



Mitigation Enabling Energy Transition in the MEDiterranean region

National Report on EE Indicators – [ALGERIA] – *Energy Efficiency Indicators Medex*

Clouche Wahida «Head of the Energy Management Observatory» (APRUE)

REDEC 2023 – meet MED II

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Lebanon

Context :

This activity is part of the extension of the previous project, MED-EE I, which made it possible, between 2010 and 2015, to carry out work to develop and compile relevant energy efficiency indicators in 4 countries in the South and of the Eastern Mediterranean (Morocco Algeria, Lebanon, Tunisia) from 2000 to 2015.

Meet MED II result on monitoring leading indicators for EE and RE :

The use of the follow-up evaluation tool for a range of advanced energy efficiency indicators, as part of the MED-EE II project, has enabled APRUE to more accurately measure the potential for savings of energy as well as the progress recorded in terms of energy efficiency by sectors and branches of activity .

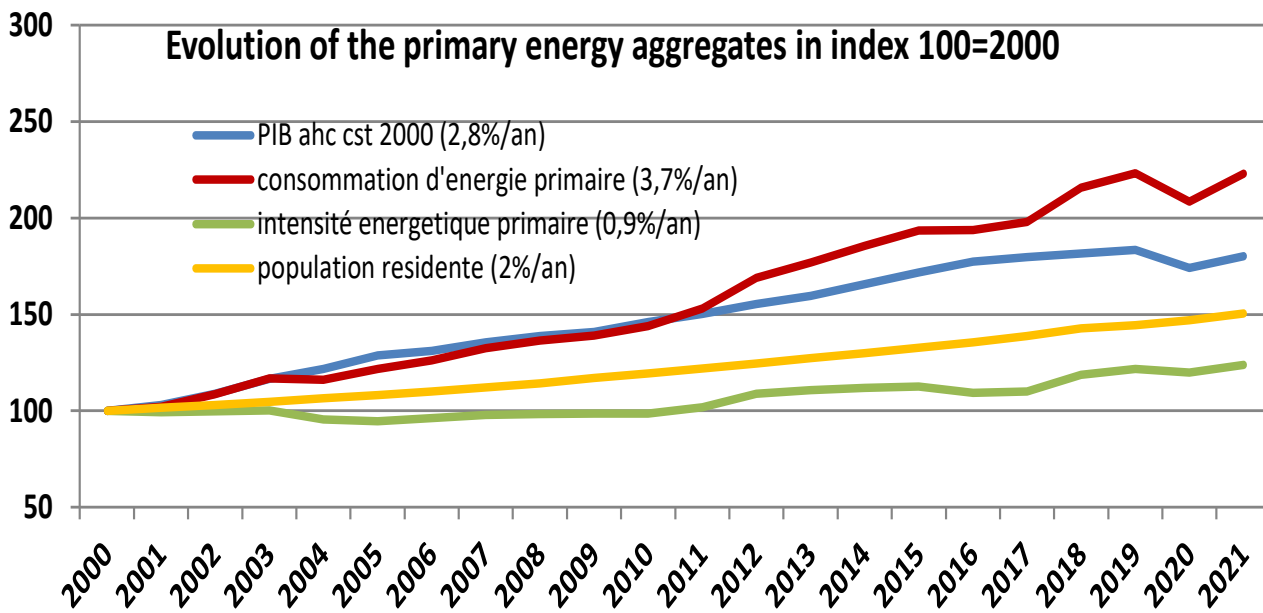
Over the period 2010-2021, growth in gross domestic product recorded an average change of 3.6%/year (2%/year for GDP excluding HC). While the growth of the resident population recorded an average growth of 2.1% / year. Several phenomena, including strong population growth combined with a rapid rate of urbanization (70%), and significant socio-economic development needs, are the main determinants of growth and new demand for services and infrastructure. energy. The CAGR of primary and final energy consumption reached, respectively: 4.1% and 5%.

Breakdown of CAGR by sectors:

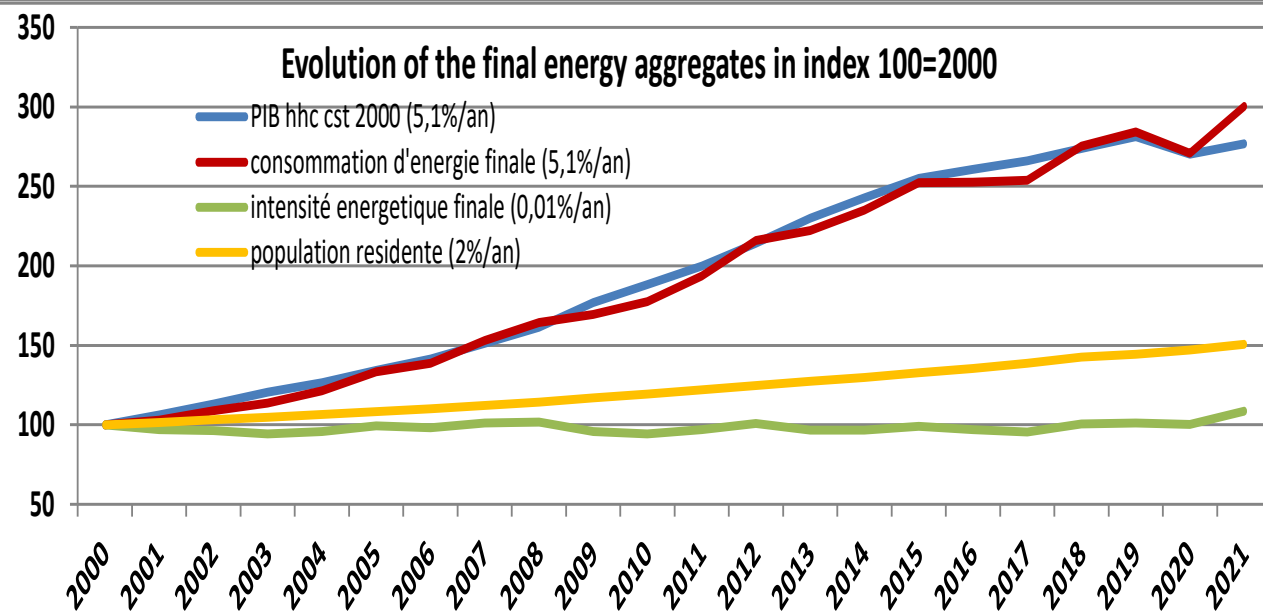
- Transport 2.3%/year;
- Residential 8.3%/year;
- the tertiary sector 4.8%/year,
- Agriculture 2.9%/year, hydraulics 3.9%/year,
- Construction 3%/year and mines and quarries 1.8%/year.

By form of energy: Electricity 6.5%/year, natural gas 7.5%/year, coal -16%/year, LPG 7.2%/year and fuels: gasoline and other 3, 5%/year, diesel 1.6%/year.

