Explore the Benefits of Taking ISO 50001 and SEP Enterprise-wide

Organizations can now take an enterprise-wide approach to significantly reduce the per-site costs of implementing ISO 50001 and certifying to Superior Energy Performance (SEP). The deep and continuing energy savings typically achieved with an ISO 50001 energy management system (EnMS) are easier to achieve for multiple sites within an enterprise when they share a common EnMS that is managed by a "Central Office."

Save Big on Implementation Cost

The four partners of the U.S. Department of Energy (DOE) SEP Enterprise-wide Accelerator pilot, 3M, Cummins, Nissan, and Schneider Electric, used this approach to implement ISO 50001 at 30 sites in the North America and also certified them to SEP. The resulting energy performance improvements saved $18.9 million of annual energy cost in total. On average, these 30 sites improved energy performance by 5% annually under their SEP certifications, saved more than $600,000 annually in energy costs, and reduced implementation cost for ISO 50001 and SEP by $19,000 of external costs and 0.8 Full Time Equivalent x years (FTE-yr) of internal staff time per site (Figure 1). ISO 50001/SEP implementation typically took between 4 and 18 months at each site, requiring 0.3 to 1.7 FTE-yr of internal labor plus $18K to $34K of external cost per site.
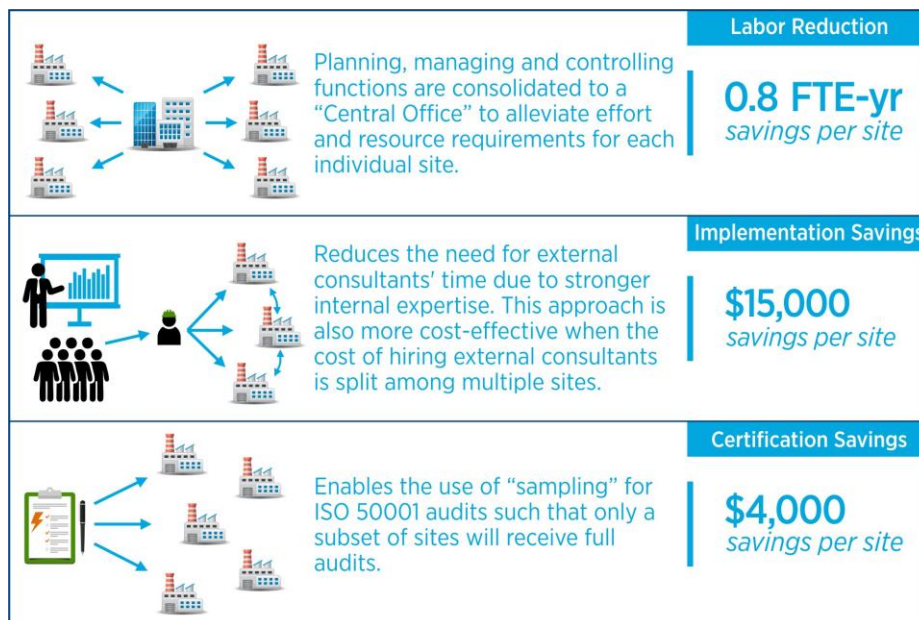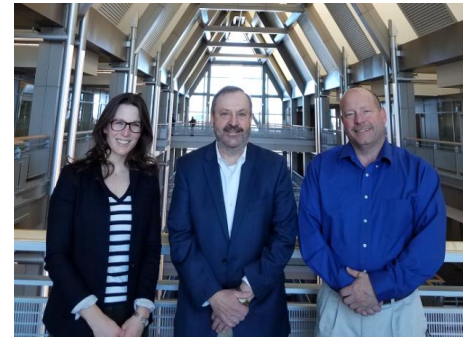

3M ISO 50001 Energy Management System Central Office Team
(Photo: provided by 3M)

"The enterprise-wide approach was essential to fast track ISO 50001/SEP implementation and minimize cost."

– Dennis Edwards
North America Facilities Director of Schneider Electric

3M reduced its implementation timeline by six months and saved one full-time staff per site.

Cummins shared their corporate "Energy Review Tool."

Nissan spent as little as 0.4 FTE-yr in labor to implement ISO 50001 & SEP at each site.

Schneider Electric completed 20 SEP sites and cut implementation period to only 3-7 months.

