

# Verification Training



U.S. DEPARTMENT OF  
**ENERGY**



**September 26, 2024**

**DOE Sustainability Performance Office**



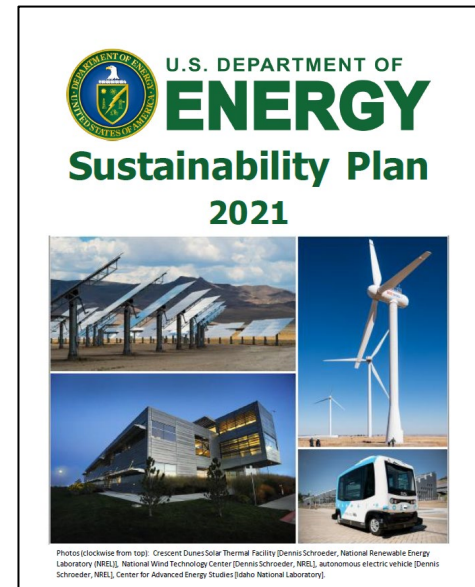
- Verification Overview
- Verification Selection
  - Verification Team review
- Verification Submission
  - Best practices
- Dashboard Verification Module

# Verification Overview



## Why do we verify?

- SPO collects annualized data to report progress on sustainability goals.
- This data informs DOE's Sustainability Plan, Annual Energy Management Report, Climate Adaptation & Resilience Plan, and other reports as well as performance status for DOE.
- To ensure accuracy, SPO verifies sustainability data prior to publication.



