



INTERNATIONAL SURVEY ENERGY MANAGEMENT PRACTICES IN ISO 50001- CERTIFIED ORGANIZATIONS

SEPTEMBER 2015



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What are the reasons and the main factors that prompt organizations to deploy an energy management system (EMS) compliant with ISO 50001?

What are all the benefits of adopting this approach and what is the return on investment? Which difficulties are experienced and how are they solved? What are the conditions for success?

The AFNOR Group reveals the conclusions of an analysis of energy management practices in 78 ISO 50001-certified organizations in France, Germany, Taiwan, the UK, Russia and Morocco.

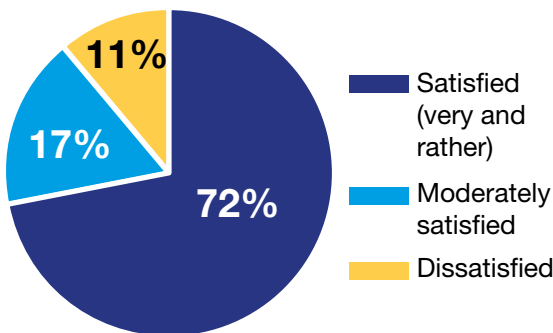
This international survey conducted by Time to Be is the continuation of an initial survey published by the AFNOR Group in November 2014, which only covered France. (see page 8 for the methodology)

ISO 50001 is recommended

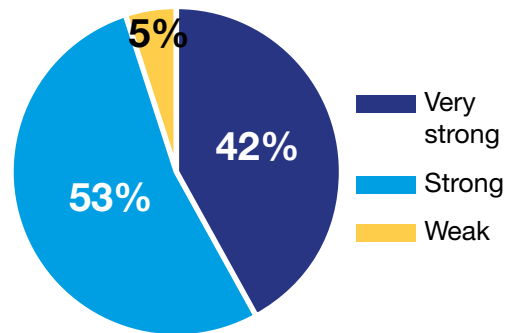
Organizations that have deployed an energy management system and obtained ISO 50001 certification are enthusiastic (**89% satisfied**) and **strongly recommend it (95%)**.

In concrete terms, ISO 50001 provides companies with the tools for a collective and progressive initiative that allows them to quickly make savings.

FEELING ABOUT THE APPROACH



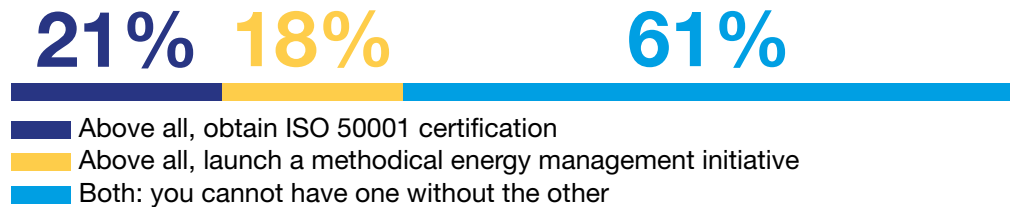
POTENTIAL FOR RECOMMENDATION



Some organizations seize up, as soon as they hear the word "standard". We must make these people understand that this is not a binding standard, but a tool to help them with an initiative.



Multiple reasons



Most companies were seeking to deploy initiatives for continual improvement and to obtain ISO 50001 certification at the same time.

The surveyed establishments most frequently mentioned the following trigger factors:

- simply obtaining the certification,
- the need to make financial savings through energy management,
- the corporate strategy,
- the subsidies and financial aid on offer,
- the rising cost of energy and/or carbon (in the past and/or in the future),
- the need to structure and rationalize the existing situation.

The need **to cut greenhouse gas emissions** is a triggering factor in **two** establishments **out of five**, and a significant motivator for one half of them.

At this stage, **the company's image** and external communications are not triggers, but they remain an important reason for almost **three out of five establishments**.

