

## In-Plant Trainings (INPLTs)

INPLTs offered by the U.S. Department of Energy's Better Buildings, Better Plants Program and Challenge are multi-day workshops performed by industry-recognized experts. INPLTs include both classroom and field-based training sessions that train attendees to identify energy conservation opportunities, quantify savings from those opportunities, and implement projects to realize the energy and cost savings. These training workshops enhance attendees' **understanding of working principles, knowledge of best practices, and capability of analyzing the energy performance of industrial energy systems.** As of September 2020, Better Plants has hosted over 140 INPLTs with about 2,400 participants, helping to identify more than \$41 million dollars in energy cost savings opportunities.



## 50001 Ready Virtual In-Plant Trainings (VINPLTs)

Due to the challenges created by the COVID-19 pandemic, manufacturers throughout the world have been trying to determine how to safely open and operate their manufacturing plants. To minimize the risk of infection, many manufacturers have reduced the number of people allowed into their plants without compromising production continuity. This makes delivery of INPLTs challenging in the traditional in-person fashion. To address this challenge and continue providing INPLTs during this difficult time, Better Plants piloted Virtual Cohort In-Plant Trainings (VINPLTs) on ammonia industrial refrigeration systems and wastewater treatment operations in October and November of 2020. The VINPLT pilot was very well received and participants requested additional trainings on more topics.

**The Better Plants program will deliver a VINPLT on 50001 Ready from February 9 to March 30, 2021.** The 50001 Ready VINPLT will be performed by industrial experts and Technical Account Managers using online video communication technologies. The 50001 Ready VINPLT comprises **eight (8) 2.5-hour online training sessions** (2-hour formal training and optional 0.5-hour Q&A) that will be delivered **on every Tuesday 10:00AM–12:30PM ET for eight (8) consecutive weeks.** Participating in this VINPLT is **free and open to all Better Plants partners.**

Participants will learn the basics of the 50001 Ready energy management system that is structured using the ISO 50001 standard. Attendees will utilize the DOE 50001 Ready Navigator and several software tools, such as EnPI Lite, Energy Footprint, and the Automated Register of Implemented Projects ("The Register") with real data and case studies to enhance the learning process. This event will prepare participants to start implementing ISO 50001 practices and even achieve 50001 Ready recognition.

To maximize the benefits from attending VINPLTs, **homework assignments will be given to the participants at the end of each session and will be due by the next session.** These homework assignments are designed to enhance participants' understanding and implementation of 50001 Ready. Although we do not expect participants to finish every task in the 50001 Ready Navigator by the end of the training, participants are expected to have a working draft started, and in some cases completed, for each of the tasks. At the completion of the VINPLT, **Professional Development Hours (PDHs) Certificates** will be prepared for the attendees upon request.

*After attending the 50001 Ready VINPLT, if participants are interested in implementing 50001 Ready across their facilities and get these facilities certified, Better Plants can refer them to join the 50001 Ready Implementation Cohort offered by the U.S. DOE Advanced Manufacturing Office.*

## 50001 Ready Virtual In-Plant Training Agenda

*February 9 to March 30, 2021; Every Tuesday 10:00AM–12:30PM ET (2-hour formal training + optional 0.5-hour Q&A)*

### **Week 1 – Introduction to all tasks; February 9, 2021**

Introduction to strategic energy management and continuous improvement; introduction to ISO 50001 – Energy Management Standard; introduction and a practical exercise on the 50001 Ready Navigator.

### **Week 2 – Tasks 1–7; February 16, 2021**

Understand the context of a 50001 EnMS; outline and confirm top management commitment; confirm scope and boundaries; review legal requirements, energy team, and energy policy; discuss the organization of the energy team; review the evaluation and management of risk.

### **Week 3 – Tasks 8–9; February 23, 2021**

Understand data collection processes: who, what, where, why, when, and how for monitoring and measuring; learn the two key PIE CHARTs process to show energy IN and energy CONSUMPTION; understand the processes for determination of significant energy users (SEUs); understand relevant variables and how to select and apply them.

### **Week 4 – Tasks 10–13; March 2, 2021**

Verify effectiveness of data collection; review your selection of SEUs; understand processes for selecting improvement opportunities; learn the selection processes for EnPIs and EnBs; learn how to set up and implement objectives, targets, and action plans.

### **Week 5 – Tasks 14–19; March 9, 2021**

Understand EnMS requirements for competence, training, awareness, communication, and documentation; learn how to develop operational controls for SEUs and action plans and communicating this to operational personnel; understand how to define and react to signification deviations from intended energy performance; review energy aspects for design and procurement teams.

### **Week 6 – Tasks 20–21; March 16, 2021**

Learn about energy performance, including the who, what, where, why, when, and how of energy measurement, monitoring, analysis, and evaluation; understand methods to evaluate energy performance improvement including use of relevant variables and linear regression; learn how to verify the effectiveness of the EnMS including action plans, EnPIs, and SEUs.

### **Week 7 – Tasks 22–25; March 23, 2021**

Learn to plan and execute an internal auditing process for the EnMS; understand how to conduct a management review, including inputs and outputs; learn how to deal with EnMS nonconformities including needs for action, implementation of corrective actions, and verifying effectiveness; understand the need for the continual improvement of the EnMS beyond the initial implementation.

### **Week 8 – Review of All Tasks and Introduction to DOE 50001 Ready Implementation Cohort; March 30, 2021**

Review highlights of all 25 tasks for 50001 Ready; check on all playbooks; time for Q&A on all tasks and playbooks; review next steps and how to apply for 50001 Ready recognition from DOE; overview of DOE 50001 Ready Implementation Cohort.