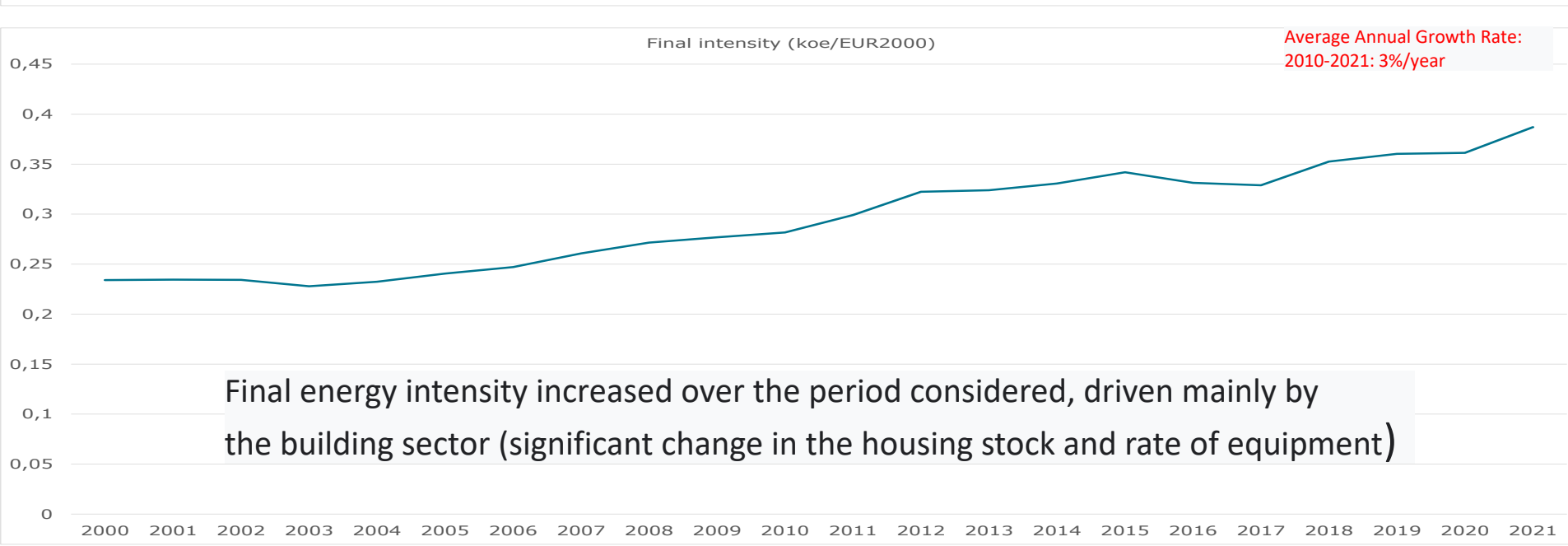
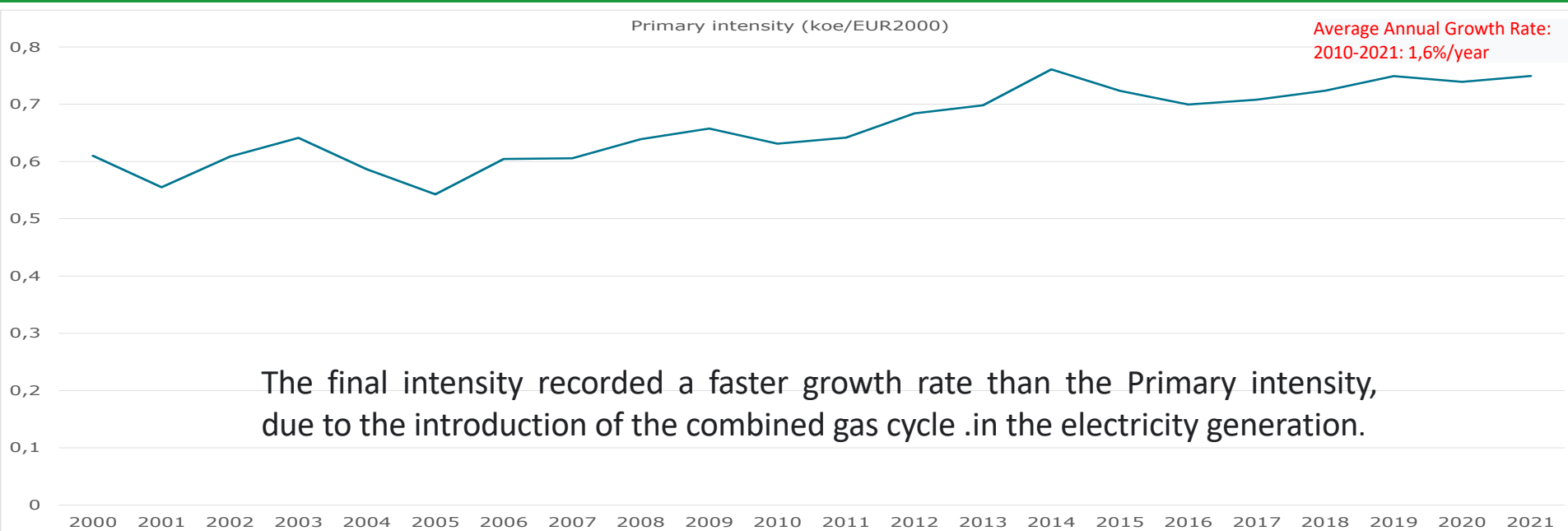
Despite the consumption growth rate, the ME policy has stabilized the final (-0.04%/year) and primary (+0.6%/year) energy intensities.

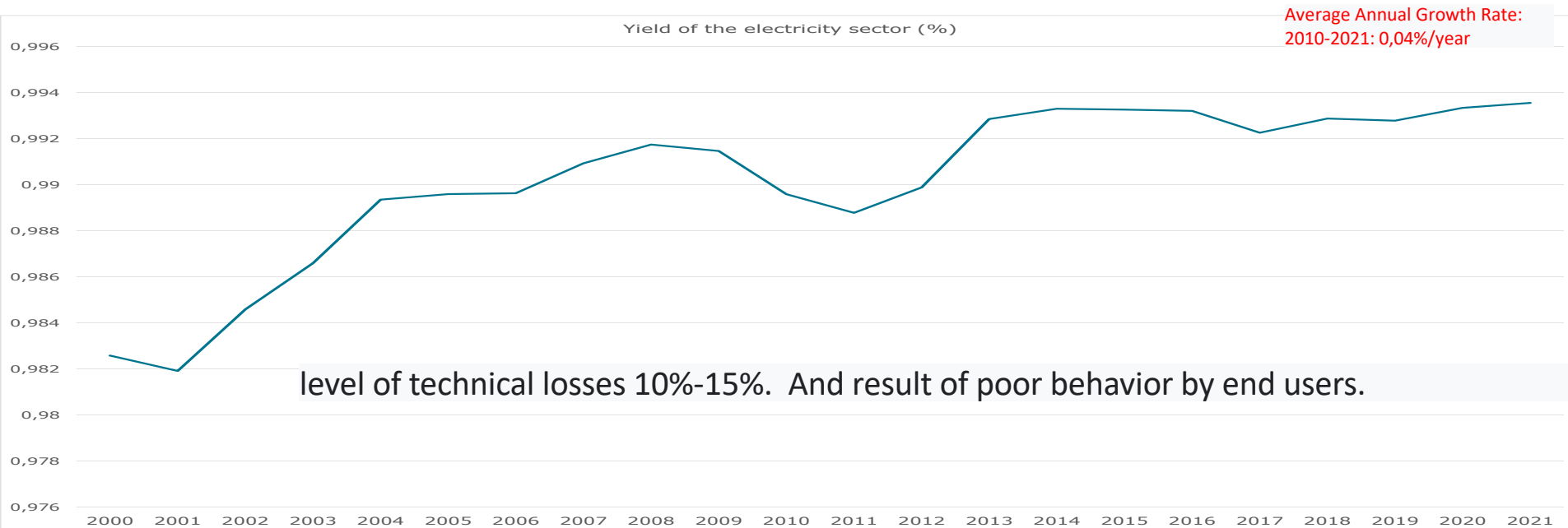
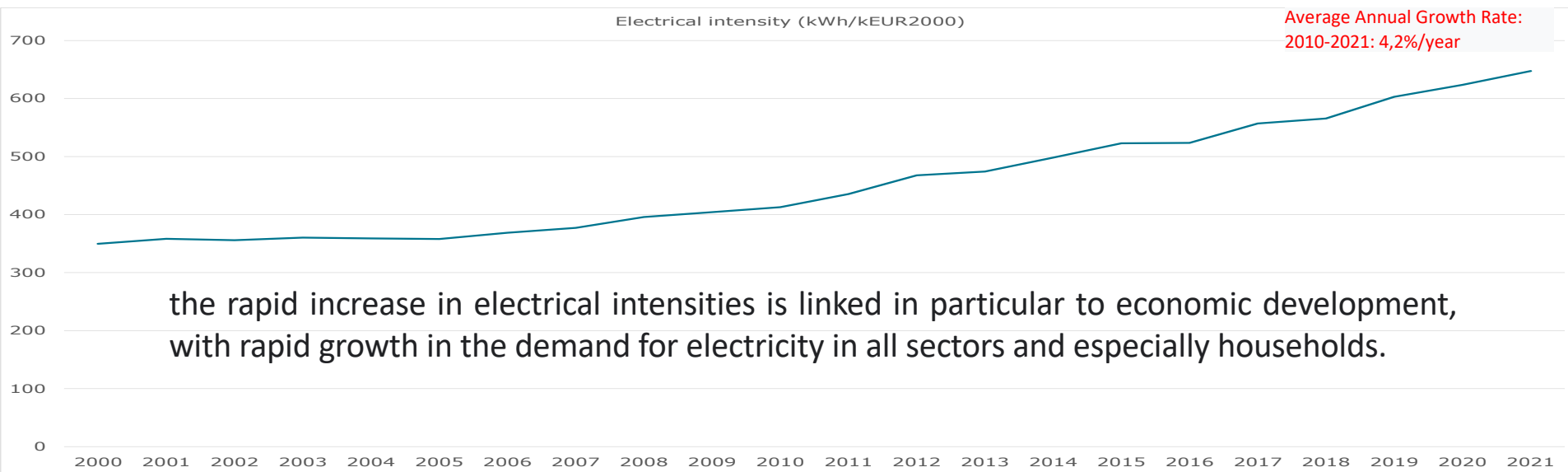


