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

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

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

1. **Identified all energy types 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).**
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 types that are consumed within the scope and boundaries. (see Tab 2 of the Energy Mapping Template)
8. Electricity
9. Natural gas

EXAMPLE

1. Fuel oil #2 (FO #2)
2. Diesel fuel
3. Liquid propane (LP)
4. Solar photovoltaic
5. Solar heating
6. Geothermal for ground source heat pumps
7. Other fuels on site, but not in scope
	1. Mission fuels used in military equipment for the execution of the mission
		1. Gasoline fuel
		2. Diesel fuel
		3. Aviation fuel
		4. JP8 fuel
		5. Jet A fuel
		6. Others
8. Make a list of energy uses within the scope and boundaries.

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

[x]  Analysis has been carried out on collected data to assess past and present energy use and consumption at the building/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.

[x]  Energy data has been organized and entered a central location and the data is stored at: ADD LOCATION

Energy Data is collected from several sources:

1. Central Energy Plant data is metered and collected and stored by Honeywell subcontractor
2. Reimbursable tenant accounts are metered and billed by ACME Utility Services.
3. The data is collected in annual fiscal year spreadsheets by month for all reimbursable accounts
4. Overall site energy in is collected from utility invoicing and purchasing records
5. Overall energy consumption is tracked and reported in two locations, by month per fiscal year
	1. Utility Payment log spreadsheet
	2. U.S. Army AEWRS data spreadsheet and reporting system
6. These data files are kept on servers at SITE and are accessible with lap top computers
7. Examples of the files are in the ADD LOCATION or SERVER

[x]  We have identified energy uses associated with energy types (complete first two columns)

The energy users on SITE are generally centered around the energy loads of commercial buildings. The SITE contains over 5,000 buildings which account for over 50 million square feet of building space. The heating, cooling, ventilation, and lighting of these spaces are big energy users. In addition, providing domestic hot water for barracks, office bathrooms and dining facilities is also a large energy user.

**Energy Uses These TWO Columns filled out for Task 9**

|  |  |  |  |
| --- | --- | --- | --- |
| **Energy Uses** | **Energy type(s) used** | **Factors/persons that affect consumption** | **Large energy user (y/n)** |
| **BUILDING HEATING –** Boilers, Heat Pumps, Ground Source Heat Pumps, Fans, Pumps, Package Units (AHUs/RTUs) | Natural Gas, Electricity, LP, FO #2 | **HDD /**Central Energy Plant OperatorsBuilding Facility ManagersDPW Maintenance TechsOccupantsREMs | **YES** |
| **WATER HEATING –** Domestic hot water for barracks, offices, dining facilities, etc. | Natural Gas, Electricity | **Demand/Occupancy /**Central Energy Plant OperatorsBuilding Facility ManagersDPW Maintenance TechsOccupantsREMs | **YES** |
| **BUILDING COOLING –** Chillers, Cooling Towers, Fans Pumps, Package Units (AHUs/DX/RTUs) | Electricity | **CDD /**Central Energy Plant OperatorsBuilding Facility Managers DPW Maintenance TechsOccupantsREMs | **YES** |
| **BUILDING LIGHTING -**  | Electricity, Solar DC | **Occupancy /**OccupantsDPW Maintenance Techs | **YES** |
| Lifts Stations for Wastewater Treatment – Pumps | Electricity | **Occupancy /**DPW Maintenance Techs | NO |
| Maintenance Shops for Vehicles & Aircraft – Painting, fabrication, repair, etc. | Electricity, Natural Gas, LP | **Workload/Units Repairs /**Maintenance Shop leaders | NO |
| Data Centers /Computers/Office Equipment – server power supply (not HVAC) | Electricity | **Operational Level /**Operators | NO |
| Flight and Combat Simulators – Hydraulic pumps, controls, etc. | Electricity | **Training Schedule /**Operators | NO |
| Cooking | Natural Gas, Electricity | Occupancy /Operators | NO |

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).

[x]  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)** |
| Cooling Degree Days (CDD) |  |
| Heating Degree Days (HDD) |  |
| Relative Humidity (morning and evening) |  |
| Base Occupancy |  |

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.

[x]  We have established our data needs for our Energy Review

[x]  We have established a process for collecting this data at scheduled intervals

[x]  We have identified sources for collecting this data

[x]  We have identified personnel responsible for collecting this data Key personnel are aware of their data collection duties

[x]  Who: Central Energy Plant data, NAME, ROLE; Reimbursable Data, NAME, ROLE, Overall energy data coordination and reporting is through the Energy Team Leader at DPW

[x]  We have established this data is from sources that are accurate and repeatable

Method: Third party calibration testing at least annually. Records are maintained.

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

[x]  Appropriate analysis methods have been used to understand and monitor energy use and consumption.

Method: SITE follows the U.S Army guidance for data collection and reporting of energy consumption data using the AEWRS system

Top Management Review:

|  |  |  |
| --- | --- | --- |
| [ ]  | Date reviewed: | Click here to enter a date. |
| [ ]  | Who reviewed? | Click here to enter text. |

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