



Greater efficiency supports patient care.

Measure and Benchmark Energy Purchases

All ECM content was independently developed and reviewed to be vendor-, product-, and service provider-neutral.

Description

This ECM provides a recommended methodology for measuring, benchmarking, and reporting key performance indicators that can help assure the success of your energy purchasing program. (This ECM is not a how-to for purchasing energy.)

Project Talking Points

- As detailed in the Energy Procurement ECM, one way for hospitals to reduce their costs is by purchasing energy through third-party suppliers. In order to prove this strategy is effective, one must be able to measure and benchmark those energy purchases.
- Much like energy procurement itself, there is no “one size fits all” strategy to measuring and benchmarking energy purchases, and the approach should be organization-specific.
- Success in this area can be defined in a few ways and it is important for the organization to determine what is most important: beating the market or accurate budgeting. Your organization must be aligned by involving all members of the stakeholder group.
- There is more to measuring and benchmarking energy use and cost than the raw numbers as they do not account for weather, transmission costs, etc.
- As you learned in the “Energy Procurement” ECM, understanding how your utility bill works is crucial to being able to accurately assess the success of your energy purchasing program.

Triple Bottom Line Benefits

- **Cost benefits:** Finding inefficiencies in your energy purchasing program will lead to cost savings.
- **Environmental benefits:** Tracking energy use and cost will potentially increase the urgency to reduce energy use and associated greenhouse gas emissions.

- **Social benefits:** Engaging multiple stakeholders across the organization will increase energy awareness and may, as a result, help prioritize energy reductions.

How-To

1. Determine and engage your stakeholder group. This stakeholder group should include members of the c-suite (e.g. the CEO and/or CFO) who will likely be the “decision makers”, the persons in facilities responsible for energy management, the persons in the organization responsible for processing the utility bills, and any outside experts who have assisted in the energy purchasing process.
2. Determine the organization’s Key Performance Indicators (KPIs) for energy use/cost and make sure these KPIs align with the organization’s energy purchasing strategy. For example, if the organization’s number one KPI is accurate forecasting of utility cost and has a low risk tolerance, a fixed cost purchasing approach will align best with this strategy. Some KPIs may include:
 - Utility Expense vs. Utility Budget
 - Utility Expense vs. Market Costs
 - Year-over-Year Utility Usage
 - Weather Normalized Year-over-Year Utility Usage
3. Gather historical utility data from previous utility bills. This should include the amount of the commodity used and pricing both from the utility and the third-party supplier. 24 months’ worth of billing data is generally recommended to establish a solid baseline.
4. Gather historical weather data in cooling and heating degree days and establish a “base load” for the facility. Determining the amount of energy in the facility that is impacted by weather will allow a facility to not only more accurately forecast future energy use, it will help normalize historical usage so performance will not be judged based on extreme weather.
5. Confirm actual performance against goals. Keep in mind that it is fine to have goals outside of the decision maker’s goals and that there are multiple ways to get to that goal. Both reducing price per unit of energy used and reducing overall energy use will reduce the overall cost of utilities. Even if it is not something the decision makers actively track, reducing energy use is a great internal goal.
6. Remember to speak the language of the stakeholder to whom you are presenting. It is unlikely a CEO or CFO will be interested in the fact that the facility reduced energy by 500,000 kBtus. They are more interested in the \$50,000 saved.

Tools

- [ENERGY STAR Portfolio Manager](#) – for tracking utility usage and spend. The tool will do weather normalization automatically and gives a simple 1-100 score on energy performance
- [EIA.gov](#) – Average Utility Prices for Comparisons
- [NOAA.gov](#) – Weather Data in Degree Days

Case Studies

No Content

Regulations, Codes and Standards, Policies

NOTE: Regulatory issues may determine whether you can purchase energy from a third-party supplier in your region/state, but this ECM is solely focused on measurement and benchmarking once you are already purchasing energy from a third-party supplier.

ECM Synergies

- Energy Procurement
- Establish a baseline for current energy use
- Perform a Utility Bill Audit

ECM Descriptors

Energy, Supply Chain

Category List:

- Contracted Services
- Energy
- Supply Strategies

ECM Attributes:

- Energy
- Strategies/Projects

Improvement Type:

- Alternative Sources
- Energy

Department:

- Engineering/Facilities Management
- Purchasing/Materials Management/Supply Chain

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