The competitive edge that a certified energy management system could provide is not an immediate objective, except for establishments whose core business is energy management and which must set an example, or for public organizations whose initiative forms part of a regional policy. It is worth remembering that ISO 50001 is a recent standard.

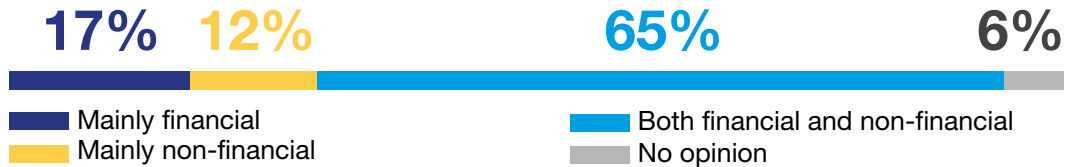
The survey also shows that, beyond the impacts on image and the guarantees of quality and credibility that it offers, certification can also bring together and rally all the stakeholders around an issue that is strategically important for the company. It also helps justify requests for capital outlay.



Our department launched an initiative that we wanted to deploy throughout the company. So we asked ourselves how we could involve the rest of the company. We couldn't expect to rally them, without a real, official and documented commitment by management, and the corresponding framework. Certification was the ideal solution that convinced management.



The benefits



FINANCIAL BENEFITS*

- **95%** A tool to identify energy consumption zones better
- **75%** A lever to increase margins
- **46%** A lever to negotiate energy purchases
- **35%** A facilitator when asking for loans to make investments



NON-FINANCIAL BENEFITS

- **85%** A long-term factor of progress
- **80%** A means of prioritizing strategic actions
- **76%** A lever to ramp up the personnel's skills
- **62%** A chance to compare energy performance
- **62%** A catalyst for the implementation of a legal and regulatory watch
- **57%** A trigger of innovation in industrial processes
- **53%** A trigger of innovation in products and services
- **36%** Advantages in terms of health, safety and comfort at work

The perceived benefits are closely linked to one another. The identification of activities that consume energy and the resulting financial, environmental and social gains are all the consequences of the implementation of a well structured and formalized approach.

- The creation and measurement of indicators make for an improved understanding of consumption and more detailed monitoring.
- New sources of savings can be identified.
- The actions to be taken, including investments, can be prioritized.
- The initiative is shared between more people.



Energy reviews prompt an efficient and structured initiative to conduct an in-depth analysis of consumption and uses on our site. They allow us to prioritize our investments, so that we do not necessarily address what costs the most immediately, but concentrate on three or four minor costs that enable us to save more kWh.



By looking into the subject, we can identify sources of gains in economic and energy efficiency. When we think about energy, we return to mid- and long-term "common sense" for the company.



All too often, too many people limit the benefits of energy efficiency to the kWh that are saved.



*Percentage of responses claiming that the benefit is "fundamental" or "significant".

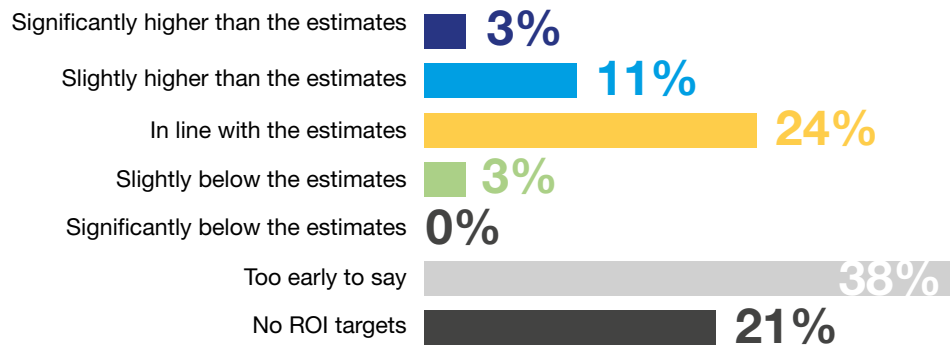
An initiative that does not demand significant capital outlays

The budgets allocated to energy performance initiatives remain poorly quantified. They are often included in budgets dedicated to the other management systems and are used by staff members who are already working on other projects.

