Module 3

Opportunity identification
Before we start our training, please find the keys below to our interactive PDF:
Learning objectives

Identifying opportunities for improvement is an essential step in energy efficiency strategy to determine measures that will have the greatest impact on the organization.

At the end of this module, you should have an overview of the following best practices:

• Collect data from various business groups in the business organization.
• Develop baselines to track energy performance.
• Assess the whole portfolio to develop energy goals.
• Conduct on-site audits and remote interviews to find optimal opportunities for improvement.
• Decide which energy efficiency measures to prioritize and implement.

Once you complete this module, you’ll have the following modules left:

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Terms to know

**Audit:** A walkthrough or analysis of the energy systems in a facility, helping to identify areas of energy inefficiency for improvement.

**Baseline:** The initial energy use measured with the current operating parameters that future energy use, after energy conservation measures (ECM) implementation, can be measured against.

**Boundary:** The defined set is the defined set of operations and activities which will be tracked for baseline development and ECM implementation. It could include one facility, multiple facilities or the entire building portfolio for an organization.

**Champion:** serves as the energy efficiency lead, and will be responsible for getting ultimate approval from the CFO or other decision-makers.

**Outlier:** In an energy performance review, a system or building that is significantly under- or overperforming compared to the rest. This outlier can provide opportunities or lessons learned to apply to other areas.

**Stakeholder:** for the purposes of this training module, refers to interested parties that can include: executives (C-suite), asset managers, facilities and engineering teams, procurement, finance, event teams, marketing, legal, green teams, landlord(s), supply chain, vendors, etc.
Opportunity identification overview

With the planning and stakeholder engagement stages initiated, the next step in the energy efficiency process is identifying the energy conservation measures for potential implementation.
3. Opportunity identification

Data management best practices

Establish strategies to routinely collect, report, and update energy data to monitor progress made. Here are some key steps:

1. **Collect data regularly from all business groups.** Create a system for groups to input data or set a deadline for all groups to hand over data. Automate this process as feasible.

2. **Normalize data and establish baselines.** Set a baseline to use as a reference tool to compare energy performance before and after a change is made.

3. **Benchmark performance to goals.** Compare the goals set to the targets achieved to gauge how much progress is made.

4. **Report regularly and share with management and across the organization.** Communicating real-time data is extremely important to give feedback.

5. **Continuously review data and data collection methodologies and evaluate data maturity.** Remove unactionable or repetitive data.

6. **Identify when estimations are needed and standards are used.** Check to see where estimations or standards may need to be applied to fill data gaps.

*If your company is reporting greenhouse gas emissions, energy data is likely already being captured. For more information see the [GHG Accounting modules].*
3. Opportunity identification

Baseline development

A baseline will be a reference tool to track energy performance. There are three key stages to developing a baseline: defining, collecting, and reporting.

Baseline development is also an important concept for tracking GHG emissions. See GHG Accounting Module 0 for more information.
Portfolio outlier assessment

Portfolio assessment is helpful to analyze short-term actionable energy-efficiency measures and to develop long-term strategic energy reduction measures across the portfolio.

Benchmark sites, products, and buildings across different business groups

Identify and assess potential outliers

Determine if outlier is positive or negative
3. Opportunity identification

Remote interviews

Interviews with on-site facility members are important to understand processes, find opportunities to implement improvements, and get feedback on ideas.

Conduct interviews to engage stakeholders:

• Interviews can help establish data quality and maturity.
• Remote interviews can prevent the need for an on-site audit.
• Remote interviews can help tailor on-site audits prior to visit.
3. Opportunity identification

On-site audits

Visit sites to **gather preliminary data, identify savings opportunities, and understand the potential of any new energy efficiency practice.**

**Key elements to consider when conducting an on-site audit**

Determine boundaries for audit:
- Identify key energy systems to include (such as HVAC, lighting)
- Utilize additional resources from [ASHRAE](https://www.ashrae.org) as needed.

Establish current level of energy performance:
- Make an inventory of the HVAC systems.
- Look at HVAC control methods (automated or manual).
- Look at interior and exterior lighting options.

Identify opportunities for improvement:
- Analyze operations and maintenance processes.
- Search for ways to improve system reliability.
- Assess risk of failure.
- Determine ease of implementation.

Identify costs and benefits to help structure a business case:
- Utilize utility rebate programs.
- Conduct a comprehensive analysis.
- Verify potential energy savings.
- Consider performance contractors.

Audits identify operational or maintenance adjustments that will save energy, retrofit recommendations, action plans for capital investments, and opportunities to incorporate feedback into proposed energy efficiency.
Advanced measure consideration

For long-term or capital-intensive measures, it is important to take some extra steps to conduct comprehensive due diligence.
3. Opportunity identification

Prioritize interventions

Create a system to decide how to select measures and which to prioritize. This will be helpful when engaging stakeholders across the organization.

A good way to prioritize tasks is to look for synergistic opportunities that will have value beyond just energy efficiency.

For example, a measure that significantly reduces total energy consumed and GHG emissions may make a strong business case.

Consider attaining short-term goals to build trust that can help approve long-term opportunities. Small wins can give an organization confidence to tackle bigger projects.
Congratulations! You’ve completed Module 3: Opportunity identification

This module provided best practices on how to systematically identify opportunities for improvement. Key takeaways:

- Create a system to collect, measure and report data regularly to stakeholders across the organization.
- Develop clear baselines for stakeholders that help track energy performance.
- Assess portfolio by benchmarking sites and identifying outliers.
- Conduct audits and interviews with on-site teams to understand current processes and get feedback on new ideas.
- Create a methodology to choose energy efficiency measures based on priority.

This module is followed by Module 4 – Roadmap development to help provide a high-level overview on how to build implementation roadmaps to achieve energy efficiency targets.