**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. **Developed one or more energy performance indicators (EnPIs) for your organization. If relevant variables significantly affect energy consumption, normalized EnPIs.**
2. **Developed an energy baseline (EnB) for EnPIs in order to later determine energy performance improvement.**
3. **Communicated proposed EnPIs and EnBs to top management so they can ensure the EnPIs and EnBs are appropriate for the organization.**
4. **Recorded and regularly reviewed the method used to determine and update EnPIs and established the conditions under which adjustments to the baseline(s) will be made.**
5. **Compared EnPI values to their respective EnBs on a regular basis.**
6. **Implemented a process for ongoing monitoring, measurement and analysis of your EnPIs, EnBs, and energy performance improvement.**
* **If you are planning on seeking U.S. DOE 50001 Ready recognition for this project please refer to the, “Get Ready Recognized,” page of the 50001 Ready Navigator to ensure you select an EnPI, EnB, and method for demonstrating energy performance improvement allowed by the recognition program. To achieve Ready recognition energy performance improvement is demonstrated for the same scope and boundaries as your 50001 Ready EnMS.**
1. Develop energy performance indicators (EnPIs) for your organization including an EnPI for each SEU. If relevant variables significantly affect energy consumption, then normalize EnPIs.

☒ We have developed our energy performance indicators (EnPIs) using information from the energy review in the Energy Data Collection and Analysis task.

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| ☒ | We have assigned responsibilities of EnPI development at our organization.  | This is the responsibility of the Green Team, with final decisions made by the Director of Engineering. |

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| ☒ | Our **energy team** is responsible for developing our list of EnPIs. | List developed 5/3/21 |
| ☒ | **Top management** is responsible for ensuring EnPIs appropriately represent energy performance, which can be accomplished through the management review process detailed in the Management Review task.  | Confirmed acceptance of responsibility on 5/14/21 |

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| ☒ | We have assigned an EnPI for each significant energy use (SEU).  | 5/3/21 |
| ☒ | Each of the EnPI’s we have selected provide immediate value to key stakeholders.  | Confirmed |

*Note: For 50001 Ready recognition specific EnPIs and EnBs are required. See program requirements on the “Get Ready Recognized” page of the 50001 Ready Navigator for more information.*

☒ We have established criteria for identifying EnPIs, detailed below:

Our EnPIs provide site-level metrics on electricity, natural gas, and water consumption for the hotel, along with visibility into the performance of our chilled water and boiler plant operations, which are 2 significant energy users.

☒ We have established methods for determining EnPIs, detailed below:

Our current EnPIs are based on site-level and equipment-level data where we have ready and reliable access. Site data will utilize monthly billing from our utilities entered into Energy Star Portfolio Manager and normalized for occupied room rates. Chiller and boiler plant performance will be based upon data we currently have in our Building Management System (BMS). Other EnPIs will be determined for other significant energy uses once data collection points are developed and integrated into a system to easily record, track, and automate the transfer of this data into a useable format.

☒ We have established a process for recording and reviewing these methods on a regular basis.

We will use both Energy Star Portfolio Manager and our Sustainability Tracker as the means to record our monthly energy usage. We will begin to normalize these values for number of occupied rooms throughout the month to adjust for changing occupancy patterns. We’re also exploring how to capture and report these values on a daily basis and to include average outside air temperatures and food & beverage covers to have a more accurate representation to changing relevant variables that drive energy consumption for our site.

☒ We have created a list of EnPI(s) for our facility, and have detailed below:

| **EnPI** | **Energy Input, units** | **Description of intended use of EnPI**  |
| --- | --- | --- |
| Energy Star Portfolio Manager score | kBtu/square-foot then normalized within Portfolio Manager for a 1-100 score | Measurement of overall site energy performance compared to past periods and rated against other hotels/motels within the Portfolio Manager tool |
| Electrical consumption per occupied room | kWhkWh per occupied room | Track monthly consumption and normalize for occupancy |
| Natural Gas consumption per occupied room | ThermsTherms per occupied room | Track monthly consumption and normalize for occupancy |
| Water usage per occupied room | HCFHCF per occupied room | Track monthly consumption and normalize for occupancy |
| Chiller plant performance | kW/ton of cooling load | Monitor energy performance of chillers, pumps, and ancillary equipment |
| Boiler plant performance | Therms per oF of outside air temperature | Monitor natural gas input to boilers and trend against daily/hourly outside air temperatures |

