

# THE PLAN-DO-CHECK-ACT COMPONENTS OF ISO 50001<sup>i</sup>

What is the underlying foundation for the **PLAN-DO-CHECK-ACT** (PDCA) continual improvement structure of an ISO 50001 energy management system (EnMS)? (Click here for detailed graphic)



**Management responsibility** — Demonstrate top management’s commitment and support to the EnMS and to continual improvement of its effectiveness and the organization’s energy performance.

**Roles, responsibility and authority** — Appoint an energy champion and an energy team, and define and communicate expectations for energy management and energy performance improvement behaviors and actions.

**Energy policy** — Develop and implement top management’s statement of the organization’s commitments related to energy to provide direction for energy performance improvement activities.

## What’s addressed in energy **PLAN**ning?

**Legal and other requirements** — Identify and keep up to date the legal and other requirements applicable to the organization’s energy uses.

**Energy review** — Analyze energy data, identify the significant energy uses, and prioritize the organization’s opportunities for energy performance improvement.

**Energy baseline** — Define a period of time to serve as a basis for comparison of energy performance.

**Energy performance indicators (EnPIs)** — Develop quantitative measures of energy performance.

**Objectives and targets** — Decide on the energy performance improvement goals to be achieved by the organization.

**Energy management action plans** — Plan the actions, responsibilities and methods needed to achieve and verify the improvements stated in the energy objectives and targets.

## How **DO** the outputs from energy planning get implemented?

**Competence, training and awareness** — Ensure that employees and contractors are aware of and capable of carrying out their energy management responsibilities.

**Communication** — Implement processes for internal and external communication about the EnMS and the organization's energy performance.

**Documentation** — Maintain documented information on the EnMS.

**Control of documents** — Establish processes for managing documents to ensure that current and accurate information is available.

**Operational control** — Plan the operations associated with your significant energy uses, objectives and targets, and action plans to ensure that those operations are resourced and carried out consistently.

**Design** — Consider opportunities for improving energy performance in design activities for new, modified or renovated facilities, equipment, systems and processes.

**Procurement** — Make energy performance a factor in purchasing decisions when significant energy uses are involved.

### **What processes CHECK on how the EnMS is doing?**

**Monitoring, measurement and analysis** — Monitor, measure and analyze the key characteristics of activities that determine energy performance.

**Evaluation of compliance** — Assess the status of compliance with applicable legal requirements and other energy requirements adopted by or committed to by the organization.

**Internal audit** — Verify that the EnMS is functioning properly and generating the planned results.

**Nonconformities, correction, corrective and preventive action** — Identify and correct actual and potential problems.

**Control of records** — Maintain information that indicates the results achieved or provides evidence of the activities performed.

### **How does management ACT for continual improvement?**

**Management review** — Review the results and performance of the EnMS and take action to ensure its continuing suitability, adequacy, effectiveness and continual improvement in energy performance.

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<sup>i</sup> Adapted from *Environmental Management Systems: An Implementation Guide for Small and Medium Organizations* (Ann Arbor, MI: NSF International, January 2001).