yes	5 Advanced Installed	359,240																	
LLNL	3725	1000205	19,867	1 Yes	5 Advanced Installed	248,644																	
LLNL	3726	1000206	19,824	1 Yes	5 Advanced Installed	276,641																	
LLNL	3751	1000208	2,160		1 No Meter - Not Required																		
LLNL	3775	1000395	1,440		1 No Meter - Not Required																		
LLNL	3925	1000221	1,081		5 Advanced Installed	17,810																	
LLNL	3982	1000401	1,920		1 No Meter - Not Required																		
LLNL	4107	1000544	388		1 No Meter - Not Required																		
LLNL	4113	1000543	183		1 No Meter - Not Required																		
LLNL	4302	1000252	5,022		1 No Meter - Not Required																		
LLNL	4316	1000555	299		1 No Meter - Not Required																		
LLNL	4352	100000020	240		1 No Meter - Not Required																		
LLNL	4377	1000259	4,920		1 No Meter - Not Required																		
LLNL	4378	1000260	5,180		1 No Meter - Not Required																		
LLNL	4382	1000407	3,600		1 No Meter - Not Required																		
LLNL	4383	1000264	4,988		1 No Meter - Not Required																		
LLNL	4384	1000265	1,577		1 No Meter - Not Required																		
LLNL	4385	1000266	3,744		1 No Meter - Not Required																		
LLNL	4387	1000183	3,658		1 No Meter - Not Required																		
LLNL	4388	1000911	320		1 No Meter - Not Required																		
LLNL	4406	1000268	1,560		1 No Meter - Not Required																		

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A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	4475	1000364	4,176		1 No Meter - Not Required																		
LLNL	4525	1000275	5,736		5 Advanced Installed	66,541																	
LLNL	4576	1000549	854		5 Advanced Installed	14,947																	
LLNL	4675	1000276	11,142	1 Yes	4 Standard Installed		67,653																
LLNL	4725	1000413	9,389		1 No Meter - Not Required																		
LLNL	4726	1000414	9,384		1 No Meter - Not Required																		
LLNL	4727	1000415	9,891	1 Yes	4 Standard Installed		96,847																
LLNL	4728	1000416	6,762		1 No Meter - Not Required																		
LLNL	4729	1000417	10,018	1 Yes	4 Standard Installed		97,409																
LLNL	4905	1000545	323		1 No Meter - Not Required																		
LLNL	4906	1000546	323		1 No Meter - Not Required																		
LLNL	4924	100000068	665		1 No Meter - Not Required																		
LLNL	4926	1000117	1,641		1 No Meter - Not Required																		
LLNL	5104	1000384	624		1 No Meter - Not Required																		
LLNL	5105	1000547	627		1 No Meter - Not Required																		
LLNL	5125	1000286	2,590		1 No Meter - Not Required																		
LLNL	5207	1000553	320		1 No Meter - Not Required																		
LLNL	5225	1000294	1,939		1 No Meter - Not Required																		
LLNL	5226	1000295	2,548		1 No Meter - Not Required																		
LLNL	5425	1000263	5,260		1 No Meter - Not Required																		
LLNL	5426	1000261	5,180		1 No Meter - Not Required																		
LLNL	5475	1000298	32,368		5 Advanced Installed	555,577																	
LLNL	5477	1020004	6,693		1 No Meter - Not Required																		
LLNL	5626	1000356	4,356		1 No Meter - Not Required																		
LLNL	5627	1000357	8,470	1 Yes	4 Standard Installed		121,664																
LLNL	5675	100000052	4,277		1 No Meter - Not Required																		
LLNL	6127	1020273	1,560		1 No Meter - Not Required																		
LLNL	6178	1000311	1,040		1 No Meter - Not Required																		
LLNL	6179	1000341	3,904		1 No Meter - Not Required																		