| Department of Energy<br>FY 2021 OMB SCORECARD FOR FEDERAL SUSTAINABILITY |  |        |  |          |  |             |           |           |
|--|--|--------|--|----------|--|-------------|-----------|-----------|
| GOAL/ASSESSMENT  | METRICS  | Score  | OTHER PROGRESS INDICATORS  | FY 2020  | FY 2021  |             |           |           |
| GREENHOUSE GAS EMISSIONS FROM OPERATIONS STANDARD                        | Change in scope 1&2 emissions from FY 2008:  | -49.1% | Score  | 1 & 2    | Total  | 4,695,642   | 2,256,235 | 2,391,052 |
|  | Change in scope 1&2 emissions from prior year:   | 5.9%   | 1  | Facility | 926,306  | 391,194     | 443,212   |           |
|  | Change in scope 1 facility energy emissions from FY 2008:  | -52.2% | 2  | Facility | 2,856,816  | 1,486,526   | 1,484,707 |           |
|  | Change in scope 1 fleet energy emissions from FY 2008:   | -48.0% | 2  | Fleet    | 67,085   | 39,114      | 42,919    |           |
|  | Change in scope 1 other emissions from FY 2008:  | -36.0% | 1  | Other    | 845,735  | 341,400     | 420,214   |           |
|  | Change in scope 1 other emissions from FY 2008:  | -50.3% | 1  | Other    | 845,735  | 341,400     | 420,214   |           |
|  |  |        |  |          | Direct GHG intensity of all facilities (kg/GSF): |             | 3.46      |           |
| FACILITY ENERGY EFFICIENCY   | Change in energy intensity (Btu/GSF) compared to FY 2003:  | -39.8% | Category   | FY 2003  | FY 2020  | FY 2021     |           |           |
|  | Change in energy intensity (Btu/GSF) from prior year:  | -1.5%  | Energy intensity (Btu/GSF)   | 222,627  | 136,014  | 133,933     |           |           |
|  |  |        | Energy use (Net billion Btu):  | 24,457   | 14,791   | 14,695      |           |           |
|  |  |        | Gross Square Feet (thousand):  | 109,855  | 108,747  | 109,721     |           |           |
| EFFICIENCY MEASURES/ INVESTMENT  | Covered facilities evaluated for efficiency opportunities (in terms of covered facility energy use): | 98.4%  | Implementation cost of ECMs identified within last 4 years (\$M):                                      |          |  | \$83.1      |           |           |
|  |  |        | CTS-reported investment in covered facilities in FY 2021 (\$M):  |          |  | na          |           |           |
|  |  |        | Total direct investment in FY 2021 (\$M):  |          |  | \$14.3      |           |           |
|  |  |        | ESPC and UEIS investment in FY 2021 (\$M):   |          |  | \$0.0       |           |           |
| RENEWABLE ENERGY USE   | Renewable electricity used (as a percentage of total electricity use):                               | 19.2%  | Renewable electricity + non-electric renewable energy used (as a percentage of total electricity use): |          |  | 22.4%       |           |           |
|  |  |        |  |          |  |             |           |           |
| WATER EFFICIENCY   | Change in potable water intensity compared to FY 2007:   | -35.7% | Category   | FY 2007  | FY 2020  | FY 2021     |           |           |
|  | Change in potable water intensity from prior year:   | -2.1%  | Facility Water Intensity (Gal per GSF)   | 68.3     | 44.9   | 43.9        |           |           |
| HIGH PERFORMANCE SUSTAINABLE BUILDINGS                                   | Percent of eligible buildings meeting sustainability criteria:                                       | 14.3%  | Buildings meeting sustainability criteria:   |          |  | 246         |           |           |
|  | Percentage point difference from prior year:   | 0.8    | Total count of eligible buildings:   |          |  | 4,724       |           |           |
|  | Percent of GSF (eligible) meeting sustainability criteria:   | 11.6%  | GSF meeting sustainability criteria (thousand):  |          |  | 9,592       |           |           |
|  | Percentage point difference from prior year:   | 0.0    | Total eligible GSF (thousand):   |          |  | 82,807      |           |           |
|  | Change in petroleum fuel use in covered fleet compared to FY 2005:                                   | -37.7% | Alternative fuel use as a percentage of total covered fleet fuel use:                                  |          |  | 19.4%       |           |           |
| TRANSPORTATION/ FLEET MANAGEMENT   | Change in petroleum fuel use in covered fleet compared to prior year:                                | 10.3%  | Covered APVs (w/bonus credits) as a percent of acquisitions:   |          |  | 156.8%      |           |           |
|  |  |        | Light-duty zero-emission vehicles as a percent of acquisitions:  |          |  | 0.79%       |           |           |
|  |  |        | Number of applicable contract actions w/ sustainable clauses, FY21:                                    |          |  | 572         |           |           |
| SUSTAINABLE ACQUISITION  | Percentage point difference of sustainable contract actions from prior year:                         | 0.8    | Number of applicable contract actions w/ sustainable clauses, FY20:                                    |          |  | 1,626       |           |           |
|  |  |        | Value of applicable contract actions w/ sustainable clauses, FY21:                                     |          |  | \$22,838.1M |           |           |
|  |  |        | Value of applicable contract actions w/ sustainable clauses, FY20:                                     |          |  | \$20,276.0M |           |           |

