

Financing energy efficiency investment projects in the Romanian industry and SME sectors

Bucharest

February 1, 2018



About ARPEE



Our commitments



Promoting energy efficiency and energy saving on the whole energy chain



Reducing energy dependence of Romania



Stating energy efficiency and energy saving as key priorities of Romania's energy and environment strategy



Energy efficiency- key factor against climate changes and global warming



Energy efficiency- major contribution to the growth of economic competitiveness, the creation of new jobs, the increase of the energy bills affordability



Buildings' energy rehabilitation

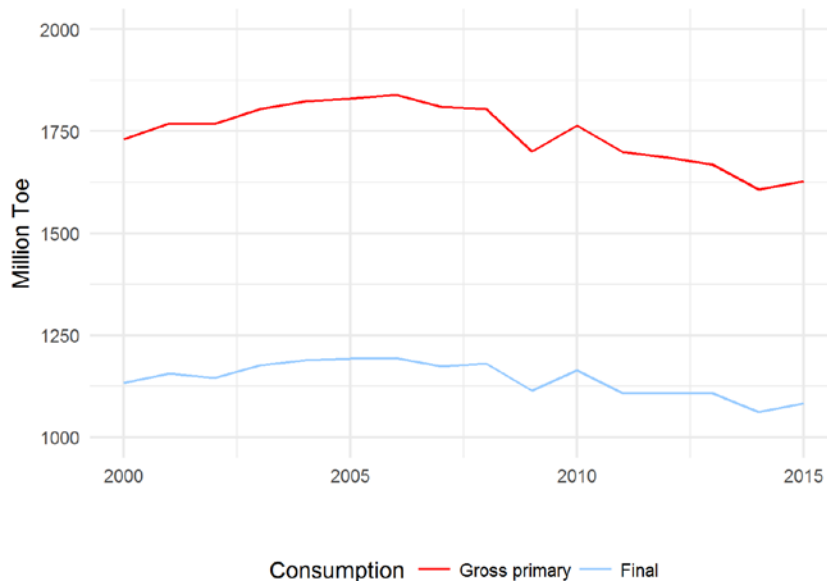
Our members



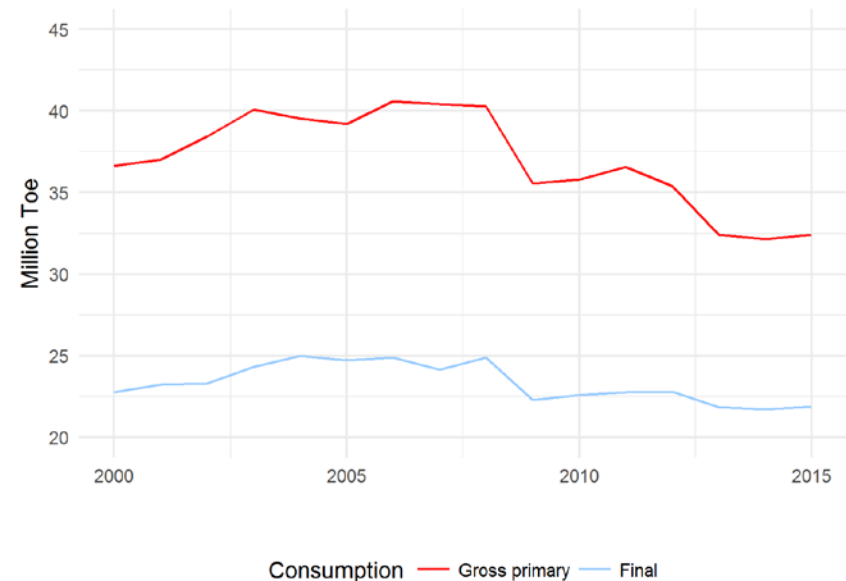
Energy demand trends in EU and Romania

- Similar mid-term trends of the primary and final energy demand in EU and Romania
- In the last years we observe a flatter evolution of the respective demand curves and even a small increase of consumption towards the end of the time interval