Over the period 2010-2021: the average annual growth rate of TPES is 4%, Over this same period the average annual growth rate of primary energy intensity is 2.1%,



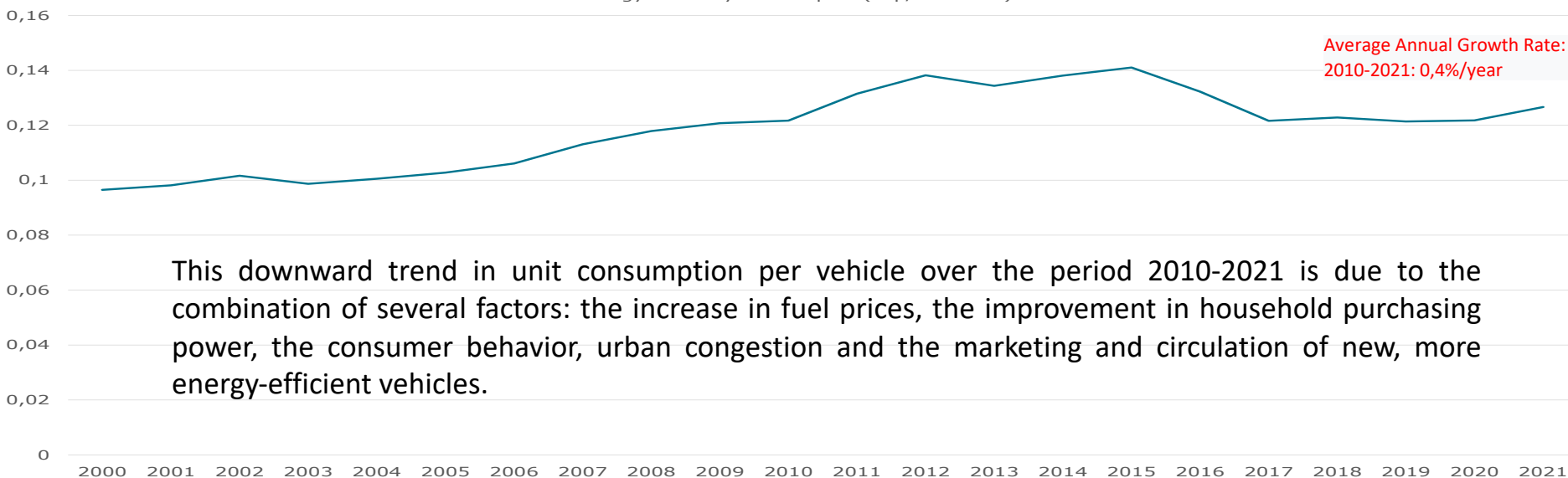
Over the period 2010-2021: the average annual growth rate of TFE is 5%. Over this same period, the average annual growth rate of final energy intensity is 1,3%,





Energy intensity of transport (kep/EUR2000)

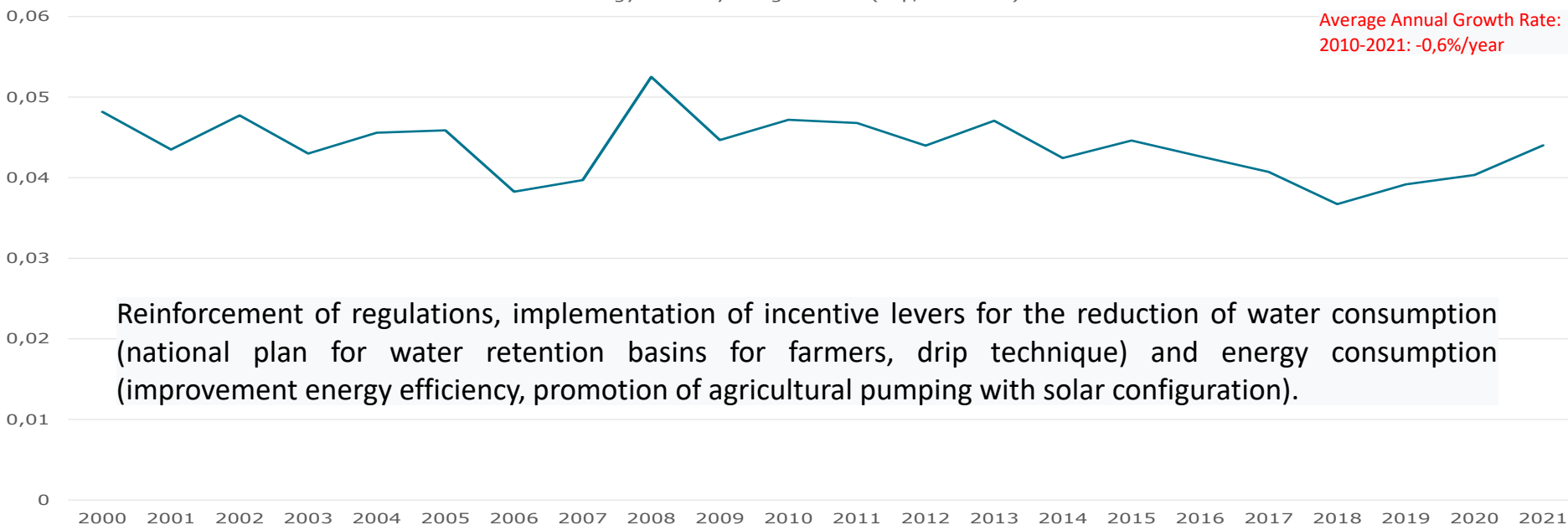
Average Annual Growth Rate:
2010-2021: 0,4%/year



This downward trend in unit consumption per vehicle over the period 2010-2021 is due to the combination of several factors: the increase in fuel prices, the improvement in household purchasing power, the consumer behavior, urban congestion and the marketing and circulation of new, more energy-efficient vehicles.

