

CONSOLIDATED ENERGY DATA REPORT (CEDR) TECHNICAL SUPPORT DOCUMENT (TSD)

September 16, 2014



U.S Department of Energy
Sustainability Performance Office

The *Consolidated Energy Data Report (CEDR) Technical Support Document (TSD)* provides instructions for reporting and submitting annual sustainability data through the CEDR.

The CEDR TSD contains two sections:

1. **Completing the Consolidated Energy Data Report:** an overview of the CEDR workbook, including detailed descriptions of all tabs and data fields.
2. **Goal Calculation and Projection Methodology:** an overview of how data from the CEDR is used to calculate goal performance for relevant Federal requirements and projecting outyear performance.

New for FY 2014 reporting, the Sustainability Performance Office (SPO) developed an enterprise-wide database for collecting and managing sustainability data. The DOE Sustainability Dashboard (Dashboard) seeks to improve data reporting by enhancing accuracy and streamlining reporting processes. The Dashboard is a DOE-specific database with the capability of collecting site-level sustainability data and providing in-depth data analytics. At present, the Dashboard collects data that primarily supports DOE's Annual GHG inventory; over time, additional reporting categories will be added to the system. The *DOE Sustainability Dashboard User Guide* should be referenced for guidance on reporting through the Dashboard. Note the Dashboard guidance will be distributed under separate cover.

Together, the CEDR and Dashboard collect data needed to report DOE's progress on its sustainability requirements under Executive Order (E.O.) 13514, E.O.13423, the Energy Policy Act (EPAct) of 2005, and the Energy Independence and Security Act (EISA) of 2007. Sustainability data collected from each DOE site is aggregated and used to calculate performance for DOE as a whole. As such, the accuracy of site reported data is critical.

Sites have two options for FY 2014 sustainability data reporting:

1. **CEDR-only approach:** Complete all CEDR tabs using instructions outlined in this document. This approach is consistent with reporting processes used in FY 2013 and prior years.
2. **Hybrid approach:** Complete all data entry categories available in the Dashboard and the following tabs in the CEDR:
 - a. 2.1 - Funds, Metering, Training
 - b. 3.3a - Conservations & RE Measures
 - c. 3.4 - Bldg Inventory Change
 - d. 4.1 - Source Energy Savings
 - e. 5.1 - Data Centers
 - f. 11 - Covered Facilities

Please contact the Sustainability Performance Office at sustainability@hq.doe.gov with any additional questions.

1. Completing the Consolidated Energy Data Report

This section describes in detail the information requested in the Consolidated Energy Data Report (CEDR) and provides a guide on how to complete the requested information. The data in the CEDR should be referenced and used in each site’s SSP. The workbook consists of 28 worksheets that should be completed by each site, as applicable. Additionally, to assist with navigation of large tables, a key has been provided identifying the fields that need to be reviewed and updated, optional fields to be addressed if applicable and available, and fields with automatic calculations.

1.1 Content

The “Content” tab provides a quick overview of each tab in the CEDR workbook and identifies which tabs have been developed in the Dashboard. This section also describes actions that need to be taken for each tab.

Worksheet	Overview	Dashboard Status	Action	TSD Page
1.1 Content	Stand-alone overview of the CEDR tabs.	Not Applicable	None.	3
1.2a Performance Summary	Summary table of select goal performance.	OMB Scorecard goals, except HPSB. Additional status reports to be developed.	None.	-
1.2b GHG Emissions Summary	Summary table of GHG emissions broken down by scope.	To be developed	None.	-
1.3 Factors and Drop-down Keys	Reference tab containing all factors and drop-down menus information for all tabs.	To be developed	None.	-
2.1 Funds, Meters, Training	Collects information on energy and water spending, and metering status.	To be developed	If applicable, complete cells with blue text.	6
2.2 Sustainable Acquisition	Collects information on review of relevant contracts for sustainable acquisition requirements	Available	Review pre-populated historical data and update with FY 2014 data.	10
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 in this tab. Conventional hydropower should be reported in this tab but separate from regular electricity for correct	Available	Review pre-populated historical data and update with FY 2014 data.	11

Worksheet	Overview	Dashboard Status	Action	TSD Page
	GHG and EUI accounting; do not report conventional hydropower in the renewable tabs.			
3.2a	Operating On-Site Renewables	Available	Review pre-populated data and update as necessary.	13
3.2b	Purchased Renewables	Available	Review pre-populated historical data and update with FY 2014 data.	17
3.3a	Active ECM & RE Measures	To be developed	Review pre-populated data and update as necessary.	20
3.3b	Cancel ECM & RE Measures	To be developed	None.	-
3.4	Bldg Inventory Changes	To be developed	Review pre-populated data and update as necessary.	25
4.1	Source Energy Savings Credit	To be developed	Complete worksheet, if applicable.	28
5.1	Data Centers	See DOEGRIT (https://doegr.it.energy.gov)	Complete worksheet, if not using DOEGRIT.	28
5.2	Electronics Acq&Disp	Available	Review pre-populated historical	35

Worksheet	Overview	Dashboard Status	Action	TSD Page
	Designated) and sound electronics disposition		data and update with FY 2014 data.	
5.3	Electronics O&M	Available	Review pre-populated historical data and update with FY 2014 data.	37
6.1	Mixed Refrigerants	Available	Review pre-populated historical data and update with FY 2014 data.	40
6.2	Fugitive F-gases	Available	Review pre-populated historical data and update with FY 2014 data.	41
6.3	Industrial Process	Available	Review pre-populated historical data and update with FY 2014 data.	43
7.1a	On-Site Wastewater	Available	Review pre-populated historical data and update with FY 2014 data.	45
7.1b	Contr. Wastewater	Available	Review pre-populated historical data and update with FY 2014 data.	46
8.1	Air Bus Travel	Available	Review pre-populated historical data and update with FY 2014 data.	47
8.2	Ground Bus Travel	Available	Review pre-populated historical data and update with FY 2014 data.	48
8.3	Commuter Travel	Available	Review pre-populated historical data and update with FY 2014 data.	49
9.1a	On-Site Landfill MSW	Available	Review pre-populated historical data and update with FY 2014 data.	51
9.1b	Off-Site Landfill MSW	Available	Review pre-populated historical data and update with FY 2014 data.	53
9.1c	MSW & C&D Diversion	Available	Review pre-populated data and update as necessary.	56
10	Fleet Fuel (Optional)	Pulls from FAST in mid-December	Optional - Download and	57

Worksheet	Overview	Dashboard Status	Action	TSD Page
	FAST data.		paste FAST data.	
11 Covered Facilities	List of covered facilities with anticipated evaluation dates and type/level.	To be developed	Select covered facilities and complete associated data columns.	58

2.1 Funds, Metering, Training

This worksheet collects information on spending for energy and water improvements, training, and metering status.

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

These are obligations for energy and/or water efficiency incurred from appropriated funds, revolving fund accounts, or other accounts. Other accounts might include, for example, obligations for purchases of compact fluorescent lights to replace incandescent bulbs, or replacement chillers paid for directly by each site rather than through an energy savings performance contract. These obligations do not include anything to be paid for or financed by a third party (e.g. a utility or energy-savings performance contractor). Provide information on the funds obligated or planned for obligation for each reporting year. Enter amounts in thousands of dollars.

Direct agency obligations should be considered to be any funding used towards energy management that originates from Congressional appropriations. This can include what sites and programs define as “indirect funds” for sites, but as those funds originate from appropriations, they should be considered for inclusion in this table as well.

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

Energy savings performance contracts (ESPCs) are contracts that allow a private-sector energy service company (ESCO) to perform energy-efficiency improvements at a government facility using private financing, rather than the government’s paying for the work directly. The first line of Table 1-2 will show the total number of new ESPC projects awarded by each site during the reporting year. This includes delivery orders awarded under DOE Super ESPC blanket contracts. Report new ESPCs signed during the reporting year, in the “number/thou \$” column. On the same line, in the “Million Btu” column, enter the total of the average annual energy savings anticipated from all ESPC projects awarded during the year, in millions of Btu delivered to the site.

On the second line, enter the total project investment value of new ESPCs signed during the reporting year. The investment value of an ESPC task/delivery order is the implementation price (for survey, study, design, construction, commissioning to acceptance, and markup — including indirect costs such as overhead and profit) — that an ESCO charges to develop and implement the project. Excluded are the government payments (from guaranteed savings) to the contractor

during the performance period term for debt repayment (principal and interest) and services such as measurement and verification (M&V) and maintenance. Also excluded are the government's administrative costs, which site budget offices will identify on the Circular A-11 form.

On the third line, enter the amount privately financed as a result of new ESPCs signed during the reporting year. The amount privately financed under an ESPC task/delivery order is the permanent financing principal borrowed to implement the project. It equals the investment value, less any utility or systems benefit administrator rebates or incentives, less any government pre-performance period payments, and plus any capitalized interest costs (e.g. construction period interest).

On the fourth line, enter the cumulative guaranteed cost savings of all of the ESPCs reported on the previous three lines. Each ESPC has a schedule of cost savings to energy and related O&M budgets guaranteed by the ESCO. From these schedules, enter the sum of each year's guaranteed cost savings.

On the fifth line, report the sum of each awarded ESPC task/delivery order's total award value (contract price). This is obtainable from the schedule of fixed contractor payments that will be used by the ESCO for debt repayment and performance period services. For the fourth and fifth lines, report the actual contract-negotiated guaranteed cost savings and contract prices in nominal costs. Do not discount each year's amounts to the present year value.

The last line is the total amount each site paid or will pay to ESPC contractors during the reporting year as a consequence of all ESPCs signed to date.

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

Utility energy service contracts (UESCs) are similar to ESPCs, except that the work is performed by utilities (electric or gas) serving the site. With a UESC, the utility arranges financing to cover all or a portion of the capital costs of the project. Then the utility is repaid over the contract term from the cost savings generated by the energy efficiency measures. These contracts can either be negotiated directly by the site, placed through an existing "area-wide agreement" the utility has with the General Services Administration, or established through a "basic ordering agreement" (more generally used by the Department of Defense).

The first line of Table 1-3 will show the total number of new UESC projects awarded by the site during the reporting year. Report only new UESCs signed during that year, in the "number/thou \$" column. On the same line, in the "Million Btu" column, enter the average annual site energy savings anticipated from the UESCs awarded during the year, in millions of Btu delivered to the site.

On the second line, enter the total project investment value of new UESCs signed during the reporting year. (See instructions for ESPCs above for clarification of investment value.)

On the third line, enter the amount privately financed as a result of new UESCs signed during the year. (See instructions for ESPCs above for clarification of amount privately financed.)

On the fourth line, enter the cumulative guaranteed cost savings of all of the UESCs reported on the previous three lines. Each UESC has a schedule of cost savings to energy and related O&M budgets estimated by the utility/contractor. From these schedules, enter the sum of each year's cost savings.

On the fifth line, report the sum of each awarded UESC's total award value (contract price). This is obtainable from the schedule of fixed payments that will be used by the utility for debt repayment and performance period services. For the fourth and fifth lines, report the actual contract-negotiated cost savings and contract prices in nominal costs. Do not discount each year's amounts to the present year value.

The last line is the total amount the site paid or will pay to utilities/contractors during the reporting year as a consequence of all UESCs signed to date.

Table 1-4. EPC Act 1992 Training

EPC Act 1992 training covers a broad range of training as related to sustainability for facility management and operations. Training can consist of areas such as fundamentals of building energy systems, building energy codes and applicable professional standards, energy accounting and analysis, life-cycle cost methodology, fuel supply and pricing, and instrumentation for energy surveys and audits.

Enter the number of federal personnel or on-site contractors that received energy management training and total training expenditures (or budget). When counting the number of people who received training, include only people who received organized instruction (e.g. at seminars, workshops, and conferences), not those who received general-information items such as flyers reminding people to turn out lights and turn off computers. The cost of such general information items intended to raise energy awareness among all employees can be included in the training budget entries. However, travel costs associated with this training should also be included in the cost of the training. Some examples of energy management training are:

- Basics of building energy systems;
- Building energy codes and applicable professional standards;
- Energy accounting and analysis;
- Life-cycle cost methodology;
- Fuel supply and pricing; and
- Instrumentation for energy surveys and audits.

Table 1-5a. EPC Act 2005 Metering of Electricity Use

Table 1-5b. EISA 2007 Metering of Natural Gas Use

Table 1-5c. EISA 2007 Metering of Steam Use

Table 1-5d. DOE O 436.1 & SSPP Metering of Chilled Water Use

Table 1-5e. Water Management Best Practice Metering of Water Use

These fields should be completed based on the site's latest metering plan, which DOE encourages its sites to update annually, and include meters for electricity, water, natural gas, steam, and chilled water. For each utility, report the number of buildings that were individually metered and the utility amount metered. Note per NECPA (42 U.S.C. Section 8253) buildings

include industrial, process, or laboratory facilities (a clarification for the CEDR metering tables). The following steps should be taken to complete these tables.

Note that this tab records performance for both DOE metering goals and the Federal metering goals. The DOE metering goals exceed Federal requirements by requiring 90 percent of electricity, natural gas, steam, and chilled water to be metered. The Federal requirements are based on EPA Act 2005 Section 103 and EISA 2007 Section 432 and require the metering of electricity, natural gas, and steam to the maximum extent practicable.

For all rows:

1. The metering plan should follow the *Metering Best Practices: A Guide to Achieving Utility Resource Efficiency*, August 2011.
2. Based on the site's metering plan, identify the number of buildings that would satisfy the "maximum extent practicable" requirement. The *Metering Best Practices* guide defines the four following factors as defining "the maximum extent practicable." Based on these, fill in the "# of Appropriate Buildings for Metering" field for each utility (column B of each table).
 - i. *Installation of metering and advanced metering wherever feasible;*
 - ii. *The capability of providing useful data and information that leads to improved energy management practices or operations and maintenance improvements resulting in energy and/or energy-related cost savings;*
 - iii. *The sensible application of metering technology; and*
 - iv. *Cost-effectiveness, which is based on a 10-year simple payback, assuming annual savings of at least 2 percent, or higher depending on the use of the metered data to implement energy savings and other cost savings measures.*
3. Using the site's metering plan to the extent possible, count how many "appropriate" buildings (as identified in the previous bullets) have dedicated standard meters for each utility and fill in "Cumulative # of Buildings Metered" in the "Standard Meters" category (column C of each table). "Dedicated" implies that the meter collects consumption data only for that building and represents the entire building's consumption.
4. Similarly, count how many "appropriate" buildings have dedicated advanced meters for each utility. Fill in "Cumulative # of Buildings Metered" in the "Advanced Meters" category (column F of each table).
5. Should a building have both standard and advanced metering that represents the entire building, count only the advanced meter.
6. Fill in each "Estimated Amount of Purchased [utility] Metered" (columns D and G of each table) and "Estimated Amount of On-site Generated [utility] Metered" field for each utility (columns E and H of each table). Ensure only utility metered at or below the "building" level, as defined by NECPA, is reported. If the source of the metered utility cannot be identified (purchased or on-site generated), the amount metered at a building level should be reported under "Estimated Amount Purchased" (Columns D and G) up to the total amount purchased in tab 3.2, and the remaining under estimated amount of on-site generated.
7. Should a building have multiple meters (e.g. sub-meters), ensure the utility metered is only accounted for once. This is to avoid double counting.

8. Provide “Total % of [utility] Metered” (column K) for meeting the SSPP goal of both purchased and on-site generated utility metered at the building level. This is a user-entered data field, and is not calculated from any other data. This should include not only the purchased utility metered as well as on-site generated utility.
9. No action is needed for columns, “# of Appropriate Buildings with Dedicated Meters” and “Cumulative % of Buildings Metered” in the “Total” section. These fields are automatically calculated.

For FY 2015 through 2017 rows:

Repeat steps above, but use anticipated estimates of the same fields and include the estimation methodology.

2.2 Sustainable Acquisition

This worksheet collects information on review of relevant contract actions for sustainable acquisition requirements. Federal goals require that 95% of new contract actions are energy-efficient (ENERGY STAR or FEMP designated), water-efficient, biobased, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives, where such products and services meet agency performance requirements.

Column/Title	Instructions				
E. Acquisition Category	<p>Select the appropriate category from the drop-down list. Sites may choose to report other types of contracts in addition to construction or custodial. If so, choose “Other (Optional)” from the drop down list and list details in Column K “Additional Information.”</p> <p><i>Drop-down list:</i></p> <table border="1" style="margin-left: 20px;"> <tr> <td>Construction</td> <td>Custodial</td> </tr> <tr> <td>Other (Optional)</td> <td></td> </tr> </table>	Construction	Custodial	Other (Optional)	
Construction	Custodial				
Other (Optional)					
F. Number of New Contract Actions	Enter the total number of contract actions taken during the previous fiscal year.				
G. Number Reviewed	<p>Enter the number of contracts reviewed during the previous fiscal year. At minimum, 5% of new contract actions must be reviewed. However, a greater number of contracts (up to 100%) may be reviewed to ensure the sample size of contracts can adequately assess performance.</p> <p>The following tips may assist the process of selecting contracts for review:</p> <ol style="list-style-type: none"> 1) Narrow down the pool of contracts only to those which are likely to be subject to sustainable acquisition requirements. For example, support services contracts often have no applicable sustainable acquisition requirements, so they can be removed from the review pool. 2) Select contracts from the narrowed pool. These contracts should be chosen at random. Sites with a large number of contract actions may audit as little as 5% of total relevant contract actions and still obtain a statistically useful result. With a goal of 95% of relevant contacts 				

Column/Title	Instructions
	meeting sustainable acquisition requirements, just one negative result can reduce compliance below the goal if less than 20 contracts are reviewed. Keep this in mind while choosing the number of contracts to be reviewed.
H. Number without Opportunity for any Sustainable Acquisition	Enter the number of reviewed contracts for which there is no opportunity for sustainable acquisition. This could include contracts which do not contain any opportunity for sustainable acquisition (e.g. support services) or contracts for which specialized products are required that cannot be substituted.
I. Number Meeting All Sustainable Acquisition requirements	Enter number of reviewed contracts meeting all relevant sustainable acquisition requirements.

3.1 Energy & Water

This tab collects quarterly consumption and associated cost information for facilities, non-fleet vehicles and equipment, and fully serviced leases (voluntary). Sites should update their consumption and cost data by quarter and utility/fuel type.

On-site non-renewable energy should not be reported in this tab. To receive appropriate credit for metering of on-site generated non-renewable energy, complete the “Total % of [utility] Metered” column in tab 2.1. On-site generated and purchased renewable energy should be reported in tabs 3.2a and 3.2b, respectively. 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. The workbook calculates Btus and GHG emissions. If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

Column/Title	Instructions
G. Category	Select the appropriate category from the drop-down list for reporting energy and water consumption and cost. <ul style="list-style-type: none"> - Buildings: Report energy consumption and cost for the energy intensity goal subject facilities. - Excluded: Report energy consumption and cost for the energy intensity goal excluded facilities. - Vehicles and Equipment: Report energy consumption and cost for non-fleet vehicles and equipment and non-facility energy (e.g. backup generators). - Water: Report water consumption and cost at the whole site/lab. - Fully Serviced Lease(s): to report energy consumption and cost for lease(s), such as fully serviced leases that count as Scope 3 emissions.

