**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 and recorded your organization’s objective and energy targets.**
2. **Obtained top management’s approval of the objectives and energy targets and communicate appropriately.**
3. **Communicated the energy objectives and energy targets appropriately to your organization.**
4. Develop and record your organization’s objective and energy targets.

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| [x]  | We have gathered a team to develop and record our targets.  |

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| [x]  | As appropriate, we supplemented our energy team with: |

[x]  Individuals with energy expertise

[x]  Personnel in specialized functions, such as accounting or finance

[x]  Personnel familiar with operational or production equipment

[x]  Management familiar with organizational plans and goals

[x]  Suppliers or contractors that provide energy equipment or technical resources

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| [x]  | Our team consists of the following individuals: |

**Team member name Function represented**

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| [ ]  | *[Key Participant]* | *[Energy Team]* |
| [x]  | Jane Doe | Maintenance (Team Lead) |
| [x]  | Jim Doe | Engineering |
| [x]  | John Doe | Corporate |
| [x]  | Jill Doe | Procurement |
| [x]  | Jenn Doe | Operations |

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| [x]  | We have provided our team with the inputs needed to develop relevant objectives and energy targets: |

Coordination between the energy team, plant management, and facility personnel input, a comprehensive Energy Policy was created for the facility. In accordance with the energy plan, facility energy objective and targets were created that are feasible, measurable, and aid in the energy improvement process and Energy Management System being established at the facility.

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| **Our objectives and energy targets:** |
| [x]  | Are consistent with our energy policy and effectively spur our energy policy commitments into action. | Confirmed. |
| [x]  | Consider and fully incorporate the potential energy improvement opportunities identified, prioritized, legal requirements and those that can be realistically achieved in the energy review. | Confirmed. |
| [x]  | Consider the significant energy uses (as identified in the Significant Energy Uses task and when identified we set an objective and/or energy target related to that improvement. | Confirmed. |
| [x]  | Consider our organization’s business and financial situation, operating conditions, and constraints that are achievable, compatible, and align with your organization’s strategic business plans, and result in successful improvement of energy performance and the EnMS. | Confirmed. |

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| **Our objectives related to energy performance include:** |
| [ ]  | *[ex: “Reduce energy consumption 10 percent in five years from the 2019 baseline.”]* |
| [x]  | Reduce Non-Process Energy Consumption by 25% in 2 years based on 2019 baseline |
| [x]  | Reduce Process Energy Consumption by 15% in 5 years based on 2019 baseline |
| [x]  | Reduce Total Utility-Purchased Energy Consumption (Elec, Nat Gas) by 15% in 5 years based on 2019 baseline |
| [x]  | Reduce Process Chemical Costs by 15% in 5 years compared to 2019 baseline |

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| **Our energy targets are quantitative and include:** |
| [ ]  | *[ex: “Reduce electricity consumption 5 percent compared to a 2019 baseline by the third Quarter of 2021.”]* |
| [x]  | Reduce Energy Intensity of the Aeration Process by 15% by 2025 compared to 2019 baseline |
| [x]  | Reduce Pumping Energy Intensity by 5% in 2 years compared to 2019 baseline |
| [ ]  | Click here to enter text. |

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| **We have established:** |
| [x]  | A process for monitoring, reviewing and updating objectives and targets on a continual basis. | All Energy Objectives and Targets will be reviewed and updated (if necessary) quarterly by the Energy Team. |
| [x]  | Roles and responsibilities for monitoring and reviewing this progress. | Energy Team will report to their respective departments what is required for continuous monitoring of Energy Objectives and Targets – the responsible members will then compile and report all applicable EnPIs at the quarterly reviews. |

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| [x]  | A practice of reporting objectives and energy target achievements to top management through the management review process introduced in the Management Review task. We issue revisions to objectives as needed.  | Energy Team will write up a report after their quarterly review and will present to top management the state of the current objectives and targets – at which point revisions will be made if deemed necessary. |
| [x]  | We retain documented information on the objectives and energy targets.  | All applicable information and data is stored in the Google Drive Folder under “Energy Team Documents” |

*The Energy Objectives and Targets Worksheet below can be useful to record objectives, energy targets and required inputs.*