EU energy consumption

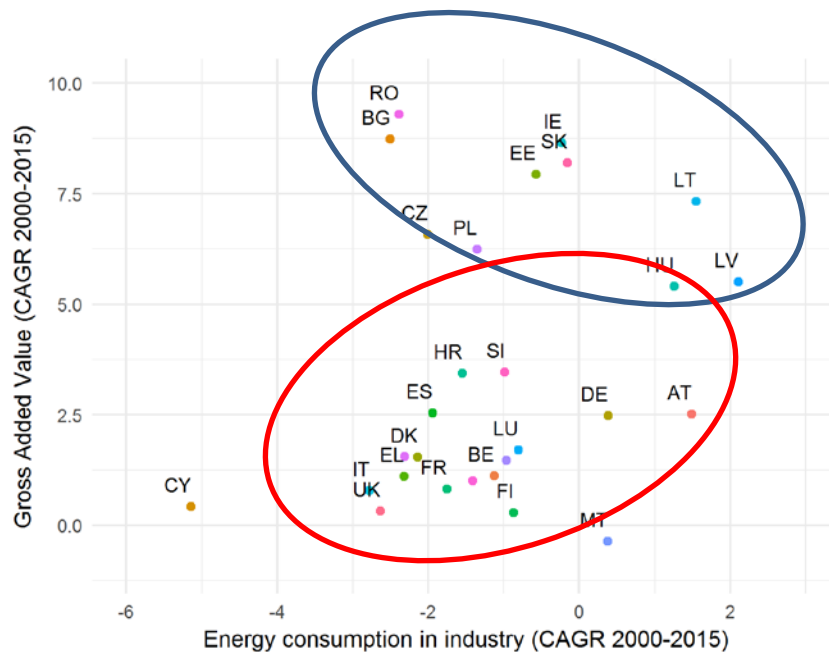


RO energy consumption



Energy efficiency in the industry

Gross added value vs energy consumption in EU



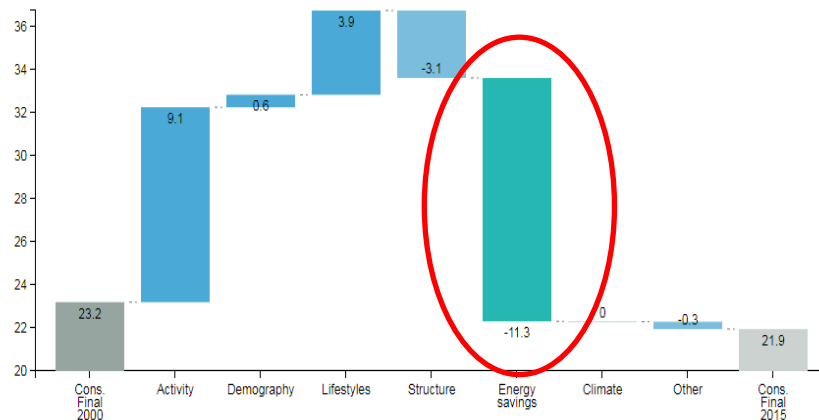
Sources: Own calculations, Eurostat, 2015

- Two groups of economies in EU in terms of GAV and energy efficiency of industrial consumers
- Significant increase of the gross value added of industry in national accounts in the Central and Eastern Europe in the last 15 years
- Also, a large improvement of energy efficiency by the industrial sector in the region (except some Baltic states) is noticeable
- The mature Western economies improve their energy efficiency at significant lower GAV
- Despite fears of de-industrialization, Romania has had the highest CAGR of the gross added value of industry in EU and one of the highest energy efficiency rate

Significant energy savings already achieved by industrial consumers in Romania

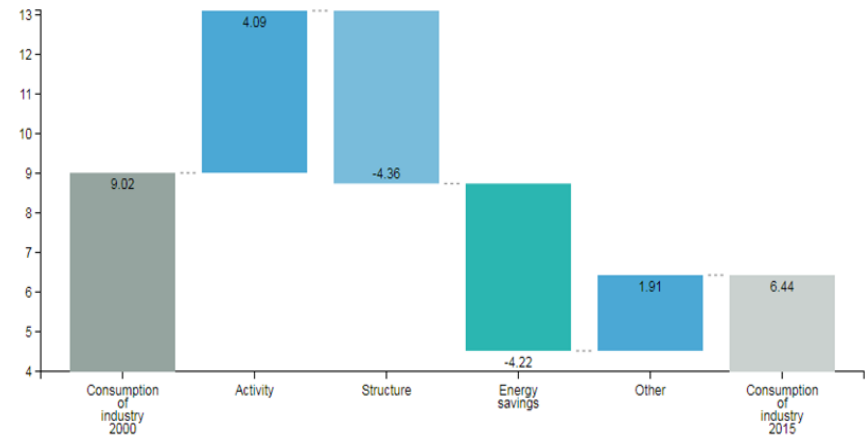
- Significant efficiency gains recorded in the last 15 years in almost all sectors, offsetting the increase of economic activity

VARIATION FINAL ENERGY CONSUMPTION - ROMANIA - MTOE (2000-2015)



Source: ODYSSEE

VARIATION INDUSTRY CONSUMPTION - ROMANIA - MTOE (2000-2015)