Column/Title	Instructions																																								
H. Subcategory	<p>Select the most appropriate utility/fuel consumption type (e.g. electricity, potable water, natural gas) from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="500 373 1349 1045"> <thead> <tr> <th colspan="2" data-bbox="500 373 1349 405"><i>Goal subject and excluded facilities:</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="500 405 963 436">Biomass</td> <td data-bbox="963 405 1349 436">Hot Water</td> </tr> <tr> <td data-bbox="500 436 963 468">Chilled Water – Absorption Chiller</td> <td data-bbox="963 436 1349 468">LNG</td> </tr> <tr> <td data-bbox="500 468 963 499">Chilled Water – Electric Driven Chiller</td> <td data-bbox="963 468 1349 499">LPG</td> </tr> <tr> <td data-bbox="500 499 963 531">Chilled Water – Engine Driven Chiller</td> <td data-bbox="963 499 1349 531">Natural Gas</td> </tr> <tr> <td data-bbox="500 531 963 562">Coal</td> <td data-bbox="963 531 1349 562">Other</td> </tr> <tr> <td data-bbox="500 562 963 594">Diesel</td> <td data-bbox="963 562 1349 594">Square Feet</td> </tr> <tr> <td data-bbox="500 594 963 625">Electricity – Conventional Hydro</td> <td data-bbox="963 594 1349 625">Steam – Natural Gas</td> </tr> <tr> <td data-bbox="500 625 963 657">Electricity – Grid</td> <td data-bbox="963 625 1349 657">Steam – Biomass</td> </tr> <tr> <td data-bbox="500 657 963 688">Fuel Oil</td> <td data-bbox="963 657 1349 688">Steam – Coal</td> </tr> <tr> <td data-bbox="500 688 963 720">Tires – Fossil-Derived</td> <td data-bbox="963 688 1349 720"></td> </tr> <tr> <th colspan="2" data-bbox="500 720 1349 751"><i>Vehicles and equipment:</i></th> </tr> <tr> <td data-bbox="500 751 963 783">Aviation Gas</td> <td data-bbox="963 751 1349 783">Gasoline</td> </tr> <tr> <td data-bbox="500 783 963 814">Biodiesel</td> <td data-bbox="963 783 1349 814">Jet Fuel</td> </tr> <tr> <td data-bbox="500 814 963 846">CNG</td> <td data-bbox="963 814 1349 846">LNG</td> </tr> <tr> <td data-bbox="500 846 963 877">Diesel</td> <td data-bbox="963 846 1349 877">LPG</td> </tr> <tr> <td data-bbox="500 877 963 909">E-85</td> <td data-bbox="963 877 1349 909">Other</td> </tr> <tr> <th colspan="2" data-bbox="500 909 1349 940"><i>Water:</i></th> </tr> <tr> <td data-bbox="500 940 963 972">Aquifer Replenish</td> <td data-bbox="963 940 1349 972">Potable</td> </tr> <tr> <td data-bbox="500 972 963 1045">ILA non-potable fresh</td> <td data-bbox="963 972 1349 1045">Re-claimed/cycled</td> </tr> </tbody> </table> <p>At this time, there is no entry category for captured water (e.g. rainwater). If you are capturing water for consumption, enter the information in a separate row, select “Re-claimed/cycled” or leave the “Subcategory” field blank (Tab 3.1, Column H), and in the “Additional Information” (Tab 3.1, Column Q) provide a short note on the source and end-use. If counted in a separate row in this manner, this water should not be included in the total for any other rows. Keep in mind that in some states water capture/detention is not allowed; therefore, please be in accordance with state law. It is not required to report captured water.</p>	<i>Goal subject and excluded facilities:</i>		Biomass	Hot Water	Chilled Water – Absorption Chiller	LNG	Chilled Water – Electric Driven Chiller	LPG	Chilled Water – Engine Driven Chiller	Natural Gas	Coal	Other	Diesel	Square Feet	Electricity – Conventional Hydro	Steam – Natural Gas	Electricity – Grid	Steam – Biomass	Fuel Oil	Steam – Coal	Tires – Fossil-Derived		<i>Vehicles and equipment:</i>		Aviation Gas	Gasoline	Biodiesel	Jet Fuel	CNG	LNG	Diesel	LPG	E-85	Other	<i>Water:</i>		Aquifer Replenish	Potable	ILA non-potable fresh	Re-claimed/cycled
<i>Goal subject and excluded facilities:</i>																																									
Biomass	Hot Water																																								
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<i>Water:</i>																																									
Aquifer Replenish	Potable																																								
ILA non-potable fresh	Re-claimed/cycled																																								
J. FY	Enter the fiscal year for the consumption and cost data being.																																								
K. QTR	Enter the fiscal year quarter for the consumption and cost data being reported.																																								
L. Usage Amount	Enter the consumption amount for the utility being report based on the usage unit in column I.																																								
N. Cost (1,000 \$)	Enter the cost in thousands of dollars (not whole numbers) for the utility/fuel being report.																																								
P. Main Site Zip Code	Update, if the main site zip code is incorrect. Electricity and T&D Loss GHG emissions are calculated based on eGrid emissions factors which are based on zip code.																																								

Column/Title	Instructions
Q. Additional Information	Use this column to provide additional information, such as: - Comments justifying changes or large differences; - Notes on fuel source: a. If chilled water is from a non-electric source and the source is not natural gas. The current estimated GHG emission estimates are based on the assumption that the fuel source is natural gas. b. If steam is not from natural gas. Default is natural gas. c. If biomass, what is the fuel source? (i.e., wood and wood residuals, agricultural byproducts, peat, solid byproducts, biogas, ethanol, biodiesel, rendered animal fat, vegetable oil).
R. SPO Notes	This column contains SPO notes based on identified potential data errors. Please review and update data, if requested.

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendices A and B*.

3.2a Operating On-Site Renewables

In order to receive credit for progress-to-date toward the on-site renewable energy goal, sites must provide information on operating self-generated energy from renewable sources. The systems listed in this worksheet have been pre-populated with the information provided in previous CEDRs. Sites should note that under EPCRA 2005, on-site renewable electric energy will be counted at two times the actual, if the RECs are retained. Therefore, if a site develops a project that generates 3.75 percent of the site’s total annual electricity, then the site will have contributed 7.5 percent.

Sites can receive modified credit for renewable power generated on-site even if the power and the RECs are sold to third parties. This credit takes the form of “Scope 3 percentage points,” which do not represent emission reductions, but are counted towards Scope 3 emission reductions under EO 13514 as a policy tool to encourage on-site renewable generation. To receive Scope 3 credit, report these as “On Federal Land, Not Transmitted to Site” or “On Indian Land, Not Transmitted to Site.” At this time, Tab 1.2 Performance Summary does not subtract this credit from SSPP Goal 1.2 Scope 3 GHG performance. This credit is not included in DOE’s official Scope 3 GHG performance if the goal (13% reduction) is met without the credit.

FEMP has developed two guidance documents which outline the options for sites to generate renewable energy or purchase renewable energy or renewable energy certificates (RECs). Please refer to these documents for any specific questions related to renewable energy:

- *Guide to Purchasing Green Power*¹
- *Renewable Energy Requirement Guidance for EPCRA 2005 and Executive Order 13423*²

¹ http://www1.eere.energy.gov/femp/pdfs/purchase_green_power.pdf

Column/Title	Instructions								
D. System Description/Name	For identification of the system, enter a renewable energy system description and/or name.								
E. Location Description (e.g. building name, etc.)	Provide a description of where the system is located, such as the building name or number.								
F. System Location (Zip Code)	Provide the zip code where the system is located.								
G. Year Installed (YYYY)	Provide the year each system was installed. Information will be used to determine whether renewable energy meets the requirement that half of the renewable energy agencies use come from new resources placed in service after January 1, 1999.								
H. End Use Category	Assign an end use category in regards to the energy intensity goal. If the system provides energy for an excluded facility or is located remotely such that it does not serve a facility, select "Excluded." If the system provides energy for a facility that is included in your energy intensity goal performance or you're not sure, select "Goal Subject."								
I. Siting Status - On Federal or Indian Land?	<p>Select the siting and transmission of the system from the drop-down list. Note, electric renewable energy produced and consumed on Federal or Indian land qualifies for a bonus.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tbody> <tr> <td>On Federal Land, On User Site</td> <td>On Indian Land, Transmitted to Site</td> </tr> <tr> <td>On Federal Land, Transmitted to Site</td> <td>On Indian Land, Not Transmitted to Site</td> </tr> <tr> <td>On Federal Land, Not Transmitted to Site</td> <td>NOT on Federal or Indian Land, Adjacent to User Site</td> </tr> <tr> <td>On Indian Land, On User Site</td> <td>NOT on Federal or Indian Land, Transmitted to User Site</td> </tr> </tbody> </table>	On Federal Land, On User Site	On Indian Land, Transmitted to Site	On Federal Land, Transmitted to Site	On Indian Land, Not Transmitted to Site	On Federal Land, Not Transmitted to Site	NOT on Federal or Indian Land, Adjacent to User Site	On Indian Land, On User Site	NOT on Federal or Indian Land, Transmitted to User Site
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On Federal Land, Not Transmitted to Site	NOT on Federal or Indian Land, Adjacent to User Site								
On Indian Land, On User Site	NOT on Federal or Indian Land, Transmitted to User Site								
J. Is the Project that Produces the Renewable Energy on Brownfields or Other Environmentally Compromised Land?	This data is needed to address Section 1(d) of the Presidential Memo which directs that agencies shall consider opportunities, to the extent economically feasible and technically practical, to install or contract for energy installed on current or formerly contaminated lands, landfills, and mine sites. The U.S. EPA's RE-Powering America's Land Initiative has preliminarily screened for renewable energy potential at over 450 federal facilities being cleaned up under federal cleanup authorities. The results of this screening, as well as other tools and resources related to siting renewable energy systems on contaminated lands, landfills and mine sites can be found at www.epa.gov/renewableenergyland/ .								

² http://www1.eere.energy.gov/femp/pdfs/epact05_fedrenewenergyguid.pdf

Column/Title	Instructions														
K. Ownership Status	<p>Select the ownership status of project and RECs from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="500 342 1336 464"> <tr> <td data-bbox="500 342 917 405">Agency Owns Energy and RECs from Project, if Electric</td> <td data-bbox="917 342 1336 405">Hosted Project (Green Energy)</td> </tr> <tr> <td data-bbox="500 405 917 464">RECs Transferred but Energy Used by Agency</td> <td data-bbox="917 405 1336 464">Hosted Project (RECs)</td> </tr> </table>	Agency Owns Energy and RECs from Project, if Electric	Hosted Project (Green Energy)	RECs Transferred but Energy Used by Agency	Hosted Project (RECs)										
Agency Owns Energy and RECs from Project, if Electric	Hosted Project (Green Energy)														
RECs Transferred but Energy Used by Agency	Hosted Project (RECs)														
L. % of RECs Retained	<p>Select from the drop-down list the portion of RECs associated with the system that are retained by the site or DOE. If all RECs are retained, select 100%. If no RECs are retained, select 0%. Otherwise, select the percent of RECs retained. Assume all RECs are retained unless you are aware that they have actively been sold. Note, per FEMP guidance and EPA's definition, RECs should include ALL environmental attributes.</p>														
M. On or Off Grid?	<p>From the drop-down list select the most appropriate description for the renewable energy produced.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="500 821 1336 915"> <tr> <td data-bbox="500 821 917 852">Electric On Grid</td> <td data-bbox="917 821 1336 852">Both, On Grid</td> </tr> <tr> <td data-bbox="500 852 917 884">Electric Off Grid</td> <td data-bbox="917 852 1336 884">Both, Off Grid</td> </tr> <tr> <td data-bbox="500 884 917 915">Non-Electric</td> <td data-bbox="917 884 1336 915"></td> </tr> </table>	Electric On Grid	Both, On Grid	Electric Off Grid	Both, Off Grid	Non-Electric									
Electric On Grid	Both, On Grid														
Electric Off Grid	Both, Off Grid														
Non-Electric															
N. Does the site own the T&D system that delivers the electricity?	<p>This information is for determining if the transmission and distribution (T&D) losses are Scope 1 or 3, if applicable. Select “Yes,” if the site or DOE owns ALL T&D between system and end-use.</p>														
O. Scope 1 or 2 system?	<p>Select “Scope 1” or “Scope 2” from the drop-down list. If the system is owned and controlled by the site or DOE, then its emissions are considered to be “direct” and “Scope 1.” Hence, if there are any biogenetic emissions, they will be added to the site’s Scope 1 emissions.</p>														
P. Generator Nameplate Capacity (MW)	<p>Provide the systems generator nameplate capacity.</p>														
Q. System Type/Category	<p>Select a renewable energy system type from the drop-down list. If you select "Wood and Wood Residuals" also enter fuel information in columns Z through AD. The information will be used to account for emissions from biomass combustion.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="500 1514 1385 1793"> <tr> <td data-bbox="500 1514 954 1577">Biogas (captured methane)</td> <td data-bbox="954 1514 1385 1577">Mechanical (i.e. direct water pumping)</td> </tr> <tr> <td data-bbox="500 1577 954 1608">Concentrating Solar Power (CSP)</td> <td data-bbox="954 1577 1385 1608">NA</td> </tr> <tr> <td data-bbox="500 1608 954 1640">Fuel Cells</td> <td data-bbox="954 1608 1385 1640">Ocean (Thermal, Wave, Tidal, other)</td> </tr> <tr> <td data-bbox="500 1640 954 1671">Geothermal</td> <td data-bbox="954 1640 1385 1671">Solar Photovoltaic</td> </tr> <tr> <td data-bbox="500 1671 954 1734">Ground Source Heat Pumps</td> <td data-bbox="954 1671 1385 1734">Solar Thermal (including water and space conditioning)</td> </tr> <tr> <td data-bbox="500 1734 954 1766">Hydrokinetic (non-ocean)</td> <td data-bbox="954 1734 1385 1766">Wind</td> </tr> <tr> <td data-bbox="500 1766 954 1793">Incremental Hydropower</td> <td data-bbox="954 1766 1385 1793">Wood and Wood Residuals</td> </tr> </table>	Biogas (captured methane)	Mechanical (i.e. direct water pumping)	Concentrating Solar Power (CSP)	NA	Fuel Cells	Ocean (Thermal, Wave, Tidal, other)	Geothermal	Solar Photovoltaic	Ground Source Heat Pumps	Solar Thermal (including water and space conditioning)	Hydrokinetic (non-ocean)	Wind	Incremental Hydropower	Wood and Wood Residuals
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Hydrokinetic (non-ocean)	Wind														
Incremental Hydropower	Wood and Wood Residuals														

Column/Title	Instructions										
R. Estimated Annual Renewable Electricity Output (MWh/Yr)	If the system produces electric energy, enter in megawatt hours the amount of renewable electricity output from each renewable energy system. For small systems the amount of electricity output by the system will be the same as the amount consumed. For large systems where the excess energy is sold, this amount should be greater than the amount of energy consumed.										
S. Estimated Annual Renewable Electricity Consumed (MWh/Yr)	If the system produces electric energy, enter in megawatt hours the amount of electricity consumed by the site from each renewable energy system. For small systems the amount of electricity output by the system will be the same as the amount consumed.										
W. Estimated Annual Renewable Thermal Output (10 ⁶ Btu/Yr)	If the system produces non-electric energy, enter in millions of Btu the amount of renewable thermal energy output from each renewable energy system. For small systems the amount of thermal energy output by the system will be the same as the amount consumed. For large systems where the excess energy is sold, this amount should be greater than the amount of energy consumed.										
X. Estimated Annual Renewable Thermal Consumed (10 ⁶ Btu/Yr)	If the system produces non-electric energy, enter in millions of Btu the amount of thermal energy consumed from each renewable energy system. For small systems the amount of thermal energy output by the system will be the same as the amount consumed.										
Y. Implementation Cost (\$)	Enter the system's implementation cost in whole dollars (not thousands or millions). Implementation cost consists of such costs as energy surveys, feasibility studies, engineering design, and construction including labor and materials. ³										
<i>For biomass systems:</i>											
Z. Principal Biomass Fuel Type	If applicable, select a principal biomass fuel type from the drop-down list. This is to determine the biogenic emission factor to be added to the Scope 1 or 2 emissions for biomass systems. <i>Drop-down list:</i> <table border="1" data-bbox="487 1260 1396 1428"> <tbody> <tr> <td>Agricultural byproducts</td> <td>MSW, Input BTUs</td> </tr> <tr> <td>Biodiesel (100%)</td> <td>Rendered animal fat</td> </tr> <tr> <td>Biogas (captured methane)</td> <td>Solid byproducts</td> </tr> <tr> <td>Ethanol (100%)</td> <td>Vegetable oil</td> </tr> <tr> <td>MSW for Purchased Steam, Output BTUs</td> <td>Wood and wood residuals</td> </tr> </tbody> </table>	Agricultural byproducts	MSW, Input BTUs	Biodiesel (100%)	Rendered animal fat	Biogas (captured methane)	Solid byproducts	Ethanol (100%)	Vegetable oil	MSW for Purchased Steam, Output BTUs	Wood and wood residuals
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MSW for Purchased Steam, Output BTUs	Wood and wood residuals										
AA. Principal Biomass Fuel Use (10 ⁶ Btu /Yr)	Provide the amount of principal biomass fuel used in millions of Btu. Biomass use is multiplied by the emission factor for the fuel to derive emissions from its combustion. For blended fuels like E-85 enter the type of non-biomass fuel used in the blend and the amount of Btus in Columns X and Y, respectively.										
AB. Secondary/Blend Fuel Type	If applicable, select a secondary biomass fuel type from the drop-down list. The secondary or blended fuel can come from fossil or renewable resources. The type of fuel determines the emission factors for the secondary fuel used in a blend or co-firing, for example the 15% gasoline in E-85.										

³ FEMP - http://www1.eere.energy.gov/femp/news/printable_versions/news_detail.html?news_id=7308

Column/Title	Instructions																																																								
	<p><i>Drop-down list:</i></p> <table border="1"> <tr><td>N/A</td><td>Heavy gas oils</td></tr> <tr><td>Agricultural byproducts</td><td>Isobutene</td></tr> <tr><td>Asphalt and road oil</td><td>Isobutylene</td></tr> <tr><td>Aviation gasoline</td><td>Kerosene</td></tr> <tr><td>Biodiesel (100%)</td><td>Kerosene-type jet fuel</td></tr> <tr><td>Biogas (captured methane)</td><td>Liquefied petroleum gases (LPG)</td></tr> <tr><td>Blast furnace gas</td><td>Lubricants</td></tr> <tr><td>Butane</td><td>Motor gasoline</td></tr> <tr><td>Butylene</td><td>MSW for Purchased Steam, Output BTUs</td></tr> <tr><td>Coal Anthracite</td><td>MSW, Input BTUs</td></tr> <tr><td>Coal Bituminous</td><td>Naphtha (<401 degrees F)</td></tr> <tr><td>Coal Coke</td><td>Natural Gas Pipeline (Weighted U.S. Average)</td></tr> <tr><td>Coal Lignite</td><td>Natural gasoline</td></tr> <tr><td>Coal Mixed (commercial sector)</td><td>Other oil (>401 degrees F)</td></tr> <tr><td>Coal Mixed (electric power sector)</td><td>Peat</td></tr> <tr><td>Coal Mixed (industrial coking)</td><td>Pentanes plus</td></tr> <tr><td>Coal Mixed (industrial sector)</td><td>Petrochemical feedstocks</td></tr> <tr><td>Coal Subbituminous</td><td>Petroleum coke</td></tr> <tr><td>Coke oven gas</td><td>Propane</td></tr> <tr><td>Crude oil</td><td>Propylene</td></tr> <tr><td>Distillate Fuel Oil No. 1</td><td>Rendered animal fat</td></tr> <tr><td>Distillate Fuel Oil No. 2</td><td>Solid byproducts</td></tr> <tr><td>Distillate Fuel Oil No. 4</td><td>Special naphtha</td></tr> <tr><td>Distillate Fuel Oil No. 5</td><td>Still gas</td></tr> <tr><td>Distillate Fuel Oil No. 6</td><td>Tires</td></tr> <tr><td>Ethane</td><td>Unfinished oils</td></tr> <tr><td>Ethanol (100%)</td><td>Vegetable oil</td></tr> <tr><td>Ethylene</td><td>Wood and wood residuals</td></tr> </table>	N/A	Heavy gas oils	Agricultural byproducts	Isobutene	Asphalt and road oil	Isobutylene	Aviation gasoline	Kerosene	Biodiesel (100%)	Kerosene-type jet fuel	Biogas (captured methane)	Liquefied petroleum gases (LPG)	Blast furnace gas	Lubricants	Butane	Motor gasoline	Butylene	MSW for Purchased Steam, Output BTUs	Coal Anthracite	MSW, Input BTUs	Coal Bituminous	Naphtha (<401 degrees F)	Coal Coke	Natural Gas Pipeline (Weighted U.S. Average)	Coal Lignite	Natural gasoline	Coal Mixed (commercial sector)	Other oil (>401 degrees F)	Coal Mixed (electric power sector)	Peat	Coal Mixed (industrial coking)	Pentanes plus	Coal Mixed (industrial sector)	Petrochemical feedstocks	Coal Subbituminous	Petroleum coke	Coke oven gas	Propane	Crude oil	Propylene	Distillate Fuel Oil No. 1	Rendered animal fat	Distillate Fuel Oil No. 2	Solid byproducts	Distillate Fuel Oil No. 4	Special naphtha	Distillate Fuel Oil No. 5	Still gas	Distillate Fuel Oil No. 6	Tires	Ethane	Unfinished oils	Ethanol (100%)	Vegetable oil	Ethylene	Wood and wood residuals
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AC. Secondary/Blend Fuel Use (10 ⁶ Btu /Yr)	Provide the amount of secondary/blend fuel used in millions of Btu.																																																								
AD. Fuel Costs (\$)	Provide the total fuel cost for the principle and secondary/blend fuel used for the biomass system in whole dollars for this fiscal year.																																																								
AE. Additional Information	Provide any additional pertinent information on the renewable system not captured in prior columns.																																																								
AF. SPO Notes	This column contains SPO notes based on identified potential data errors. Please review and update data, if requested.																																																								

3.2b Purchased Renewables

In order to receive credit for progress-to-date toward the renewable energy goals, sites must provide information on purchased renewable energy and renewable energy certificates. Information in this worksheet will be used to supplement a site's progress towards the 7.5% renewable energy goal.