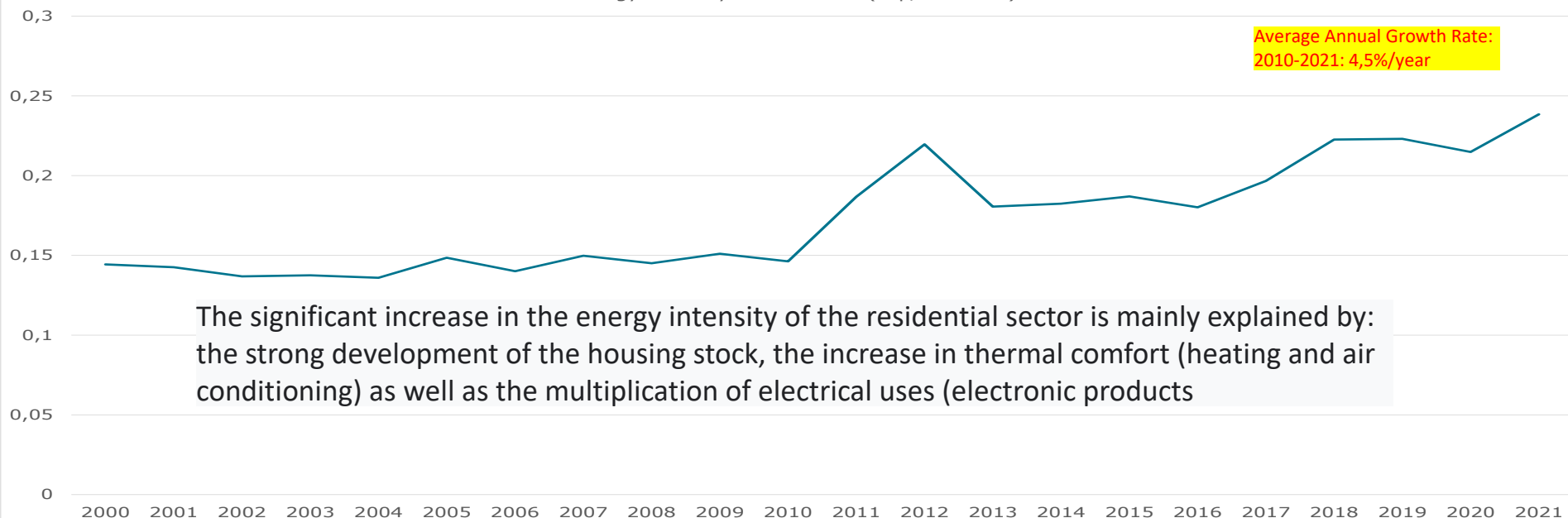
Energy intensity of agriculture (kep/EUR2000)