Labor Reduction
Planning, managing and controlling functions are consolidated to a "Central Office" to alleviate effort and resource requirements for each individual site.
0.8 FTE-yr savings per site

Implementation Savings
Reduces the need for external consultants' time due to stronger internal expertise. This approach is also more cost-effective when the cost of hiring external consultants is split among multiple sites.
$15,000 savings per site

Certification Savings
Enables the use of "sampling" for ISO 50001 audits such that only a subset of sites will receive full audits.
$4,000 savings per site

Figure 1: The Enterprise-wide Approach Saves ISO 50001/SEP Implementation Resources in 3 Ways
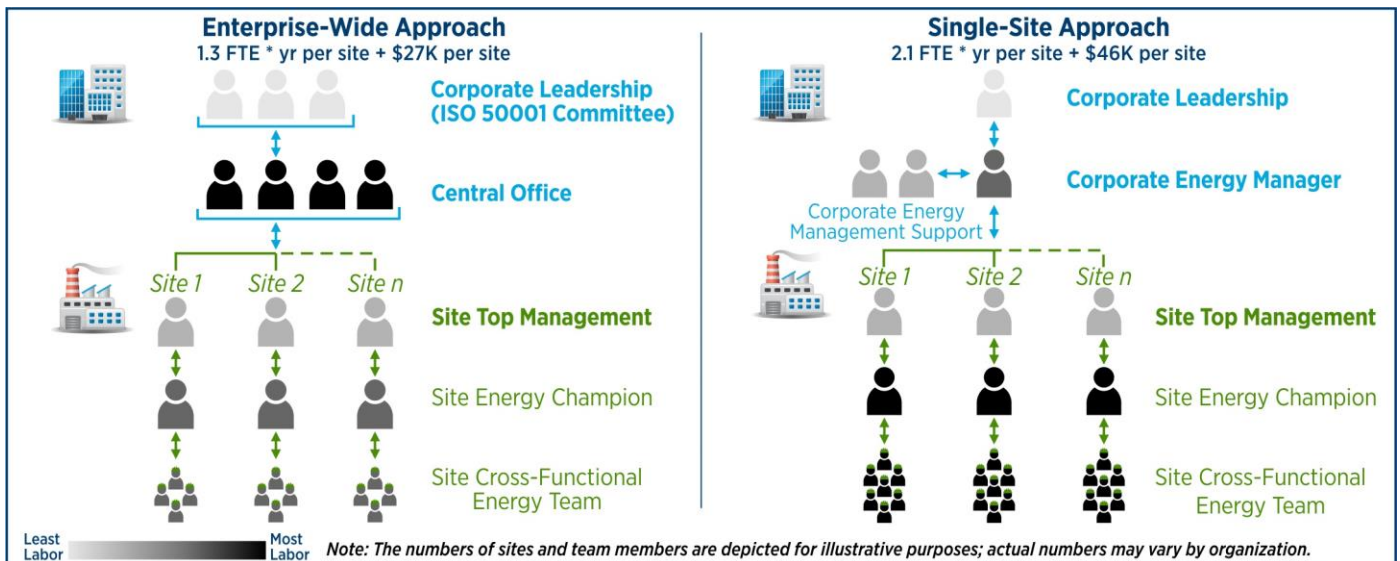
Figure 2: ISO 50001 Organization Structure Requires Less Staff Resources per Site under Enterprise-wide Approach (Left) vs. Single-site Approach (Right).

As an organization gains experience with ISO 50001 and SEP, the labor requirement for implementation can decrease for each additional site. Leveraging a "Central Office" under the enterprise-wide approach reduces costs beyond what the normal "learning curve" can achieve. For example, Schneider Electric was able to cut the per-site implementation labor in two major phases, by almost 50% in each phase, since their first pilot site.

The ISO 50001 Enterprise Organizational Structure

The four accelerator partners have each established their own ISO 50001 Enterprise team structures with many commonalities. Figure 2 (Left) shows a "generic" structure that can be used for the enterprise-wide approach. It addresses top management at two levels – corporate and site. The "Central Office" is directed by corporate top management and oversees the ISO 50001 Enterprise program across sites. Each site has an energy champion leading the local (site) program with support from a cross-functional team. Figure 2 (Right) shows a structure that is typically used for the traditional, single-site ISO 50001/SEP approach. It's clear that the enterprise-wide approach reduces the resource requirement per site and, hence, is much more cost-effective.

The successfully tested enterprise-wide approach to implementing ISO 50001 is suitable for all sectors. With the listed DOE resources, it is ready for your organization to leverage and achieve your energy/sustainability goal faster and at a lower cost.

Who is ISO 50001/SEP Enterprise Intended for?

The ISO 50001/SEP Enterprise-wide approach works best for organizations with one or more of the following characteristics:

- An established corporate energy goal;
- An existing energy management program;
- Implementation of ISO 50001 at a pilot site;
- Experience with ISO management systems, such as ISO 9001 or ISO 14001;
- Multiple sites that can benefit from sharing best practices.

DOE ISO 50001/SEP Implementation Resources

- 50001 Ready Navigator tool
- EnPI Tool and EnPI Lite Tool
- Energy Footprint
- Energy Review Tool
- Case Studies
- Training materials
- Qualified ISO 50001 Instructors

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