FEMP has developed two guidance documents which outline the options for sites to generate renewable energy or purchase renewable energy or renewable energy certificates (RECs). Please refer to these documents for any specific questions related to renewable energy:

- *Guide to Purchasing Green Power*
- *Renewable Energy Requirement Guidance for EPC Act 2005 and Executive Order 13423*

Column/Title	Instructions																
F. Type of Renewable Energy Purchased	<p>Select from the drop-down list the type of renewable energy purchased. Note green energy is the actual energy including associated RECs. If the RECs are not included in the purchase, then credit cannot be claimed for purchased renewable energy. The “Renewable Energy Credit” (REC) option is intended to cover only unbundled REC purchases, with no associated electricity purchase.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="467 762 1373 888"> <tr> <td data-bbox="467 762 943 825">Purchased Electric Renewable Energy (Bundled)</td> <td data-bbox="948 762 1373 825">Renewable Energy Credits</td> </tr> <tr> <td data-bbox="467 831 943 888">Purchased Thermal/Non-Electric Renewable Energy</td> <td data-bbox="948 831 1373 888"></td> </tr> </table>	Purchased Electric Renewable Energy (Bundled)	Renewable Energy Credits	Purchased Thermal/Non-Electric Renewable Energy													
Purchased Electric Renewable Energy (Bundled)	Renewable Energy Credits																
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G. Source Type/Category	<p>Select a renewable energy system type from the drop-down list. If you select "Biomass" (i.e., biomass, MSW, etc.) also enter fuel information in columns Q through U. The information will be used to account for emissions from biomass combustion.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="467 1094 1360 1409"> <tr> <td data-bbox="467 1094 927 1157">Biogas (captured methane)</td> <td data-bbox="932 1094 1360 1157">Mechanical (i.e. direct water pumping)</td> </tr> <tr> <td data-bbox="467 1163 927 1184">Concentrating Solar Power (CSP)</td> <td data-bbox="932 1163 1360 1184">NA</td> </tr> <tr> <td data-bbox="467 1190 927 1211">Fuel Cells</td> <td data-bbox="932 1190 1360 1211">Ocean (Thermal, Wave, Tidal, other)</td> </tr> <tr> <td data-bbox="467 1218 927 1239">Geothermal</td> <td data-bbox="932 1218 1360 1239">Solar Photovoltaic</td> </tr> <tr> <td data-bbox="467 1245 927 1266">Ground Source Heat Pumps</td> <td data-bbox="932 1245 1360 1308">Solar Thermal (including water and space conditioning)</td> </tr> <tr> <td data-bbox="467 1314 927 1335">Hydrokinetic (non-ocean)</td> <td data-bbox="932 1314 1360 1335">Wind</td> </tr> <tr> <td data-bbox="467 1341 927 1362">Incremental Hydropower</td> <td data-bbox="932 1341 1360 1362">Wood and Wood Residuals</td> </tr> <tr> <td data-bbox="467 1369 927 1390">Blend (RECs Only)</td> <td data-bbox="932 1369 1360 1390"></td> </tr> </table>	Biogas (captured methane)	Mechanical (i.e. direct water pumping)	Concentrating Solar Power (CSP)	NA	Fuel Cells	Ocean (Thermal, Wave, Tidal, other)	Geothermal	Solar Photovoltaic	Ground Source Heat Pumps	Solar Thermal (including water and space conditioning)	Hydrokinetic (non-ocean)	Wind	Incremental Hydropower	Wood and Wood Residuals	Blend (RECs Only)	
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Blend (RECs Only)																	
H. Source Location (Zip Code)	Provide the zip code where the system producing the energy is located.																
I. Is the Project that Produces the Renewable Energy on Brownfields or Other Environmentally Compromised Land?	<p>This data is needed to address Section 1(d) of the Presidential Memo which directs that agencies shall consider opportunities, to the extent economically feasible and technically practical, to install or contract for energy installed on current or formerly contaminated lands, landfills, and mine sites. The U.S. EPA’s RE-Powering America’s Land Initiative has preliminarily screened for renewable energy potential at over 450 federal facilities being cleaned up under federal cleanup authorities. The results of this screening, as well as other tools and resources related to siting renewable energy systems on contaminated lands, landfills and mine sites can be found at www.epa.gov/renewableenergyland/.</p>																

Column/Title	Instructions								
J. Service Year (YYYY)	Provide the year when the source came into service, even if it was prior to January 1, 1999. Information will be used to determine whether renewable energy meets the requirement that half of the renewable energy agencies use come from new resources placed in service after January 1, 1999.								
K. Purchased Year (FY)	Provide the fiscal year for which the renewable energy was purchased. This information is for completing DOE's Annual Energy Report.								
L. REC Supplier/Contract With...	Select the name of the REC Supplier or name of the entity with which the contract is with from the dropdown list. If the name is not represented, select "Other" and provide another name. <i>Drop-down list:</i> <table border="1" data-bbox="467 636 1360 737"> <tr> <td>BPA</td> <td>GSA</td> </tr> <tr> <td>DLA/DESC</td> <td>TVA</td> </tr> <tr> <td>WAPA</td> <td>Other (Provide...)</td> </tr> </table>	BPA	GSA	DLA/DESC	TVA	WAPA	Other (Provide...)		
BPA	GSA								
DLA/DESC	TVA								
WAPA	Other (Provide...)								
M. RECs purchased on multi-year contract?	Select "Yes" from the dropdown if the RECs purchased are on a multi-year contract or "No" if not.								
N. Contract Begins - Month	Select the month in which the contract began from the dropdown.								
O. Contract Begins - Year	Select the year in which the contract began from the dropdown.								
P. Contract Ends - Month	Select the month in which the contract ends from the dropdown.								
Q. Contract Ends - Year	Select the year in which the contract ends from the dropdown.								
R. End Use Category	Assign an end use category in regards to the energy intensity goal. If the energy purchases if for an excluded facility, select "Excluded." If the purchased energy if for a facility that is included in your energy intensity goal performance or you're not sure, select "Goal Subject."								
S. Siting Status - On Federal or Indian Land?	Select the siting and transmission of the system from the drop-down list. Electric renewable energy produced and consumed on Federal or Indian land qualifies for a bonus. <i>Drop-down list:</i> <table border="1" data-bbox="467 1446 1312 1667"> <tr> <td>On Federal Land, On User Site</td> <td>On Indian Land, Transmitted to Site</td> </tr> <tr> <td>On Federal Land, Transmitted to Site</td> <td>On Indian Land, Not Transmitted to Site</td> </tr> <tr> <td>On Federal Land, Not Transmitted to Site</td> <td>NOT on Federal or Indian Land, Adjacent to User Site</td> </tr> <tr> <td>On Indian Land, On User Site</td> <td>NOT on Federal or Indian Land, Transmitted to User Site</td> </tr> </table>	On Federal Land, On User Site	On Indian Land, Transmitted to Site	On Federal Land, Transmitted to Site	On Indian Land, Not Transmitted to Site	On Federal Land, Not Transmitted to Site	NOT on Federal or Indian Land, Adjacent to User Site	On Indian Land, On User Site	NOT on Federal or Indian Land, Transmitted to User Site
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On Indian Land, On User Site	NOT on Federal or Indian Land, Transmitted to User Site								
T. Total Renewable Electricity Purchased (MWh/Yr)	Enter in megawatt hours per year the amount of renewable electricity purchased by the site from each renewable energy type.								

Column/Title	Instructions
Y. Total Renewable Thermal Energy Purchased (10 ⁶ /Yr)	Enter in millions of Btu per year the amount of thermal energy purchased from each renewable energy type.
Z. Annual Cost (\$)	Provide the annual cost of the renewable energy or RECs purchased for each type of purchased renewable energy in whole dollars (not thousands or millions). The cost of RECs should be for the renewable attributes only, while the cost of purchased renewable energy should be for both the attributes and energy. The reported cost should correspond with the amount of renewable energy used during the fiscal year, regardless of when the purchase occurred.
AB. Additional Information	Provide any additional pertinent information on the renewable purchase not captured in prior columns.
AC. SPO Notes	This column contains SPO notes based on identified potential data errors. Please review and update data, if requested.

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix B*.

3.3a Active ECM & RE Measures

The intent of this worksheet is to capture energy and water management measures, including renewable energy (RE) systems and non-capital measures, to help project future energy savings potential and funding needs. This table is pre-populated with a list of measures that originates from information provided by sites in June 2014 while complying with reporting requirements for EISA Section 432. Update as need be. Note cancelled ECM and RE measures have been moved to tab 3.3b Cancel ECM & RE Measures and require no action. Please edit and complete the new fields in the pre-populated list as needed. Additionally, information provided in this worksheet will be used for updating the EISA Section 432 Compliance Tracking System (CTS).

Column/Title	Instructions
<i>Measure/Project Description:</i>	
D. HQ Measure #	Headquarters (HQ) assigned measure number. For new measures, either leave the field blank or create a new number using the format of XXXX-0000-0000 where the first set of XXXX are landlord program acronym, 0000 is the site number, and 0000 is the next number in the series. If splitting out a measure into ECMs by building level or type, keep the HQ assigned number and add an alphabet to the end for each such new row (e.g. a, b, c). Please do not merge ECMs into one row, instead bundle using the same HQ number with different alphabets at the end.
E. If Covered, EISA S432 Reporting Year (YYYY)	From the drop-down list, select reporting year or "Not Covered." No action required for historical years.

Column/Title	Instructions																
F. Has this measure been included in an official DOE budget requests? If yes, provide Project/Measure #	If the measure was included in an official DOE budget request, such as the IFI Crosscut, provide the project/measure # by which this measure was identified in the budget request. If not, then enter "No" or leave blank.																
G. Site Project #	If applicable, provide a project number for each measure. For ease of reference, sites are advised to assign the same project number as the one used for the site's own tracking system. Moreover, this column can be used to identify bundled projects. Project bundling is recommended for small measures which alone are not financially attractive.																
H. Conservation Measure(s) Status	<p>This column must be updated. The information is used for identifying which ECMs must be uploaded into the EISA Sect 432 CTS and performance projections.</p> <p>Select the most appropriate status for each measure from the drop-down list. Select "Cancelled" for measures which the site is not moving forward with and provide a short reason in the "Additional Information" column; do not delete the measure row. This is a running list of measures; therefore, over time as projects are implemented and become operational their status should be updated and changed to "Operational." Measures with a status of "Identified" or "Verified" will be considered currently unfunded, while measures with a status of "Awarded/Approved" or "Operational" will be considered as funded. Funded is defined for this purpose as having funding readily available to begin implementation of the measure.</p> <ul style="list-style-type: none"> - Identified: Potential conservation measure(s) identified through an audit, evaluation, or by site energy manager(s) for which estimates are very rough and a formal proposal for the implementation of the measure has not been put forward. - Verified: The identified conservation measure's sustainability metrics and costs have been checked for accuracy and confirmed. - Awarded/Approved: Contract awarded/funding approved and/or construction has begun. - Operational: Construction complete and system is operating. - Cancelled: Project terminated or dropped. 																
I. Conservation Measure(s) Type	<p>Select a description that best describes the conservation measure(s) type from the drop-down list, whose choices are provided below. If the measure type is not listed, select "Other" and ensure a measure description is provided in the adjacent column.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="467 1619 1385 1900"> <tbody> <tr> <td>Advanced Metering Systems</td> <td>Fuel Cell</td> </tr> <tr> <td>Appliance/Plug-load reductions</td> <td>Geothermal</td> </tr> <tr> <td>Audit/Evaluation -- Energy*</td> <td>Ground Source Heat Pumps</td> </tr> <tr> <td>Audit/Evaluation -- Water*</td> <td>Heating, Ventilating, and Air Conditioning (HVAC)</td> </tr> <tr> <td>Behavioral Modification</td> <td>Hydrokinetic (non-ocean)</td> </tr> <tr> <td>Biomass</td> <td>Incremental Hydropower</td> </tr> <tr> <td>Boiler Plant Improvements</td> <td>Landfill Gas (MSW)</td> </tr> <tr> <td>Building Automation Systems/EMCS</td> <td>Lighting Improvements</td> </tr> </tbody> </table>	Advanced Metering Systems	Fuel Cell	Appliance/Plug-load reductions	Geothermal	Audit/Evaluation -- Energy*	Ground Source Heat Pumps	Audit/Evaluation -- Water*	Heating, Ventilating, and Air Conditioning (HVAC)	Behavioral Modification	Hydrokinetic (non-ocean)	Biomass	Incremental Hydropower	Boiler Plant Improvements	Landfill Gas (MSW)	Building Automation Systems/EMCS	Lighting Improvements
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Column/Title	Instructions	
	Building Envelope Modifications	Mechanical (i.e. direct water pumping)
	Chilled Water/Hot Water/Steam Distribution Systems	Municipal Solid Waste
	Chiller Plant Improvements	Non-capital measure
	Commissioning, Re/Retro-commissioning*	Ocean (Thermal, Wave, Tidal, other)
	Computer System Improvements	Other
	Concentrating Solar Power (CSP)	Photovoltaic
	Conventional Hydropower	Rate Adjustments
	Data Center Efficiency	Refrigeration
	Day lighting	Renewable Energy Assessment
	Distributed Generation	Solar Thermal (including water and space conditioning)
	Electric Motors and Drives	Standard Metering Systems
	Electrical Peak Shaving/Load Shifting	Water and Sewer Conservation Systems
	Energy Related Process Improvements	Wind
	Energy/Utility Distribution Systems	Windows
	* Note: The listing and identification of these measures/efforts are applicable to EISA Section 432 and illustrate site efforts to meet the EISA requirements.	
J. Conservation Measure(s) Name or Description	Provide a short description of the conservation measure. The description should include details not captured by the project “type.”	
K. Measure(s) Location (Zip Code)	Provide the zip code for the location where the measure will be implemented.	
L. Is this a multiple or single facility ECM?	Indicate if the ECM is being implemented across multiple facilities or a single facility.	
M. Does the measure contribute to the reduction of deferred maintenance?	If this measure reduces the site’s deferred maintenance, select “Yes” from the drop-down list. Otherwise, select “No.” Note: This is useful in prioritization of projects that not only meet goal requirement but also help reduce deferred maintenance. Also, this will identify instances that sites are going beyond traditional maintenance for meeting requirements.	
N. Is this effort/measure beyond typical O&M improvement to meet a goal?	Is this effort/ measure beyond typical maintenance and improvement to meet a goal? If so, select “Yes” from the drop-down list. Otherwise, select “No.”	

Column/Title	Instructions																				
<i>Funding Overview:</i>																					
O. Funding Source/Type (Actual or Potential)	<p>Select an appropriate funding source from the drop-down list. If a source has not yet been identified, select “Unknown.” This applies both to projects that are currently funded and to those projects where money is not yet readily available, but funding is being pursued.</p> <p><i>Drop-down list:</i></p> <table border="1"> <thead> <tr> <th><u>Appropriations</u></th> <th><u>Third-party financing</u></th> </tr> </thead> <tbody> <tr> <td>Line Item</td> <td>ESPC</td> </tr> <tr> <td>General Plant Projects (GPP)</td> <td>ESPC - ENABLE</td> </tr> <tr> <td>Institutional General Plant Projects (IGPP)</td> <td>ESPC - PPA</td> </tr> <tr> <td>Maintenance and Repair (M&R) Direct</td> <td>EUL</td> </tr> <tr> <td>M&R Indirect</td> <td>PPA</td> </tr> <tr> <td>Disposition</td> <td>UESC</td> </tr> <tr> <td>ARRA</td> <td><u>Other</u></td> </tr> <tr> <td></td> <td>Other</td> </tr> <tr> <td></td> <td>Unknown</td> </tr> </tbody> </table>	<u>Appropriations</u>	<u>Third-party financing</u>	Line Item	ESPC	General Plant Projects (GPP)	ESPC - ENABLE	Institutional General Plant Projects (IGPP)	ESPC - PPA	Maintenance and Repair (M&R) Direct	EUL	M&R Indirect	PPA	Disposition	UESC	ARRA	<u>Other</u>		Other		Unknown
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	Other																				
	Unknown																				
P. Starting Year of Measure Implementation (Anticipated or Actual - YYYY)	Provide the anticipated or actual starting year for the proposed conservation measure(s).																				
Q. Completion/Operational Year of Measure (Anticipated or Actual -- YYYY)	Provide the anticipated or actual completion (operational) year for the proposed conservation measure(s). If a measure listed last year was completed this year and is currently in operation, enter the year of completion and ensure that the status of the project is listed as “Operational.”																				
R. Estimated Service Life	Provide the expected service life of the measure. This information is needed for the NPV analysis.																				
S. Estimated Implementation Cost (\$)	Enter in whole dollars (not thousands or millions) the estimated cost for implementing the conservation measure(s). Implementation cost consists of such costs as energy surveys, feasibility studies, engineering design, and construction including labor and materials. ⁴ The implementation cost should not include the cost of financing the projects over time if using an energy savings performance contract or utility energy service contract.																				
<i>Measurement and Verification (M&V)</i>																					
T. Are there plans to measure and verify the performance of this measure?	<p>EISA Section 432 requires follow up on implemented measures for measurement and verification (M&V) of performance. DOE encourages M&V of implemented measure and projects. However, it is understood that it may not be cost-effective to perform continuous M&V on all measures. As such, sites should update this column to identify projects where continuous M&V is cost-effective and will be performed as part of their EISA evaluations.</p> <p>Note: All ESPC funded projects must have M&V. Sites are greatly</p>																				

⁴ FEMP - http://www1.eere.energy.gov/femp/news/printable_versions/news_detail.html?news_id=7308

Column/Title	Instructions
	encouraged to follow up on all other large and/or alternatively financed projects.
U-V. If M&V has been conducted, provide type and date.	As part of EISA Section 432's follow-up process, savings need to be measured and verified. Please provide the type of M&V (see guidance at http://www1.eere.energy.gov/femp/pdfs/mv_guidelines.pdf), the date M&V was completed and ensure savings information has been updated.
W. Were the findings from the M&V consistent with projections?	Select from the drop-down list based on results from the M&V compared to the estimates previously entered. If necessary, please updated estimate values with M&V findings.
<i>Source Savings/Renewable Energy Output</i>	
X. Is this an energy saving measure or renewable energy system?	To reduce the size of the measures tab, this column was added and the renewable energy fuel switching columns removed. From the drop-down list select if this is a measure that saves energy or is a renewable system that switches fuel consumption. Then provide the type of fuel saved or avoided in columns X to AE.
Y-AF. Estimated Percent of Energy Saved per each Energy Type	Provide estimated fuel saved or avoided for each energy type (electricity - MWh, fuel oil - 10 ³ Gal, natural gas - 10 ³ Cf, LPG/propane - 10 ³ Gal, coal - short tons, steam - 10 ⁹ BBtu, other - 10 ⁹ Btu), as applicable. If there are no savings associated with the measure enter "0." If estimated savings are unknown at this time enter "TBD." If there "other" savings, provide information on what "other" is.
AG. Estimated Annual Potable Water Savings (10 ³ Gal/Yr)	Enter in thousands of gallons the estimated annual potable water savings expected from the water conservation measure(s). If there are no savings associated with the measure enter "0." If estimated savings are unknown at this time enter "TBD."
AH. Estimated Annual ILA/Non-Potable Freshwater Savings (10 ³ Gal/Yr)	Enter in thousands of gallons the estimated annual Industrial, Landscaping, and Agricultural (ILA) non-potable freshwater savings expected from the water conservation measure(s). If there are no savings associated with the measure enter "0." If estimated savings are unknown at this time enter "TBD."
AI. Estimated Annual Renewable Electricity Output (MWh/Yr)	Enter in megawatt-hours the estimated annual renewable electric output expected from the renewable energy system(s).
AJ. Estimated Annual Renewable Thermal Output (10 ⁹ Btu/Yr)	Enter in billions of Btu the estimated annual renewable thermal output expected from the renewable energy system(s).
<i>Cost Savings:</i>	
AK. Estimated Annual Energy Cost Savings (\$/Yr)	Enter in whole dollars (not thousands or millions) the estimated annual energy cost savings expected from the energy conservation measure(s). If there are no savings associated with the measure enter "0." If estimated savings are unknown at this time enter "TBD."

Column/Title	Instructions
AL. Estimated Annual Water Cost Savings (\$/Yr)	Enter in whole dollars (not thousands or millions) the estimated annual water cost savings expected from the water conservation measure(s). If there are no savings associated with the measure enter "0." If estimated savings are unknown at this time enter "TBD."
AM. Estimated Annual Cost Savings (\$/Yr) from switching to a renewable energy source	If applicable, provide cost savings resulting from the renewable energy measure in whole dollars (not thousands or millions).
AN. Estimated Annual Ancillary Cost Savings (\$/Yr)	Enter in whole dollars (not thousands or millions) the estimated annual other ancillary cost savings expected from each identified efficiency measures. These may include savings due to reduced maintenance, operational costs, repairs, etc. If there are no savings associated with the measure enter "0." If estimated savings are unknown at this time enter "TBD."
<i>Notes:</i>	
AO. Site Priority	Prioritize measures per site mission, need, preference, etc.
AP. Additional Information	Provide any additional pertinent information on the measure(s) not captured in prior columns.
AQ. Bldg # (Optional)	Optional field for tracking building number.
AR. SPO Notes	This column contains SPO notes based on identified potential data errors. Please review and update data, if requested.

3.4 Building Inventory Changes

Sites should complete the CEDR worksheet, “Bldg Inventory Changes” to show compliance on EISA Section 438 storm water management, EAct 2005 30 percent better than ASHRAE, and the May 2012 OMB Memorandum to dispose of excess inventory.⁵

For storm water requirements in EISA Section 438, sites should indicate whether projects over 5,000 square feet “use site planning, design, construction, and maintenance strategies for the property 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,” as provided by EPA’s storm water management guidance. Currently, there is no requirement delineating a Critical Decision (CD) threshold to meet this statute. Sites are encouraged to focus on projects that are below the CD-2 stage until formal guidance is issued.

Per Section 109 of EAct 2005, all new federal buildings in design (i.e., CD-1 or lower) as of October 1, 2006 shall be designed such that their energy consumption is 30 percent below the ASHRAE standard.