Average Annual Growth Rate:
2010-2021: -0,6%/year

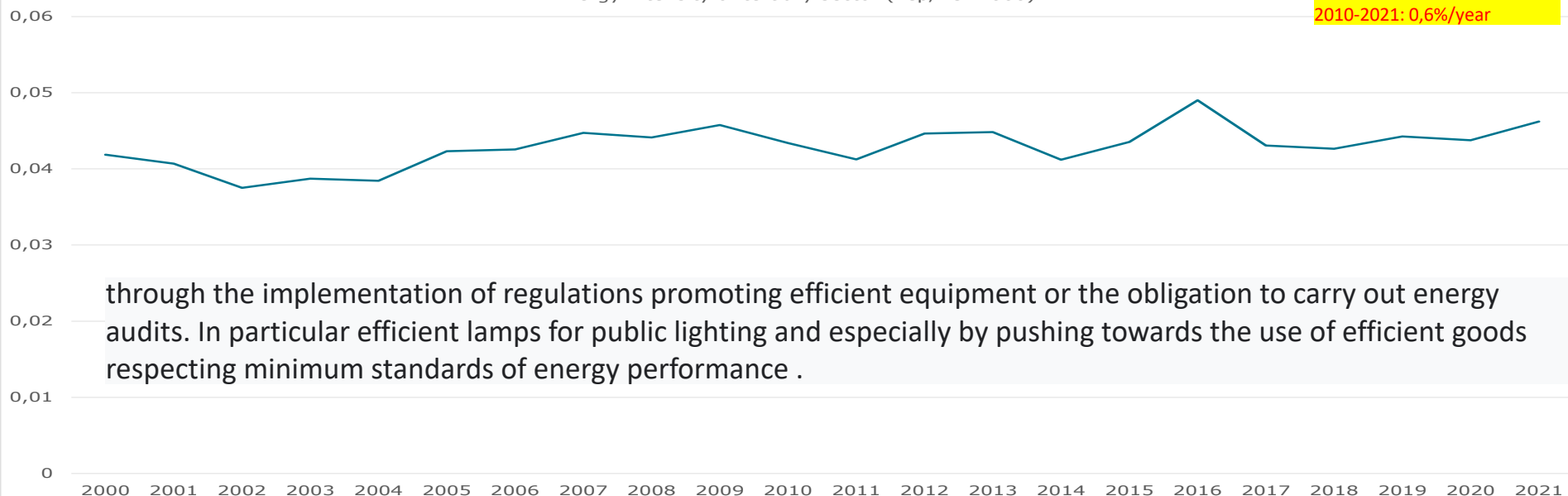


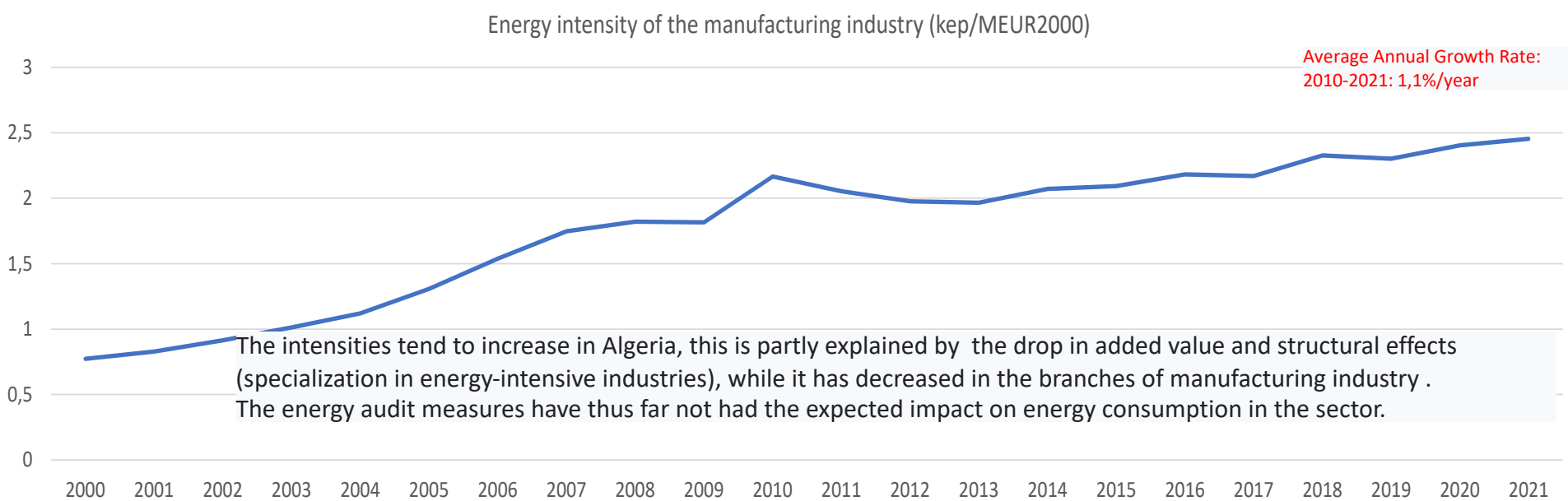
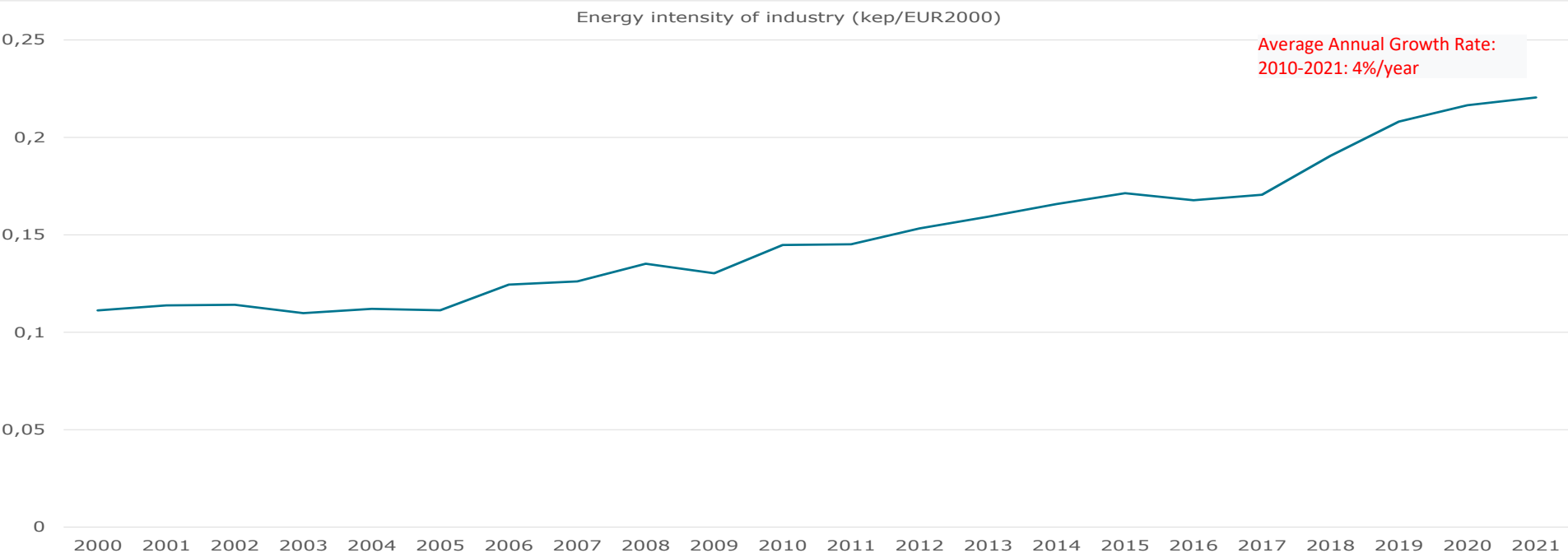
Reinforcement of regulations, implementation of incentive levers for the reduction of water consumption (national plan for water retention basins for farmers, drip technique) and energy consumption (improvement energy efficiency, promotion of agricultural pumping with solar configuration).

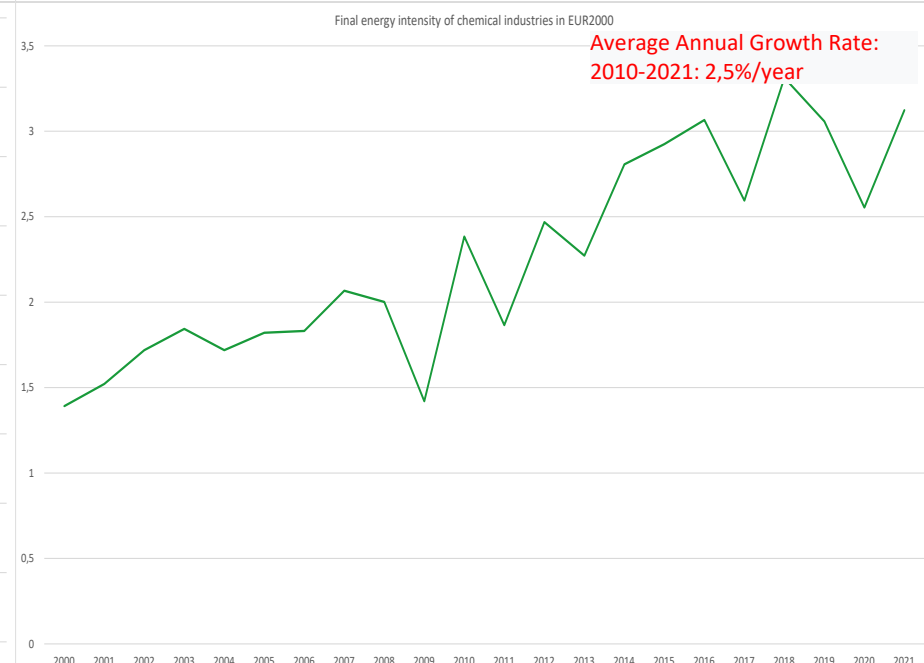
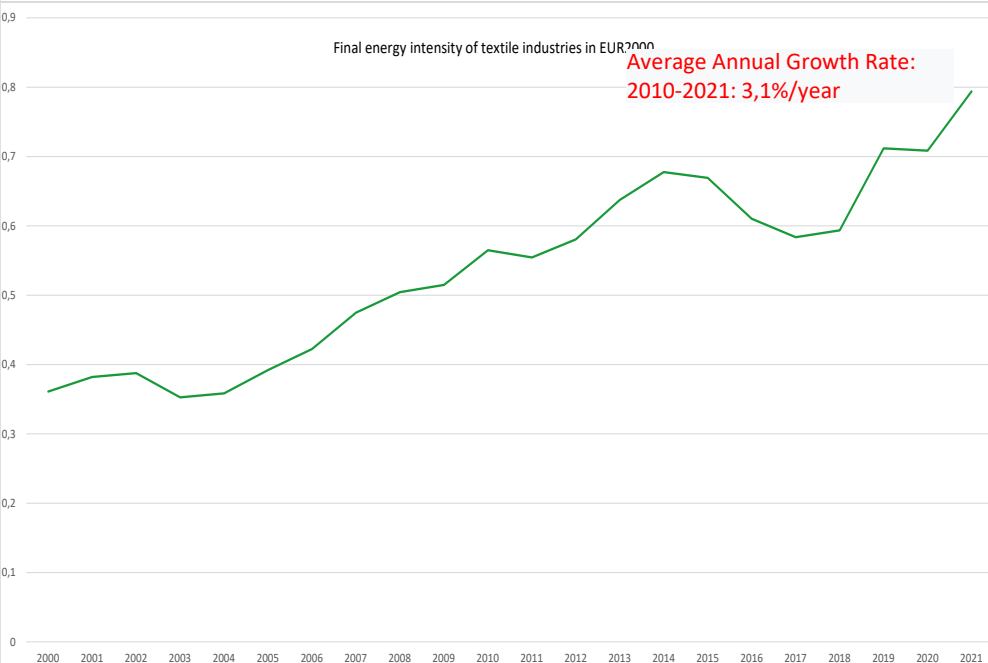
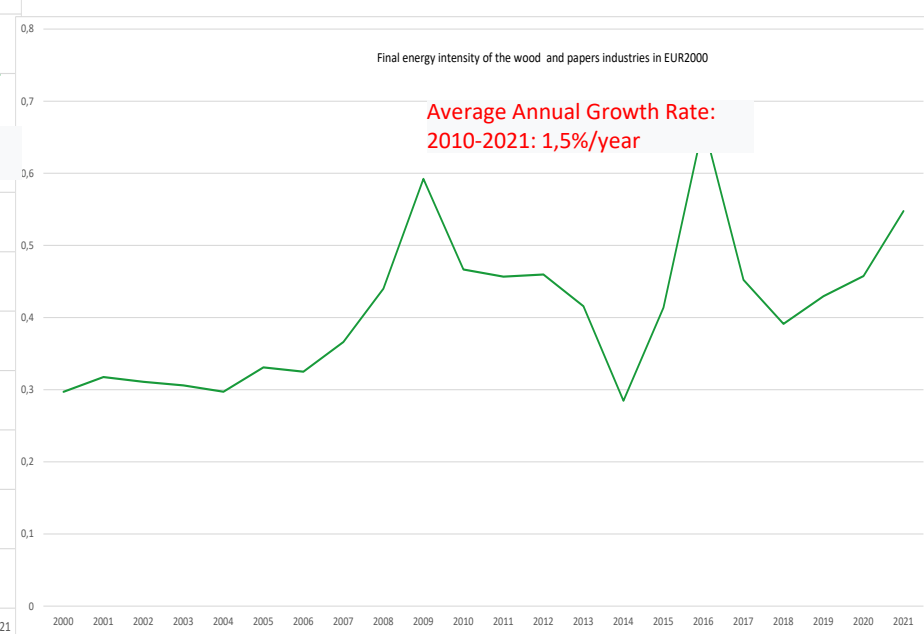
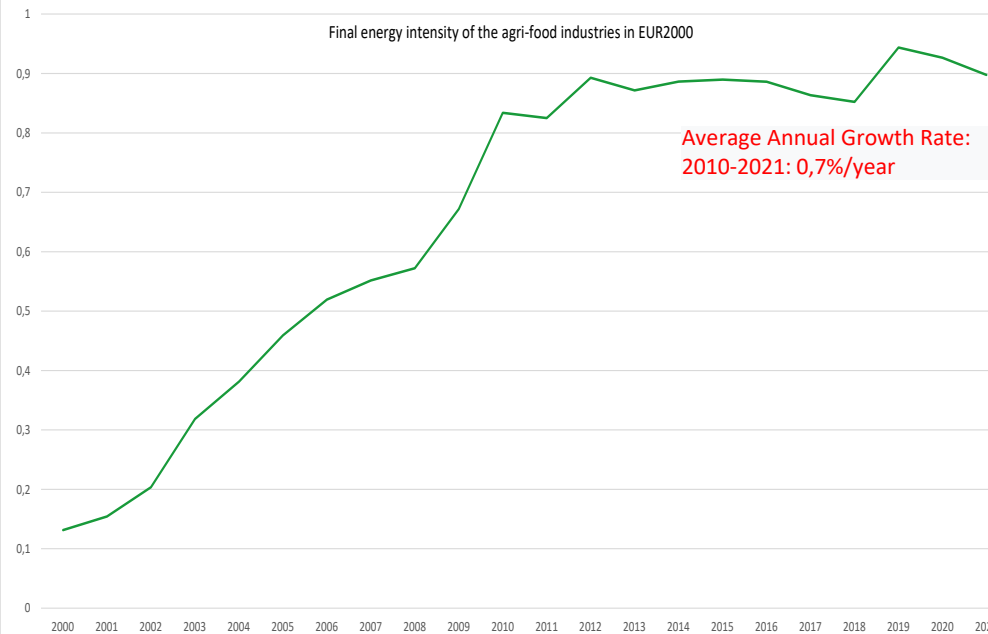
Energy intensity of residential (kep/EUR2000)