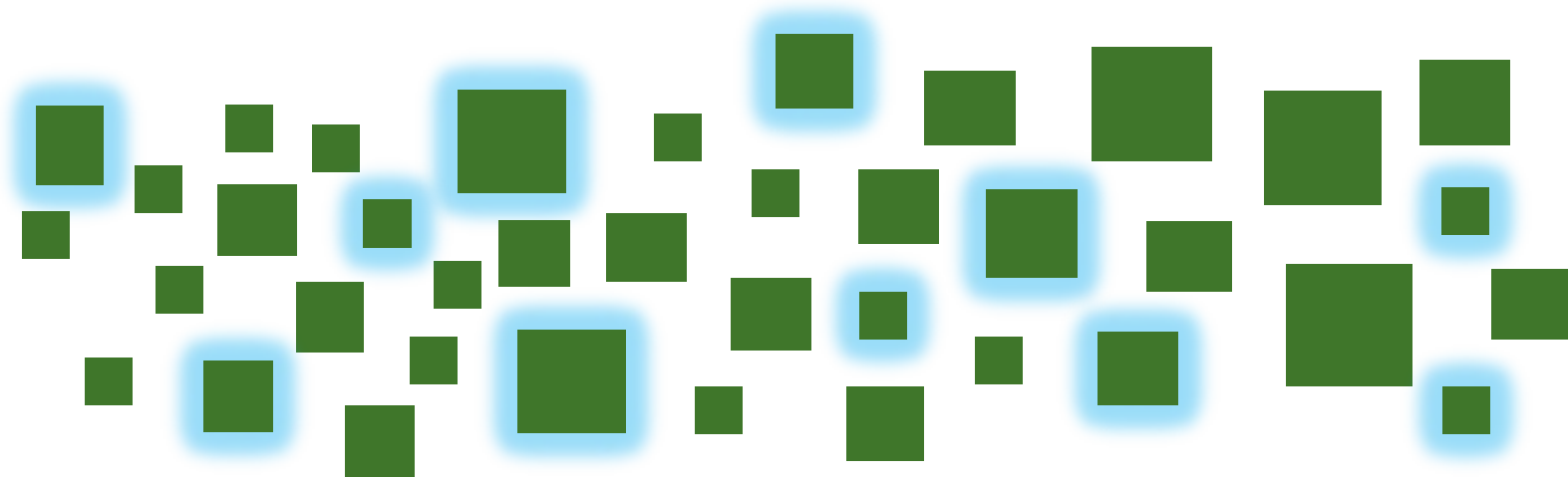
\*Due to the COVID-19 pandemic, the data as reported may appear anomalous and represent exogenous factors beyond the Agency's control. The impact on agency performance has not been fully evaluated at this time.

Sources: Agency submitted data from Annual Energy Data Report, EISA 432 Compliance Tracking System, Federal Real Property Profile, Federal Automotive Statistical Tool, SAM.GOV

## How does the selection process work?

- Each year, SPO selects a sample of small and large sites which make up at least 10 percent of GHG emissions (Scope 1 & 2) and water use.

### DOE Sites





## How does the selection process work?

- SPO aims to select sites every two to three years.
- If SPO has identified process related issues during a previous verification, the site(s) will be reselected for verification for the same category within two years to ensure process improvements.
- For multi-location sites, SPO will aim to select **one location** for verification to lessen the burden of producing documentation from multiple locations.

# Verification Categories



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- Selected sites are usually assigned 3 data categories.
- Current data categories\*:

|                                    |                                   |
|------------------------------------|-----------------------------------|
| Energy                             | Fleet Fuel                        |
| Water                              | Fugitives & Refrigerants          |
| Municipal Solid Waste –<br>On-site | Wastewater Treatment –<br>On-site |
| Green energy purchases             | Steam/chilled water               |