⁵ <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-12.pdf>

The legal definition of public buildings states that certain types of installations are exempt from Federal status, and therefore do not require reporting. The definition of ‘public buildings’ can be found under 40 U.S.C. 3301(5), which includes notable exemptions for process-type facilities that are directly applicable to DOE.⁶ Per the code, a public building “...means a building, whether for single or multitenant occupancy, and its grounds, approaches, and appurtenances, which is generally suitable for use as office or storage space or both by one or more federal agencies or mixed-ownership Government corporations,” which can include many types of facilities, including warehouses, federal office buildings, courthouses, or even telecommuting centers.⁷ However, some notable exemptions that impact sustainability reporting are also listed in the code. Buildings that are defined as “reclamation or power projects, for chemical or manufacturing or development projects, or for nuclear production, research or development projects” are not required to report data in Tab 3.4.

This worksheet is pre-populated with a list of new construction projects that were received in last year’s CEDR. Sites should update this worksheet with information on new building construction, major renovations, replacements, and buildings that are to be disposed of in the near future. Disposition information is currently collected in FIMS, and to reduce redundancies it is recommended that only dispositions with set dates and funding be reported. The disposition information will be used for addressing the OMB memo and projections. In addition to being able to track compliance with the above requirements, this worksheet also enables estimates of anticipated future utility consumption, especially if the consumption levels will significantly impact DOE’s efforts to comply with sustainability requirements.

The following instructions describe how individual fields in the worksheet should be completed.

Column/Title	Instructions
D. Project ID (Optional)	Sites may optionally fill in this field with any internal tracking numbers.
E. Building/Project Name	Enter the name of the new construction building.
F. Location (Zip Code)	Provide the zip code where the building or project will be located.
G. Planned or Actual CD-2 date (MM/YY)	Enter the anticipated or actual month and year when the project was/will be approved for CD-2.
H. Current CD Status	Enter the project’s current CD status.
I. HQ Approved Change Y/N	Select “Yes” or “No” from the dropdown.
J. Total Project Cost (\$M)	Enter the project’s anticipated or actual cost in millions of dollars.
K. Number/Type of Facilities	Enter the project’s number of buildings and a brief description on the type of facility.

⁶ <http://www.gpo.gov/fdsys/granule/USCODE-2011-title40/USCODE-2011-title40-subtitleII-partA-chap33-sec3301/content-detail.html>

⁷ <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title40/html/USCODE-2011-title40-subtitleII-partA-chap33-sec3301.htm>

Column/Title	Instructions										
L. Facility Changes Status	<p>From the drop-down list select the most appropriate status description for this facility.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tr> <td>Addition</td> <td>Renovation</td> </tr> <tr> <td>Demolition</td> <td>Replacement</td> </tr> <tr> <td>New</td> <td>Not Applicable</td> </tr> </table>	Addition	Renovation	Demolition	Replacement	New	Not Applicable				
Addition	Renovation										
Demolition	Replacement										
New	Not Applicable										
M. Anticipated Electricity Usage (kWh/Yr)	Enter the project's expected annual electricity use in terms of kilowatt-hours per year. If not known, enter "TBD." If no consumption, enter "0."										
N. Anticipated Natural Gas Usage (10 ³ cubic feet/Yr)	Enter the project's expected annual natural gas use in terms of thousands of cubic feet per year. If not known, enter "TBD." If no consumption, enter "0."										
O. Anticipated Potable Water Usage (10 ³ Gal/Yr)	Enter the project's expected annual potable water usage in terms of thousands of gallons per year. If not known, enter "TBD." If no consumption, enter "0."										
P. Anticipated ILA Water Usage (10 ³ Gal/Yr)	Enter the project's expected annual non-potable freshwater water usage in terms of thousands of gallons per year. If not known, enter "TBD." If no consumption, enter "0."										
Q. Excluded from Energy Intensity	Select "Yes" from the drop-down list, if the facility will be excluded from the energy intensity goal. Otherwise, select "No."										
R. Expected Building Occupancy or Removal Year (YYYY)	Enter the expected occupancy year of the new construction project or expected removal year of the asset.										
S. Anticipated Square Footage	Enter the project's expected total square footage in whole numbers (not thousands).										
T. If > 5,000 sq ft, will it maintain or restore pre-development hydrology?	For compliance with Section 438 of EISA, new construction — to the maximum extent technically feasible — must have storm water controls as described in EPA's guidance document, <i>Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act</i> .										
U. What GP equivalency will the building achieve?	<p>Select an equivalent Guiding Principles compliance level from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tr> <td>LEED® Certified</td> <td>Guiding Principles</td> </tr> <tr> <td>LEED® Silver</td> <td>Green Globes</td> </tr> <tr> <td>LEED® Gold</td> <td>Living Status</td> </tr> <tr> <td>LEED® Platinum</td> <td>Not Applicable</td> </tr> <tr> <td></td> <td>None of the Above</td> </tr> </table>	LEED® Certified	Guiding Principles	LEED® Silver	Green Globes	LEED® Gold	Living Status	LEED® Platinum	Not Applicable		None of the Above
LEED® Certified	Guiding Principles										
LEED® Silver	Green Globes										
LEED® Gold	Living Status										
LEED® Platinum	Not Applicable										
	None of the Above										
V. Estimated percentage below ASHRAE Std 90.1 in terms of energy use	Enter the anticipated percent below ASHRAE Std 90.1.										
W. If not at least 30% below ASHRAE Std 90.1, will design achieve maximum level of energy efficiency that is life-	Choose either "Yes" or "No."										

Column/Title	Instructions
cycle cost-effective?	
X. In terms of energy use, percentage below ANSI/ASHRAE/IESNA Standard 90.1 achieved	For new building construction projects (completions only): enter the percent below ASHRAE Std 90.1 that was actually realized.
Y. Additional Information	Provide any additional pertinent information on inventory changes not captured in prior columns.
Z. SPO Notes	This column contains SPO notes based on identified potential data errors. Please review and update data, if requested.

4.1. Source Energy Savings Credit

This worksheet is used to provide an offset to an apparent increase in energy usage when a cost-effective project results in the increase of site-delivered energy but a decrease in source (or primary) energy measured at the source of generation. The calculated offset from such projects must be entered into Tab 3.1 before the savings can be realized for reporting purposes. Sites are requested to enter savings in the tables provided, if applicable. For additional information, refer to *Guidance Providing Credit Toward Energy Efficiency Goals for Cost Effective Projects Where Source Energy Use Declines But Site Energy Use Increases*.

5.1 Data Centers

This worksheet is a compilation of results from past DOE surveys on data centers and last year's CEDR. Complete the worksheet by:

1. Verifying and updating the site's legacy data center information.
2. Adding any data centers or server rooms that are missing in separate rows. OMB defines a data center as; *"a closet, room, floor or building for the storage, management, and dissemination of data and information. Such a repository houses computer systems and associated components, such as database, application, and storage systems and data stores. A data center generally includes redundant or backup power supplies, redundant data communications connections, environmental controls (air conditioning, fire suppression) and special security devices housed in leased (including by cloud providers), owned, collocated, or stand-alone facilities."*
3. Regardless of security classification, all DOE data centers are required to meet the SSPP performance goals. However, only unclassified data centers are required to be reported in the CEDR inventory.
4. If a DOEGRIT assessment has been completed for a data center for the current year, it is not necessary to complete CEDR record for that data center.

The SSPP requires DOE sites to conduct CORE Data Center assessments using the DOEGRIT tool (<https://doegrit.energy.gov>). This tool is intended to help DOE data center owners identify opportunities and best practices in optimizing data center energy efficiency. DOEGRIT is built

upon the FEMP DOE Data Center Energy Profiler Software Tool Suite (DC Pro) and has been tailored to meet the reporting requirements of the SSPP and Federal Data Center Consolidation Initiative (FDCCI). In addition to identifying savings opportunities in data centers, DOEGRIT is a reporting tool, capturing similar data that sites enter in CEDR Tab 5.1.

Sites are encouraged to use DOEGRIT to capture the added benefit of the tools that can quickly document site and data center baselines, provide recommendations for sustainability projects, assess best practice implementations and support SSP development. Instructions can be found at <https://doegrit.energy.gov/app/UserGuide.pdf>.

For this year, sites are being asked to categorize their data centers as CORE or Non-CORE. The definition of a “CORE” data center is as follows:

CORE Data Centers are fundamental components of Department's/Agency's post consolidation environment. CORE Data Centers will serve as primary consolidation points for Site IT infrastructure allowing the Department/Agency to achieve economies of scale. CORE Data Centers have sufficient power and cooling to support anticipated operations, appropriate redundancy to meet availability requirements, adequate space for anticipated growth, appropriate level of physical security and comply with Federal and industry best practices for energy efficiency and operations.

CORE Data Centers are expected to have (or can be optimized to) a PUE of 1.4 or less. In addition, CORE data centers are expected to meet (with optimization) the following Key Performance Indicators:

1. Virtualized Operating Systems %: Number of virtualized operating systems / total operating systems [*Target ≥ 10% (Source: OMB / VM Ware)*]
2. Virtualization Density: Virtual operating systems / virtual hosts (recalibrated to a %) [*Target ≥ 75% (Source : OMB / Gartner)*]
3. Virtual Hosts %: Virtual hosts / total servers [*Target ≥ 50% (Source: OMB)*]
4. Server to Full Time Equivalent (FTE) Ratio: Total servers / total data center personnel (federal employees and contractors) [*Target ≥ 25 : 1(Source: OMB / Gartner)*]
5. Facility Utilization %: (Total rack count * 30 square feet) / (total IT area (square feet) reported) [*Target ≥ 80% (Source: OMB / Industry)*]
6. Storage Utilization %: Total storage used / total storage [*Target ≥ 80% (Source: OMB / Gartner)*]

Column/Title	Instructions
D. GOCO/FED	Indicate if this is a Federal operated Data Center (includes direct support contractor operated) or operated by an M&O agreement / contract by selecting “Fed” or “GOCO” from the drop-down list.
E. Data Center Name	Provide a descriptive name for the data center.

Column/Title	Instructions
F. Status	<p>Select the current status of data center.</p> <p><i>Drop-down list:</i> Operational Closed/Removed Inaccurate</p>
G. Data Center Function	<p>Indicate the primary function of the data center.</p> <p><i>Drop-down list:</i> HPC General Server/Telco Room</p>
H. Core or Non-Core Data Center	<p>Indicate whether the data center is a CORE or Non-CORE data center by selecting from the drop-down list. Note, pre-identified Federal data centers have been provided to OMB.</p> <p>For Non-CORE data centers, use the “Additional Information” column to indicate the special purpose of the Non-Core classification as such: <i>INSTALLATION PN</i> - Fixed DC serving single installation w/ local services. <i>SPECIAL PURPOSE PN</i> - Fixed facility w/ mission specific infrastructure. <i>TACTICAL/MOBILE</i> - Infrastructure / servers optimized for tactical env’t or deployable computing.</p>
I. Assigned DCEP POC	<p>Indicated if a Data Center Energy Practitioner (DCEP) has been assigned to this data center by providing DCEP name and phone number.</p>
J. Data Center POC	<p>Indicate primary POC for this data center if additional information is needed for this inventory by providing name(s), email, and phone number.</p>
K. Street Address	<p>Provide the Street address for this data center.</p>
L. Street Address 2	<p>Use this space to enter a Building, Room, or Suite number.</p>
M. City	<p>Provide the City name for this data center.</p>
N. State	<p>Provide the State name (XX) for this data center.</p>
O. Zip Code	<p>Provide the Zip Code for this data center</p>
P. Country	<p>Indicate the Country where this data center is located.</p>
Q. IT Space Area (Sq. Ft.)	<p>This is what is commonly referred to as white space or raised floor space. Please indicate the total sq. ft. available for IT equipment. Do not include office space, mechanical rooms or storage areas. Minimum is 8 Sq.Ft. (equivalent to 1 rack).</p> <p>Please note that this should be the total "IT" or "Rack" floor space, do not include office, infrastructure or space that cannot be used to support IT equipment.</p>
R. Facility Cost (\$/Sq. Ft./Yr.)	<p>Please indicate the cost per square feet per year paid for the facility. Be sure to indicate if power is included in the cost in the adjacent column. Typically calculated by the monthly lease or rent charges X 12 (Annual Cost). Maximum is \$2,000.</p>

Column/Title	Instructions								
S. Electricity Included in Cost? (Y/N)	Please indicate if electricity is included in the lease or facility cost provided in the previous column by selecting "Yes" or "No" from the drop-down list.								
T. Ownership Type	<p>Select the appropriate ownership type from the drop-down list. If this facility is a tenant of another data center and you are responsible for the infrastructure, select COLLOCATED. If this facility is sharing space and you are NOT responsible for the infrastructure, select OUTSOURCED TO OTHER AGENCY.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="634 575 1403 701"> <tr> <td>1. Agency Owned</td> <td>5. Collocation</td> </tr> <tr> <td>2. GSA Owned</td> <td>6. Outsourcing to Contractor</td> </tr> <tr> <td>3. Lease and Retrofit</td> <td>7. Outsourcing to Other Agency</td> </tr> <tr> <td>4. Turnkey Lease</td> <td>8. Using Cloud Provider</td> </tr> </table>	1. Agency Owned	5. Collocation	2. GSA Owned	6. Outsourcing to Contractor	3. Lease and Retrofit	7. Outsourcing to Other Agency	4. Turnkey Lease	8. Using Cloud Provider
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2. GSA Owned	6. Outsourcing to Contractor								
3. Lease and Retrofit	7. Outsourcing to Other Agency								
4. Turnkey Lease	8. Using Cloud Provider								
U. Provider Name	If using a non-agency provider facility, please indicate the name of the provider. Typically used for out-sourcing or cloud services.								
V. Data Center Tier/Type	<p>Select the appropriate ownership Tier/Type from the drop-down list.</p> <p>The Uptime Institute include the following: Tier 1: composed of a single path for power and cooling distribution, without redundant components, providing 99.671% availability. Tier III: composed of multiple active power and cooling distribution paths, but only one path active, has redundant components, and is concurrently maintainable, providing 99.982% availability Tier II: composed of a single path for power and cooling distribution, with redundant components, providing 99.741% availability Tier IV: composed of multiple active power and cooling distribution paths, has redundant components, and is fault tolerant, providing 99.995% availability.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="634 1444 1403 1570"> <tr> <td>1. Tier I</td> <td>5. Server Room/Closet</td> </tr> <tr> <td>2. Tier II</td> <td>6. Lab</td> </tr> <tr> <td>3. Tier III</td> <td>7. Unknown</td> </tr> <tr> <td>4. Tier IV</td> <td>8. Cloud Provider</td> </tr> </table>	1. Tier I	5. Server Room/Closet	2. Tier II	6. Lab	3. Tier III	7. Unknown	4. Tier IV	8. Cloud Provider
1. Tier I	5. Server Room/Closet								
2. Tier II	6. Lab								
3. Tier III	7. Unknown								
4. Tier IV	8. Cloud Provider								
W. FTE Count	Related to operations at or below the operating system level. If the responsibilities are a fraction of a person or several person's time, estimate the hours per year attributed to data center operations and divide by 2080 (workable hours per year) (Note: For both Federal and Contractor Support Staff).								
X. Average Cost per FTE	Enter the average annual cost paid for IT personnel (government and contractor) associated with Data Center Operations. (Fully Loaded)								

Column/Title	Instructions								
Y. Provides Services to Other Agencies	Indicate if the data center is providing services to other agencies that are not part of the same Cabinet level Department (DOE). Other agency data is not required if the facility is not owned by the agency. Includes contracted or Cloud providers. Select “Yes” or “No.”								
Z. % of Services paid by Other Agencies	Enter the total percentage of services paid for by an agency outside the department (DOE). Do not include co-location of multiple components within a single agency. Only valid if this data center is providing "Services to Other Agencies"								
AA. List of Agencies Served	To ensure continuity, provide the names of the agencies hosted in each facility.								
AB. Marked for Closing	Please indicate if the data center is marked to be closed by selecting "Yes" or "No" from the drop-down list. Core Data Centers are not candidates for closure.								
AC. Phase of Closure	<p>If the data center is targeted for closure, select the appropriate closure phase from the drop-down list. If there are several phases being worked in parallel, Select only the highest Closure phase that has been completed.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="634 919 1393 1056"> <tbody> <tr> <td>Stage 1: Inventory</td> <td>Stage 5: Equipment Removal</td> </tr> <tr> <td>Stage 2: Application Mapping</td> <td>Closed</td> </tr> <tr> <td>Stage 3: Migration Mapping</td> <td>Considering</td> </tr> <tr> <td>Stage 4: Migration Execution</td> <td></td> </tr> </tbody> </table>	Stage 1: Inventory	Stage 5: Equipment Removal	Stage 2: Application Mapping	Closed	Stage 3: Migration Mapping	Considering	Stage 4: Migration Execution	
Stage 1: Inventory	Stage 5: Equipment Removal								
Stage 2: Application Mapping	Closed								
Stage 3: Migration Mapping	Considering								
Stage 4: Migration Execution									
AD. Closing Fiscal Year (Anticipated or Actual – YYYY)	If data center is targeted for closure, select the appropriate scheduled closure period from the drop-down list. If already closed, indicate timeframe when closure occurred. If not targeted for closure leave blank.								
AE. Closing Quarter (Anticipated or Actual)	If data center is targeted for closure, select the appropriate scheduled closure period from the drop-down list. If already closed, indicate timeframe when closure occurred. If not targeted for closure leave blank. If quarter unknown use 4Q.								
AF. Real Property Disposition	<p>If data center is closed, indicate whether the property will be disposed or re-purposed by entering one of the following descriptions:</p> <p>Dispose at Close Dispose at Later Date Re-Purpose</p>								
AG. Total Floor Area Eliminated / Purposed	If data center is closed, enter the total Sq.Ft. eliminated or repurposed as a result of this closed data center.								
AH. Real Property Disposition Date (YYYY/Q#)	If data center is closed, indicate the FY disposition date. (Q#/YYYY)								
AI. Total Servers Moved to Other Data Center	If data center is closed, enter the total number of servers removed (or to be removed) from this closed data center and relocated to another facility.								
AJ. Total De-Commissioned Physical Servers	If data center is closed, enter the total number of physical servers de-commissioned from this closed (or closing) data center.								

Column/Title	Instructions
AK. Overall FTE Reduction	If data center is closed, enter the total FTE reduction resulting in this closed (or closing) data center.
AL. Electricity Metered (Y/N)	Please indicate if the facility has metering capability by selecting "Yes" or "No" from the drop-down list.
AM. Total Data Center (Facility) Power Capacity (kW)	<p>Provide the data center's total power capacity in kilowatt hours. For larger data centers, this can often be measured at the main switchboard or load center. If unknown, use the following to convert the total Amps of the input breakers and voltage to KW's: http://rapidtables.com/calc/electric/Amp_to_kW_Calculator.htm.</p> <p>This value typically includes total power available for the data center IT systems, cooling systems, power distribution systems and any direct data center office support space. It should exclude non-data center office or facility space.</p>
AN. Average Data Center Electricity Usage (kWh)	<p>Enter the total (average) energy consumed by the data center per hour (in kWh). This includes energy consumed by the white space and auxiliary equipment (Cooling / Power Distribution / Lighting, etc). If unknown, use the Total Data Center (Facility) Power capacity number.</p> <p>This value should be equal or less than the "Total Data Center (Facility) Power Capacity" and reflects the actual average consumption of energy by the data center IT systems, cooling systems and power distribution systems. While the "Total Data Center (Facility) Power Capacity" reflects what power is available, the "Average Data Center Electricity Usage" reflects what is being used of the available power.</p>
AO. Total Data Center IT Power Capacity (kW)	<p>Enter the total power available to the white / raised floor space in kW. This can often equal the UPS and /or Generator Set rating.</p> <p>This value should be less than the "Total Data Center (Facility) Power Capacity" and typically reflects the total power available to the IT systems. If this value is the same as the "Total Data Center (Facility) Power Capacity" it indicates that there is no supplement cooling or UPS (power conditioning) for this data center. Please verify this value is correct and if so, please annotate in the notes section how cooling and power conditioning is provided.</p>
AP. Average IT Electricity Usage (kWh)	<p>Provide the average electricity consumed by the IT equipment per hour. IT power usage can often be measured at the UPS/PDU power meter. If unknown, use the following estimates: Volume servers - 230 Watts per server Mid-range servers - 625 Watts per server High-end servers - 8,000 Watts per server</p> <p>Volume servers typically cost less than \$25K per system Mid-range servers typically cost less than \$500K per system High-end servers typically cost more than \$500K per system</p>

Column/Title	Instructions
	Similar to the average data center energy usage, Average IT Electricity Usage should be equal or less than "Total Data Center (IT Power) Capacity". In most cases, this value will be less due to annual variances in IT load and in "reserve" power buffer allocated for possible peak usage periods or expansion (i.e. the IT systems load design is only 80% of the total UPS capability).
AQ. Cost Per kWh (if known)	If available, please provide the cost per kWh. If unknown, leave blank. Maximum cost is \$0.50. Some DOE data centers are not charged for electricity. For these data centers please enter the words "No Cost" to avoid having the OMB TCO model replace a "0" or blank entry with a calculated default value.
AT. Has A DC Pro Assessment been Conducted?	Indicate if a DC Pro Assessment has been conducted for this data center by entering: None DOEGRIT DCPro
AU. Date of DOEGRIT Assessment (MM.DD.YY)	If an assessment has been conducted, provide the assessment date.
AV. Current Rack Count (#)	This is the total number of racks that are in the data center. Please include racks used for backup, storage, network and wiring gear.
AX. Super Computers or HPC System	Enter the number of HPC Cluster Nodes. Do not include HPC Cluster Nodes as Virtual Hosts.
AY. Mainframes (IBM or compatible)	Enter the number of IBM mainframe systems.
AZ. Mainframes (Other)	Enter the number of non-IBM mainframe systems.
BA. Windows Servers	Physical servers with Windows based OS loaded directly on the server. If using blade servers with one OS per blade, each blade should be counted as one server. Do not include the count of physical servers running Virtualization host OS's such as VM Ware's ESX server, Citrix XenServer or Microsoft Hyper-V. Those should be listed in the Virtual Host Count column.
BB. Unix Servers	Physical servers with Unix based OS loaded directly on the server. If using blade servers with one OS per blade, each blade should be counted as one server. Do not include the count of physical servers running Virtualization host OS's such as VM Ware's ESX server, Citrix XenServer or Microsoft Hyper-V. Those should be listed in the Virtual Host Count column.
BC. Linux Servers	Physical servers with Linux based OS loaded directly on the server. If using blade servers with one OS per blade, each blade should be counted as one server.

