

How can we know if we have saved or lost energy/money through energy efficiency?

(practical example of applying the new energy analysis method)

Energy efficiency means direct profit!

In industry, energy efficiency is achieved mainly by changing the way energy is managed, rather than by installing new technologies. Thus, energy efficiency can be continuously improved.

By adapting the ODEX indicator method to the end-user level, we have developed a new method for analyzing energy consumption that eliminates the disadvantage of discontinuity of the Energy Audit (Balance) method, offering the possibility to evaluate energy savings monthly and not just once every 4 years (according to Law 121/2014 on energy efficiency).

The new energy analysis method allows for the timely evaluation of energy/financial savings/losses, from one year to the next, following the implementation of various energy efficiency measures, starting from monthly statistical data on electricity or natural gas consumption and production values recorded in the two years of analysis.

The analysis can be applied to any area of an Organization where both the production values achieved and the related energy consumption are generated, monitored, centralized and accounted for: an equipment, a facility, a line or a technological process, a final energy consumption process, a department or a production section, the entire Organization or part of it.

Another advantage of applying the new energy analysis method is that, by introducing a new, qualitative indicator of energy performance - Energy Efficiency (energy use efficiency), we can also find out how energy is used, by differentiating energy consumption into Productive Consumption and Unproductive Consumption.

Conclusion: Together with the Energy Audit (Balance Sheet), the new method of analyzing energy efficiency and effectiveness represents the most important tools at the Energy Manager's disposal for monitoring, analyzing and optimizing energy consumption in a timely manner.

Practical example: Industrial consumer with energy consumption of over 1000 TEP.