In more than two thirds of the establishments questioned, these budgets are considered to be **negligible** or **small, when compared with the benefits they produce**:

- major investments are rare, due to the priority given to metering plans or other equipment that costs less than €10 k;
- levels of recruitment remain low;
- any available aid and subsidies, or ESC bonuses*, tend to be used to offset these investments.

A promising return on investment



One third of respondents, who voiced an opinion on the question, have achieved **results that outstripped their expectations**. And almost all the others stated that the financial benefits were in line with their estimates.

Amongst the establishments that are sufficiently mature to measure their energy savings, **more than 50% declared that they had cut their energy bill by between 5% and 30%**.



We had set a target for energy savings of 15%. So it was a great surprise to learn that our energy costs have in fact dropped by 30%. We would never have been able to produce such reliable figures, if we had not adopted this approach. It allowed us to escalate the data to management and, more importantly, to share it with the greatest number, in order to motivate everyone in the company.



*Energy Savings Certificates.

Few difficulties

On the whole, the interviewees declared that they had not encountered any major difficulties in the deployment of their ISO 50001 program.

Any difficulties that were encountered were considered as obstacles that are typical of any management system:

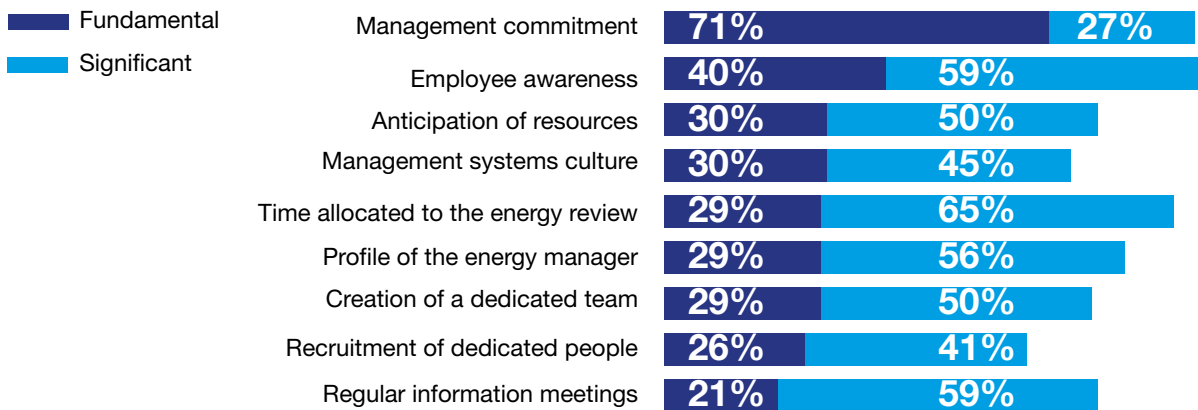
- technical issues resulting from the age of the buildings and systems,
- a shortage of time and workload management,
- the availability and qualifications of the human resources,
- the implementation and interpretation of the standard,
- changes in employee behavior (changes in deep-rooted habits in order to save energy)



This is a long-term initiative. What really counts today, is spreading the word to our operatives. They have to accept the monitoring of the indicators on their machines and adopt it as part of their everyday work.



Conditions of success: above all, governance and human resources



This program is also a **matter of planning ahead and scoping**. It is advisable to secure:

- the necessary internal human and material resources;
- enough time and action plans with milestones;
- support from external service providers in order to gain more expertise, efficiency and time in the understanding and the application of the standard.

Management commitment must go beyond a simple written statement, and take the form of the concrete and informed governance of the initiative on a daily basis.

Employees must be involved, aware and united, right from the start. This demands communication and training actions toward the players who are closest to the project.

