



Italian National Agency for New Technologies,
Energy and Sustainable Economic Development

ITALIAN NATIONAL AGENCY
FOR ENERGY EFFICIENCY



Energy Audits Implementation Scheme in Italy: data analysis procedures and benchmarking

EnR Round table on the Industry Decarbonisation study
16th February 2022

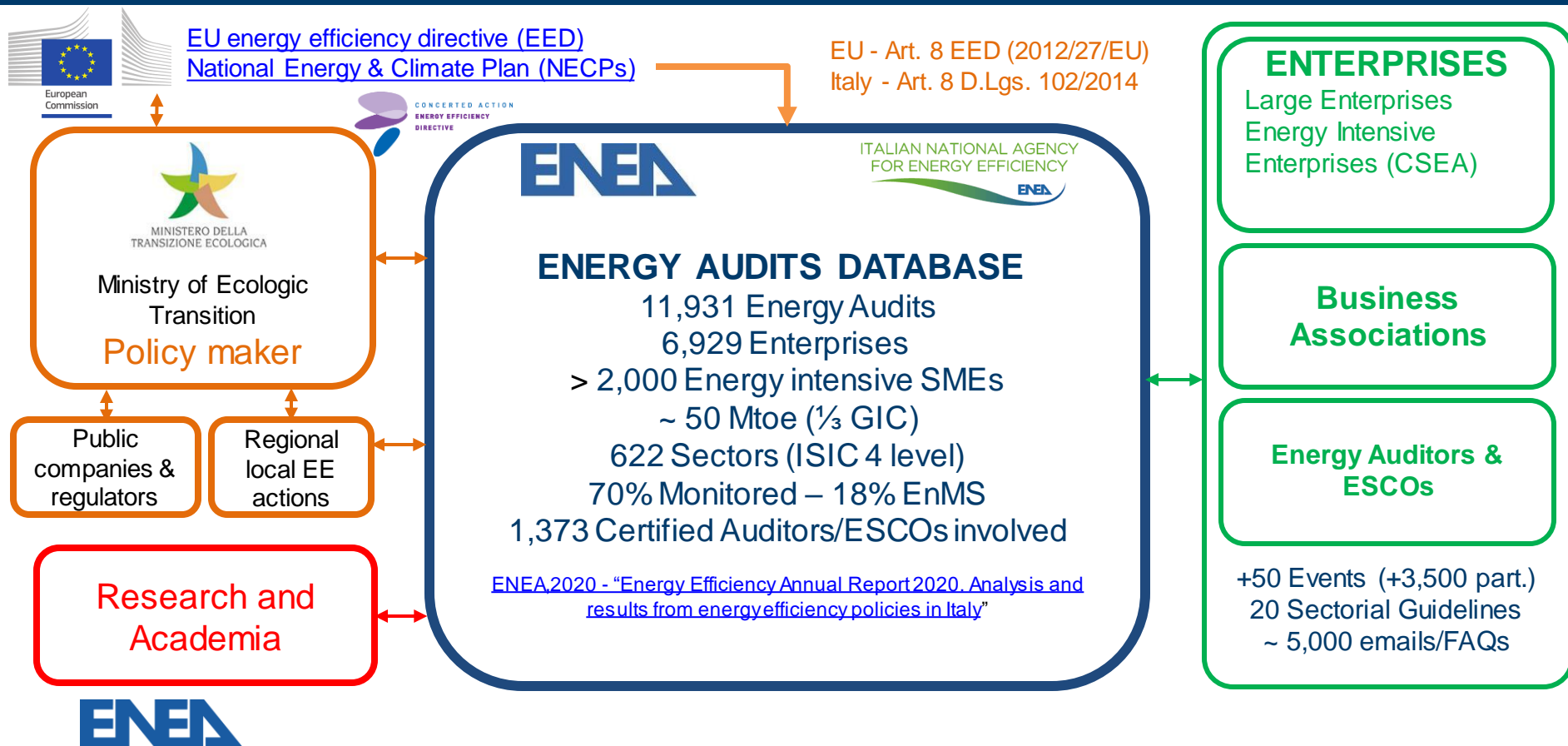
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ENERGY AUDIT ECOSYSTEM – 2019/2020