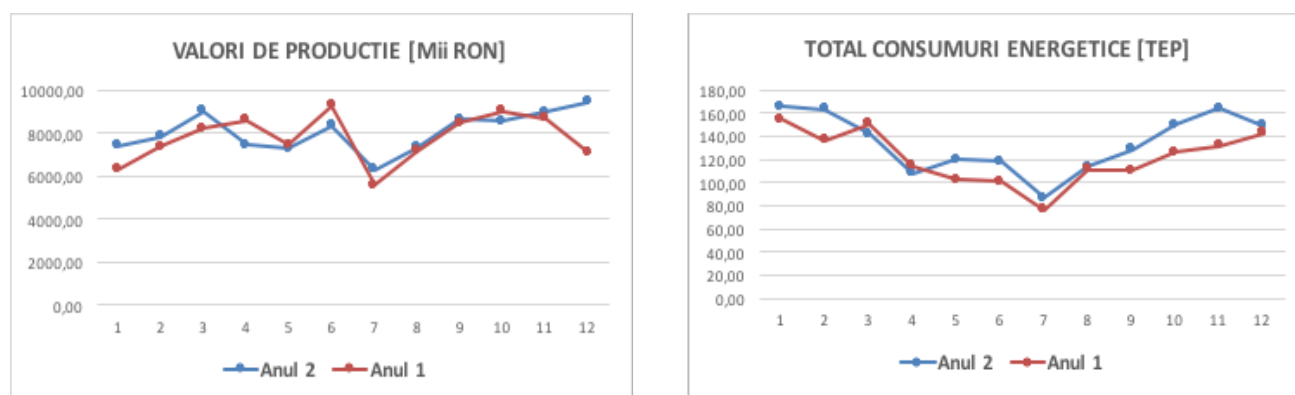


Fig. 1. Evolution of production values and total energy consumption

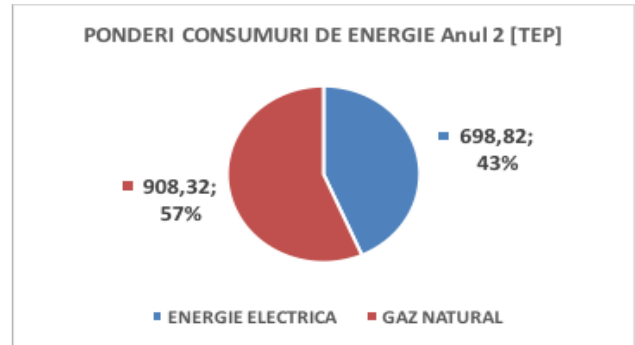
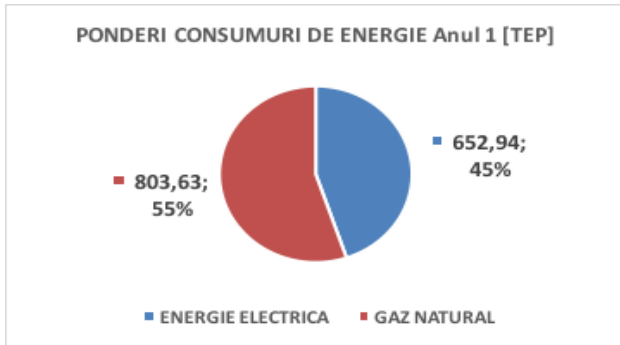


Fig. 2. Energy consumption ratios Year 1/Year 2

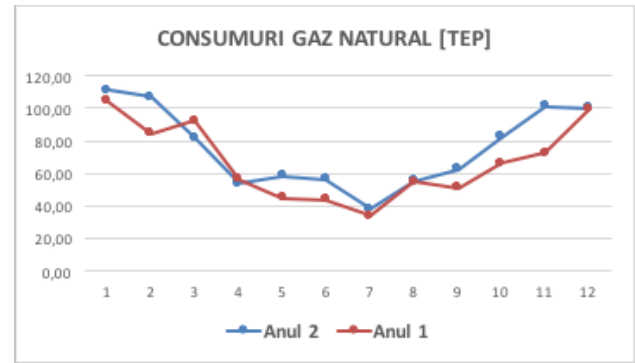
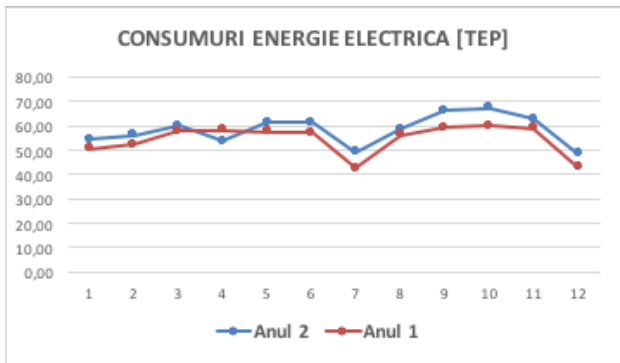


Fig. 3. Monthly energy consumption

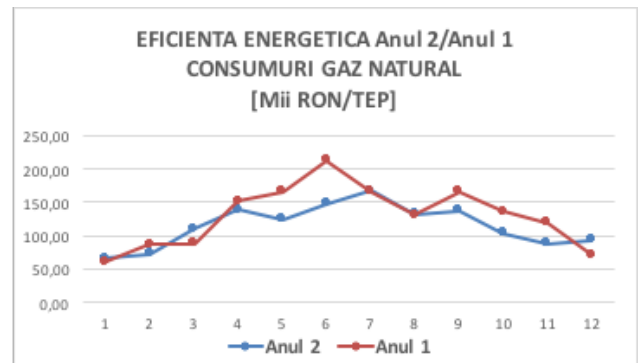
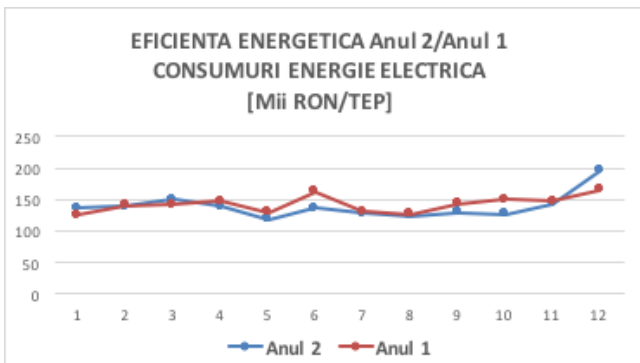