Energy Objectives and Targets Worksheet

|  |  |
| --- | --- |
| **Objective:** Reduce Process Energy Consumption by 15% in 5 years based on 2019 baseline | **Doc ID:** |
| **Target 1:** Reduce Energy Intensity of the Aeration Process by 15% by 2025 compared to 2019 baseline |
| **Target 2:**N / A |
| **Target 3:**N / A |
| **List the energy policy commitment(s) relevant to this objective:**“The energy team will help in…designing the most efficient process…[and] will strive to reach annual energy efficiency goals for the purpose of continual facility improvement…” |
| **Considerations** |
| Is this objective related to one or more legal, regulatory or other energy requirement(s)?[ ]  YES [x]  NO**If yes, list the relevant legal or other requirements:**N / A | **How were applicable legal and other energy requirements taken into account in the development of this objective and related targets?** Energy Team discussed all applicable legal and energy requirements and were found to not be applicable to this energy target. |
| Is this objective related to one or more significant energy uses?[x]  YES [ ]  NO**If yes, list the significant energy use(s):** Aeration | **How were significant energy uses taken into account in the development of this objective and related targets?** Aeration is the biggest energy user at the facility and is our primary SEU, therefore reducing the energy intensity of this process is crucial and is at the forefront of this energy target. |
| **How has the prioritized list of opportunities from the energy review been considered in the development of this objective?**Multiple improvement opportunities were related to the aeration process and are of great importance to the facility. |
| **What technological options are feasible for this objective?** * Upgrading to fine bubble diffusers.
* Installing controls and instrumentation required for Dissolved Oxygen (DO) controls
* Varying the pumping and sanitation controls based on seasonal variations
 |
| **What financial requirements or conditions are relevant to this objective?** Implementation cost must be within Capital Expenditure Budget for the fiscal year.Less than 3-year simple payback is ideal but can be altered if it’s a long-term investment. |
| **What source of funds will be utilized for this objective/target?** **[x]  Capital budget** **[x]  Maintenance budget** **[ ]  External loan** **[ ]  Performance contract** **[ ]  Guaranteed savings** **[ ]  Other** |
| **What business and operational conditions or constraints are relevant to this objective?** Aeration is essential to the wastewater treatment process and thus rigorous testing, measurement, and validation is required of any alterations planned. |
| **Who are the interested parties who have or may have views relevant to this objective and target(s)?**The municipality and local government. Due to the tax-payer money required for any expenditures and the clean water being delivered to the constituents. |
| **How have the views of interested parties been considered?** The municipality will have to lend approval to any major capital expenditure and will have to confirm any changes to crucial process steps. |
|  **Monitoring and Measurement** |
| How will the objective be monitored and measured?Quarterly reviews by the Energy Team monitoring utility meter data and applicable EnPIs. | How will the target(s) be monitored and measured?Quarterly reviews by the Energy Team monitoring applicable EnPIs and data points. |
| What data will be collected or analyzed?Utility and flow meter dataBAS data related to the aeration processAuxiliary current draw data of aeration blowers | **Who will collect or analyze the data?** (Responsible Positions)Jimmy Doe will collect and analyze data and will present for review to the Energy Team | How often will monitoring and measuring be done? Jimmy Doe will collect BAS and current data weekly and will compile with monthly utility meter data | What will be the record of monitoring and measurement?All data will be stored in the Google Drive Folder under “Energy Team Data” |
| **What monitoring and measurement equipment will be utilized?** BAS terminalAmp Clamps for Current Draw | **Which equipment will require calibration?** Amp Clamps will be calibrated and correlated to BAS data | **Is this equipment already in the calibration system?**Yes | What will be the record of calibration?Calibration will be confirmed in data collected and stored in the Google Drive Folder |
| **What will be the EnPI (if any) that will be used to report this objective/target(s)?**Elec = 2.19 (Flow) – 0.13(HDD) + 1468.95 |

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| **Related Energy Management Action Plans**(List the Action Plans associated with achieving this objective and related targets) |
| Action Plan for Upgrading Aeration System to Fine Bubble Diffusers | N / A |
| **Controls** |
| **What operational controls are needed?** Controls for Aeration System including Blower Speed and BAS Data  | **List any controls that are already in place:**All applicable |
| **Prepared by:** Jimmy Doe | **Date:** 8/15/2020 |

1. Obtain top management’s approval of the objectives and energy targets and communicate appropriately.

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| [x]  | We have a process in place to report objectives and energy target achievements to top management using the management review process introduced in the Management Review task and issue revisions as needed.  | Achievements will be reported as part of quarterly report to top management |

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| **Top Management Responsibilities:** |
| Objectives and energy targets have been established | Approved – 8/15/2020 |
| These objectives and energy targets align with our organization’s strategic direction. | Confirmed – 8/15/2020 |
| Resources needed to achieve objectives and targets are provided. | Confirmed – 8/15/2020 |
| Objectives and energy targets are either approved or direction is provided for any needed changes. | Approved – 8/15/2020 |

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| **Team Responsibilities:** |
| Objectives and energy targets are presented to management for review and approval in a clear and understandable format. | Presented - 8/10/2020 |
| Sufficient information is provided to justify the purpose of the objective(s) and energy target(s) and its relationship to the organization’s strategic direction and energy policy commitments. | Confirmed – 8/10/2020 |

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| **Top Management Approval:** |
| [x]  | Top Management has reviewed and approved Baselines, Objectives and Targets, and have offered their support. |
| [x]  | Who approved: | Jim Doe |
| [x]  | Date approved: | 8/15/20 |

*The Energy Objectives and Targets Worksheet provided earlier in this task can be useful in communicating to management the proposed objectives and related targets, relevant inputs and in detailing the monitoring processes in place.*

1. Communicate the energy objectives and energy targets appropriately to your organization

**We have communicated our objectives and energy targets to the following groups:**

|  |  |  |
| --- | --- | --- |
| [x]  | The energy team | Communicated. |
| [x]  | All personnel who can affect these objectives and targets or have a role in achieving them | Communicated. |
| [x]  | Employees and on-site contractors have been made aware of how they contribute to achieving the objectives and energy targets, | Communicated. |
| [x]  | Broadly across our organization’s improvement efforts to promote a culture of energy efficiency and support positive energy behavior. | Communicated. |

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| [x]  | Objectives and Targets have been incorporated into our organization’s EnMS Awareness Training | Confirmed. |

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| [x]  | We periodically update personnel on progress made towards achieving the objectives and energy targets and celebrate success when they are achieved. | Included in our monthly energy team updates |

*The below table can be useful in helping to track your training and communication efforts:*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Communication / Training Event** | **Targeted Audience** | **Event Date** | **Responsible Party Name** | **Responsible Party Signature** |
| Monthly Energy Team Update at All-Hands Meeting | All Facility Personnel | First Wed of every month | Energy Team | Click here to enter text. |
| Annual Energy Training | All Facility Personnel | First Week of Feb | Energy Team, EHS Coordinator | Click here to enter text. |
| Aeration Team Meeting | Aeration Team | Every other Fri | Energy Team – Aeration Dept Rep | Click here to enter text. |

Top Management Approval

|  |  |  |
| --- | --- | --- |
| [x]  | Date approved: | Jim Doe |
| [x]  | Who approved: | 8/15/2020 |

Comments

Click here to enter text.