1. Develop an energy baseline (EnB) for EnPIs in order to later determine energy performance improvement.

Providing responses to the questions below can help in identifying the relevant EnBs for the established EnPIs:

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| ☒ | How will each EnPI be used for evaluating energy performance? Is there a logical EnB for each? | We use an established baseline over the period pre-2020 to determine how significant a deviation either up or down we would observe. We use our current methods for measuring at first but most likely expand to a more detailed way to gather the data. |
| ☒ | What are the historical changes to facilities, equipment, systems, processes, or organization that would change how energy performance is evaluated? | We start with an “average” year (2019) as the EnB, but pandemic-related business disruptions may require future adjustments to the EnB. Different ways of doing business, ventilation requirements, and changes to CDC guidelines or even statutes may create a new baseline that would be used moving forward. |
| ☒ | What stakeholder interests should be considered when establishing EnB for the EnPI? | Financial. Quality of guest experience. Adhering to local guidelines. Avoiding union issues and keeping colleague involvement and experience high. |
| ☒ | Are there strategic initiatives that would be measured or influenced by one or more of the established EnPIs? Is there an EnB associated with these strategic initiatives? | None identified at this time. |
| ☒ | What are the historical periods that have reliable, consistent data for the established EnPIs? | We have historical data regarding EnPIs dating back to 2011. We are unlikely to use the data from 2020 and possibly 2021 due to the atypical occupancy rates and energy consumption due to the pandemic. While the records are accurate, they do not reflect a standard year of normal operations. |

1. Communicate proposed EnPIs and EnBs to top management so they can ensure the EnPIs and EnBs are appropriate for the organization.

☒ Identified EnPIs and EnBs have been approved by top management.

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| Who approved? | General Manager |
| When approved? | 5/15/21 |

1. Record and regularly review the method used to determine and update EnPIs and establish the conditions under which adjustments to the baseline(s) will be made.

☒ We maintain documented information on the methods we use to determine and update our organization’s EnPIs.

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| Who maintains the documented information? | Engineering Management |
| Where are these records maintained (e.g. energy manual or energy planning procedure)? | link to shared Engineering folder on network drive |

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| ☒ | We evaluate any changes in facilities, equipment, systems, processes, operating procedures, materials, relevant variables, and many other factors. We adjust the EnPI as necessary. | This will be a fluid strategy based on our observations during Green Team meetings, as well as observations from key members as they become more aware of EnPIs in their own areas.  |

1. Compare EnPI values to their respective EnBs on a regular basis.

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| ☒ | EnPI values are reviewed and compared to their respective EnBs, as appropriate. | Pursuing these values being measured on a year-over-year basis with a pre-COVID year as the baseline. Done during strategy meetings. |
| ☒ | Calculated EnPI values and their associated EnBs are retained as documented information and periodically reviewed to determine if adjustments are required.  | Done when reviewing our current data collection sources. Adjustments would be made when significant deviations are observed but only after determining the cause of the deviation. |
| ☒ | We have a process in place where we make adjustments to an EnB in the following instances:* When the EnPIs no longer accurately reflect the organization’s energy performance
* When there are major changes to static factors, the process, operational patterns, or energy systems
* According to a predetermined method
 | We currently have calendar year 2019 as our EnB period, but will re-evaluate during Green Team meetings. For example, impacts such as pandemic-related business disruptions may require a future adjustment to the EnB. |
| ☒ | We maintain records of modifications and updates to EnBs to ensure energy performance measures remain relevant and meaningful. | Yes, and we will use our recorded data to cross reference and adjust when necessary. |

1. Implement a process for ongoing monitoring, measurement and analysis of your EnPIs, EnBs, and energy performance improvement

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| ☒ | Calculated EnPI values and EnBs are recorded and reviewed on a regular basis. | Currently being done on a monthly basis but new methods of data collection using BMS may allow for more granular and frequent information to be collected. |
| ☒ | The components of EnPIs that are measured or calculated are managed for accuracy and repeatability in the energy data collection plan (as addressed in the Energy Data Collection and Analysis task).  | Data from the BMS and meters are regularly reviewed for accuracy and anomalies by Engineering Department personnel. |
| ☒ | Top management’s review of energy performance includes a review of performance as determined by the EnPIs and the related EnBs.  | Top management will always be involved in the review process and will have the final word on any significant changes in strategy. |
| ☒ | Top management ensures changes are made when the above-mentioned metrics are no longer appropriate. | See above. |

Top Management Approval

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| ☐ | Date approved: | Click here to enter a date. |
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Comments

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