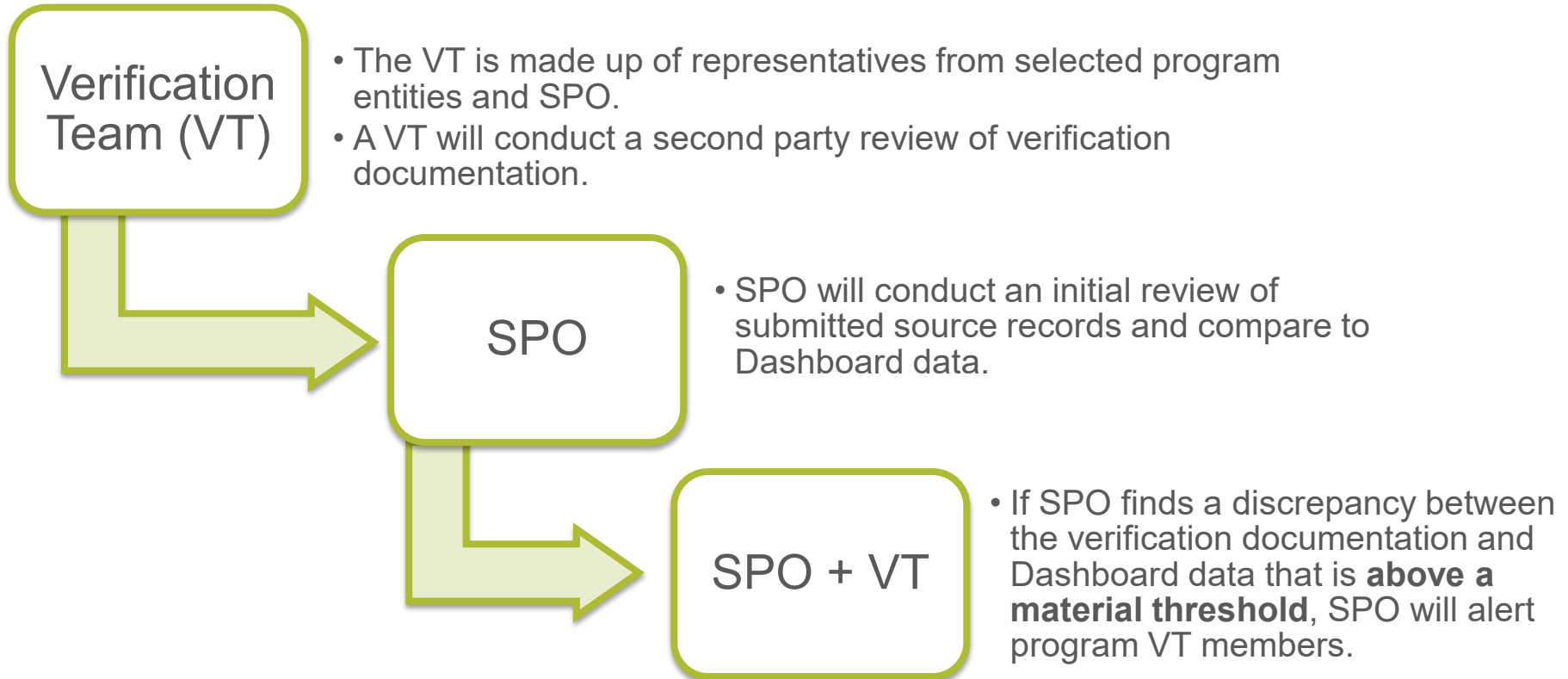
\*Subject to change

Sites are notified of their verification selection by the **end of July** and have until **January** of the following year to submit their documentation.

# Verification Team Review



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## Why use a material threshold?