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A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	6205	1020068	404		1 No Meter - Not Required																		
LLNL	6206	1000225	688		1 No Meter - Not Required																		
LLNL	6301	100000086	732		1 No Meter - Not Required																		
LLNL	6325	1020379	4,320		4 Standard Installed		5,189																
LLNL	6424	1000897	390		1 No Meter - Not Required																		
LLNL	6426	1000359	2,100		1 No Meter - Not Required																		
LLNL	6475	100000154	12,070	1 Yes	4 Standard Installed		300,190											5 Advanced Installed					
LLNL	6501	1000327	908		1 No Meter - Not Required																		
LLNL	6525	1000317	971		1 No Meter - Not Required																		
LLNL	6526	1000318	2,756		1 No Meter - Not Required																		
LLNL	6575	1000319	1,460		1 No Meter - Not Required																		
LLNL	6870	1000444	1,416		5 Advanced Installed	373																	
LLNL	6901	1000120	520		1 No Meter - Not Required																		
LLNL	6925	1000361	5,873	1 Yes	5 Advanced Installed	155,827																	
LLNL	6926	1000408	2,160		1 No Meter - Not Required																		
LLNL	6928	1000358	1,912		1 No Meter - Not Required																		
LLNL	6929	100000089	4,925		1 No Meter - Not Required																		
LLNL	6930	100000090	5,937		1 No Meter - Not Required																		
LLNL	6931	100000140	1,405		1 No Meter - Not Required																		
LLNL	6951	1000381	1,440		1 No Meter - Not Required																		
LLNL	6989	100000071	756		1 No Meter - Not Required																		
LLNL	132N	1020394	251,316		5 Advanced Installed	5,200,207					4 Standard Installed			17,341									
LLNL	132S	1020383	219,385		5 Advanced Installed	4,259,938												5 Advanced Installed					
LLNL	170A	1020428	800		1 No Meter - Not Required																		
LLNL	193A	1020560	151		1 No Meter - Not Required																		
LLNL	194A	1000445	240		1 No Meter - Not Required																		
LLNL	196A	1020416	112		1 No Meter - Not Required																		
LLNL	231A	100000084	110		1 No Meter - Not Required																		
LLNL	297A	1020352	335		1 No Meter - Not Required																		

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A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	312A	1021324	107		1 No Meter - Not Required																		
LLNL	321A	1020071	59,515		1 No Meter - Not Required																		
LLNL	321B	1020072	7,511		1 No Meter - Not Required																		
LLNL	321C	1020073	78,335		1 No Meter - Not Required																		
LLNL	321D	1000548	2,106		1 No Meter - Not Required																		
LLNL	321E	1021504	2,581		4 Standard Installed		106,723				4 Standard Installed			29,972,000									
LLNL	322A	1000526	340		1 No Meter - Not Required																		
LLNL	335A	1020423	64		1 No Meter - Not Required																		
LLNL	335B	1020424	64		1 No Meter - Not Required																		
LLNL	514A	1000447	2,473		1 No Meter - Not Required																		
LLNL	517A	1000229	474		1 No Meter - Not Required																		
LLNL	518A	1020257	204		1 No Meter - Not Required																		
LLNL	519A	1021264	594		1 No Meter - Not Required																		
LLNL	551E	1020327	40,966		5 Advanced Installed	682,670												5 Advanced Installed					
LLNL	551W	1020328	65,776		5 Advanced Installed	841,875					5 Advanced Installed		2,188,000					5 Advanced Installed					
LLNL	597A	1020964	99		1 No Meter - Not Required																		
LLNL	612A	1000448	4,283		1 No Meter - Not Required																		
LLNL	OS071N	1020449	132		1 No Meter - Not Required																		
LLNL	OS113E	1020448	34		1 No Meter - Not Required																		
LLNL	OS122S	1020907	213		1 No Meter - Not Required																		
LLNL	OS122W	1020446	60		1 No Meter - Not Required																		
LLNL	OS231S	100000088	96		1 No Meter - Not Required																		
LLNL	OS235N	1020905	32		1 No Meter - Not Required																		
LLNL	OS243W	1020906	60		1 No Meter - Not Required																		
LLNL	OS273	1000678	775		1 No Meter - Not Required																		
LLNL	OS316N	1020447	72		1 No Meter - Not Required																		
LLNL	OS321E	100000087	54		1 No Meter - Not Required																		
LLNL	OS338	1000656	429		1 No Meter - Not Required																		
LLNL	OS394	1000692	234		1 No Meter - Not Required																		