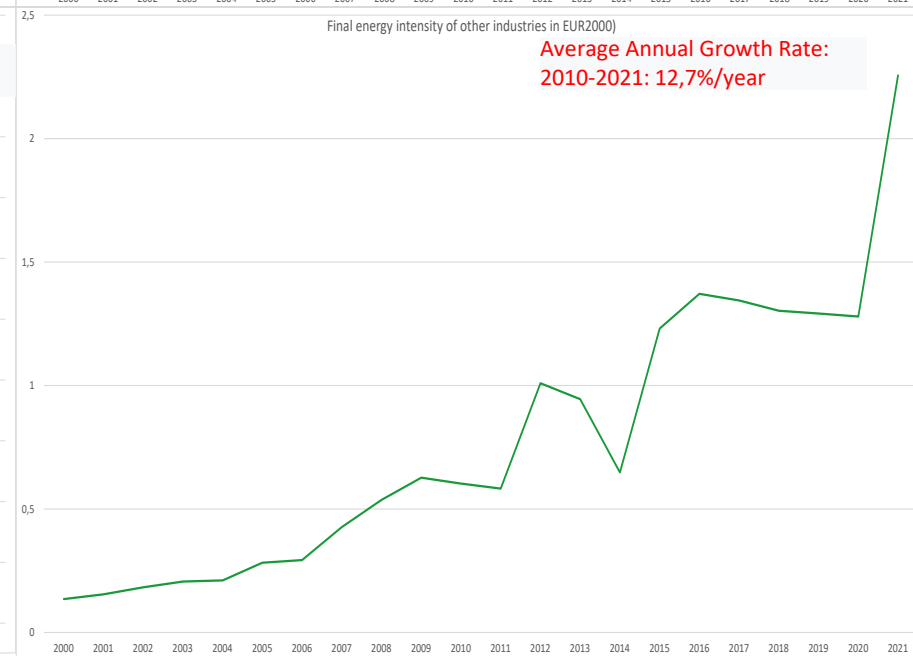
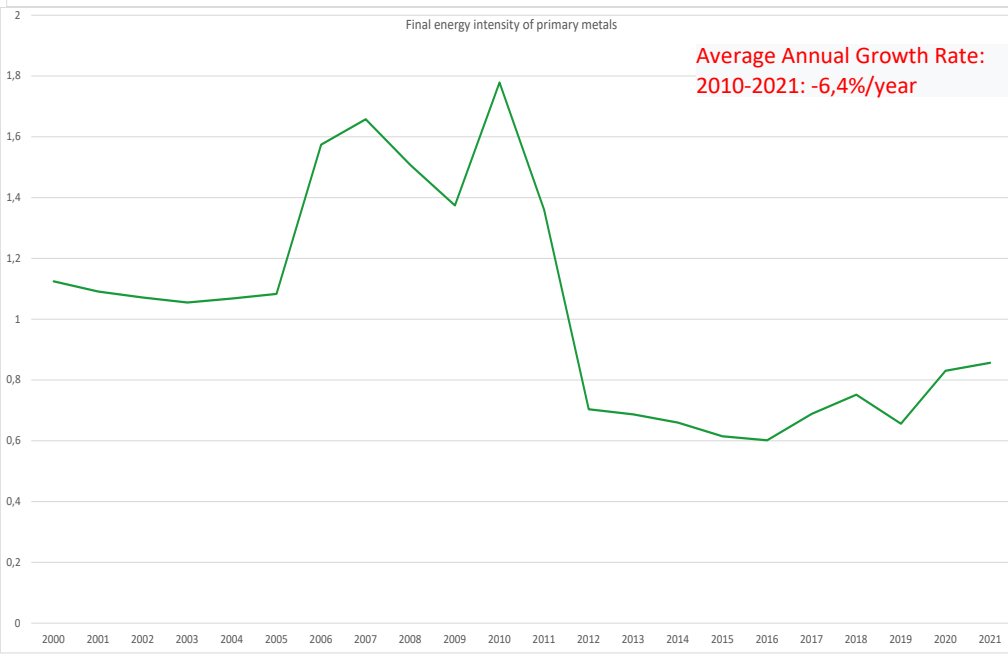
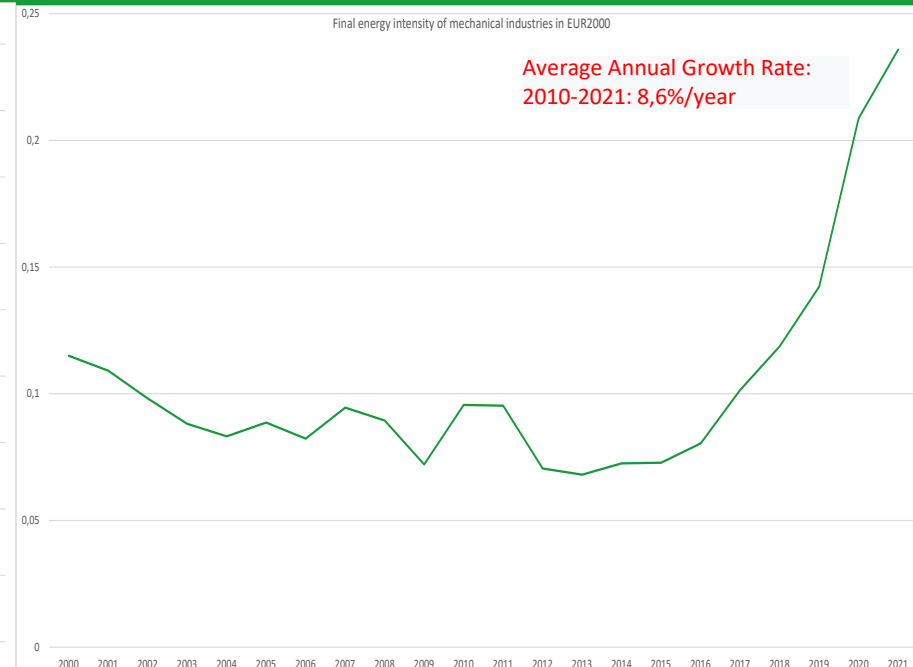
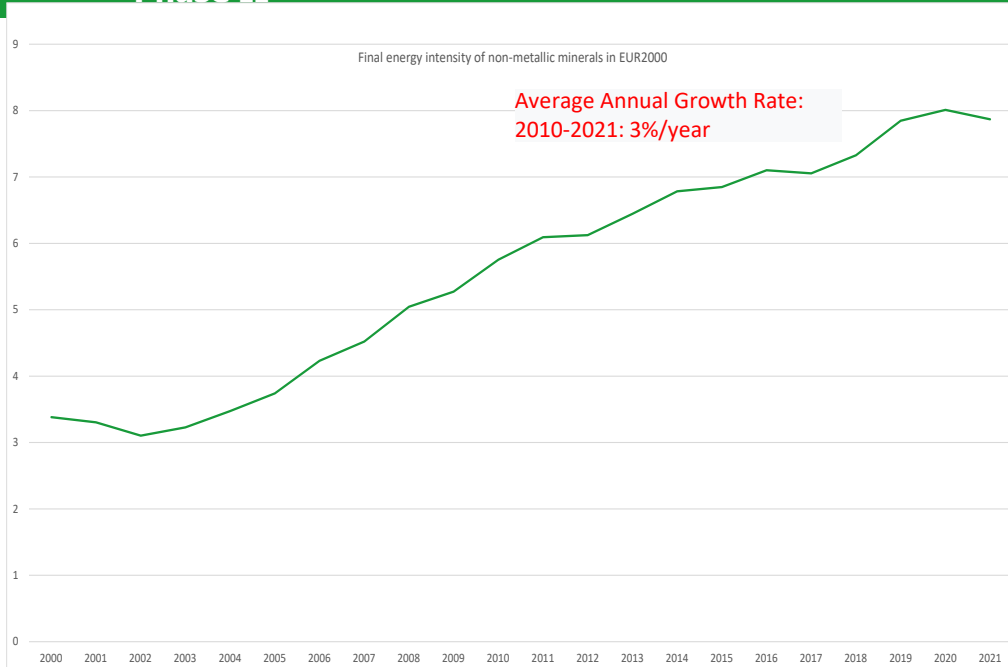