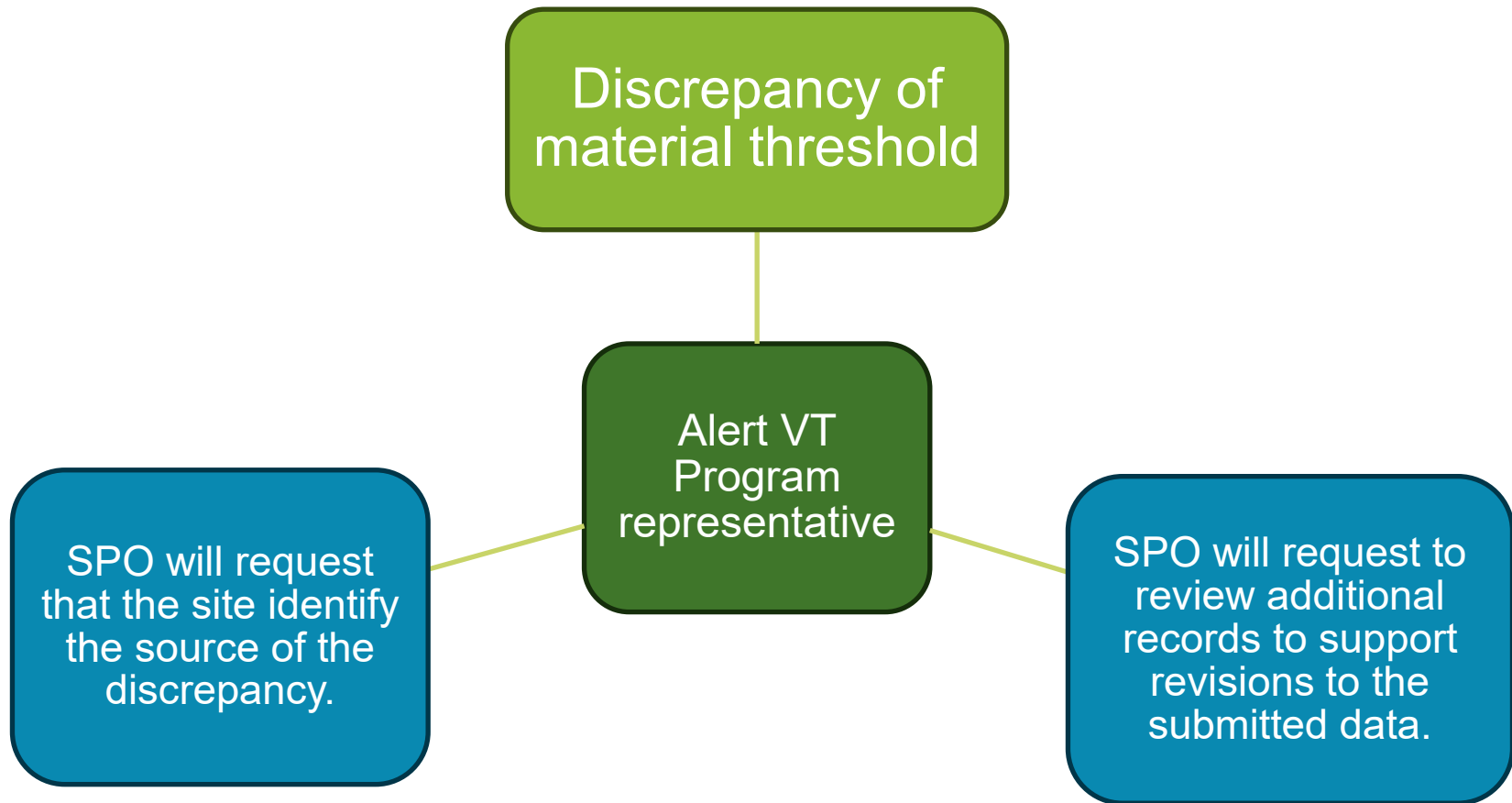
- A site's size affects the significance of a discrepancy on Department-level data.
- For example, a large site with a discrepancy of 5 percent or greater may significantly impact the Department's total, but a similar discrepancy for a small site may be negligible.
- If SPO finds a discrepancy less than the material threshold, SPO and program VT members will collectively review and decide on the need for additional actions.



# Discrepancy Review Process



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SPO will document all discrepancies of a material threshold, along with the findings from the review, in the verification summary report. The summary report will also include process improvement recommendations.

# Verification Team Review Logistics



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- The VT meets in May of each year to review the verification summary report.
- VT members must acknowledge approval of the report by digitally signing a signature document that will be attached to the final summary report (for internal records only).



## Verification submissions include two components:

### Methodology overview:

- Explains the calculations, assumptions, and any discrepancies in the data

### Verification documentation:

- Includes bills, receipts, and meter readings that support submitted figures

██████████ L Data Verification

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II. Methodology Detail..... 7

| Point of Contact (POC) | Primary Contact |
|------------------------|-----------------|
| Name                   | ██████████      |
| Job Title              | ██████████      |
| Email Address          | ██████████      |
| Phone Number           | ██████████      |
| Category Type          | ██████████      |

**CURRENT CHARGES**

**Electric Charges**

**RATE PLAN**  
023 - Industrial Power

**METER READING**  
Electric Meter read on 12/31/19  
(Next scheduled read date 1/31/20)

| METER NO.  | BILLING PERIOD | DAYS       | KWH        | KW DEMAND  | KVA DEMAND |
|------------|----------------|------------|------------|------------|------------|
| ██████████ | ██████████     | ██████████ | ██████████ | ██████████ | ██████████ |

Current month Bill Demand ██████████  
Power factor is 99.00%.