Fig. 4 The evolution of energy efficiency

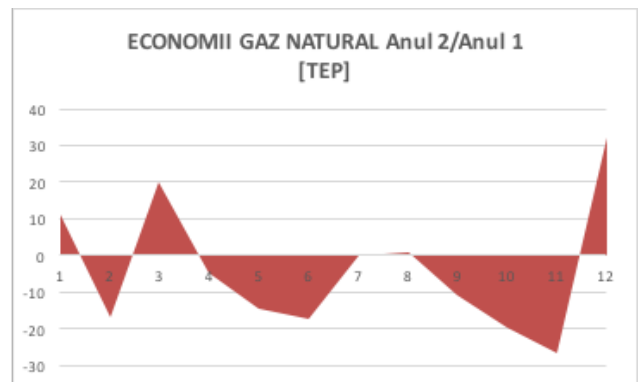
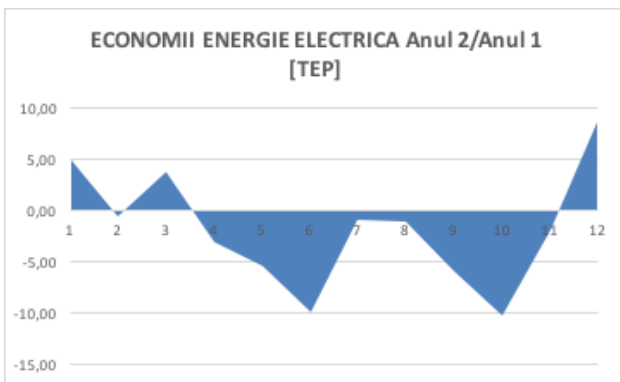


Fig. 5. Energy savings/losses

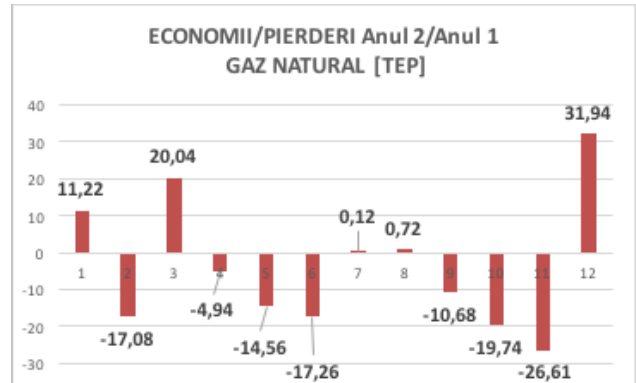
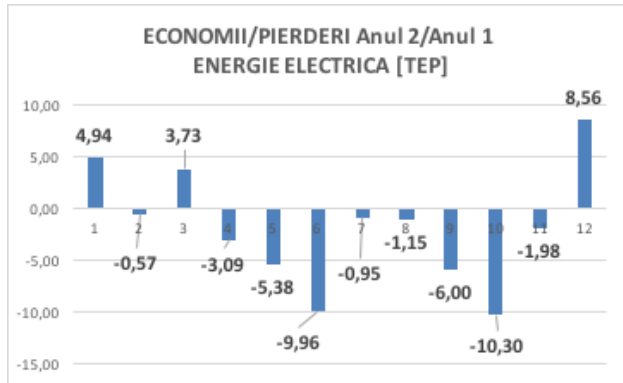