The choice of the energy manager is crucial. The surveyed companies profiled a person with:

- a global vision of the company's activities;
- technical expertise;
- organizational skills;
- good inter-personal and communications skills;
- perseverance and determination.

The identified good practices

Step back and take the time to define the company's targets and the necessary commitment to the initiative.

- Compare the balance of energy costs and the cost of implementing the ISO 50001 program.
- Capitalize on the practices that the company developed as part of its environmental initiative (ISO 14001 standard).
- Anticipate the needs for training and/or recruitment a few months before the project is launched.
- Once the decision has been made, launch the project as soon as possible.

Organize management and governance. Frame the project in advance and define the steps.

- Make sure that management is committed.
- Allocate a budget and prepare internal and/or external support. Name a dedicated representative of the management who will act as the energy manager.
- Set up an Energy Committee that regularly brings together the key players and implement a process for the delegation of tasks to its members.

Pay attention to clause 4.4 "Energy planning" of ISO 50001.

- Map out consumption and the uses of energy and think about the action plan.
- Allow time for legal and other requirements (4.4.2), the energy review (4.4.3) and, if necessary, call on external experts for these subjects.
- Think about the necessary investments. Do not only prioritize major short-term investments. Smaller investments identified by the energy review can quickly reap significant returns.

Raise awareness amongst employees and bring them together

- Bring internal employees onboard and make them aware of what is at stake by communicating regularly and effectively.
- If the company has several sites to be deployed sequentially in accordance with the standard, provide an explanatory guide specific to each structure, its activity and its culture.

Call on external service providers

- Seek support from carefully selected technical experts.
- Anticipate the necessary budget for something which should be considered as a source of efficiency.
- Do not neglect the role of the certification auditor, who is a partner that can help interpret the standard and offer benevolent support to the initiative.

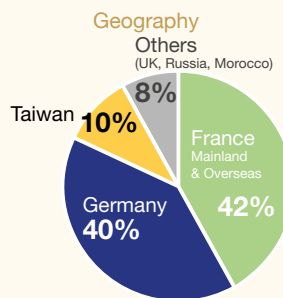
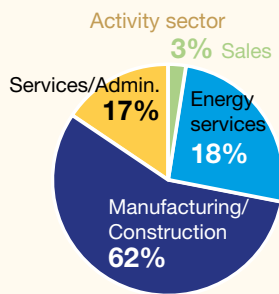
Keep it simple

- As far as is possible, try to simplify the actions and approaches when applying the demands, especially when it comes to energy planning.
- Simple approaches will also enable the personnel that do not belong to the Energy Committee to take the actions onboard and to become more involved.

Methodology:

- A qualitative and exploratory phase conducted with the energy correspondents, between December 2014 and April 2015. Face-to-face interviews about the situations and the challenges of 12 French* organizations in the forefront of the ISO 50001 initiative.
- A quantitative phase by online survey of 66 ISO 50001-certified establishments in France (including overseas territories), Germany, Taiwan, the UK, Russia and Morocco, with a view to quantifying the information gathered in the qualitative phase.

PROFILES OF THE SURVEYED ORGANIZATIONS



About one third of these establishments are also ISO 9001 (quality) and ISO 14001 (the environment) certified.

Almost four multi-site establishments out of five have deployed their energy management system on all of their sites, or intend to do so.

* APERAM Stainless, Carrefour, Coriance, Findus, International Cookware, Merck Millipore, Munksjo Arches, Ricoh Industrie, Schneider Electric, TIP Beyno, Université de Haute Alsace, Saint Raphaël.

The AFNOR Group and energy management

The mission of AFNOR Energies is to drive and coordinate the activities of the AFNOR Group in the fields of energy management, energy efficiency and renewable energies, in collaboration with the various entities that deploy standardization, publishing, training and certification solutions on a national and international scale.

Successfully make the energy transition by adopting a dynamic and structured approach: training in voluntary standards, support for the deployment of energy management initiatives and the implementation of control solutions, ISO 50001 certification, etc.

Do you want to engage? We will support you

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