

**THE
ENERGY
& WATER
AGENCY**

Malta's Experience with Energy Audit Programs

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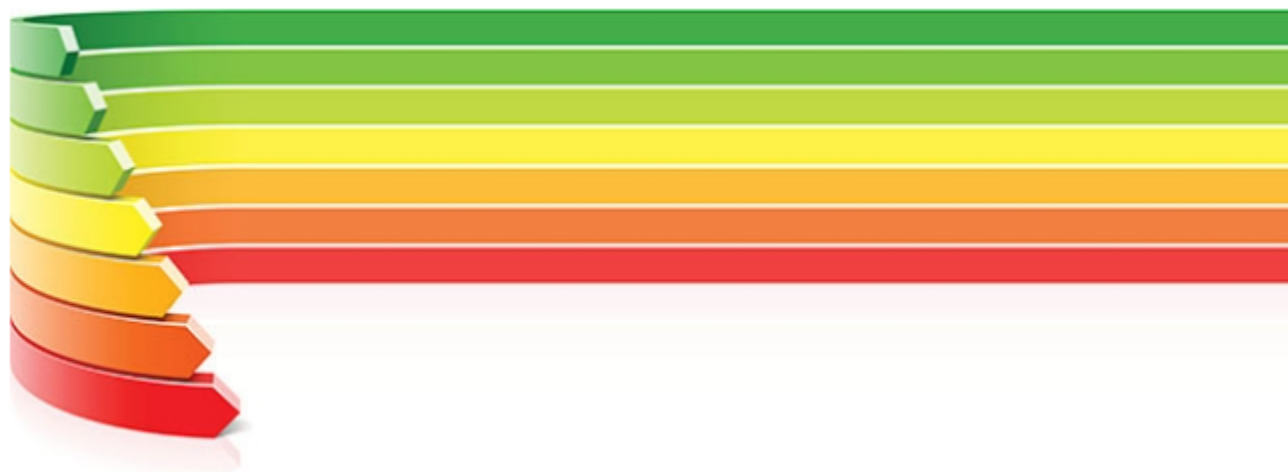
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THE ENERGY EFFICIENCY DIRECTIVE

- The Agency has the role to :
 - Report on the implementation of the EED
 - implement measures to fulfil obligations arising from the transposition of the Directive (LN 196 of 2014)
 - Set National Indicative Energy Efficiency target for 2020, the development of Alternative Policy measures to reach a pre-determined savings amount at final consumption, the analysis of Heating and Cooling potential; the setting up of a certification scheme for Energy Auditors; Information Dissemination; Energy Services...and Energy Audits

NON SME ENERGY AUDITS

- Regulation 10(9) of the Energy Efficiency and Cogeneration Regulations, 2014 - makes it mandatory that enterprises that are not SMEs (i.e. Non-SMEs) commission an energy audit.



SME'S AND ENERGY AUDITS

- Regulation 10(5) of the Energy Efficiency and Cogeneration Regulations, 2014 – develop programmes to encourage SMEs to undergo energy audits.
- Regulation 10(8) of the Energy Efficiency and Cogeneration Regulations, 2014 – bring to the attention of SMEs, concrete examples of how energy management systems could help their business



ENERGY AWARENESS IN HOUSEHOLDS

Regulation 10(5) – develop programmes to raise energy awareness in households

Pilot carried out in 2015 with 155 visits

By end 2016, 1056 visits were done covering all localities in Malta.

DID YOU KNOW...
You can save up to 20% off your electricity and water bills simply by adopting these energy efficient tips?

THE ENERGY & WATER AGENCY

WATER
Save 200m³/yr by having a shower instead of a bath.

WATER HEATER
Regulate your water heater to save.

SPACE HEATING
An A/C is 3 times more efficient than an electric heater.

LIGHTING
Save €15/yr by switching from incandescent to LED.

STAND BY APPLIANCES
Save €33/yr by switching off items on stand-by.

ENJOY YOUR SAVINGS

Call us now on **2229 2575** or send an email info-energywateragency@gov.mt and we'll send you a professional to help you become more energy and water efficient. This service is free of charge and appointments can be booked 7 days a week.
www.energywateragency.gov.mt

#Efficiencyfirst

*The Energy and Water Agency is a Government Entity within the Office of the Prime Minister (Energy and Projects) established by LN 340/2016. The Agency is in charge of drafting, implementing and disseminating Energy and Water Policy for Malta.

