**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. **For purchases related to SEUs, clearly identified any energy performance-related requirements. Communicated these requirements to suppliers and/or service providers, and informed them that energy performance is part of the evaluation criteria.**
2. **Evaluated your organization’s current procurement processes for items that can significantly impact energy performance.**
3. **Determined and taken any needed actions to adjust existing procurement processes to meet EnMS requirements.**
4. **Developed life-cycle criteria for specific types of procurement activities if you do not have them already.**
5. **Developed and communicated specifications for the purchase of energy supply and ensuring the energy performance of procured equipment and services.**
6. **Determined if any specifications for the purchase of energy supplies are applicable to ensure the energy performance of equipment and services purchased.**
7. For purchases related to SEUs, clearly identify any energy performance-related requirements. Communicate these requirements to suppliers and/or service providers, and inform them that energy performance is part of the evaluation criteria:

For purchases related to SEUs, we:

|  |  |  |
| --- | --- | --- |
| ☒ | Identified energy performance-related requirements. | Included in design and procurement documentation. |
| ☒ | Communicated requirements to suppliers and service providers. | Included in design and procurement documentation, as well as communications with suppliers and service providers. |
| ☒ | Informed suppliers that energy performance is part of the evaluation criteria. | Communications with suppliers and service providers. |

1. Evaluate your organization’s current procurement processes for items that can significantly impact energy performance:

We evaluated the following factors relating to service providers’ impact on energy performance:

☒ Training

All service providers are informed of our energy policy, energy considerations in design and procurement, and the Energy Management System (EnMS).

☒ Certifications

No certifications related to EnMS are required of our existing service suppliers; however, they will be a consideration when selecting new suppliers.

☒ Experience with similar energy uses

New service suppliers are evaluated based on their past work, experience, and familiarity with IT equipment, cooling systems, and other SEU-related equipment and processes in data centers.

☒ Skilled trades availability

New service suppliers are evaluated based on their skilled trades.

☒ Procurement practices for parts or materials

We have communicated our energy performance priorities to our procurement staff and relevant service providers.

☒ Client recommendations or reviews

☐ Other Click here to enter text.

1. Determine and take any needed actions to adjust existing procurement processes to meet EnMS requirements:

*The following worksheet can be useful to assist in identifying any needed actions.*

Procurement Policy Checklist

Use this checklist to review your organization’s current purchasing policy for products, equipment, and energy services that can significantly impact energy performance. Note any necessary modifications to the existing system under 'Actions Needed'.

|  |  |  |
| --- | --- | --- |
| Our procurement policy: |  | Actions Needed: |
| 1. ensures energy performance is considered (especially of SEUs). | ☒ | Included. |
| 1. has criteria for evaluating energy use, consumption, and efficiency over the lifetime of products, equipment, or services. | ☒ | Use [PUE](https://www.iso.org/standard/63450.html) and [RCI](http://ancis.us/images/RCI.pdf) metrics, lifecycle cost analysis. |
| 1. includes evaluation of energy use, energy consumption, and energy efficiency over the planned or expected operating lifetime for purchases that significantly affect energy performance. | ☒ | Use [PUE](https://www.iso.org/standard/63450.html) and [RCI](http://ancis.us/images/RCI.pdf) metrics, lifecycle cost analysis. |
| 1. includes evaluation and selection criteria for products, equipment, or services to be purchased (especially for SEUs). | ☒ | Use [PUE](https://www.iso.org/standard/63450.html) and [RCI](http://ancis.us/images/RCI.pdf) metrics, lifecycle cost analysis. |
| 1. includes procurement criteria that prioritize energy performance and life cycle assessment/costing. | ☒ | Use [PUE](https://www.iso.org/standard/63450.html) and [RCI](http://ancis.us/images/RCI.pdf) metrics, lifecycle cost analysis. |

Our procurement policy, as related to energy performance and our EnMS, is:

Our data center staff will evaluate high-performance, energy-efficient options for all planned purchases of energy-consuming equipment, ensuring that these options do not compromise the thermal environment of the IT equipment. They will select products with the lowest lifecycle cost based on the equipment's estimated useful life. We will partner with utility energy-efficiency programs to conduct this analysis, considering available incentives to lower the lifecycle costs incurred by the data center.

|  |  |  |
| --- | --- | --- |
| The following has been communicated to suppliers and/or service providers: |  | Actions Needed: |
| 1. Energy performance-related requirements are part of the evaluation criteria. | ☒ | Share our procurement policy with suppliers, contractors, and design professionals. |
| 1. These evaluation criteria are a necessary factor in procurement. | ☒ | Share our procurement policy with suppliers, contractors, and design professionals. |

We have defined, developed, documented, and implemented specifications for energy supply purchases.