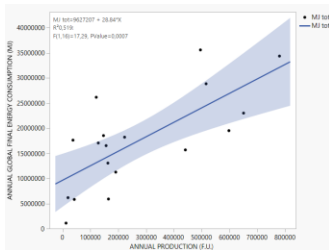


APPLICATIONS OF DATA ANALYSIS AND BENCHMARKING

Policy Support – Ministry of Ecologic Transition

- Continuous feedback on the implementation status of EED art.8
- Tracking implementation EPIAs and energy savings in EIs – *Art. 7 EED*
- Analysis of electrical indicators – *Planned Gas indicators*
- Technical specific support and training on a national (e.g. regulatory issues) & regional (e.g. promotion of Energy audit calls) level

Sectoral analysis:



- Development of EPIs and tools
- Market-driven implementation EPIAs and BAT
- Trends of EPIAs and cost effectiveness analysis
- Specific analysis: SMEs, Energy management systems, monitoring, etc.
- Continuous feedback with industrial associations

ENERGY AUDITS DATA ANALYSIS

DATA SOURCES

1. Energy audits reports
2. Pre-compiled spreadsheets: energy consumption
3. Clustering file
4. User's portal- Internal Database



Available information for first level benchmarking

- General Info: sectorial and geographical
- Class size, certifications and monitoring
- Production (or equivalent)
- Energy final consumption (10 energy carriers)
- Distribution uses: main, auxiliary and general
- Energy Performance Improvement Actions (EPIAs) implemented and identified

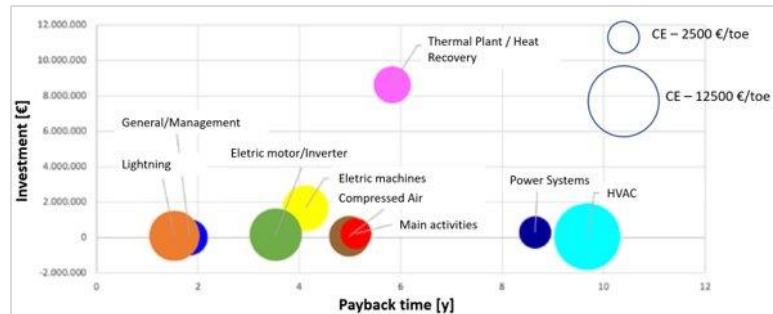
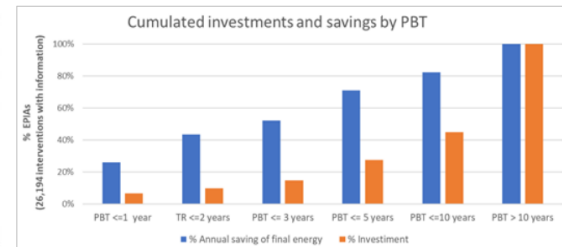
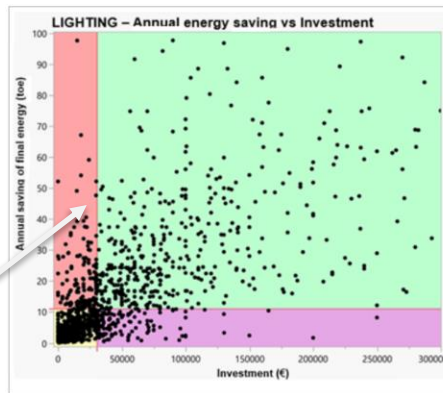
Second level benchmark