TOOLS FOR NON-SMEs

- Certified Energy auditors and Energy Managers
 - GN1302 provides for the registering of energy auditor and energy manager courses.
 - List of certified energy auditors and energy managers available on line.
- Guidance Note
 - A guiding document produced jointly by REWS and the Agency.
 - Intended to guide non-SMEs and other enterprises in the discharge of the Energy Audit obligations pursuant to L.N. 196 of 2014.
- Template for Energy Audits
 - The use of the template is not mandatory but compliance with this template is an indication that sufficient detail has been submitted.

EED AND LARGE INDUSTRY

■ Energy Audits

- 64 non-SMEs were required to carry out the mandatory energy audit by 2015. To date, 62 large enterprises submitted their energy audit report to the Agency;
- 28 non-SMEs were exempted because they are relatively small offices with low energy consumption;
- 4 non-SMEs were exempted based on the energy/environmental management system that they have in place.

EED AND LARGE INDUSTRY (2)

- Energy Efficiency Partner Initiative
 - 23 Voluntary Agreements signed
 - Delivered 11 GWh of savings in 2014 and 'new' 5 GWh in 2015.



EEPI

Energy Efficiency Partner Initiative

VERIFICATION OF ENERGY AUDITS

Fifth Schedule

Part B

Minimum criteria for energy audits including those carried out as part of energy management systems

- (a) be based on up-to-date, measured, traceable operational data on energy consumption and (for electricity) load profiles;
- (b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;
- (c) build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP) in order to take account of long-term savings, residual values of long-term investments and discount rates;
- (d) be proportionate, and sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities for improvement.

Energy audits shall allow detailed and validated calculations for the proposed measures so as to provide clear information on potential savings.

The data used in energy audits shall be storable for historical analysis and tracking performance.

VERIFICATION OF ENERGY AUDITS (2)

- 66% of Energy Audits submitted were verified
- Letters of non-compliance were sent to a number of non-SMEs
- Currently the Agency is in discussion with these non-SMEs for them to address deficiencies in their audit.

MINIMUM CRITERIA FOR ENERGY AUDITS

(a) be based on up-to-date, measured, traceable operational data on energy consumption and (for electricity) load profiles;

- Data should be available for the previous 12 months.
 - *Historic data not provided or does not include operational data.*
- Technical validity of the measurements taken and equipment used.
 - *No details of actual measurements taken and equipment used.*
- Data to show a relationship between operational activity in the period and actual energy consumed.
 - *Relationship between operational activity and actual energy consumption not established.*

MINIMUM CRITERIA FOR ENERGY AUDITS

(b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;

- Suitably set boundaries to ensure that significant energy consumption activities and justification for any omissions have been included.
 - *Review of energy consumption to be sufficiently detailed or categorized by floor/rooms within the building, operations, processes etc.*
 - *Important or significant energy uses to be included in scope of energy audit (e.g. transportation).*

MINIMUM CRITERIA FOR ENERGY AUDITS

(c) build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP) in order to take account of long-term savings, residual values of long-term investments and discount rates;

- Improvement opportunities identified in report, need to be 'considered' for choice upon LCCA or SPP.
 - *Financial analysis at times missing from report.*
 - *No evidence of the basis on which the energy savings have been calculated. It is not always clear whether the estimations of energy savings have any sound scientific validity.*

MINIMUM CRITERIA FOR ENERGY AUDITS

(d) be proportionate, and sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities for improvement.

- Clear coverage of all key energy consuming activities in the audited organization;
 - *Proportionality to be backed basis of measurements and analysis to permit the understanding of the overall energy performance of the organisation.*

MINIMUM CRITERIA FOR ENERGY AUDITS

Energy audits shall allow detailed and validated calculations for the proposed measures so as to provide clear information on potential savings.

- Calculations used to determine possible savings are provided in the report in order to allow validation.
 - *Insufficient or no evidence of how the reported values (e.g. of energy savings) were obtained.*
 - *Financial analysis based on estimates and would need to be clearly stated.*

AUDITS IN MEDIUM SIZED SMEs

Purchase of Equipment to conduct the audits

Michael Debono Group

Debenhams – Sliema

Elepac

Marks & Spencer – Valletta

Benna

General Soft Drinks

AVIfilm

Investing in Energy does Level 1 audits boosted with data logging to give a more accurate picture of the energy consumption. Basic Recommendations.

FURTHER ENERGY AUDITS IN ACTION

- Energy Awareness Scheme in Residences → Energy efficiency investments in vulnerable households – 253 visits.
- Updating of Energy Audits in Public Buildings: 50 updates.
- Energy Audits for the Small and Micro Enterprises Scheme in collaboration with Malta Enterprise.

GRAZZI

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