Basic Facilities Charge  
17,145,845 kWh X \$ 0.042260 ██████████  
39,840 kW X \$ 14.600000 ██████████

Renewable Energy Resources  
MV-Web Software Lease  
Pp3 Operating Charge  
Transmission Maintenance Fee  
Demand Side Management Rider Credit  
Voltage Level Discount 39,840 kW X \$ - 0.600000  
Tax Rider

**Total Electric Charges** ██████████

**Electric Charges**

**RATE PLAN**  
007 - SR3 Three Rivers Credit

**METER READING**  
Electric Meter read on 12/31/19  
(Next scheduled read date 1/31/20)

| METER NO.  | BILLING PERIOD | DAYS       | KWH        | KW DEMAND  | KVA DEMAND |
|------------|----------------|------------|------------|------------|------------|
| ██████████ | ██████████     | ██████████ | ██████████ | ██████████ | ██████████ |

**Total Electric Charges** ██████████

## Methodology Overview

- Provide a point of contact for each data category:

### Subject Matter Experts

| Point of Contact (POC) | Category 1 | Category 2 |
|------------------------|------------|------------|
| Name                   |            |            |
| Job Title              |            |            |
| Email Address          |            |            |
| Phone Number           |            |            |

- Provide a comparison table for values in the verification documentation and in the Dashboard:

### *Example: Natural Gas Reporting Comparison Table*

| Category 1       | Utility Bill Usage | Utility Bill Cost | Dashboard Usage | Dashboard Cost |
|------------------|--------------------|-------------------|-----------------|----------------|
| Natural Gas (Q1) | 15,003 ccf         | \$10,000.90       | 1,500.3 Mcf     | \$10,000       |

- If verification data values do not match what is reported in the Dashboard, please explain why.



## Methodology Overview

- Describe the process for obtaining the source data as well as a detailed explanation of identified issues/adjustments (e.g., broken meters) and plans for mitigation.
- Describe any assumptions and/or data manipulation performed to enter data into the Dashboard.

**Example:** Site's Contractor pumps raw water from the River to the site through pipelines. The water is treated on-site and produces potable water for the site. Water gallons are tracked using a set of water meters from the river and in the Treatment Plant. Cost estimates are calculated using water treatment chemicals, labor cost, and raw water pump electric cost.



## Methodology Overview

- Specify conversion factors.
  - A list of conversion factors is available on the Dashboard. If you use factors other than these, please explain why.
- Provide the relevant reports from internal tracking systems and tools, such as chemical inventory, Human Resources records for employee population, DriveThru, EPA's LandGEM output, spreadsheets, etc.



## Methodology Overview

- Each category request will specify the verification reporting timeframe.
  - For annual data, provide data on a federal fiscal year basis (October 1 – September 30).
    - For data that is not structured by federal fiscal year, please provide a description of the methodology used to adjust the timeframe.
  - If only one quarter of data is requested, please only provide data for the months requested.
    - For data that overlaps quarters, please provide a description of the methodology used to separate/estimate the quarter data.
  - See sample Methodology Document on the Dashboard for an example.





# Dashboard Submission



Sites selected for verification will submit their methodology overview and documentation through the Verification tab in Dashboard's Quality Control Status module:

Welcome, isabelle.heilman | Tuesday, September 7, 2021  
My Profile | Change Password | Log Out

Quality Control Status

- Enter Data
- Data QA/QC
- Site Sustainability Plan
- Completion Status
- Quality Control Status

DOE Program Office: [Dropdown]

DOE Site: [Dropdown]

Request Status: All [Dropdown]

Fiscal Year: All Years [Dropdown]

Category: All Categories [Dropdown]

Name Search: [Text Input]

