



Energy Efficiency Solutions

Energy audit of the hotel

General information on the solution —

“Targets”:

- Hotel area: General
- End-use: All (space heating, hot water production, specific usage of electricity, etc.)

Related criteria of the EU Eco-label:

Audit of the energy efficiency of the building is an optional criterion of the EU Eco-label

About its implementation:

- Ease: Easy (*)
- Best moment: can be done at any time. Recommended before undertaking renovation work in the hotel.
- Relevant initial situation: No energy audit of the hotel has been carried out for the last 5 years.

Indicative cost:

- Energy auditing: approx. 10 k€ (possible financial support – see below)

Indicative return on investment time:

- Depends on the actions taken after the audit.

Note that costs and return on investment may vary greatly depending on the local context and on the hotel's initial situation.

Description of the solution —



Principle

Having an energy audit made by an energy expert is the best way to get a comprehensive view of the actions that need to be taken in order to improve the energy efficiency of a specific hotel.

It is an essential step if you want to identify the technical solutions that are the most appropriate to your hotel.

Benefits from an energy audit:

An energy audit will:

- reveal problems that can be solved easily through simple, inexpensive actions,
- identify areas of improvement and assess the potential for energy savings,



- help you set priorities, in particular for large investments (building insulation, space heating equipment, etc.) for large investments (building insulation, space heating equipment, etc.).

Steps of an energy audit:

- **On-site survey:** during the on-site survey, the characteristics of hotel buildings and equipment are examined and described in detail (space use, building condition, equipment conditions and use, maintenance, etc). Data of energy consumption are also examined.
- **Data treatment:** calculations are made to interpret data collected on-site. Areas of improvement are identified, costs of each measure and return on investment are calculated.
- **Recommendations delivery:** at the end of the audit, a consolidated list of recommendations is provided to the hotelier, who can then choose which actions to undertake.



Steps of an energy audit

Recommendations

About energy audits

Which organisations may I contact to get information and support for an energy audit?

- A variety of organisations can help you carry out an energy audit, either by providing you with complementary information (list of service providers, etc.) or by providing you with financial support for this. These organisations include: energy agencies, local authorities, chambers of commerce and industry, etc.
- Note also that some service providers (e.g. energy suppliers) have developed a service that includes both the energy audit of the hotel and the financial set-up. These service providers may also provide financial support (in the form of credit at advantageous interest rates, etc).

Note also that an energy audit may be combined with an assessment of carbon emissions resulting from energy consuming activities.

Other possible audits:

Other types of audits are available to hotels: environmental audits, audits for eco-labels (like the EU Eco-label), carbon assessments, etc. Here is some information to help you evaluate which type of audit is the most appropriate for your facilities.

The environmental audit

- An environmental audit has a **wider scope** than an energy audit, as it takes into account all environmental areas (waste, energy, water, environmental management and marketing, etc.).
- The environmental audit is recommended as a first step. It will help you get an overview of your hotel's environmental impact and set up priorities.



The audit for the EU Eco-label

- The audit for the EU Eco-label (solution n°III) assesses whether your hotel qualifies for the EU Eco-label. The following issues are considered: energy consumption, water consumption, waste production, use of chemical products and environmental management. *For more information on the EU Eco-label: www.ecolabel-tourism.eu.*



EU Eco-label

The carbon assessment

- Carbon assessment is one type of environmental audit. It assesses the green house gas (GHG) emissions resulting from the hotel's operations and is a first step in order to reduce these emissions. The aspects considered may include:
 - energy consuming activities (laundry, space conditioning...)
 - products/supplies transportation,
 - staff transportation,
 - building construction,
 - waste handling and disposal, etc.

The global business impact is usually expressed in terms of carbon equivalent tons and in terms of CO₂ equivalent tons.

- If you have a carbon assessment made by a service provider, you should make sure that they use a methodology that is compatible with [ISO 14064](#) norm, with the [GHG protocol initiative](#) and with the [Directive n° 2003/87/CE](#) relative to CO₂ emissions quotas exchange.

Link with others database

It is recommended that you collect data about your energy consumption (solution n°I) before having an energy audit (solution n°II) in order to get a preliminary view of the energy consumption of your hotel and as preparation for the energy audit



Benefits for the hotel



Prepare an effective
action plan

Make informed choices

The energy audit is essential to identify energy saving potentials and to get recommendations specific to your hotel. It will help you make informed choices on future investment and renovation work.

Involve your staff

Audits can be useful for raising staff awareness on the environmental impact of your hotel and for involving your staff in your action plan.

Market availability

Maturity of the solution: mature.

Manufacturers / suppliers of energy sub-meters :

- Delta Dore www.deltadore.com,
- Schneider Electric www.schneider-electric.com

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