Our energy purchasing policy/specification is:

We are a 100% electrical facility, and we purchase electricity from our local utility. Our data center staff will evaluate new electrical tariffs as they become available.

|  |  |  |
| --- | --- | --- |
| ☒ | Procurement lead name: | Purchasing Manager |

1. Develop life-cycle criteria for specific types of procurement activities if you do not have them already.

*The worksheet below can assist in establishing life-cycle criteria for procurement activities:*

Procurement Checklist

Use this checklist to review your organization’s current purchasing process for products, equipment, and energy services that can significantly impact energy performance. Note any necessary modifications to the existing system under 'Actions Needed'.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Yes** | **No** | **Actions Needed** |
| 1. Do personnel who affect purchasing consider the following? |  |  |  |
| * 1. Significant energy uses and their related controls? | ☒ | ☐ | SEUs and controls communicated. |
| * 1. Energy objectives, targets, and related action plans? | ☒ | ☐ | Objectives, targets, and action plans communicated. |
| * 1. Energy performance as indicated by your EnPIs? | ☒ | ☐ | EnPIs communicated (Task 11). |
| * 1. Sustaining the improvements of past energy projects? | ☒ | ☐ | Operational performance communicated. |
| * 1. Maintenance of energy systems (e.g., lighting, compressed air, steam, etc.)? | ☒ | ☐ | Operational performance communicated. |
| * 1. Life cycle costs? | ☒ | ☐ | Lifecycle cost communicated. |
| 1. Have criteria for assessing energy use, consumption, and efficiency over the lifetime of the product, equipment, or service been established and implemented? | ☒ | ☐ | Procurement policy includes lifecycle cost. |
| 1. Have the following been communicated to personnel who affect procurement? |  |  |  |
| * 1. The outputs of energy planning, such as the significant energy uses and related controls; energy objectives, targets, and related action plans; EnPIs | ☒ | ☐ | Communicated to procurement personnel 5/7/24. |
| * 1. Operational controls to sustain the improvement results of past energy projects? | ☒ | ☐ | Communicated to procurement personnel 5/7/24. |
| * 1. Key maintenance items related to the organization’s energy systems (e.g., lighting, compressed air, steam, etc.)? | ☒ | ☐ | Communicated to procurement personnel 5/7/24. |
| 1. Do specifications for purchased items identify any energy performance-related requirements? | ☒ | ☐ | Performance-related requirements developed 5/13/24. |
| 1. Have energy performance-related requirements been communicated to suppliers? | ☒ | ☐ | Communicated to suppliers 5/13/24. |
| 1. Have suppliers been made aware that energy performance is part of the evaluation criteria? | ☒ | ☐ | Communicated to suppliers 5/13/24. |

Life Cycle Cost Assessment Worksheet

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Energy Use: Click here to enter text. | | | | | | 5Financial Discount Rate: Click here to enter text. | | | | | |
| Energy Cost: Click here to enter text. | | | Maintenance Labor Cost: Click here to enter text. | | | | Unit Replacement Time: Click here to enter text. | | | | |
| **Options** | **Energy**  **Consumption (Annual)** | **Initial Purchase Cost** | **Number of Units Needed Per Year** | **1Annualized Maintenance and Repair Cost** | **2Annual Energy Cost** | | **Expected Operating Life** | **Disposal Cost** | **3Annualized Replacement Cost** | **Salvage Value** | **4Life Cycle Cost** |
| A) | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| B) | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| C) | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| D) | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| E) | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |

1 Annualized Maintenance and Repair Cost = (Labor cost)(# hrs)(# units)

2 Annual Energy Cost = (Annual Energy Consumption)(Energy cost/kwh)

3 Annualized Replacement Cost = Initial Purchase Cost/Operating Life (yrs)

4 Life-Cycle Cost = Annualized Maintenance and Repair Cost + Annual Energy Cost + Annualized Replacement Cost - Salvage Value

5 Note: To account for time value of money, annualized costs may be discounted to present value.

|  |  |
| --- | --- |
| **Prepared by:**  *[enter name here]* | **Date Prepared:**  *[enter date here]* |

1. Develop and communicate specifications for the purchase of energy supply and ensuring energy performance of procured equipment and services.

*The following worksheet can assist in developing and communicating your procurement specifications.*