- Sectorial models, processes and BAT analysis

COST ANALYSIS AND COST/EFFECTIVENESS SOLUTIONS: EXAMPLES

Analysis of Implemented and Identified EPIAs

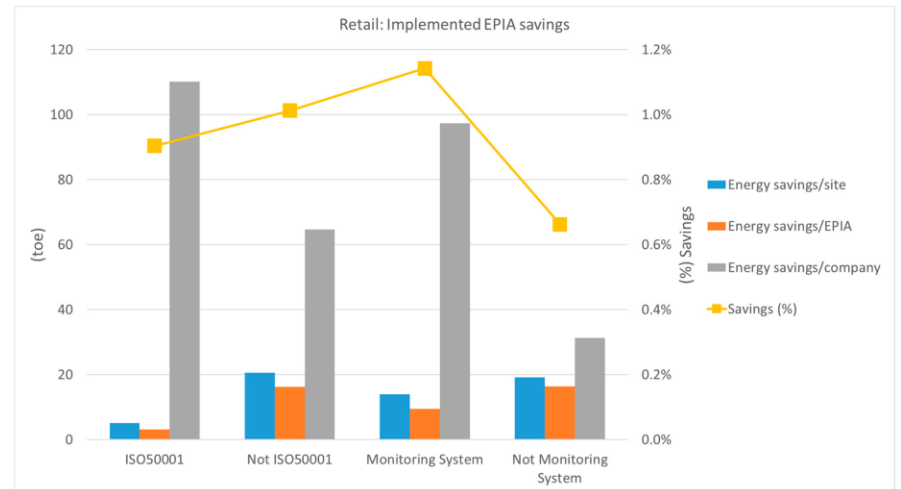
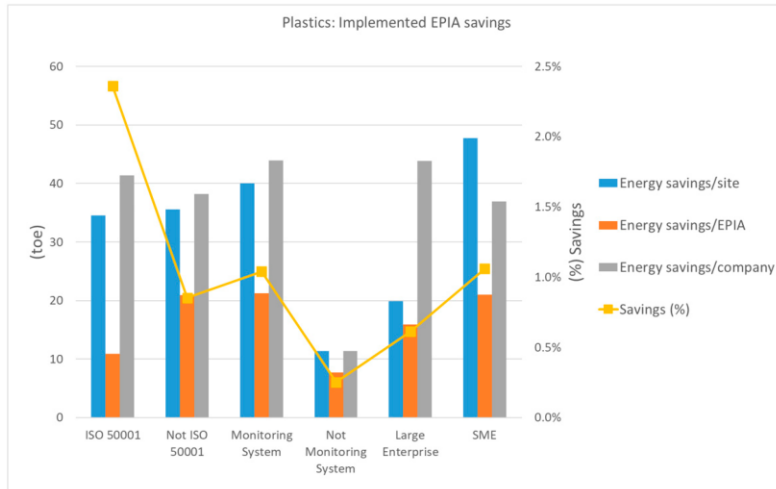
- Analysis of Best Technologies
 - Savings and Payback time
 - Market trends of identified EPIAs
 - Cost Effectiveness (€/toe) indicator
- For 4 digit NACE level, cost effectiveness is computed in Euro per toe, as Investment/saving (achieved or potential)
- Intervention areas can be compared in terms of cost/effectiveness
- EPIAs information can be obtained for ISO 50001 certified enterprises or energy intensive SMEs



IMPLEMENTATION OF MONITORING SYSTEMS

First results (to be further developed in 2022/2023):

- “Energy Savings/company” and “EPIAs/site” ratios are higher in enterprises (industrial and services) with EnMS and monitoring system. Better planning of EPIAs with EnMs and monitoring.
- Sectoral savings are higher with monitoring systems. Not conclusive results for EnMs.



CONTINUOUS IMPROVEMENT AND CONCLUSIONS

- Analysis is a very **time-consuming** process → Improvement of database and involvement of stakeholders
- **Human factor** in the auditing (thousands of ESCOs, auditors & enterprises) → Guidelines (with business associations), training and support
- Heterogenous reporting and monitoring → Involvement on development and promotion of standards (EN 16247 and national implementation UNI/TR 11824)
- «**Energy Efficiency Gap**» Implementation of EE measures → Promotion of supporting measures for energy audits and energy efficiency
- Several public bodies involved in EE mechanisms with different databases/procedures → Harmonisation of databases and procedures on national/local levels

Many thanks for your attention

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