Column/Title	Instructions
BD. Other	Servers that cannot be classified in one of the above categories. (example Novell) Do not include the count of physical servers running Virtualization host OS's such as VM Ware's ESX server, Citrix XenServer or Microsoft Hyper-V. Those should be listed in the Virtual Host Count column.
BF. Total Virtual Host Count (#)	Physical servers used to host the virtual environment. Do not include these in the physical server counts A virtual host is a physical server whose primary purpose is to run multiple virtual OS's. Example: a physical server loaded with VM Ware ESX server, Citrix XenServer or Microsoft Hyper-V.
BG. Total Virtual OS Count (#)	Provide the total virtualized operating systems residing on virtual hosts. Minimum is 1.
BI. SAN/NAS/DAS – Total (TB)	Provide total dedicated storage. Do not include storage internal to servers.
BJ. SAN/NAS/DAS – Used (TB)	Provide total Network storage used.
BL. Additional Information	Provide any additional pertinent information not captured in prior columns.

5.2 Electronics Acquisition and Disposal

The Electronics Acquisition and Disposal tab records information related to the acquisition of EPEAT certified electronics and the environmentally sound disposal of all electronics.

If an EPEAT-covered product category is chosen in Column E, then acquisition data is required to be entered in Columns I through M. Data should not be entered in Columns I through M if the electronic is not an EPEAT rated product. The following three categories of items are covered by EPEAT:

- Computers & Displays
 - CRT Monitors
 - Desktop Computers
 - Integrated Desktop Computers
 - LCD Monitors
 - Notebook Computers
 - Tablets/Slates
 - Thin Clients
 - Workstations
- Imaging Equipment
 - Copiers
 - Digital Duplicators
 - Facsimile (Fax) Machines
 - Mailing Machines
 - Multi-function Devices
 - Printers
 - Scanners
- Televisions

Even though there are no EPEAT-qualified CRT Monitors, acquisition data should be provided for that category, as monitors as a whole are considered an EPEAT category. In this case,

EPEAT numbers for CRT Monitors under Columns I through M will be zero. In future reporting, CRT and LCD categories will be combined in to a single “monitors” category.

Imaging equipment and televisions were added to the EPEAT registry in 2012, and in June of 2014, an interim rule was issued that amended in the Federal Acquisition Regulation (FAR) to include them. This broadened the FAR and harmonized definitions of electronic products with the Institute of Electrical and Electronics Engineers (IEEE) 1680.⁸

Environmentally sound disposal of electronics can be recorded in Columns Q through T in three ways:

1. Choose “Bulk Electronics Disposal” from the drop-down in Column E and entering the total weight of products disposed of during the previous fiscal year.
2. Choose an electronics type in Column E and then enter the number of that product disposed of in the previous fiscal year.
3. Combination of option #1 and 2. For example, use this option if monitors and computers were itemized while cell phones, PDAs, and copiers were taken in bulk together. In this case, items should be counted in one category or the other, not both.

Column/Title	Instructions																				
E. Electronics Category	<p>Choose the type of electronic from the down-drop list.</p> <p><i>Drop-down list:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Bulk Electronics Disposal</td> <td>Multifunction Devices</td> </tr> <tr> <td>CRT Monitors</td> <td>Fax Machines</td> </tr> <tr> <td>LCD Monitors</td> <td>Printers</td> </tr> <tr> <td>Notebook Computers</td> <td>Copiers</td> </tr> <tr> <td>Integrated Desktop Computers</td> <td>Mailing Machines</td> </tr> <tr> <td>Workstations</td> <td>Servers</td> </tr> <tr> <td>Desktop Computers</td> <td>Digital Duplicators</td> </tr> <tr> <td>Slates/Tablets</td> <td>Personal Digital Assistants</td> </tr> <tr> <td>Thin Clients</td> <td>Mobile Phones</td> </tr> <tr> <td>Televisions</td> <td>Scanners</td> </tr> </table>	Bulk Electronics Disposal	Multifunction Devices	CRT Monitors	Fax Machines	LCD Monitors	Printers	Notebook Computers	Copiers	Integrated Desktop Computers	Mailing Machines	Workstations	Servers	Desktop Computers	Digital Duplicators	Slates/Tablets	Personal Digital Assistants	Thin Clients	Mobile Phones	Televisions	Scanners
Bulk Electronics Disposal	Multifunction Devices																				
CRT Monitors	Fax Machines																				
LCD Monitors	Printers																				
Notebook Computers	Copiers																				
Integrated Desktop Computers	Mailing Machines																				
Workstations	Servers																				
Desktop Computers	Digital Duplicators																				
Slates/Tablets	Personal Digital Assistants																				
Thin Clients	Mobile Phones																				
Televisions	Scanners																				
I. Total Number Acquired	If an EPEAT product category was chosen in Column E, enter the total quantity of that product acquired during the fiscal year.																				
J. # of EPEAT Bronze Acquired	If an EPEAT product category was chosen in Column E, enter the total quantity of that product acquired during the fiscal year that met the EPEAT Bronze rating.																				
K. # of EPEAT Silver Acquired	If an EPEAT product category was chosen in Column E, enter the total quantity of that product acquired during the fiscal year that met the EPEAT Silver rating.																				
L. # of EPEAT Gold Acquired	If an EPEAT product category was chosen in Column E, enter the total quantity of that product acquired during the fiscal year that met the EPEAT Gold rating.																				

⁸ <https://www.federalregister.gov/articles/2014/06/24/2014-14376/fac-2005-75-far-case-2013-016-item-i-docket-2013-0016-sequence-1-federal-acquisition-regulation>

Column/Title	Instructions
M. # of ENERGY STAR (but not EPEAT) Acquired	If an EPEAT product category was chosen in Column E, enter the total quantity of that product acquired during the fiscal year that met ENERGY STAR certification but did not meet EPEAT standards.
Q. Transferred or Donated	Enter the weight (if “Bulk Electronics Disposal” chosen in column E) or number of product transferred or donated during the previous fiscal year.
R. Recycled by Certified Recycler	Enter the weight (if “Bulk Electronics Disposal” chosen) or number of product recycled by a certified electronics recycler during the previous fiscal year.
S. Recycled by non-Certified Recycler	Enter the weight (if “Bulk Electronics Disposal” chosen) or number of product recycled by a non-certified electronics recycler during the previous fiscal year.
T. Sent for disposal (e.g. landfill)	Enter the weight (if “Bulk Electronics Disposal” chosen) or number of product disposed of through landfills or other non-environmentally-sound methods.

5.3 Electronics O&M

The Electronics O&M tab records information related to the operation of electronic equipment at the site. This tab records information for both duplex printing and power management in the same columns, depending on the category of electronic chosen. Power management reporting is required for desktop computers, notebook computers, and both CRT and LCD monitors. To streamline reporting, those items are now recorded in just two categories, computers and displays, whereas in previous years they each had their own category. Duplex printing reporting is required for printers, copiers, and multifunction devices (MFDs).

As defined by EPA, electronics are considered to be using power management if ENERGY STAR power management features (e.g. sleep, standby, hibernate) are enabled, so that these devices enter a low-power states if they are not in use for specified periods of time (Energy Star recommends “within 30 minutes).

Please consider the following questions while completing this worksheet. The answers to these questions may be useful to SPO in evaluating the state of power management at your site.

1. Does the IT Support Group at your organization provide commissioning services for laptops and desktops at deployment? Commissioning may include: adding accounts for service access, adding security software and adjusting network settings, checking and adjusting power management settings and checking for desired OS and application updates.

Response Choices:

- a. Yes: indicate in “Additional Information” specific services checked or added, or don't know what services are provided
- b. No: indicate in “Additional Information” if you have an IT support org.

- c. Don't know: indicate in “Additional Information” if you have an IT support org.)
2. Is there a written policy at your organization that newly purchased personal work stations be purchased with power management settings activated and/or commissioned (supplied with a standard image and settings) by an IT support group and power management settings activated?

Response Choices:

- a. Yes: provide url in “Additional Information”
 - b. No: indicate in “Additional Information” if you know why not, e.g. IT support group not available, IT support group fees are too expensive
 - c. Don't know: indicate in “Additional Information” contact information for someone that should know
3. Does your organization publish or otherwise communicate a policy related to power management for personal workstations so that end-users understand what power management settings and practices they need to implement, or if those settings are centrally managed why it is done?

Response Choices:

- a. Yes: indicate in “Additional Information” url, and outreach
 - b. No: indicate in “Additional Information” why not
 - c. Don't know: indicate in “Additional Information” contact information for someone that should know
4. Has your organization investigated or currently have automated end-point workstation management software?

Response Choices:

- a. Yes: indicate in “Additional Information” vendor names and products; is it currently used to implement the power management policy?
- b. No: indicate in “Additional Information” whether there are any plans to investigate end-point workstation management software.
- c. Don't know: indicate in “Additional Information” contact information for someone that should know

Column/Title	Instructions					
F. Electronics Category	<p>Choose the type of electronic from the down-drop list. Depending on the choice entered here, the information requested in Columns F through I will change.</p> <p><i>Drop-down list for pre-2014:</i></p> <table border="1" style="width: 100%;"> <tr><td>CRT Monitors</td></tr> <tr><td>LCD Monitors</td></tr> <tr><td>Desktop Computers</td></tr> <tr><td>Notebook Computers</td></tr> <tr><td>Printers, Copiers, and MFDs</td></tr> </table>	CRT Monitors	LCD Monitors	Desktop Computers	Notebook Computers	Printers, Copiers, and MFDs
CRT Monitors						
LCD Monitors						
Desktop Computers						
Notebook Computers						
Printers, Copiers, and MFDs						

Column/Title	Instructions			
	<p><i>Drop-down list for post-2014:</i></p> <table border="1" data-bbox="634 306 1109 401"> <tr> <td data-bbox="634 306 1109 338">Monitors (CRT & LCD)</td> </tr> <tr> <td data-bbox="634 338 1109 369">Computers (Desktop & Notebook)</td> </tr> <tr> <td data-bbox="634 369 1109 401">Printers, Copiers, and MFDs</td> </tr> </table>	Monitors (CRT & LCD)	Computers (Desktop & Notebook)	Printers, Copiers, and MFDs
Monitors (CRT & LCD)				
Computers (Desktop & Notebook)				
Printers, Copiers, and MFDs				
H. Number Owned	<p>Enter the number of electronics owned by DOE or DOE contractors for the category chosen in Column E. Sources may include DOE Property Management system (DOE tagged items) or end-point data from IT networks. Electronics owned by co-located entities not under DOE management/control should not be included. Electronics owned but primarily or exclusively used off site and not under site management and control should not be included.</p> <p>This number, minus the number of exemptions, will provide the numerator for power management scoring. Any qualifying comments about this data should be entered in the “Additional Information” column. If data is not available, please indicate in the “Additional Information” column the reasons why, and what steps are being taken to obtain accurate data.</p>			
I. Number Ineligible from Power Management (exempt) or Duplex Printing (incapable)	<p>Enter the number of electronics from the category chosen in Column E that are considered exempt from power management or incapable of duplex printing.</p> <p>Printers, copiers and multifunction devices (MFDs) are considered ineligible for duplex printing if they are only capable of single sided printing.</p> <p>Laptops, desktops, and monitors are considered exempt from power management requirements if they are running mission critical applications (e.g. facility security, energy or environmental management or other essential operational systems, if they are maintaining continuous process monitoring or control or uninterruptable laboratory experiments). Legacy electronics that are not capable of power management should be exempted. If significant numbers of legacy exemptions are taken, please explain in “Additional Information” what measures are taken to encourage users to turn them off or put them in reduced-power modes when not in use, and how the success of those measures is monitored. No power management exemptions are provided for computer virus scanning or OS, application or virus protection software updates.</p> <p>In sum, for desktops and laptops, the number entered in column H minus the number entered in column I should represent the number of DOE-owned, site controlled units capable of power management that are being used for end user computing,</p>			
J. Number Using Power Management or Duplex Printing	Enter the number of electronics from the category chosen in Column E that utilize duplex printing (if Printers, Copiers, and			

Column/Title	Instructions
	<p>MFDs chosen) or power management (if Computers & Displays is chosen).</p> <p>Power management methods may include:</p> <ol style="list-style-type: none"> 1. End User Opt In and Setting (Policy/Encouragement/Outreach) 2. Set at deployment, but not technically enforced after deployment (Activated PM settings required as part of purchase specification, and/or set as part of standard load after acquisition) 3. Set via OS or network management software, with end user opt-out 4. Set via OS or network management software, network monitors and maintains low-power settings. <p>Please indicate in “Additional Information” what method(s) are utilized along with mechanisms used to monitor and assure compliance.</p> <p>Thin client units which inherently use no more power than a stand-alone computer in power management mode (e.g.: sleep, hibernate) should be counted as complying with power management requirements.</p>
L. Additional Information	Provide any additional pertinent information, such as methodology used to collect this data, not captured in prior columns.

6.1 Mixed Refrigerants

This tab will collect refrigerant, fluorinated gases, and mixed refrigerants data using the default or simplified material balance approach along with a short description of the methodology used for gathering the information. The workbook calculates GHG emissions by breakdown the refrigerants into corresponding component F-gases. If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

Column/Title	Instructions				
E. Data Entry Type	<p>Select the appropriate data entry type from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tr> <td>Fiscal Year</td> <td>3-Year Rolling Average</td> </tr> <tr> <td>Calendar Year</td> <td></td> </tr> </table>	Fiscal Year	3-Year Rolling Average	Calendar Year	
Fiscal Year	3-Year Rolling Average				
Calendar Year					
F. Refrigerant Type	<p>Select the appropriate refrigerant type from the drop-down list. Note that ozone depleting substances (CFCs and HCFCs) are not considered GHGs in the context of E.O. 13514 and other GHG accounting systems. Thus, it is recommended that sites carefully track both refrigerant type and quantity to avoid reporting</p>				

Column/Title	Instructions																																																																																				
	<p>challenges with these commingled refrigerant gases.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="634 338 1373 1003"> <tr><td>R-12</td><td>R-403A</td><td>R-415A</td><td>R-431A</td></tr> <tr><td>R-22</td><td>R-403B</td><td>R-415B</td><td>R-434A</td></tr> <tr><td>R-23</td><td>R-404A</td><td>R-416A</td><td>R-435A</td></tr> <tr><td>R-32</td><td>R-405A</td><td>R-417A</td><td>R-437A</td></tr> <tr><td>R-41</td><td>R-406A</td><td>R-418A</td><td>R-438A</td></tr> <tr><td>R-125</td><td>R-407A</td><td>R-419A</td><td>R-500</td></tr> <tr><td>R-134a</td><td>R-407B</td><td>R-420A</td><td>R-501</td></tr> <tr><td>R-143a</td><td>R-407C</td><td>R-421A</td><td>R-502</td></tr> <tr><td>R-152a</td><td>R-407D</td><td>R-421B</td><td>R-503</td></tr> <tr><td>R-227ea</td><td>R-407E</td><td>R-422A</td><td>R-504</td></tr> <tr><td>R-236fa</td><td>R-408A</td><td>R-422B</td><td>R-505</td></tr> <tr><td>R-245fa</td><td>R-409A</td><td>R-422C</td><td>R-506</td></tr> <tr><td>R-14</td><td>R-409B</td><td>R-422D</td><td>R-507</td></tr> <tr><td>R-116</td><td>R-410A</td><td>R-423A</td><td>R-507A</td></tr> <tr><td>R-218</td><td>R-410B</td><td>R-424A</td><td>R-508A</td></tr> <tr><td>R-C318</td><td>R-411A</td><td>R-425A</td><td>R-508B</td></tr> <tr><td>R-401A</td><td>R-411B</td><td>R-426A</td><td>R-509</td></tr> <tr><td>R-401B</td><td>R-412A</td><td>R-427A</td><td>R-509A</td></tr> <tr><td>R-401C</td><td>R-413A</td><td>R-428A</td><td></td></tr> <tr><td>R-402A</td><td>R-414A</td><td>R-429A</td><td></td></tr> <tr><td>R-402B</td><td>R-414B</td><td>R-430A</td><td></td></tr> </table>	R-12	R-403A	R-415A	R-431A	R-22	R-403B	R-415B	R-434A	R-23	R-404A	R-416A	R-435A	R-32	R-405A	R-417A	R-437A	R-41	R-406A	R-418A	R-438A	R-125	R-407A	R-419A	R-500	R-134a	R-407B	R-420A	R-501	R-143a	R-407C	R-421A	R-502	R-152a	R-407D	R-421B	R-503	R-227ea	R-407E	R-422A	R-504	R-236fa	R-408A	R-422B	R-505	R-245fa	R-409A	R-422C	R-506	R-14	R-409B	R-422D	R-507	R-116	R-410A	R-423A	R-507A	R-218	R-410B	R-424A	R-508A	R-C318	R-411A	R-425A	R-508B	R-401A	R-411B	R-426A	R-509	R-401B	R-412A	R-427A	R-509A	R-401C	R-413A	R-428A		R-402A	R-414A	R-429A		R-402B	R-414B	R-430A	
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R-41	R-406A	R-418A	R-438A																																																																																		
R-125	R-407A	R-419A	R-500																																																																																		
R-134a	R-407B	R-420A	R-501																																																																																		
R-143a	R-407C	R-421A	R-502																																																																																		
R-152a	R-407D	R-421B	R-503																																																																																		
R-227ea	R-407E	R-422A	R-504																																																																																		
R-236fa	R-408A	R-422B	R-505																																																																																		
R-245fa	R-409A	R-422C	R-506																																																																																		
R-14	R-409B	R-422D	R-507																																																																																		
R-116	R-410A	R-423A	R-507A																																																																																		
R-218	R-410B	R-424A	R-508A																																																																																		
R-C318	R-411A	R-425A	R-508B																																																																																		
R-401A	R-411B	R-426A	R-509																																																																																		
R-401B	R-412A	R-427A	R-509A																																																																																		
R-401C	R-413A	R-428A																																																																																			
R-402A	R-414A	R-429A																																																																																			
R-402B	R-414B	R-430A																																																																																			
H-I (for default approach) OR J-O (for material balance approach)	<p>Fill in the requested fugitive inventory data, which will be used to calculate the overall quantity emitted in Column P.</p> <p>For the material balance approach: “Quantity Returned to Supply” refers to the amount of refrigerant not used and instead stored for use at another time. If you do not have an inventory and use everything purchased, this will be zero.</p> <p>“Refrigerant Disbursements” refers to the amount of refrigerant of sold or disposed of during the fiscal year. If a refrigerant is removed from the system and stored on-site, it is considered “Returned to Supply.” If it is removed from the system and transferred off-site, it is considered “Disbursement.”</p>																																																																																				
Z. Additional Information	Provide any additional pertinent information not captured in prior columns.																																																																																				

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix A*.