Fig. 6. Monthly energy savings/losses

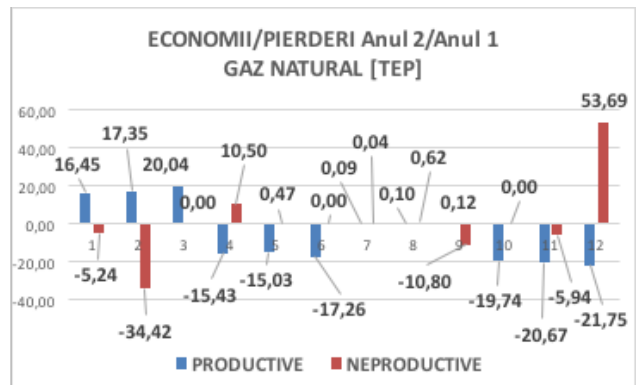
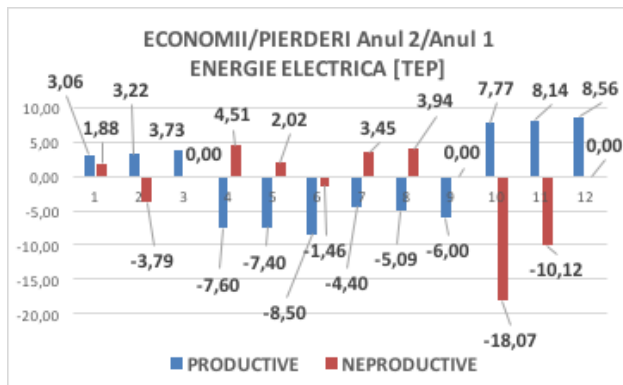


Fig. 7. Monthly productive/non-productive energy savings/losses

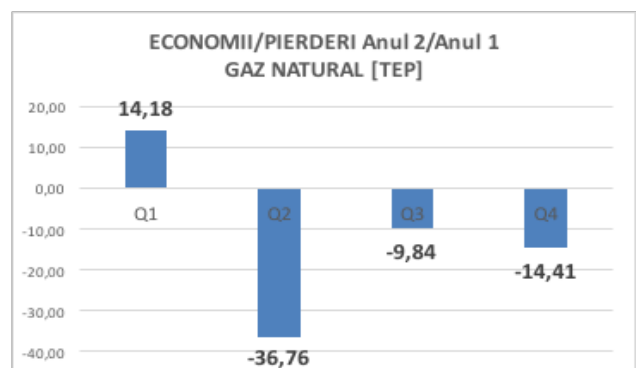
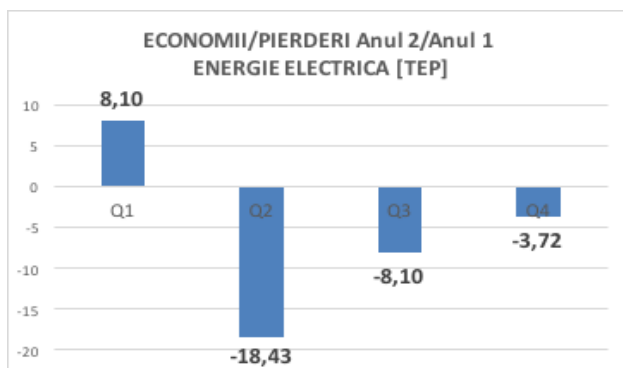


Fig. 8. Quarterly energy savings/losses

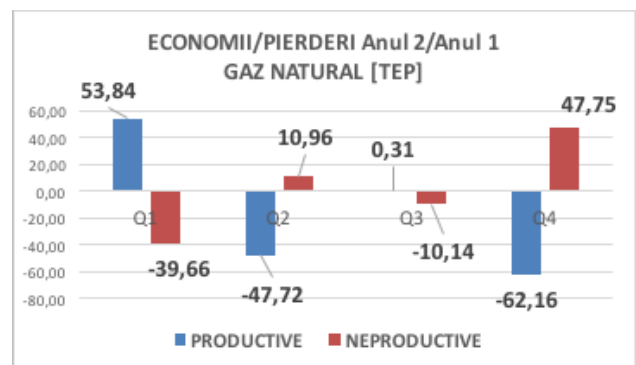
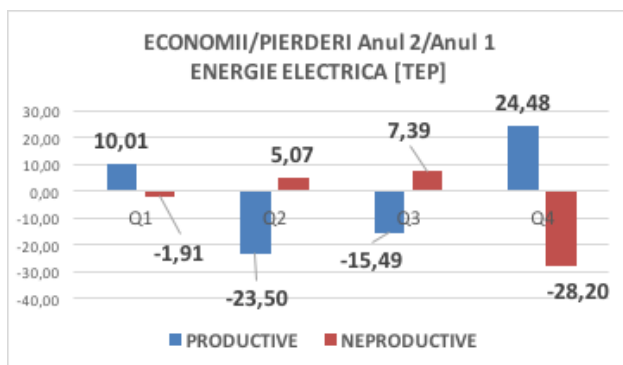