Source: ODYSSEE

The environment

	Large industry	Small and medium size enterprises
Strong points	<ul style="list-style-type: none"> • Superior investment power and credit worthiness • Intense competition in markets force them to stay cost competitive • Easier access to efficient technologies and technical competences • Incentives (nonetheless usually through regulation constraints) to improve energy efficiency 	<ul style="list-style-type: none"> • Increasing concerns regarding accessibility of energy efficiency financing for SME create momentum for improvement • Eligible for a larger range (but usually of limited amount) of financing sources for energy efficiency • Retail prices are increasing making them more aware about the benefits of energy efficiency
Weak points	<ul style="list-style-type: none"> • Most fast payback energy efficiency investments already implemented by companies • Market conditions (competitive pressure) may delay investments in energy efficiency • Competition rules on state aid policy limit access to EU funds • Wholesale energy prices are stagnant or decreasing 	<ul style="list-style-type: none"> • Lack of financial power to finance the equity part of investments • Access to new technology is usually scarce • Limited amount of internal competences

Complexity of energy efficiency projects

Problem identification

- Benchmarking with peers in terms of consumption
- Several solutions on the market (ECOVA, Schneider Electric etc)
- Difficulties for small companies to access such services

Energy audits

- Measure current energy flows
- Understand areas of potential improvements
- Provide recommendations for S/M/L terms
- Pre-calculate a ROI
- Mandatory audits for enterprises > 1000 toe/year but virtually no impact on SME

Solution design

- Compare different solutions/technologies in regard to investment needs and energy savings
- A pre-feasibility study
- Could be part of energy audits
- Mostly unattainable for smaller companies due to costs

Implement

- Financing
- Contract type
- ESCO/EPC
- ESA
- MESA
- Innovative financing is still missing, strong rely on classical financial structure of projects

Measurement of savings

- Measure and certify of energy savings
- Repayment of investment linked to savings
- Few projects reach actually this stage

Very few instruments to finance energy efficiency in industry and SMEs

Direct subsidies

National level:

Energy Efficiency Fund still not in place through required by law

No RES or cogeneration support mechanism for new entrants

Important funding sources (such as EU-ETS revenues) should, but they do not, finance EE investments

EU structural funds

Low absorption rates for most of operational programs

Cost of co-financing is a barrier for SMEs

Indirect support

No tax rebates for EE investments (esp. for SMEs)

Corporate investments

Difficulty to differentiate EE investments from business optimisation processes

Investment thresholds (such as WACC+ targets) hinder investments

Complex ESCO/ESA at very incipient level at best

No green bonds in the local market

Replicate the example of corporate green PPA for energy efficiency

Third party financing

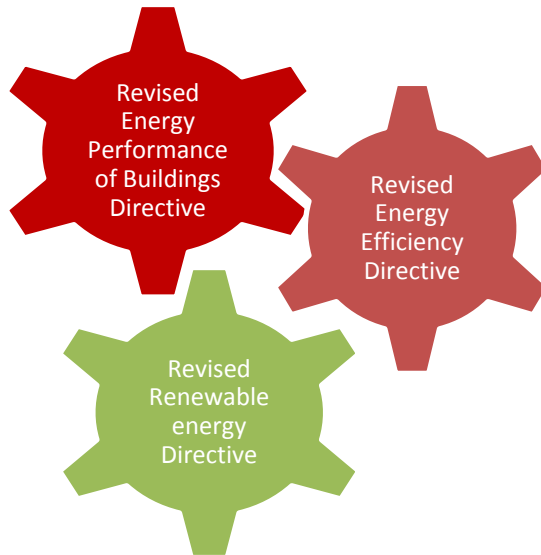
Some financing is available from EU financing institutions (such as EBRD or EIB), usually through commercial banks

Lack of maturity of EE market makes that financing through commercial banks is usually expensive, especially for SMEs

On-bill financing: interesting option for the future

“Energy efficiency first” principle

It is the time when Europe better understands and advocates for the benefits of energy efficiency for our societies



Energy Efficiency Directive:

- increase of the EU’s energy efficiency target from 27% to 30% or even 35%

Energy Performance of Buildings

- fully decarbonise national building stocks by 2050 (with milestones for 2030)
- introduction of building automation and control systems as an alternative to physical inspections
- green mobility requirements

Renewable Energy Directive

- increase of RES in heating and cooling by 1% per year between 2020-2030
- third-party access to district heating and cooling when produced from RES or waste

Conclusions

- We see important progress in terms of reduction of energy demand in the last decade, in the context of a strong economic growth
- Industry accounts for about 40% of the total primary demand energy savings in Romania
- Romania remains a country with significant energy efficiency potential ahead in industry and SMEs
- New energy efficiency gains will require, to be achieved, an even more important financial resources and better financing
- Public authorities must play a more active role, including through fiscal policies, in penetration of new and innovative financing schemes
- Instruments to decrease investments risks must be implemented
- Improved education and knowledge of stakeholders on energy efficiency is key (information campaigns, roundtables etc)