6.2 Fugitive F-gases

This tab will collect fugitive fluorinated gases and other fugitive emissions data using the default or simplified material balance approach along with a short description of the methodology used

for gathering the information. Fugitive emissions from industrial processes should be reported in tab 6.3 Industrial Process. The workbook calculates GHG emissions. If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

Column/Title	Instructions																																																																				
E. Data Entry Type	<p>Select the appropriate data entry type from the drop-down list.</p> <p><i>Drop-down list:</i> Fiscal Year Calendar Year 3-Year Rolling Average</p>																																																																				
F. Material Type	<p>Select the appropriate material type from the drop-down list. Note that ozone depleting substances (CFCs and HCFCs) are not considered GHGs in the context of E.O. 13514 and other GHG accounting systems. Thus, it is recommended that sites carefully track both refrigerant type and quantity to avoid reporting challenges with these commingled refrigerant gases.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tbody> <tr> <td>Carbon dioxide</td> <td>HFC-245fa</td> <td>HFE-143a</td> <td>HFE-374pc2</td> </tr> <tr> <td>Methane</td> <td>HFC-365mfc</td> <td>HFE-227ea</td> <td>Methyl Chloroform</td> </tr> <tr> <td>Nitrous oxide</td> <td>HFC-c-447ef</td> <td>HFE-236ca12 (HG-10)</td> <td>Sevoflurane</td> </tr> <tr> <td>HFC-23</td> <td>HFC-43-10mee</td> <td>HFE-236ea2 (Desflurane)</td> <td>HFE-356mm1</td> </tr> <tr> <td>HFC-32</td> <td>Sulfur hexafluoride</td> <td>HFE-236fa</td> <td>HFE-338mmz1</td> </tr> <tr> <td>HFC-41</td> <td>Nitrogen trifluoride</td> <td>HFE-245cb2</td> <td></td> </tr> <tr> <td>HFC-125</td> <td>PFC-14</td> <td>HFE-245fa1</td> <td>HFE-347mmy1</td> </tr> <tr> <td>HFC-134</td> <td>PFC-116</td> <td>HFE-245fa2</td> <td></td> </tr> <tr> <td>HFC-134a</td> <td>PFC-218</td> <td>HFE-254cb2</td> <td>2,2,3,3,3-pentafluoropropanol</td> </tr> <tr> <td>HFC-143</td> <td>Perfluorocyclopropane</td> <td>HFE-263fb2</td> <td>PFPME</td> </tr> <tr> <td>HFC-143a</td> <td>PFC-3-1-10</td> <td>HFE-329mcc2</td> <td>Carbon dioxide (biogenic)</td> </tr> <tr> <td>HFC-152</td> <td>PFC-c318</td> <td>HFE-338mcf2</td> <td>Carbon Tetrachloride</td> </tr> <tr> <td>HFC-152a</td> <td>PFC-4-1-12</td> <td>HFE-338pcc13 (HG-01)</td> <td>CFC-11</td> </tr> <tr> <td>HFC-161</td> <td>PFC-5-1-14</td> <td>HFE-347mcc3</td> <td>CFC-113</td> </tr> <tr> <td>HFC-227ca</td> <td>PFC-6-1-16</td> <td>HFE-347mcf2</td> <td>CFC-12</td> </tr> <tr> <td>HFC-227ea</td> <td>PFC-7-1-18</td> <td>HFE-347pcf2</td> <td>Chlorofluorocarbon</td> </tr> <tr> <td>HFC-236ca</td> <td>PFC-9-1-18</td> <td>HFE-356mec3</td> <td>HCFC-141b</td> </tr> </tbody> </table>	Carbon dioxide	HFC-245fa	HFE-143a	HFE-374pc2	Methane	HFC-365mfc	HFE-227ea	Methyl Chloroform	Nitrous oxide	HFC-c-447ef	HFE-236ca12 (HG-10)	Sevoflurane	HFC-23	HFC-43-10mee	HFE-236ea2 (Desflurane)	HFE-356mm1	HFC-32	Sulfur hexafluoride	HFE-236fa	HFE-338mmz1	HFC-41	Nitrogen trifluoride	HFE-245cb2		HFC-125	PFC-14	HFE-245fa1	HFE-347mmy1	HFC-134	PFC-116	HFE-245fa2		HFC-134a	PFC-218	HFE-254cb2	2,2,3,3,3-pentafluoropropanol	HFC-143	Perfluorocyclopropane	HFE-263fb2	PFPME	HFC-143a	PFC-3-1-10	HFE-329mcc2	Carbon dioxide (biogenic)	HFC-152	PFC-c318	HFE-338mcf2	Carbon Tetrachloride	HFC-152a	PFC-4-1-12	HFE-338pcc13 (HG-01)	CFC-11	HFC-161	PFC-5-1-14	HFE-347mcc3	CFC-113	HFC-227ca	PFC-6-1-16	HFE-347mcf2	CFC-12	HFC-227ea	PFC-7-1-18	HFE-347pcf2	Chlorofluorocarbon	HFC-236ca	PFC-9-1-18	HFE-356mec3	HCFC-141b
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Column/Title	Instructions			
				(C2H3FC12) Dichlorofluoroethane
	HFC-236cb	HCFE-235da2 (Isoflurane)	HFE-356pcc3	HCFC-22
	HFC-236ea	HFE-43-10pccc (H-Galden 1040x)	HFE-356pcf2	HCFC-225ca
	HFC-236fa	HFE-125	HFE-356pcf3	HCFC-225cb
	HFC-245ca	HFE-134	HFE-365mcf3	HFE-449sl (HFE-7100) Chemical blend
	Trifluoromethyl sulphur pentafluoride	(Octafluorotetramethylene)hydroxyethyl group	Bis(trifluoromethyl)-methanol	HFE-569sf2 (HFE-7200) Chemical blend
H-I (for default approach) OR J-O (for material balance approach)	<p>Fill in the requested fugitive inventory data, which will be used to calculate the overall quantity emitted in Column P.</p> <p>For the material balance approach: “Quantity Returned to Supply” refers to the amount of fugitive F-gas not used and instead stored for use at another time. If you do not have an inventory and use everything purchased, this will be zero.</p> <p>“Refrigerant Disbursements” refers to the amount of fugitive F-gas of sold or disposed of during the fiscal year.</p> <p>If a fugitive F-gas is removed from the system and stored on-site, it is considered “Returned to Supply.” If it is removed from the system and transferred off-site, it is considered “Disbursement.”</p>			
R. Additional Information	Provide any additional pertinent information not captured in prior columns.			

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix A*.

6.3 Industrial Process

This tab will collect industrial process emissions by process along with a short description of the methodology used for gathering the information. Report emissions at the individual process level (e.g. particle accelerators, refrigeration and air condition equipment manufacturing, aluminum production); a laboratory is not considered a single process. If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

Column/Title	Instructions																																																																
E. Process Type	<p>Provide a description of the process type or select one from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="634 373 1312 657"> <tr> <td>Adipic Acid Production</td> <td>Lime Production</td> </tr> <tr> <td>Aluminum Production</td> <td>Nitric Acid Production</td> </tr> <tr> <td>Ammonia Production</td> <td>Particle Accelerators</td> </tr> <tr> <td>Cement Production</td> <td>Pulp and Paper Production</td> </tr> <tr> <td>HCFC-22 Production</td> <td>Refrigeration and Air Condition Equipment Manufacturing</td> </tr> <tr> <td>Iron and Steel Production</td> <td>Semiconductor Manufacturing</td> </tr> </table>	Adipic Acid Production	Lime Production	Aluminum Production	Nitric Acid Production	Ammonia Production	Particle Accelerators	Cement Production	Pulp and Paper Production	HCFC-22 Production	Refrigeration and Air Condition Equipment Manufacturing	Iron and Steel Production	Semiconductor Manufacturing																																																				
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F. GHG Type	<p>Select the appropriate GHG type from the drop-down list. Note that ozone depleting substances (CFCs and HCFCs) are not considered GHGs in the context of E.O. 13514 and other GHG accounting systems. Thus, it is recommended that sites carefully track both refrigerant type and quantity to avoid reporting challenges with these commingled refrigerant gases.</p> <p><i>Drop-down list:</i></p> <table border="1" data-bbox="634 926 1373 1890"> <tr> <td>Carbon dioxide</td> <td>HFC-245fa</td> <td>HFE-143a</td> <td>HFE-374pc2</td> </tr> <tr> <td>Methane</td> <td>HFC-365mfc</td> <td>HFE-227ea</td> <td>Methyl Chloroform</td> </tr> <tr> <td>Nitrous oxide</td> <td>HFC-c-447ef</td> <td>HFE-236ca12 (HG-10)</td> <td>Sevoflurane</td> </tr> <tr> <td>HFC-23</td> <td>HFC-43-10mee</td> <td>HFE-236ea2 (Desflurane)</td> <td>HFE-356mm1</td> </tr> <tr> <td>HFC-32</td> <td>Sulfur hexafluoride</td> <td>HFE-236fa</td> <td>HFE-338mmz1</td> </tr> <tr> <td>HFC-41</td> <td>Nitrogen trifluoride</td> <td>HFE-245cb2</td> <td></td> </tr> <tr> <td>HFC-125</td> <td>PFC-14</td> <td>HFE-245fa1</td> <td>HFE-347mmy1</td> </tr> <tr> <td>HFC-134</td> <td>PFC-116</td> <td>HFE-245fa2</td> <td></td> </tr> <tr> <td>HFC-134a</td> <td>PFC-218</td> <td>HFE-254cb2</td> <td>2,2,3,3,3-pentafluoropropanol</td> </tr> <tr> <td>HFC-143</td> <td>Perfluorocyclopropane</td> <td>HFE-263fb2</td> <td>PFPME</td> </tr> <tr> <td>HFC-143a</td> <td>PFC-3-1-10</td> <td>HFE-329mcc2</td> <td>Carbon dioxide (biogenic)</td> </tr> <tr> <td>HFC-152</td> <td>PFC-c318</td> <td>HFE-338mcf2</td> <td>Carbon Tetrachloride</td> </tr> <tr> <td>HFC-152a</td> <td>PFC-4-1-12</td> <td>HFE-338pcc13 (HG-01)</td> <td>CFC-11</td> </tr> <tr> <td>HFC-161</td> <td>PFC-5-1-14</td> <td>HFE-347mcc3</td> <td>CFC-113</td> </tr> <tr> <td>HFC-227ca</td> <td>PFC-6-1-16</td> <td>HFE-347mcf2</td> <td>CFC-12</td> </tr> <tr> <td>HFC-227ea</td> <td>PFC-7-1-18</td> <td>HFE-347pcf2</td> <td>Chlorofluorocarbon</td> </tr> </table>	Carbon dioxide	HFC-245fa	HFE-143a	HFE-374pc2	Methane	HFC-365mfc	HFE-227ea	Methyl Chloroform	Nitrous oxide	HFC-c-447ef	HFE-236ca12 (HG-10)	Sevoflurane	HFC-23	HFC-43-10mee	HFE-236ea2 (Desflurane)	HFE-356mm1	HFC-32	Sulfur hexafluoride	HFE-236fa	HFE-338mmz1	HFC-41	Nitrogen trifluoride	HFE-245cb2		HFC-125	PFC-14	HFE-245fa1	HFE-347mmy1	HFC-134	PFC-116	HFE-245fa2		HFC-134a	PFC-218	HFE-254cb2	2,2,3,3,3-pentafluoropropanol	HFC-143	Perfluorocyclopropane	HFE-263fb2	PFPME	HFC-143a	PFC-3-1-10	HFE-329mcc2	Carbon dioxide (biogenic)	HFC-152	PFC-c318	HFE-338mcf2	Carbon Tetrachloride	HFC-152a	PFC-4-1-12	HFE-338pcc13 (HG-01)	CFC-11	HFC-161	PFC-5-1-14	HFE-347mcc3	CFC-113	HFC-227ca	PFC-6-1-16	HFE-347mcf2	CFC-12	HFC-227ea	PFC-7-1-18	HFE-347pcf2	Chlorofluorocarbon
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Column/Title	Instructions			
	HFC-236ca	PFC-9-1-18	HFE-356mec3	HCFC-141b (C2H3FC12) Dichlorofluoro ethane
	HFC-236cb	HCFE-235da2 (Isoflurane)	HFE-356pcc3	HCFC-22
	HFC-236ea	HFE-43-10pccc (H-Galden 1040x)	HFE-356pcf2	HCFC-225ca
	HFC-236fa	HFE-125	HFE-356pcf3	HCFC-225cb
	HFC-245ca	HFE-134	HFE-365mcf3	HFE-449sl (HFE-7100) Chemical blend
	Trifluoromethyl sulphur pentafluoride	(Octafluorotetramethylene)hydroxymethyl group	Bis(trifluoromethyl)-methanol	HFE-569sf2 (HFE-7200) Chemical blend
H. Quantity Emitted (lbs)	Provide quantity of GHG type emitted in pounds.			
J. Additional Information	Provide any additional pertinent information not captured in prior columns.			

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix A*.

7.1a On-site WWT

This tab will collect fugitive emissions for on-site wastewater treatment plant (WWTP) or system by type along with a short description of the methodology used for gathering the information. If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

Industrial wastewater should be included in this tab by manually inflating the population served under each category of WWT reported in this tab. This inflation calculation is performed according to the *Federal Greenhouse Gas Accounting and Reporting Guidance Technical Support Document*. For on-site WWT, the following number should be added to the population served: (kilograms [kg] total biological oxygen demand [BOD5] from industrial sources per day / 0.90 (kg BOD5/person/day)). If the population served is inflated to account for industrial wastewater, please note the amount attributed to industrial wastewater in the “Additional Information” column.

Column/Title	Instructions
E. Workdays per Year	If known, provide the number of workdays per year. Otherwise, assume 5 workdays per week for 52 weeks per year, 10 holidays, and 20 vacation/sick days. Total of 230 workdays per employee per year.
F. Centralized WWTP with	If applicable, provide the population served by an on-site

Column/Title	Instructions
Anaerobic Digestion (Persons)	centralized WWTP with anaerobic digestion.
G. Centralized WWTP with Nitrification / Denitrification (Persons)	If applicable, provide the population served by an on-site centralized WWTP with nitrification/denitrification.
H. Centralized WWTP without Nitrification / Denitrification (Persons)	If applicable, provide the population served by an on-site centralized WWTP without nitrification/denitrification.
I. Effluent Discharge to Rivers and Estuaries with Nitrification / Denitrification (Persons)	If applicable, provide the population served by an on-site effluent discharge to rivers and estuaries with nitrification/denitrification.
J. Effluent Discharge to Rivers and Estuaries without Nitrification / Denitrification (Persons)	If applicable, provide the population served by an on-site effluent discharge to rivers and estuaries without nitrification/denitrification.
K. Wastewater Treatment Lagoons (Persons)	If applicable, provide the population served by on-site wastewater treatment lagoons.
L. Septic Systems (Persons)	If applicable, provide the population served by on-site septic systems.
O. Additional Information	Provide any additional pertinent information not captured in prior columns.

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix A*.

7.1b Off –Site WWT

This tab will calculate Scope 3 GHG emissions from contracted/off-site wastewater treatment plant/system based on the reported population served. In addition to providing population served data, describe the methodology used for gathering the information. 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 and note the change in the “Additional Information” column.

Industrial wastewater should be included in this tab by manually inflating the population served under each category of WWT reported in this tab. This inflation calculation is performed according to the Federal Greenhouse Gas Accounting and Reporting Guidance Technical Support Document. For off-site WWT, the following number should be added to the population served: (kg of nitrogen from industrial sources per day / 0.26 (kg N/person/day)). If the population served is inflated to account for industrial wastewater, please note the amount attributed to industrial wastewater in the “Additional Information” column.

Column/Title	Instructions
E. Workdays per Year	If known, provide the number of workdays per year. Otherwise, assume 5 workdays per week for 52 weeks per year, 10 holidays,

Column/Title	Instructions
	and 20 vacation/sick days. Total of 230 workdays per employee per year.
F. Centralized WWTP with Anaerobic Digestion (Persons)	If applicable, provide the population served by a contracted/ off-site centralized WWTP with anaerobic digestion.
G. % Centralized WWTP with Nitrification/Denitrification	<p>If known, provide percent of contracted centralized WWTP with nitrification/denitrification. Otherwise use the EPA estimate of 36.5%.</p> <p>According to the U.S. EPA Clean Watersheds Needs Survey 2004 Report to Congress, 36.5% of systems in the US have advanced wastewater treatment, which features a nitrification/denitrification stage. See at: http://www.epa.gov/cwns/2004rtc/cwns2004rtc.pdf.</p> <p>P. H-1, total US population = 297 million P. 3-1, population served by advanced wastewater treatment = 108.5 million</p> <p>$108.5 / 297 = 36.5\%$</p>
O. Additional Information	Provide any additional pertinent information not captured in prior columns.

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix C*.

8.1 Air Travel

This tab will collect business air travel data by flight type for the primary contractor along with a short description of the methodology used for gathering the information. Travel by Federal employees should not be recorded under this tab. That information is collected by the Federal GovTrip database and will be entered at a later day by SPO.

If mileage information is not known, cost information can be used to estimate miles traveled by adjusting the cost for taxes and converting the cost before taxes to miles based on average \$/miles (<http://www.airlines.org/Economics/DataAnalysis/Pages/MonthlyPaxYield.aspx>). Finally, if historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information column.

Column/Title	Instructions						
F. Flight Type	<p>Select the appropriate flight type from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1"> <thead> <tr> <th><u>List Choice</u></th> <th><u>Comments</u></th> </tr> </thead> <tbody> <tr> <td>Short Haul</td> <td>Less than 300 miles.</td> </tr> <tr> <td>Medium Haul</td> <td>Greater than or equal to 300 miles and less than 700 miles.</td> </tr> </tbody> </table>	<u>List Choice</u>	<u>Comments</u>	Short Haul	Less than 300 miles.	Medium Haul	Greater than or equal to 300 miles and less than 700 miles.
<u>List Choice</u>	<u>Comments</u>						
Short Haul	Less than 300 miles.						
Medium Haul	Greater than or equal to 300 miles and less than 700 miles.						

Column/Title	Instructions						
	<table border="1"> <tr> <td>Long Haul</td> <td>Greater than or equal to 700 miles.</td> </tr> <tr> <td>Unknown</td> <td>Unknown</td> </tr> <tr> <td>GSA Travel MIS</td> <td>GovTrip provided data on Federal employee air travel.</td> </tr> </table>	Long Haul	Greater than or equal to 700 miles.	Unknown	Unknown	GSA Travel MIS	GovTrip provided data on Federal employee air travel.
Long Haul	Greater than or equal to 700 miles.						
Unknown	Unknown						
GSA Travel MIS	GovTrip provided data on Federal employee air travel.						
H. Consumption/Usage	Enter the passenger miles traveled for the flight type being report in column F.						
K. Additional Information	<p>Provide any additional pertinent information not captured in prior columns, such as:</p> <ul style="list-style-type: none"> - Cost information, if miles traveled was estimated based on cost. For your information, miles traveled can be estimated using cost by adjusting the cost for taxes (taxes were estimated at 15.5% of total cost, http://web.mit.edu/TicketTax/) and converting the cost before taxes to miles based on average \$/miles (http://www.airlines.org/Economics/DataAnalysis/Pages/MonthlyPaxYield.aspx) - Clarification on if the data includes both Federal and primary contractor information. Federal information is pulled from GovTrip by DOE HQ, therefore, this will identify cases of (or potential for) double counting. 						

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix C*.

8.2 Ground Travel

This tab will collect business ground travel data for the primary contractor along with a short description of the methodology used for gathering the information. Travel by Federal employees should not be recorded under this tab. That information is collected by the Federal GovTrip database and will be entered at a later day by SPO.

If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

Column/Title	Instructions										
E. Process Type	<p>Select the appropriate process type from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1"> <thead> <tr> <th><u>List Choice</u></th> <th><u>Comments</u></th> </tr> </thead> <tbody> <tr> <td>Rental Mileage by Class</td> <td>Collects information in miles based on vehicle type.</td> </tr> <tr> <td>Rental Direct Fuel Purchase</td> <td>Collects information in gallons based on general vehicle types.</td> </tr> <tr> <td>Rental Trip Mileage</td> <td>Collects information on average miles per trip based on general vehicle types.</td> </tr> <tr> <td>POV Mileage</td> <td>Collects information on total reimbursed miles.</td> </tr> </tbody> </table>	<u>List Choice</u>	<u>Comments</u>	Rental Mileage by Class	Collects information in miles based on vehicle type.	Rental Direct Fuel Purchase	Collects information in gallons based on general vehicle types.	Rental Trip Mileage	Collects information on average miles per trip based on general vehicle types.	POV Mileage	Collects information on total reimbursed miles.
<u>List Choice</u>	<u>Comments</u>										
Rental Mileage by Class	Collects information in miles based on vehicle type.										
Rental Direct Fuel Purchase	Collects information in gallons based on general vehicle types.										
Rental Trip Mileage	Collects information on average miles per trip based on general vehicle types.										
POV Mileage	Collects information on total reimbursed miles.										

Column/Title	Instructions																		
	<table border="1"> <tr> <td>Mass Transit Trip Mileage</td> <td>Collects information on average miles per trip with mass transit.</td> </tr> </table>	Mass Transit Trip Mileage	Collects information on average miles per trip with mass transit.																
Mass Transit Trip Mileage	Collects information on average miles per trip with mass transit.																		
F. Vehicle Type	<p>Select the appropriate vehicle type from the drop-down list.</p> <p><i>Drop-down lists:</i></p> <p>For “Rental Mileage by Class” process</p> <table border="1"> <tr> <td>Economy</td> <td>Minivan/Wagon</td> </tr> <tr> <td>Compact</td> <td>Small SUV</td> </tr> <tr> <td>Midsized</td> <td>Medium SUV</td> </tr> <tr> <td>Full Size</td> <td>Large SUV</td> </tr> <tr> <td>Luxury</td> <td>Passenger Van</td> </tr> <tr> <td>Unknown</td> <td>1/2 Ton Pickup</td> </tr> </table> <p>For “Rental Direct Fuel Purchase”, “Rental Trip Mileage”, or “POV Mileage” processes</p> <table border="1"> <tr> <td>Passenger Car</td> <td>SUV or Truck</td> </tr> </table> <p>For “Mass Transit Trip Mileage” process</p> <table border="1"> <tr> <td>Bus</td> <td>Commuter Rail</td> </tr> <tr> <td>Metro/Transit Rail</td> <td>Intercity Rail</td> </tr> </table>	Economy	Minivan/Wagon	Compact	Small SUV	Midsized	Medium SUV	Full Size	Large SUV	Luxury	Passenger Van	Unknown	1/2 Ton Pickup	Passenger Car	SUV or Truck	Bus	Commuter Rail	Metro/Transit Rail	Intercity Rail
Economy	Minivan/Wagon																		
Compact	Small SUV																		
Midsized	Medium SUV																		
Full Size	Large SUV																		
Luxury	Passenger Van																		
Unknown	1/2 Ton Pickup																		
Passenger Car	SUV or Truck																		
Bus	Commuter Rail																		
Metro/Transit Rail	Intercity Rail																		
G. Fuel Type	<p>Select the appropriate fuel type from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tr> <td>Gasoline</td> <td>Diesel</td> </tr> <tr> <td>Electric</td> <td></td> </tr> </table>	Gasoline	Diesel	Electric															
Gasoline	Diesel																		
Electric																			
H. Consumption/Usage	Enter the consumption/usage type based on the selected process, vehicle, and fuel type and unit of measure in Column I.																		
J. Site Average Miles per Trip	Provide the average miles per trip, if known and the unit of measure is ""Number of Agency Business Trips.""																		
M. Additional Information	<p>Provide any additional pertinent information not captured in prior columns, such as:</p> <p>- Clarification on if the data includes both Federal and primary contractor information. Federal information is pulled from GovTrip by DOE HQ, therefore, this will identify cases of (or potential for) double counting.</p>																		

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix C*.