Energy intensity of tertiary sector (kep/EUR2000)



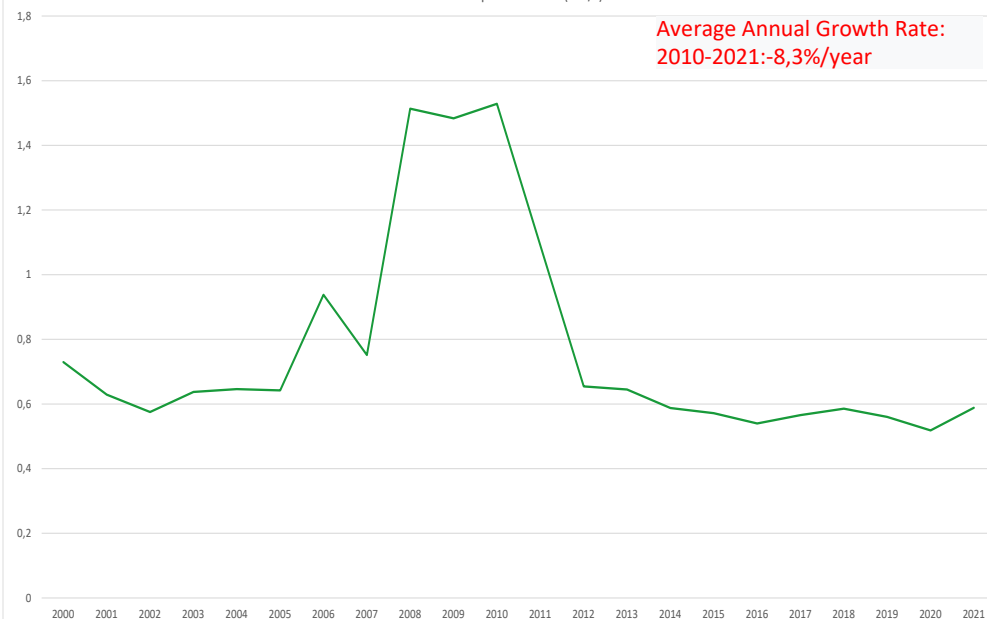






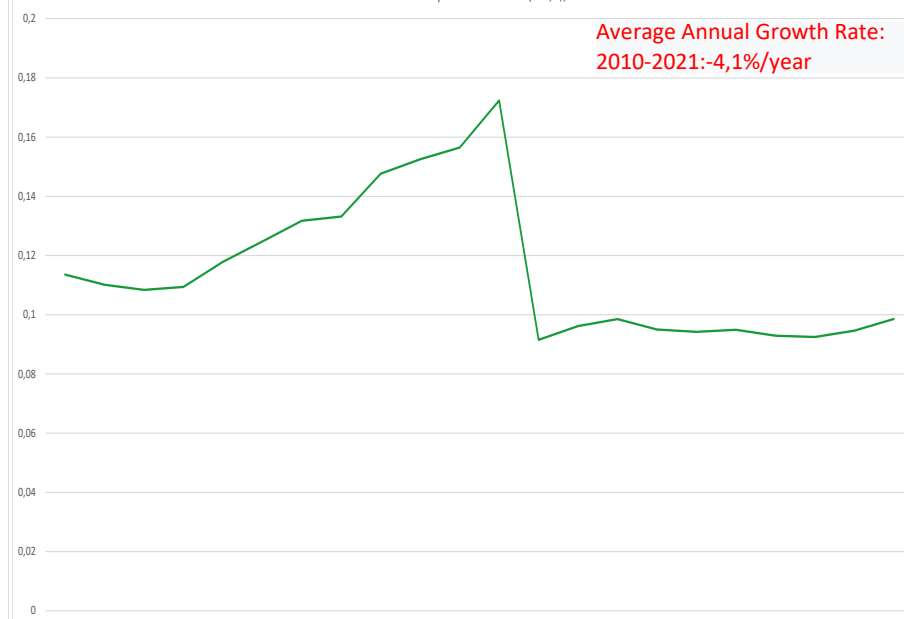
Unit consumption of steel (toe/t)