Apply Clear

Change Request | Quality Assurance | **Verification**

| DOE Program Office | DOE Site  | FY   | Category | Subcategory Description | Updated Date         | Updated By       | Verification Status   | Decision Date | Approving Admin | Details    |
|--------------------|-----------|------|----------|-------------------------|----------------------|------------------|-----------------------|---------------|-----------------|------------|
| D-Program          | Demo Site | 2021 | Water    |                         | 9/7/2021 10:56:52 AM | isabelle.heilman | Notified of Selection |               |                 | Open Notes |

# Verification Module



- Each verification category is a separate entry.
- Click on “Open/Notes” within a verification category to open the submission portal:

| DOE Program Office | DOE Site  | FY   | Category | Subcategory Description | Updated Date            | Updated By       | Verification Status   | Decision Date | Approving Admin | Details                    |
|--------------------|-----------|------|----------|-------------------------|-------------------------|------------------|-----------------------|---------------|-----------------|----------------------------|
| D-Program          | Demo Site | 2021 | Energy   | Natural Gas             | 9/7/2021<br>11:14:20 AM | isabelle.heilman | Notified of Selection |               |                 | <a href="#">Open Notes</a> |
| D-Program          | Demo Site | 2021 | Water    |                         | 9/7/2021<br>10:56:52 AM | isabelle.heilman | Notified of Selection |               |                 | <a href="#">Open Notes</a> |

Sustainability Dashboard: Home

Verification Status: Notified of Selection

+ Add new record

| Name                   | Job Title | Email | Phone # |
|------------------------|-----------|-------|---------|
| No records to display. |           |       |         |

+ Add new record

Verification Team Review Documents

+ Add new record

No records to display.

+ Add new record

Site Supporting Documents

Methodology Overview

No records to display.

Verification Team Notes

Site Notes

Save Cancel Notify

# Add Subject Matter Experts



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- To add a SME, click on “Add new record” and enter contact information for your SME, then click on the “Save” icon next to your entry.

The screenshot shows a web application interface for adding Subject Matter Experts (SMEs). The interface is divided into several sections on the left and a main data entry area on the right.

**Left Sidebar:**

- Verification Status
- Site Subject Matter Experts
- Verification Team Review Documents
- Site Supporting Documents
- Verification Team Notes
- Site Notes

**Main Data Entry Area:**

- A dropdown menu labeled "Notified of Selection".
- A button labeled "+ Add new record" (highlighted with a red box).
- A table with columns: Name, Job Title, Email, and Phone #.
- A single record is displayed: Name: Leslie Knope, Job Title: Energy Manager, Email: leslie.knope@pawnee, Phone #: (202)-123-4567.
- A "Save" icon (highlighted with a red box) is located to the left of the record.
- Below the table, there are three sections, each with a "+ Add new record" button and a "No records to display." message:
  - Verification Team Review Documents
  - Site Supporting Documents (with a "Methodology Overview" link)
  - Verification Team Notes
- At the bottom right, there are three buttons: "Save", "Cancel", and "Notify".

# Site Supporting Documents



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- To add the methodology document and verification documentation, click “Add new record” under “Site Supporting Documentation”

Sustainability Dashboard: Quality Control Status

Verification Status

Notified of Selection

+ Add new record

Site Subject Matter Experts

|  | Name         | Job Title      | Email                   | Phone #    |
|--|--------------|----------------|-------------------------|------------|
|  | Leslie Knope | Energy Manager | leslie.knope@pawnee.gov | 2021234567 |

+ Add new record

Verification Team Review Documents

No records to display.

+ Add new record

Site Supporting Documents

Methodology Overview

No records to display.

Verification Team Notes

Site Notes

Save Cancel Notify

# Site Supporting Documents, continued



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- Upload your documents (in PDF, Word, or Excel formats) and click the save icon to submit your documents.
- Check the box to indicate which file is the methodology overview.

