**Date last modified/updated:** Click here to enter a date. **Internal audit:** Click here to enter a date.

**Who last modified/updated:** Click here to enter text. **Management review:** Click here to enter a date.

**This part of the Navigator Playbook is completed when you have:**

1. **Identified all energy sources that are consumed within the scope and boundaries.**
2. **Made a list of energy uses within the scope and boundaries.**
3. **Identified relevant variables that potentially affect the energy consumption of SEUs and would help create meaningful energy performance indicators (EnPIs) and energy baselines (EnBs). If seeking U.S. DOE 50001 Ready recognition identify relevant variables that potentially affect the energy consumption of the scope and boundaries of your 50001 Ready EnMS.**
4. **Developed and implemented a data collection plan based upon the data needs including the key characteristics of ISO 50001.**
5. **Ensured measurements and metering are conducted accurately and are repeatable.**
6. **Determined appropriate analysis methods and used them to understand and monitor energy use and consumption.**
7. Identify all energy sources that are consumed within the scope and boundaries.
8. Make a list of energy uses within the scope and boundaries.

☐ We have identified our current energy sources (to be recorded in 50001 Ready Navigator Energy Consumption Tracker)

☐ Analysis has been carried out on collected data to assess past and present energy use and consumption at the equipment level (to be recorded in 50001 Ready Navigator Energy Consumption Tracker)

Use the 50001 Ready Navigator Energy Consumption Tracker to collect and record this information. This tool is included as part of the 50001 Ready Navigator Playbook. If you are already collecting and storing this information in other ways, indicate below.

☒ Energy data has been organized and entered into a central location, and the data is stored at:

ENERGY STAR Portfolio Manager is used rather than the Energy Consumption Tracker.

☒ We have identified energy uses associated with energy sources (complete first two columns)

|  |  |  |  |
| --- | --- | --- | --- |
| **Energy Uses** | **Energy source(s) used** | **Factors/persons that affect consumption** | **Large energy user (y/n)** |
| IT Equipment (servers, storage, and network) | Electricity | IT equipment load | Y  |
| HVAC system (chillers, Air Handling Units (AHUs), and pumps) | Electricity | IT equipment load, type of HVAC system (chillers, AHUs, pumps), outside temperature (climate) | Y |
| Electrical system (transformers, UPSs, and PDUs) | Electricity | IT equipment and HVAC system loads, type of electrical system | Y |

1. Identify relevant variables that potentially affect the energy consumption of SEUs and would help create meaningful energy performance indicators (EnPIs) and energy baselines (EnBs).

☒ We have identified relevant variables that potentially affect the energy consumption of SEUs and would help create meaningful energy performance indicators (EnPIs) and energy baselines (EnBs)

|  |  |
| --- | --- |
| **Relevant Variable** | **Affected SEU(s) or Scope and Boundaries** |
| IT equipment loads by servers, storage, and network | IT equipment, HVAC system, and electrical system |
| Type of HVAC system (chillers, AHUs, pumps) | HVAC system  |
| Type of electrical system (transformers, UPSs, and PDUs) | Electrical system |
| Outside temperature (climate) | HVAC system |

1. Develop and implement a data collection plan based upon the data needs including the key characteristics of ISO 50001 (see resource for Task 20 Monitoring and Measurement of the EnMS).
2. Ensure measurements and metering are conducted accurately and are repeatable.

☒ We have established our data needs for our Energy Review

☒ We have established a process for collecting this data at scheduled intervals

☒ We have identified sources for collecting this data

☒ We have identified personnel responsible for collecting this data. Engineering Management

☒ Who. Engineering Team

☒ We have established that this data is from sources that are accurate and repeatable

Method: Utility meters and DCIM meters/sensors are calibrated for accuracy.

1. Determine appropriate analysis methods and use them to understand and monitor energy use and consumption.

☒ Appropriate analysis methods have been used to understand and monitor energy use and consumption.

Method: Energy usage analysis through DCIM trending, [M&V guidelines](https://www.energy.gov/sites/default/files/2024-10/mv_guide_5_0.pdf), [data center metering](https://datacenters.lbl.gov/sites/default/files/DataCenterMeteringandResourceGuide_02072017_0.pdf), [accessing onboard server sensors](http://datacenters.lbl.gov/resources/accessing-onboard-server-sensors-energy), [thermal guidelines, temperature measurements](http://datacenters.lbl.gov/sites/default/files/FINAL%20Thermal%20Guidelines%20and%20Temp%20Measurements%209-15-2020.pdf), data analysis, record keeping, and using selected energy and energy-related metrics (Power Usage Effectiveness [PUE](https://www.iso.org/standard/63450.html), Water Usage Effectiveness [WUE](https://www.iso.org/standard/63450.html), Carbon Usage Effectiveness [CUE](https://www.iso.org/standard/63450.html), Rack Cooling Index [RCI](http://ancis.us/images/RCI.pdf)).

Top Management Approval

|  |  |  |
| --- | --- | --- |
| ☒  | Date approved: | 6-5-2023 |
| ☒  | Who approved: | General Manager |

Comments

Click here to enter text.