Working with Corporate to Establish Energy-Related Procurement Processes

|  |  |  |  |
| --- | --- | --- | --- |
| **Consider the following:** | **Yes** | **No** | **Actions Needed** |
| * How does procurement information currently flow between your organization and corporate? | ☒ | ☐ | Corporate provides procurement guidance and reviews our performance specifications. |
| * How can I make corporate aware of purchases related to significant energy uses? | ☒ | ☐ | Corporate reviews and approves energy-saving projects before purchases. |
| * What is the corporate role in developing energy performance specifications for energy-related processes? | ☒ | ☐ | Corporate guidance was developed to inform the creation of energy performance specifications. |
| * Is there a process for providing energy-related specifications to the procurement function? | ☒ | ☐ | Procurement maintains the purchasing policy, which was developed through a collaboration between Engineering and Procurement. |
| * Does the evaluation process include a consideration for energy performance? | ☒ | ☐ | Yes, as part of the criteria used to evaluate proposals. |
| * Who will have the responsibility for evaluating energy-related purchases? | ☒ | ☐ | Procurement with support from Engineering, including the Energy Team. |
| * Who will notify suppliers that energy performance is part of the procurement evaluation process? | ☒ | ☐ | Procurement. |
| * Does Corporate have a life-cycle assessment process? | ☒ | ☐ | Yes. |
| * How will a significant impact on energy performance be determined and evaluated? | ☒ | ☐ | The Energy Team will determine and evaluate the impact of purchases on energy performance. |
| * Is there information your organization can provide to the corporate procurement function to make their procurement decisions more effective for your energy management system? | ☒ | ☐ | We perform lifecycle analyses and communicate changes to laws and mandates. |
| * Is there energy supply price signal information that the procurement function can provide to your organization that might impact operational decisions? | ☒ | ☐ | Real-time electricity demand is used to determine peak demand costs. |
| * What connections or relationships need to be established between your organization and the procurement function? | ☒ | ☐ | Scheduled communications with Procurement. |

1. Determine if any specifications for the purchase of energy supplies are applicable to ensure the energy performance of equipment and services purchased.

*The next worksheet can assist in identifying energy supply parameters and formulate suitable energy supply purchasing specifications.*

Energy Purchasing Specification Summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Prepared by:** | Purchasing Manager | **Date Prepared:**  5/15/24 |  |
| **Approved by:** | Engineering Manager | **Date Approved:**  5/16/24 |  |

**Energy Source**

This specification defines the requirements for (source):

☒ Electricity

☐ Natural Gas

☐ Fuel Oil

☐ Propane

☐ Coal

☐ Biomass

☐ Waste material: description

☐ Click here to enter text.

**Quantity**

Amount to be delivered: Varies

Delivery units: kWh for electricity

Delivery method:

☐ Above ground transmission line

☐ Pipeline

☐ Tanker truck

☐ Rail

☐ Trailer truck

☒ Other: Utility distribution

Delivery period: ☐ quarterly, ☐ monthly, ☐ weekly, ☐ daily, ☒ other-specify: Continuously.

**Quality**

Define expected characteristics of energy supply, including factors important to the proper operation of the facility and its energy consuming equipment. For electricity, consider voltage, amperage and power quality such as voltage sag, frequency of power interruptions and interruption length.

For fossil and renewable energy, quality may include energy content, ash content, amount of regulated constituents, guarantee less than: ☐ Sulfur Click here to enter text. %; ☐ heavy metals Click here to enter text. %

List energy quality requirements:

|  |
| --- |
| All electricity provided to the data center is delivered by the local electric utility based on tariff schedules that define rates, power quality, availability, and carbon impacts. |

**Price**

The energy price will be based on (select electricity or fuel):

**☒ Electricity** ☐ **Fuels**

☒ published rate schedule ☐market price plus

☒ time-of-use rate ☐ fixed price

☐ marginal rate (real-time pricing) ☐ well-head

☐ market price plus delivery ☐ delivery

☐ fixed rate per unit ☐ transportation

☐ interruptible rate ☐ other:

☐ other:

The total energy cost will be determined by:

☒ total energy consumption

☒ demand charges

☒ mass/volume consumed;

☐ delivery volume

☐ other method

**Miscellaneous Requirements**

Other requirements (including legal or regulatory), not specified elsewhere, that the energy source must satisfy include: (list)

|  |
| --- |
| Click here to enter text. |

**Contract Period/Renewal**

The effective dates during which the energy specifications described above apply.

From: 09/01/24

Until: 08/31/28

Prior to contract renewal, the energy specifications listed above will be reviewed and revised as required by on-going operations.

**Invoicing Method and Timing**

Invoices will be submitted by: Invoice submission location:

☐ Paper document ☐ Plant office

☒ Electronic ☒ Divisional office

☐ Other (specify): Click here to enter text. ☐ Corporate office

Invoice submission interval:

☐ Daily

☐ Weekly

☒ Monthly

☐ At delivery

☐ Other: Click here to enter text.

**Approval for Payment**

The following groups or individuals will review energy purchasing invoices and approve for payment (check all that apply):

☒ Purchasing

☐ Receiving

☐ Production

☐ Management

☐ Other (specify):

**Method of Payment**

☐ Check

☐ Bank draft

☒ Electronic funds transfer

☐ Credit

☐ Other

Top Management Approval

|  |  |  |
| --- | --- | --- |
| ☒ | Date approved: | 5/20/24 |
| ☒ | Who approved: | General Manager |

Comments

Click here to enter text.