The screenshot shows a web application window titled "Sustainability Dashboard: Home". The interface is divided into several sections on the left and a main content area on the right. The "Site Supporting Documents" section is highlighted with a red box. In this section, there is a "Choose File" button, a text input field containing "Demo Site ... odocument.pdf", and a checked checkbox. Above this section, there is a "Methodology Overview" section with a checkbox that is also checked. The main content area also contains a table with columns for Name, Job Title, Email, and Phone #, and a "Notify" button at the bottom right.

| Name         | Job Title      | Email                   | Phone #    |
|--------------|----------------|-------------------------|------------|
| Leslie Knope | Energy Manager | leslie.knope@pawnee.gov | 2021234567 |

| File Name                      | Methodology Overview                |
|--------------------------------|-------------------------------------|
| Demo Site ... odocument.pdf    | <input checked="" type="checkbox"/> |
| Demo Site_FY Water Bills.pdf   | <input type="checkbox"/>            |
| Demo Site FY Water Values.xlsx | <input type="checkbox"/>            |

# Submit Verification Files



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- When you have completed your document submission, click “Save.”

The screenshot shows a web application window titled "Sustainability Dashboard: Home". The interface is divided into several sections on the left and a main content area on the right. The left sidebar includes sections for "Verification Status", "Site Subject Matter Experts", "Verification Team Review Documents", "Site Supporting Documents", "Verification Team Notes", and "Site Notes". The main content area contains a "Notified of Selection" dropdown, an "Add new record" button, a table with one record for Leslie Knope, another "Add new record" button, a "No records to display" message, a third "Add new record" button, a "Methodology Overview" section, and a file upload area. The file upload area shows a "Choose File" button, a selected file "Demo Site ...ocument.pdf" with a checkmark, and two other files: "Demo Site\_FY Water Bills.pdf" and "Demo Site FY Water Values.xlsx", both with empty checkboxes. At the bottom right, there are three buttons: "Save", "Cancel", and "Notify". The "Save" button is highlighted with a red rectangle.

| Name         | Job Title      | Email                   | Phone #    |
|--------------|----------------|-------------------------|------------|
| Leslie Knope | Energy Manager | leslie.knope@pawnee.gov | 2021234567 |

| File Name                      | Selected                            |
|--------------------------------|-------------------------------------|
| Choose File                    | <input checked="" type="checkbox"/> |
| Demo Site_FY Water Bills.pdf   | <input type="checkbox"/>            |
| Demo Site FY Water Values.xlsx | <input type="checkbox"/>            |

# Verification Summary Report



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- The VT will upload the verification summary report and record any notes on the verification submission using the same portal.

Sustainability Dashboard: Home

Verification Status: **Completed**

+ Add new record

| Name         | Job Title      | Email                   | Phone #    |
|--------------|----------------|-------------------------|------------|
| Leslie Knope | Energy Manager | leslie.knope@pawnee.gov | 2021234567 |

+ Add new record

Verification Team Review Documents

Verification Summary Document.docx

+ Add new record

| Methodology Overview   |
|--|
| Demo Site Methodology Document.pdf <input checked="" type="checkbox"/> |
| Demo Site_FY Water Bills.pdf <input type="checkbox"/>                  |
| Demo Site FY Water Values.xlsx <input type="checkbox"/>                |

Site Supporting Documents

Verification Team Notes: No discrepancies found.

Site Notes

Save Cancel Notify

# Verification Timeline



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| Activity  | Date                 |
|---|----------------------|
| Sites selected for verification                     | July 2024            |
| Verification training session                       | September 2024       |
| Verification submissions due                        | January 17, 2025     |
| SPO reviews submissions and prepares summary report | January – April 2025 |
| VT members meet to review and finalize report       | May 2025             |





# Any questions?

Sustainability Performance Office

[www.sustainability.energy.gov](http://www.sustainability.energy.gov)

[sustainability@hq.doe.gov](mailto:sustainability@hq.doe.gov)

# Acronyms



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|     |                                     |
|-----|-------------------------------------|
| CEQ | Council on Environmental Quality    |
| DOE | Department of Energy                |
| EPA | Environmental Protection Agency     |
| GHG | Greenhouse Gas                      |
| SME | Subject Matter Expert               |
| SPD | Sustainability Performance Division |
| SSP | Site Sustainability Plan            |
| VT  | Verification Team                   |