Fig. 9. Quarterly productive/non-productive energy savings/losses

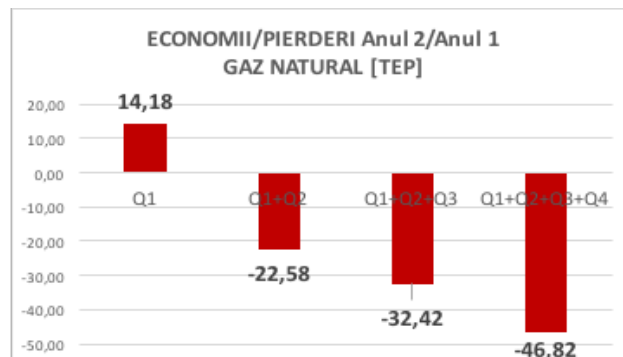
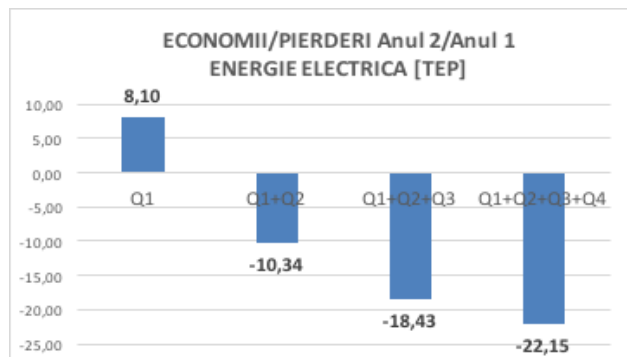


Fig. 10. Annual energy savings/losses

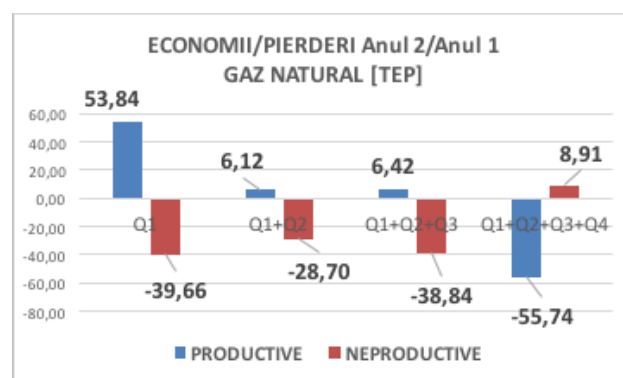
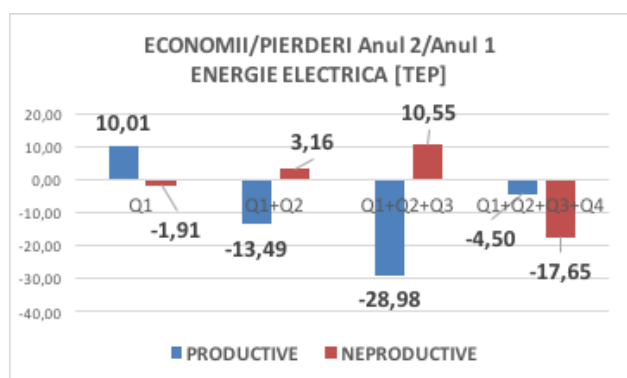


Fig. 11. Annual productive/non-productive energy savings/losses

💡 The first step to saving is to start using energy only where, only when, only as much and only as necessary. We can guide you in this direction.

✉ Contact us for details or to schedule a meeting.

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