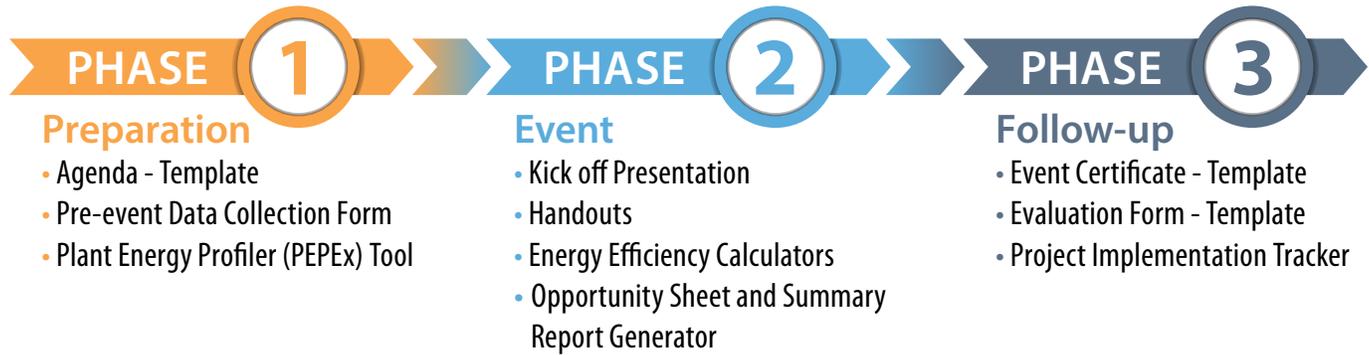


The Department of Energy has developed the necessary tools and materials, collectively known as the Energy Treasure Hunt Exchange Toolkit, to help with each individual phase of the treasure hunt process. The toolkit provides the treasure hunt facilitator with the tools needed to effectively plan for the event, successfully run it and track the results.



Tools for Phase 1 – Treasure Hunt Preparation

Proper planning helps the facilitator to setup more effective teams, identify and target high potential operations and avoid surprises on the day of the event. Crucial to proper planning is gathering relevant information and analyzing it to get a better understanding of the facility and its operations. The **Pre-Event Data Collection Form** is developed to serve this purpose.

The form provides a structured approach to collecting relevant information without missing out on required data. Depending on the level of time and effort the facilitator is looking to put into the preparation, the tool provides two levels of data collection and analyzing options.

The “Essential data” section of the form contains items crucial to run the event like the energy sources used, operating shifts, annual energy consumption and utility costs. The “Helpful data” section contains information that is useful to plan an effective event, this include information on process equipment including its specifications, efficiency and operating hours.

For a more detailed analysis, the user can make use of the **Plant Energy Profiler Excel(PEPEX)**. The PEPEX tool helps identify how energy is being consumed at a plant in addition to pointing out the potential for improvement in each system.

Tools for Phase 2 – Treasure Hunt Event

The treasure hunt event involves the participating teams investigating specific systems to identify possible energy savings opportunities, quantifying the savings and summarizing the results. The tools for phase 2 help the participants and the facilitator at each step of this process.

Handouts - The handouts provide appropriate guidance to help participants identify opportunities and collect relevant data to quantify savings. While the handouts provides the necessary information for anyone to start identifying opportunities and gathering data, it is designed to be used only as a guide to help the participants get started and not meant to be an all encompass checklist. The toolkit contains three separate set of handouts for each system type.

The **checklists** provide a breakdown of the systems and their various components which are assessed by the treasure hunt participants along with the typical parameters to investigate for identifying opportunities. The also lists out the most common low cost no cost opportunities associated with the system along with a sketch of the system for better understanding.

The **data collection sheet** lists out the minimum amount of information that is required to quantify the savings associated with some of the most common opportunities identified in a treasure hunt event. In addition, the sheet also provides tips on where and how to collect the required data.



The system specific **cheat sheets** are a repository of system charts, default tables, rules of thumb etc. The cheat sheets serve multiple purposes: they help participants understand the system's operation better, they help to make back of the envelope estimates and provide quick references to check the feasibility of some opportunities.

Opportunity Sheet help properly document the identified energy savings opportunity to make sure information is not lost from project identification to its implementation. The opportunity sheets streamline the information transfer by providing a standard format to capture and summarize the specifics of a potential energy-saving measure. Each opportunity identified during an energy treasure hunt exchange gets its own opportunity sheet.

Energy Treasure Hunt Calculators are developed to calculate consistently the energy savings from opportunities or best practices identified during the Energy Treasure Hunt Exchanges. Each energy or utility type (including water) has its respective "Treasure Hunt Calculator". The treasure hunt calculators are used to estimate the savings associated with typical treasure hunt opportunities like scheduling or turning equipment on or off, reducing the load on the equipment etc. In addition to the calculators defined above, some opportunity specific calculators (air leaks, insulation etc.) are also available.

The results from the calculators are used to populate the opportunity sheets. The use of these DOE calculators is optional and could be by-passed when the energy savings are estimated using other calculators or methods familiar to the user.

Summary Report Generator - Post the identification and the quantitative analysis of individual opportunities, the numbers are usually rolled-up and summarized to create a report and presented to management. This is made easy with the use of the summary report generator which automatically rolls up the individual opportunity sheets and creates appropriate summary tables and charts.

Tools for Phase 3 – Treasure Hunt Follow up

The energy treasure hunt exchange follow-up involves prioritizing the identified energy savings opportunities and determining the next steps for project implementation. The **Project Implementation Tracker** helps with this task and is used to check the status of energy projects against the implementation schedule and monitor project results.

Additional Toolkit Components - Templates

The toolkit also has some supplementary templates that the facilitator can make use of at each phase. The templates for the **agenda** and the **save-the-data** document can be used during the planning phase to communicate the event to the participants.

The template for the **kickoff presentation** can be used on the first day of the event to introduce the participants to the treasure hunt process and provide an overview of the facility and its systems. Templates for **event certificates** and sample **evaluation form** are also available that could be leveraged for the post event activities.



BetterPlants

BetterPlants@EE.doe.gov

<https://betterbuildingsolutioncenter.energy.gov/better-plants>