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A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	OS415W	1020908	126		1 No Meter - Not Required																		
LLNL	OS454	100000080	3,375		5 Advanced Installed	9,053,406												4 Standard Installed	35,587				
LLNL	OS513	1000681			3 No Meter Future Advanced																		
LLNL	OS518	1000681	3,263		1 No Meter - Not Required																		
LLNL	OS601	100000116	83		1 No Meter - Not Required																		
LLNL	OS610E	100000078	49		1 No Meter - Not Required																		
LLNL	OS621	1020400	824		1 No Meter - Not Required																		
LLNL	OS651N	1020904	69		1 No Meter - Not Required																		
LLNL	OS665	1000676	576		1 No Meter - Not Required																		
LLNL	OS682	1020567	8,880		4 Standard Installed		311,000				5 Advanced Installed		17,642,000										
LLNL	OS683	1020944	2,104		4 Standard Installed		73,695											4 Standard Installed	7,806				
LLNL	U011	1000662	402		5 Advanced Installed	167,920																	
LLNL	U042	1000663	402		5 Advanced Installed	107,770																	
LLNL	U119	1000664	1,944		1 No Meter - Not Required																		
LLNL	U172	1000660	675		1 No Meter - Not Required																		
LLNL	U187	1020384	1,225		1 No Meter - Not Required																		
LLNL	U193	1000677	6,440		1 No Meter - Not Required																		
LLNL	U283	1000649	216		1 No Meter - Not Required																		
LLNL	U291	1000667	8,612		5 Advanced Installed	9,660,535												4 Standard Installed	18,147				
LLNL	U295	1000668	1,128		1 No Meter - Not Required													4 Standard Installed					
LLNL	U299	1000650	675		4 Standard Installed		48,341																
LLNL	U313A	1000655	216		1 No Meter - Not Required																		
LLNL	U313B	1000657	332		1 No Meter - Not Required																		
LLNL	U325	1000669	5,072		5 Advanced Installed	16,754,832												4 Standard Installed	32,554				
LLNL	U328C	1000673	300		1 No Meter - Not Required																		
LLNL	U416	1000670	743		1 No Meter - Not Required						3 No Meter Future Advanced	2015											
LLNL	U424	1000671	6,548		1 No Meter - Not Required																		
LLNL	U430	1000654	705		1 No Meter - Not Required																		
LLNL	U448	1000653	702		1 No Meter - Not Required																		

					ELECTRICAL			STEAM			NATURAL GAS				CHILLED WATER			WATER			DATA CENTER		
A	B	C	D	E	F			I	J	K	L	N			O	P	Q	R	S	T	U	V	W
Site	Building (FIMS Name)	Property Sequence Number	GSF	HPSB	Meter Type and Status	FY13 Adv	FY13 Std	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Fiscal Year to Install	FY13 Adv (CF)	FY13 Std (CF)	Meter Type and Status	Estimated Annual Energy Usage (Btu[6])	Fiscal Year to Install	Meter Type and Status	Estimated Annual Water Usage (000s Gallons)	Fiscal Year to Install	Data Cente	Data Center Metered	FY to Complete Metering
LLNL	U470	1000643	699		1 No Meter - Not Required																		
LLNL	U472	1020380	1,313		1 No Meter - Not Required																		
LLNL	U599	1000651	692		1 No Meter - Not Required																		
LLNL	U6042	1020186	354		5 Advanced Installed	1,390,164												4 Standard Installed					
LLNL	U664	1000652	236		1 No Meter - Not Required																		
LLNL	PTU-10		350		5 Advanced Installed	55,834												5 Advanced Installed					
LLNL	S300				5 Advanced Installed	12,489,738																	
						369,782,634	9,960,373						167,761,000	87,119,041					106,747				

Meter Type and Status	FY13 Adv	FY13 Std
	172,962	89,820
	MM BTU	MM BTU
cum adv metered		39%
cum std metered		20%

Columns for "Meter Type and Status" & "Fiscal Year to Install" have a dropdown picklist for answer choices.

		FY13 Adv	FY13 Std	
116	Bldgs w/ Ind. Meter	369,782,634	9,960,373	
247	Bldgs w/Shared Meter	86.09%	2.32%	88.40%
27	Bldgs w/ Std meters			
21	Bldgs w/ No Meter			
411	Total Bldgs	FY13 kWh Totals	429,550,000	
		Ind	369,782,634	
		Std	9,960,373	
95%	Bldgs metered	Shared	49,806,993	

Bldgs		FY13 Adv	FY13 Std
14	Std	167,761,000	87,119,041
14	Adv	39%	20.42%
28		FY13 CF Totals	426,620,000
		MM BTU	439,845

13	Std Meters
12	Adv Meters
25	Totals

5	CT
1	Mocho
2	Sandia
2	B471
1	U295
2	East Ave
13	Totals