8.3 Commute

This tab will collect commute data for both Federal and primary contractor employees along with a short description of the methodology used for gathering the information. If historical data is updated please be sure to address this in your SSP narrative and note the change in the “Additional Information” column.

If possible, this data should be collected through an employee survey on commuting habits. Based on the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document* requirements, USDA and DOT have developed a set of eight basic survey questions that will fulfill those requirements, which are included below. Sites may also ask additional commuting-related questions specific to their location.

1. Please provide your site/operating administration or office.
2. What is the five digit zip code at your primary work location? (e.g., 20590, 02142)
3. What is your employment status? (Full-time, intern, employee, contractor, etc.)
4. How did you travel to work each day during the week? Provide method of transportation and miles traveled for each day of the week. Methods of transportation include: Car (drove alone), Truck/Van/SUV (drove alone), Motorcycle, Carpool/Vanpool, Bicycle, Walk, Transit bus, Transit rail (e.g. subway), Commuter rail (e.g. regional), Intercity rail (e.g. Amtrak), Other (e.g. telework full time).

	1st Method of Transportation	Miles	2nd Method of Transportation	Miles	3rd Method of Transportation	Miles
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						

1. If you selected carpool/vanpool, what was the average total number of people in your vehicle, including yourself?
2. Do you participate in an alternative work schedule?
3. Did you use the same method(s) of transportation indicated above to commute from work at the end of your workdays? If yes, mandatory questions complete. If no, question eight.
4. How did you travel from work each day during the week? Provide method of transportation and miles traveled for each day of the week. Methods of transportation include: Car (drove alone), Truck/Van/SUV (drove alone), Motorcycle, Carpool/Vanpool, Bicycle, Walk, Transit bus, Transit rail (e.g. subway), Commuter rail (e.g. regional), Intercity rail (e.g. Amtrak), Other (e.g. telework full time).

	1st Method of Transportation	Miles	2nd Method of Transportation	Miles	3rd Method of Transportation	Miles
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						

Column/Title	Instructions												
E. Process Type	<p>Select the appropriate process type from the drop-down list.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tr> <td>Personal Owned Vehicles</td> <td>Car/Van Pools</td> </tr> <tr> <td>Mass Transit</td> <td>Human Powered</td> </tr> </table>	Personal Owned Vehicles	Car/Van Pools	Mass Transit	Human Powered								
Personal Owned Vehicles	Car/Van Pools												
Mass Transit	Human Powered												
F. Vehicle Type	<p>Select the appropriate vehicle type from the drop-down list.</p> <p><i>Drop-down lists:</i></p> <p>For “Personal Owned Vehicles” process</p> <table border="1"> <tr> <td>POV Passenger Car</td> <td>POV SUV or Truck</td> </tr> <tr> <td>Motorcycle</td> <td></td> </tr> </table> <p>For “Car/Van Pools” processes</p> <table border="1"> <tr> <td>Car Pool</td> <td>Van Pool</td> </tr> </table> <p>For “Mass Transit” process</p> <table border="1"> <tr> <td>Bus</td> <td>Commuter Rail</td> </tr> <tr> <td>Metro/Transit Rail</td> <td>Intercity Rail</td> </tr> </table> <p>For “Human Powered” process</p> <table border="1"> <tr> <td>Walking and/or Bicycling</td> <td></td> </tr> </table>	POV Passenger Car	POV SUV or Truck	Motorcycle		Car Pool	Van Pool	Bus	Commuter Rail	Metro/Transit Rail	Intercity Rail	Walking and/or Bicycling	
POV Passenger Car	POV SUV or Truck												
Motorcycle													
Car Pool	Van Pool												
Bus	Commuter Rail												
Metro/Transit Rail	Intercity Rail												
Walking and/or Bicycling													
G. Fuel Type	<p>Select the appropriate fuel type from the drop-down list. The column will remain blank if the “Human Powered” process was chosen.</p> <p><i>Drop-down list:</i></p> <table border="1"> <tr> <td>Gasoline</td> <td>Diesel</td> </tr> <tr> <td>Hybrid</td> <td>Electric</td> </tr> </table>	Gasoline	Diesel	Hybrid	Electric								
Gasoline	Diesel												
Hybrid	Electric												
H. Consumption/Usage	Enter the consumption/usage type based on the selected process, vehicle, and fuel type and unit of measure in Column I.												
J. Site Average Number of Commute Days per Year	Provide the number of commute days per year, if known.												
M. Additional Information	Provide any additional pertinent information not captured in prior columns.												

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix C*.

9.1a On-Site Landfill MSW

This tab is used to estimate on-site landfill GHG emissions. Historical data has been pre-populated and may be updated with a note/justification, as need be. Construction and demolition waste should not be reported under this tab, and should be entered under Tab 9.1c.

Tab 9.1a should be populated using a combination of emissions generation calculated in EPA’s Landfill Gas Emissions (LandGEM) model and additional information on landfill gas capture specific to your landfill.

For more information on the LandGEM model, please consult the following resources:

- LandGEM User Guide: <http://www.epa.gov/ttn/catc1/dir1/landgem-v302-guide.pdf>
- LandGEM Model (Excel): <http://www.epa.gov/ttn/catc/dir1/landgem-v302.xls>

Data on the landfill gas collection system used (or lack thereof) at the landfill should be enter in Columns L-V. If unknown, default averages will be used to complete GHG calculations.

Sites which accept waste from other DOE sites should include that waste in their data entry and make a note of the waste breakdown in the “Additional Information” column. On an individual site basis, this alters GHG and MSW diversion calculations, but is required for accurate reporting for DOE as a whole since calculations for on-site and off-site landfill emissions are different and are counted under separate GHG Scopes (1 and 3, respectively).

Column/Title	Instructions
F. Annual Mass of Solid Waste Disposed On-site (Metric Tons)	Enter the mass of waste accepted at the landfill in the current year, as shown in the LandGEM “User Inputs” and “Results” tabs. Include all DOE-associated waste accepted, even if that waste was generated by a different DOE site. If waste for several sites is being entered in this method, please note the breakdown in the “Additional Information” column.
H. Landfill Open Date (Year)	Enter the year the landfill was opened.
I. Landfill Close Date (Year)	Enter the year the landfill was closed. If the landfill is still open and accepting waste, leave this field blank.
J. Carbon Dioxide (biogenic) (MT Megagram)	Enter current year CO ₂ emissions data as shown in the LandGEM “Results” tab.
K. Methane (MT Megagram)	Enter current year CH ₄ emissions data as shown in the LandGEM “Results” tab.
L. Percentage Uncontrolled Release (CO ₂ Biogenic)	If a landfill gas capture system is utilized, enter the percentage of generated CO ₂ captured by the system. Leave blank if unknown, and the default value shown in Column M will be used for calculations.
N. Percentage Uncontrolled Release (CH ₄)	Enter 100% if the landfill does not have a gas capture system. If no gas capture system is used and 100% is entered in this column, further data entry in Columns P through V is not required. If a landfill gas capture system is utilized, enter the percentage of generated CH ₄ captured by the system. Leave blank if unknown, and the default value shown in Column O will be used for calculations.
P. Landfill Gas Collection System Efficiency (CH ₄)	If a landfill gas capture system is utilized, enter the efficiency of the system.

Column/Title	Instructions
	Leave blank if unknown, and the default value shown in Column Q will be used for calculations.
R. Venting Loss (CH ₄)	If a landfill gas capture system is utilized, enter the venting loss associated with the system. Leave blank if unknown, and the default value shown in Column S will be used for calculations.
T. Methotropic Bacteria Oxidation Factor (CH ₄)	Leave blank if unknown, and the default value shown in Column U will be used for calculations.
V. Combustion Oxidation Factor (CO ₂ Biogenic)	Leave blank if unknown, and the default value shown in Column W will be used for calculations.
Z. Additional Information	Please enter any additional information, such how data on the landfill gas capture system was determined or a breakdown of waste on a site-by-site basis if the landfill accepts waste from other DOE sites.

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix A*.

9.1b Off-Site Landfill MSW

This tab is used to estimate off-site (contracted) landfill GHG emissions. Historical data has been pre-populated and may be updated with a note/justification, as need be. Construction and demolition waste should not be reported under this tab, and should be entered under Tab 9.1c.

Columns H through AD allow for changing advanced calculation options for landfill gas generation and landfill gas capture, and includes data entry fields for information that is only available by asking the landfill operator. This information is not commonly known. If you have not requested this information from the landfill operator, or this information is not available from the landfill operator, leave these columns blank and default averages will be used for GHG calculations. In this case, only data on waste sent to the landfill (Column F) is required to be entered to complete the tab. If any of these advanced data entry fields are changed, please note the rationale in the “Advanced Comments” column.

Sites which send their waste to another DOE site to be disposed of in their landfill should report zero waste and make a note on the actual waste landfilled in the “Additional Information” column. On an individual site basis, this alters GHG and MSW diversion calculations, but is required for accurate reporting for DOE as a whole since calculations for on-site and off-site landfill emissions are different and are counted under separate GHG Scopes (1 and 3, respectively).

Column/Title	Instructions
F. Annual Mass of Solid Waste Disposed On-site (Metric Tons)	Enter the mass of waste sent off-site to be disposed in a landfill during the fiscal year.

Column/Title	Instructions
	If your waste is sent to a DOE-owned landfill, enter zero in this column and add a note in the “Additional Information” column to document the amount of waste transferred.
H. Degradable Organic Carbon (Megagram C/ Megagram Waste)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter the Degradable Organic Content of the landfill waste and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
J. DOC Anaerobic Digestibility (%)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter the percentage of degradable organic content available for anaerobic digestibility and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
M. Methane % of Landfill Gas (%)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter CH₄ content (% by volume) and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
S. Percentage Uncontrolled Release (CO ₂ Biogenic)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter % (by volume) of CO₂ lost in uncontrolled and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
U. Percentage Uncontrolled Release (CH ₄)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter % (by volume) of CH₄ lost in uncontrolled</p>

Column/Title	Instructions
	and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.
W. Landfill Gas Collection System Efficiency (CH4)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter an efficiency of the gas collection system and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
Y. Venting Loss (CH4)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter an efficiency of the venting losses of the gas collection system and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
AA. Methotropic Bacteria Oxidation Factor (CH4)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter the methotropic bacteria oxidation factor and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
AC. Combustion Oxidation Factor (CO2 Biogenic)	<p>This is an advanced data entry field, and requires data from the landfill operator to be completed. If you have not requested this data from the landfill operator or the landfill operator does not know this information, leave the field blank and a default average will be used for calculations.</p> <p>If known, please enter the combustion oxidation factor and enter information on how it was obtained in “Additional Information” column or the “Methodology” section at the top of the tab.</p>
AG. Additional Information	Please enter any additional information, such how data on the landfill gas capture system was determined or if the waste was sent to another DOE site.

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix C*.

9.1c MSW & C&D Diversion

This tab is used to calculate diversion rates for both Municipal Solid Waste (MSW) and Construction and Demolition (C&D) waste. Historical data has been pre-populated and may be updated with a note/justification, as need be. All data should be entered in metric tons.

MSW Diversion:

MSW landfill waste recorded in Tabs 9.1a On-site Landfill MSW and 9.1b Off-Site Landfill MSW is imported in to Columns E and F, respectively. Those two tabs must be completed for Tab 9.1c to calculate an accurate MSW Diversion rate in Column K. If your CEDR contains data for two separate sites (i.e. two separate Site Numbers), the MSW diversion calculation in Column K may not be fully complete and accurate if different sites are used to report data in Tabs 9.1a and 9.1b but only one set of diversion data is entered (or vice versa). However, the diversion calculation on Tab 1.2 Performance Summary will accurately calculate the MSW diversion percentage under Goal 5.1.

C&D Diversion:

Tab 9.1c serves as the sole data entry point for all C&D Diversion data.

Column/Title	Instructions
G. Additional Waste not pulled from Tab 9.1a or 9.1b	Enter additional waste generated that has not been reported under on-site or off-site landfill waste.
H. Waste in 9.1a attributed to other sites (or to be excluded from entry)	Enter waste that is to be excluded from goal due to it be attributed to other sites.
J. Diverted Waste (Metric Tons)	Enter diverted MSW in metric tons. This may include recycling, transfer, beneficial reuse, or other novel diversion methods.
K. Off-Site Composting (Metric Tons)	Enter the amount of MSW in metric tons sent for off-site composting, including contracted composting.
L. On-Site Composting (Metric Tons)	Enter the amount of MSW in metric tons composted on-site.
M. Waste to Energy (Metric Tons)	Enter the amount of MSW in metric tons sent to a waste to energy facility. Note that per E.O. 13514, MSW used in waste to energy does not count as diverted waste.
O. Landfilled C&D Waste (Metric Tons)	Enter the amount of C&D waste sent to a landfill in the previous year.
P. Diverted C&D Waste (Metric Tons)	Enter the amount of C&D waste diverted from the landfill in the previous year. Diversion could include recycling, transfer, beneficial reuse, or other novel diversion methods.
R. Additional Information	Please enter any additional information, as need be.

10 Fleet Fuel (Optional)

This is an optional tab to use for estimating fleet fuel GHG emissions based on FAST reported data. A FAST custom report can be generated to populate the information in Tab 10. DOE sites are to upload their data into FAST no later than November 26. This same data can be used to enter into this optional worksheet for estimated GHG emissions. Historical data has been pre-populated.

If this optional tab is not completed, site data from FAST will still be incorporated by SPO for official DOE reporting. However, Tab 1.2 Performance Summary will not give a complete picture of site GHG emissions for use by the site without this data.

For internal site performance, it is possible to estimate GHG performance based on usage information even if FAST data entry is not complete and a FAST report is not available. A minimum of eight fields need to be populated for GHG, petroleum, and alternative fuel goal estimates based on FY 2012 data as opposed to the current default of FY 2011. In Tab 10, these fields are: *Report Year* (column G), *EO-Covered Fuel* (column J), *Fuel Group* (column K), *Fuel Type* (column M), *Vehicle Exemption* (column O), *Fuel Consumption (in gasoline gallon equivalent, or GGE)* (column Q), and cell P4. The following are the fuel types that the CEDR is set to estimate GHGs for: LPG, CNG, CNG 2400, CNG 3000, CNG 3600, LNG, E85, B20, GAS, and DSL. There are three types of vehicle exemptions in FAST and they are law enforcement (LE), emergency (E/ER), or none.

Data is required to be entered in GGE and not the natural unit. A table of GGE conversions for alternative fuels is included below.

Fuel Type	Natural Units	Gasoline Gallon Equivalent
B20	gallons	112.6% (gal x 1.126 = GGE)
B100	gallons	101.5% (gal x 1.015 = GGE)
CNG	gallons at 2,400 psi	18% (gal x 0.18 = GGE)
	gallons at 3,000 psi	22.5% (gal x 0.225 = GGE)
	gallons at 3,600 psi	27% (gal x 0.27 = GGE)
	hundred cubic feet	83% (ccf x 0.83 = GGE)
E85	gallons	72% (gal x 0.72 = GGE)
Electricity	kWh	3% (kWh x 0.03 = GGE)
LNG	gallons @ 14.7 psi and - 234 F	66% (gal x 0.66 = GGE)
LPG	gallons	74% (gal x 0.74 = GGE)
M85	gallons	57% (gal x 0.57 = GGE)

Information on the calculations used in this tab can be found in the *Federal Greenhouse Gas Accounting and Reporting Technical Support Document Appendix A*.

11 EISA Section 432 Compliance Path

Sites are asked to begin strategizing and planning for their EISA Section 432 four year reporting period by identifying covered facilities along with estimated energy consumption, anticipated evaluation year and type/level including re-/retro-commissioning and benchmarking status. If this data is completed, sites will be provided the opportunity to use this information for their EISA Section 432 June snapshot reporting, though an additional request will be made at that time to determine if the site wishes to make any updates.

2. Goal Calculation and Projection Methodology

This section provides the calculation methodology utilized by the SPO for calculating current and projected performance for each DOE site, Program Office, and Under Secretary. All calculations will be based on information provided by the sites in their SSP, CEDR, and data entered into Departmental databases (FIMS and FAST). The calculation methodologies for current performance are established in the *Federal Greenhouse Gas Accounting and Reporting Guidance Technical Support Document*, while projection formulas were developed by SPO. The realization of projected performances is not certain and is subject to availability of funds, applicability of the project/measure at the time funding becomes available, accuracy of data provided, and many other factors.

SSPP Goal #	DOE Goal/Requirement
1.1	<p>28% Scope 1 & 2 GHG reduction by FY 2020 from a FY 2008 baseline Note: GHG emission estimates are based on the methodology prescribed in CEQ’s <i>Federal Greenhouse Gas Accounting and Reporting Technical Support Document</i>.</p> <p><u>Current Performance Formula:</u> [Current GHG/Yr (<i>source: FAST, CEDR</i>) – FY 2008 GHG/Yr (<i>source: FAST, CEDR</i>)] / FY 2008 GHG/Yr (<i>source: FAST, CEDR</i>)</p> <p><u>Projection Formula:</u> Current GHG/Yr (<i>source: CEDR, FAST</i>) – Conservation Measure GHG/Yr Mitigated (<i>source: CEDR</i>) + New Process/Bldgs GHG/Yr Emissions(<i>source: CEDR</i>) – Fuel Usage Changes GHG/Yr Mitigated (<i>source: FAST</i>) – Fugitive Emission GHG/Yr Mitigated (<i>SSP</i>) – RECs GHG/Yr (<i>source: CEDR</i>)</p> <p><u>Projection Period:</u> FY2012 to FY 2020</p> <p><u>Projection Assumptions by Data Source:</u> The same assumptions and cleanup methods used for the energy intensity goal will be used for the Scope 1 & 2 GHG goal with minor changes and additions. The main difference is that there are no exclusions for this goal.</p> <p><u>Conservation Measures (CEDR)</u> No changes, simply add GHG estimates by using site provided estimates of the type of energy saved and converting them to GHG emissions mitigated.</p> <p><u>Disposition Assets/Buildings (FIMS)</u> No changes, simply convert the asset energy usage estimation to GHG emissions leaving.</p> <p><u>New Buildings (CEDR)</u> No changes, simply convert the asset energy usage estimation to GHG emissions coming on line.</p>

SSPP Goal #	DOE Goal/Requirement
	<p><i>Fleet Measures (FAST)</i> Similar to the petroleum fuel reduction goal. Simply convert the fleet fuel usage estimation to GHG emissions mitigated.</p> <p><i>Fugitive Emissions – SF₆ only (SSP)</i> Sites are not asked to provide projected fugitive emissions reductions. However, there are several factors, both quantities and qualitative, that can be used to create some scenarios.</p> <ol style="list-style-type: none"> Sites with Sulfur hexafluoride (SF₆) are required to have a SF₆ capture program (capture and reuse) by September 2012. Based on DOE’s January 2011 inventory it seems that SF₆ reduced by 42% in FY 2010 as compared to FY 2008, baseline. Preliminary analysis estimates fugitive emission reduction cost between \$1 to \$3 per MtCO₂ (PPC DOE specific report). Several DOE sites (e.g. WAPA, TJNAF and BPA) have had a SF₆ capture program for years and therefore can provide best practices lessons to other sites. Currently there are SF₆ accounting issues. It is recommended that sites use a mass balance approach in reporting SF₆ emissions. <p>Based on the above notes, use the following possible scenarios:</p> <ul style="list-style-type: none"> Conservative - 3% annually for a 30% reduction by FY 2020. Moderate - 5% annually for a 50% reduction by FY 2020. Aggressive - 7% annually for a 70% reduction by FY 2020. <p>Hold constant other fugitive emissions: industrial process, wastewater treatment, and landfill/municipal solid waste.</p> <p><i>Green and REC Purchases (CEDR)</i> See the renewable electricity section for assumption on projecting green and REC purchases. Convert green and REC purchases based on national average emission factors instead of e-Grid sub-regional factor, unless source zip code is provided.</p>
1.2	<p><i>13% Scope 3 GHG reduction by FY 2020 from a FY 2008 baseline</i> Note: GHG emission estimates are based on the methodology prescribed in CEQ’s <i>Federal Greenhouse Gas Accounting and Reporting Technical Support Document</i>.</p> <p><u><i>Current Performance Formula:</i></u> [Current year Scope 3 GHGs (<i>source: CEDR</i>) – FY 2008 Scope 3 GHGs (<i>source: CEDR</i>)] / FY 2008 Scope 3 GHGs(<i>source: CEDR</i>).</p> <p>Scope 3 GHG categories include: Air Business Travel, Ground Business Travel, Commuting, Off-Site Landfilled MSW, Off-Site Wastewater Treatment, and Electricity T&D Losses</p> <p><u><i>Projection Formula:</i></u> None <u><i>Projection Period:</i></u> None</p>

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	<p><u>Projection Assumptions by Data Source:</u> None</p>
2.1	<p>30% energy intensity reduction by FY 2015 from a FY 2003 baseline</p> <p><u>Current Performance Formula:</u> [Current Goal Btus/Yr (source: CEDR) + Green Energy Purchases Btus/Yr (source: CEDR)] / Current Goal SF (source: FIMS/CEDR) as compared to FY 2003 intensity</p> <p><u>Projection Formula:</u> [Current Goal Btus/Yr (source: CEDR)+ Future Green Energy Purchases Btus/Yr (source: CEDR)– Conservation Measure Savings Btus/Yr (source: CEDR) – Disposition Goal Energy Leaving Btus/Yr (source: CEDR and FIMS)+ New Process/Bldgs Energy Btus/Yr (source: CEDR)] / [Current Goal SF (source: FIMS/CEDR)– Disposition Goal SF (source: FIMS) + New Process/Bldgs SF (source: CEDR)]</p> <p><u>Projection Period:</u> FY 2012 to FY 2015</p> <p><u>Projection Assumptions by Data Source:</u></p> <p><i>Conservation Measures (CEDR)</i></p> <ol style="list-style-type: none"> 1. In the past, sites were not asked to distinguish between goal subject and excluded measures. An optional column has been added in the CEDR for sites to identify a measure as goal subject or excluded from the energy intensity goal. If no information is provided by the site, assume the measure applies to goal subject assets. 2. Only count measures that provide an implementation/ investment cost along with savings and/or output. Additionally the measure must have a status of Awarded/Approved, Verified, or Identified. 3. Step 1: To account for cost/budget needs, distinguish if the measures address one goal area or multiple goals. If one, then apply cost to the one goal area. If multiple, prioritize by type of savings. If RE electric then apply to RE electric. If RE thermal, then apply to RE thermal. If no RE, then energy. In general, RE costs are higher than efficiency and conservation measures therefore to avoid inflating the cost of non-RE measure, assign cost amounts of RE systems to RE goal projections. 4. Step 2: Add a return on investment gate based on built in ROI calculations; detailed methodology to be determined. 5. Step 3: Provide three different scenarios to illustrate the level confidence in the data. These scenarios are conservative, moderate, and aggressive. The status of each measure drives the scenario as such: <ul style="list-style-type: none"> • Conservative - The measure has a status of "Awarded/Approved."

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	<ul style="list-style-type: none"> • Moderate - The measure has a status of "Verified" plus the "Conservative" scenario. • Aggressive - The measure has a status of "Identified" plus the "Conservative" and "Moderate" scenario. <p>6. Step 4: Project based on the year when the measure/project is estimated to be completed. The costs provided by year are the total cost for implementing the measure and do not reflect the amount funds needed for that year. Assume completion year of FY 2020 for measures without a completion year.</p> <p><i>Disposition Assets/Buildings (FIMS)</i></p> <ol style="list-style-type: none"> 1. Step 1: Pull FIMS "Est Disposition Yr" and "Status" data to identify which buildings will be leaving DOE's inventory, when this will occur, and the building's current status. 2. Step 2: Actual disposition is dependent on funding and generally pulling down an asset is a low priority when funding is limited. Hence, not all assets with a disposition year will be accounted for. Only assets with one of the following status should be counted: <ul style="list-style-type: none"> • D&D in Progress • Shutdown Pending Transfer • Shutdown Pending Disposal • Operation Pending D&D • Deactivation • Shutdown Pending D&D • Operational Standby 3. Step 3: Add scenarios to account for possible delays in disposing of the asset. The scenarios are: <ul style="list-style-type: none"> • Conservative - Assumes disposition of asset is delayed by four years • Moderate - Assumes disposition of asset is delayed by two years • Aggressive - Assumes asset is pulled down on time 4. Step 4: Estimate energy consumption for assets designated as goal by using the average Usage/Yr/SF based on historical data from FY 2003 through current FY by energy type for goal subject assets. 5. Step 5: Since assets that are in shutdown or standby mode do not use the same amount of energy as when they are fully operational three scenarios were created to reduce the estimated energy for the asset. The scenarios are: <ul style="list-style-type: none"> • Conservative - Disposition asset consumes only 1/10th of the site's typical energy Usage/Yr/SF • Moderate - Disposition asset consumes only 1/3rd of the site's typical energy Usage/Yr/SF • Aggressive - Disposition asset consumes only 1/2 of the site's typical energy Usage/Yr/SF <p>Note: Considered estimating energy by asset type (e.g. office, air strip) but decided against it as the above step was based on averages and the mix of assets leaving the inventory were varied enough to use averages.</p>

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	<p>6. Step 6: Only count goal subject asset's square footage and estimated energy.</p> <p><i>New Buildings (CEDR)</i></p> <ol style="list-style-type: none"> 1. Step 1: In the past, sites were not asked to distinguish between goal subject and excluded new assets. An optional column has been added in the CEDR for sites to identify a new asset measure as goal subject or excluded from the energy intensity goal. If no information is provided by the site, assume the new asset will be subject to the energy intensity goal. 2. Step 2: Some sites use this tab keep a list of assets coming on line and leaving. An optional column has been added in the CEDR for sites to identify if the asset is new and being added, a replacement, or leaving. If no information is provided, clean the list by separating out assets that are new and being added (B), renovations and additions (O), have already entered the inventory and therefore need not count or are leaving (N) based on information provided in site's SSP narrative. 3. Step 3: Determine if projected consumption estimates provided by site should be counted or not, depending on what the site provides in their SSP. In general check on whether the asset is new, a replacement, or expansion. If a replacement, do not account because the energy leaving is unknown. Sites were not asked to provide energy being displaced by a replacement asset, therefore assume a one for one of the energy being replacement with no actual reduction. A note in the CEDR completion instructions has been added, instructing sites to provide difference in consumption when an asset is being replaced (e.g. if a decrease in consumption due to efficiencies, enter savings). 4. Step 4: Ensure energy and water consumption along with square footage have been provided. If not, estimate as such: <ul style="list-style-type: none"> • Assumption for missing square footage <ol style="list-style-type: none"> a) If no square footage is provided and it is not an asset that is leaving the inventory, calculate an estimated square footage based on average site specific buildings as listed in FIMS. b) If no square footage is provided and the asset is leaving the inventory, pull from FIMS. Note the square footage in this tab may not align with the square footage in FIMS. SPO will use FIMS data for square footage leaving inventory because a site may only have reported assets leaving with energy impact and left out those with minimal energy impact. • Assumption for consumption <ol style="list-style-type: none"> a) If consumption (electricity, natural gas, water, and other) was provided, check unit and magnitude then converted to BBtu/Yr or MGal/Yr. b) If consumption was not provided, estimated based on site specific historic consumption data per square footage, as provided in EMS4 and CEDR. 5. Step 5: Ensure the expected building occupancy year has been provided and is in line with information in site's SSP narrative. If no information has been provided in the CEDR or the SSP then assume FY 2020.

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2.3	<p><i>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)</i></p> <p><u>Current Performance Formula:</u> As provided by site (source: CEDR) <u>Projection Formula:</u> Current Meters (source: CEDR) + Planned Meters (source: CEDR) <u>Projection Period:</u> FY 2012 to FY 2015 <u>Projection Assumptions by Data Source:</u> None</p>
2.4	<p><i>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</i></p> <p><u>Current Performance Formula:</u> As provided by site (source: FIMS) <u>Projection Formula:</u> None <u>Projection Period:</u> None <u>Projection Assumptions by Data Source:</u> None</p>
2.5	<p><i>15% of existing buildings greater than 5,000 gross square feet (GSF) to be compliant with the five guiding principles of HPSB by FY 2015</i></p> <p><u>Current Performance Formula:</u> Based on site provided data (source: FIMS)</p> <p><u>Projection Formula:</u> [Current Bldg meeting HPSB (source: FIMS) + Selected Bldg to meet HPSB (source: FIMS and CEDR)] / [Current Bldgs > 5K sqft (source: FIMS) + New Bldgs > 5K sqft (source: CEDR)]</p> <p><u>Projection Period:</u> FY 2012 to FY 2015</p> <p><u>Projection Assumptions by Data Source:</u> Detailed methodology to be determined, however, must account for: <ul style="list-style-type: none"> • Buildings to be disposition based on FIMS data with similar assumptions as the energy intensity goal assumptions for disposition assets in the denominator; • Ensure all fields have been completed with appropriate responses in the existing building HPSB tab (i.e. if a building is planned to meet GPs then a date of full compliance must be given); • Ensure all relevant data fields in the new buildings tab have been completed (i.e. if asset will be LEED or equivalent or GP). </p>
2.6	<p><i>All new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the GPs and where the work exceeds \$5 million, each are LEED–NC Gold certification or equivalent</i></p> <p><u>Current Performance Formula:</u> None <u>Projection Formula:</u> None <u>Projection Period:</u> None</p>

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3.1	<p><i>Projection Assumptions by Data Source: None</i></p> <p>10% annual increase in fleet alternative fuel consumption by FY 2015 relative to a FY 2005 baseline</p> <p><u>Current Performance Formula:</u> [Current Alternative Fuel GGE/Yr (<i>source: FAST</i>) – 2005 Alternative Fuel GGE/Yr (<i>source: FAST</i>)] / [2005 Alternative Fuel GGE/Yr (<i>source: FAST</i>)]</p> <p><u>Projection Formula:</u> Current Alternative Fuel GGE/Yr (<i>source: FAST</i>) + linear trend from previous 10 years of Alternative Fuel GGE/Yr (<i>source: FAST</i>)</p> <p><u>Projection Period:</u> FY 2012 to FY 2015</p> <p><i>Projection Assumptions by Data Source: None</i></p>
3.2	<p>2% annual reduction in fleet petroleum consumption by FY 2020 relative to a FY 2005 baseline</p> <p><u>Current Performance Formula:</u>[Current Petroleum Consumption not including Law Enforcement and Emergency Vehicles GGE/Yr (<i>source: FAST</i>)– FY 2005 Petroleum Consumption not including Law Enforcement and Emergency Vehicles GGE/Yr (<i>source: FAST</i>)] / FY 2005 Petroleum Consumption not including Law Enforcement and Emergency Vehicles GGE/Yr(<i>source: FAST</i>)</p> <p><u>Projection Formula:</u> [Current Petroleum Consumption not including Law Enforcement and Emergency Vehicles GGE/Yr (<i>source: FAST</i>) + logarithmic trend from previous 10 years of Petroleum Consumption (GGE/yr) (<i>source: FAST</i>)] / FY 2005 Petroleum Consumption not including Law Enforcement and Emergency Vehicles GGE/Yr(<i>source: FAST</i>)</p> <p><u>Projection Period:</u> FY 2012 to FY 2015</p> <p><i>Projection Assumptions by Data Source: None</i></p>
3.3	<p>75% of light duty vehicle purchases must consist of alternative fuel vehicles (AFV) FY 2000 - FY 2015 and 100% thereafter</p> <p><u>Current Performance Formula:</u> [Alternative Fuel Vehicles (<i>source: FAST</i>) + Biodiesel Credit (<i>source: FAST</i>)] / Covered Light Duty Vehicle Acquisitions (<i>source: FAST</i>)</p> <p><u>Projection Formula:</u> Site submitted Alternative Fuel Vehicle purchase plans (<i>source: FAST</i>) / Site submitted total vehicle purchase plans (<i>source: FAST</i>)</p>

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	<p><u>Projection Period:</u> FY2012-2015</p> <p><u>Projection Assumptions by Data Source:</u> None</p>
3.4	<p><i>Reduce fleet inventory by 35% within the next 3 years relative to a FY 2005 baseline</i></p> <p><u>Current Performance Formula:</u> [Current Vehicle Inventory (source: FAST) – FY 2005 Vehicle Inventory (source: FAST)] / FY 2005 Vehicle Inventory (source: FAST)</p> <p><u>Projection Formula:</u> [(Current Vehicle Inventory (source: FAST) + Site submitted vehicle purchase plans (source: FAST) - Site submitted vehicle disposition plans (source: FAST)) - FY 2005 Vehicle Inventory (source: FAST)] / FY 2005 Vehicle Inventory (source: FAST)</p> <p><u>Projection Period:</u> FY 2011 to FY 2013</p> <p><u>Projection Assumptions by Data Source:</u> None</p>
4.1	<p><i>26% water intensity reduction by FY 2020 from a FY 2007 baseline</i></p> <p><u>Current Performance Formula:</u> Current Potable Gal/Yr (source: EMS4 and CEDR) / Current SF (source: FIMS/CEDR) as compared to FY 2007 intensity</p> <p><u>Projection Formula:</u> [Current Potable Gal /Yr (source: CEDR) – Conservation Measure Savings Potable Gal/Yr (source: CEDR) – Disposition Goal Potable Leaving Gal/Yr (source: CEDR and FIMS) + New Process/Bldgs Potable Gal/Yr (source: CEDR)] / [Current SF (source: FIMS/CEDR) – Disposition SF (source: FIMS) + New Process/Bldgs SF (source: CEDR)]</p> <p><u>Projection Period:</u> FY 2012 to FY 2020</p> <p><u>Projection Assumptions by Data Source:</u> The same assumptions and cleanup methods used for the energy intensity goal will be used for the potable water intensity goal with minor changes and additions. The main difference is that there are no exclusions for the potable water intensity goal.</p> <p><u>Conservation Measures (CEDR)</u> No changes.</p> <p><u>Disposition Assets/Buildings (FIMS)</u> Difference: Estimate potable water consumption for all assets by using the average Usage/Yr/SF based on EMS4 data from FY 2007 through current FY.</p>

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	<p><i>New Buildings (CEDR)</i> No changes.</p>
4.2	<p>20% water consumption reduction of industrial, landscaping, and agricultural (ILA) water by FY 2020 from a FY 2010 baseline</p> <p><u>Current Performance Formula:</u> [Current ILA Gals/Yr (source: CEDR) – FY 2010 ILA Gals/Yr (source: CEDR)] / FY 2010 ILA Gals/Yr (source: CEDR)</p> <p><u>Projection Formula:</u>[Current ILA Gals/Yr (source: CEDR) – Conservation Measure Savings Gals/Yr (source: CEDR) – Disposition Water Leaving Gals/Yr (source: CEDR and FIMS) + New Process/Bldgs Water Gals/Yr (source: CEDR)]</p> <p><u>Projection Period:</u> FY 2012 to FY 2020</p> <p><u>Projection Assumptions by Data Source:</u> The same assumptions and cleanup methods used for the energy intensity goal will be used for the ILA water consumption reduction goal with minor changes and additions. The main difference is that there are no exclusions and this is not an intensity goal.</p> <p><i>Conservation Measures (CEDR)</i> No changes.</p> <p><i>Disposition Assets/Buildings (FIMS)</i> Difference: Estimate ILA water consumption for all assets by using the average Usage/Yr/SF based on EMS4 data from FY 2007 through current FY.</p> <p><i>New Buildings (CEDR)</i> Assume zero consumption, unless otherwise provided by site.</p>
5.1	<p>Divert at least 50% of non-hazardous solid waste, excluding construction and demolition debris, by FY 2015</p> <p><u>Current Performance Formula:</u> [Current diverted waste(source: CEDR) + Current on-site composting (source: CEDR) + Current off-site composting (source: CEDR)] / [Current diverted waste(source: CEDR) + Current on-site composting (source: CEDR) + Current off-site composting (source: CEDR) + Current waste to energy (source: CEDR) + Current on-site landfill MSW (source: CEDR) + Current off-site landfill MSW (source: CEDR)]</p> <p><u>Projection Formula:</u> None</p> <p><u>Projection Period:</u> None</p> <p><u>Projection Assumptions by Data Source:</u> None</p>

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5.2	<p><i>Divert at least 50% of construction and demolition materials and debris by FY 2015</i></p> <p><u>Current Performance Formula:</u> [Current diverted C&D waste(<i>source: CEDR</i>)] / [Current diverted C&D waste(<i>source: CEDR</i>) + Current landfilled C&D waste (<i>source: CEDR</i>)]</p> <p><u>Projection Formula:</u> None</p> <p><u>Projection Period:</u> None</p> <p><u>Projection Assumptions by Data Source:</u> None</p>
6.1	<p><i>Procurements Meet Sustainability Requirements by including necessary provisions and clauses (95% each year)</i></p> <p><u>Current Performance Formula:</u> Contracts meeting sustainable acquisition contracts(<i>source: CEDR</i>) / [Contracts Reviewed(<i>source: CEDR</i>) – Contracts without opportunity for sustainable (<i>source: CEDR</i>)]</p> <p><u>Projection Formula:</u> None</p> <p><u>Projection Period:</u> None</p> <p><u>Projection Assumptions by Data Source:</u> None</p>
7.1	<p><i>All data centers are metered to measure a monthly PUE (100% by FY 2015)</i></p> <p><u>Current Performance Formula:</u> Based on DOE IT Sustainability Self-Assessment Tools and CEDR data (<i>source: DOEGRIT and CEDR</i>)</p> <p><u>Projection Formula:</u> None</p> <p><u>Projection Period:</u> None</p> <p><u>Projection Assumptions by Data Source:</u> None</p>
7.2	<p><i>Maximum annual weighted average Power Utilization Effectiveness (PUE) of 1.4 by FY 2015</i></p> <p><u>Current Performance Formula:</u> Based on CEDR data (<i>source: CEDR</i>)</p> <p><u>Projection Formula:</u> None</p> <p><u>Projection Period:</u> None</p> <p><u>Projection Assumptions by Data Source:</u> None</p>
7.3	<p><i>Electronic Stewardship - 100% of eligible PCs, laptops, and monitors with power management actively implemented and in use by FY 2012</i></p> <p><u>Current Performance Formula:</u> Computers or Monitors Using Power Management (<i>source: CEDR</i>) / [Computers or Monitors Using Power Management Owned (<i>source: CEDR</i>) – Computers or Monitors Exempt from Power Management (<i>source: CEDR</i>)]</p> <p><u>Projection Formula:</u> None</p>

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	<p><u>Projection Period:</u> None <u>Projection Assumptions by Data Source:</u> None</p>
8	<p>20% of annual electricity consumption from renewable sources by FY 2020 and thereafter (7.5% FY 2012)</p> <p><u>Current Performance Formula:</u> [Current on-site RE (<i>source: CEDR</i>) + Purchased Green Energy and RECs (<i>source: CEDR</i>)] / [Current MWh/Yr (<i>source: CEDR</i>) + Current on-site RE (<i>source: CEDR</i>) + Purchased Green Energy (<i>source: CEDR</i>)]</p> <p>Projections may change to reflect the 20% goal that was issued in FY 2013 (previously 7.5% by FY 2012 and beyond).</p> <p><u>Projection Formula:</u>[Current on-site RE (<i>source: CEDR</i>) + Potential on-site RE projects (<i>source: CEDR</i>) + Potential Green Energy and REC Purchases (<i>source: CEDR</i>)] / [Current MWh/Yr (<i>source: CEDR</i>) – Conservation Measure MWh/Yr (<i>source: CEDR Tab 11</i>)– Disposition Goal Energy Leaving MWh/Yr (<i>source: CEDR and FIMS</i>) + New Process/Bldgs MWh/Yr (<i>source: CEDR</i>) + Current on-site RE (<i>source: CEDR</i>) + Green Energy Purchases (<i>source: CEDR</i>)]</p> <p><u>Projection Period:</u> FY 2014 to FY 2020</p> <p><u>Projection Assumptions by Data Source:</u> The projections will be based on EPAAct 2005 and E.O. 13423 as DOE O430.2B’s goal ended in FY 2010. Furthermore, the same assumptions and cleanup methods used for the energy intensity goal will be used for the renewable electricity goal with minor changes and additions. The main difference is that there are no exclusions for the renewable electricity goal.</p> <p><u>Conservation Measures (CEDR)</u> No changes.</p> <p><u>Disposition Assets/Buildings (FIMS)</u> Addition: Estimate energy consumption for assets designated as excluded by using the average Usage/Yr/SF based on EMS4 data from FY 2003 through current FY by energy type for excluded assets.</p> <p><u>New Buildings (CEDR)</u> No changes.</p> <p><u>Green Energy and REC Purchases (CEDR)</u> For sites that provide future purchasing plans, used site provided data. Otherwise,</p>

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	<p>estimate future green energy and REC purchases based on the following scenarios:</p> <ul style="list-style-type: none"> • Conservative - Assume sites will continue to purchase the same amount of green electricity and RECs as the current year. • Moderate – Assume the site will purchase 7.5% to meet EPAAct 2005. If possible, calculate gap to meet the 7.5% with on-site systems and/or historic renewable purchases or estimated based on data provided by site. • Aggressive – Assume the site will purchase 10%. If possible, calculate gap to meet the 28% GHG reduction with on-site systems and/or historic renewable purchases.