Average Annual Growth Rate:
2010-2021:-8,3%/year



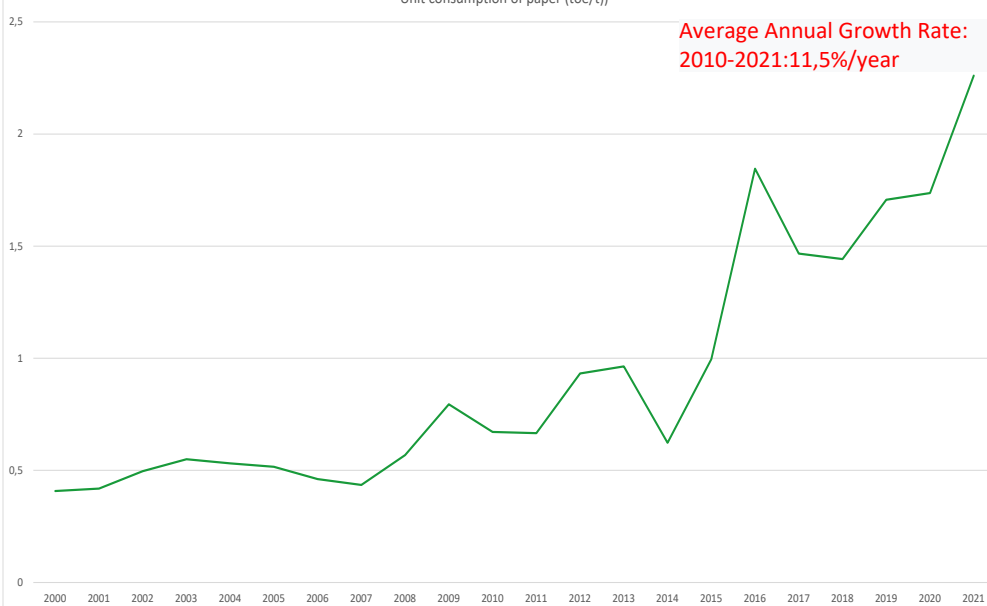
Unit consumption of cement (toe/t)

Average Annual Growth Rate:
2010-2021:-4,1%/year



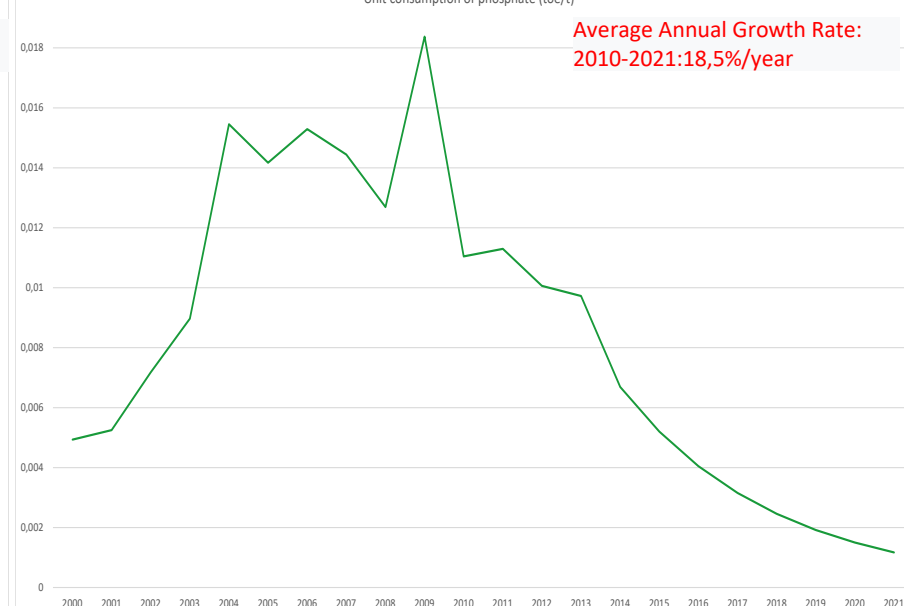
Unit consumption of paper (toe/t)

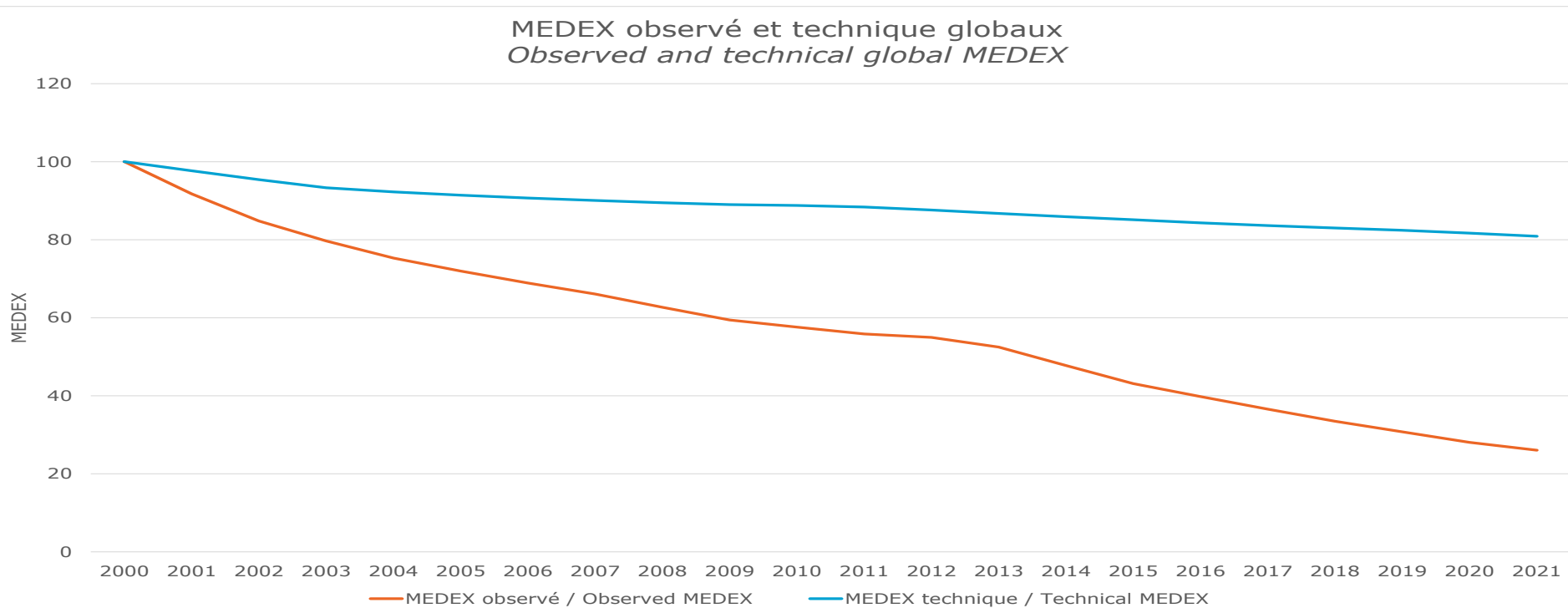
Average Annual Growth Rate:
2010-2021:11,5%/year



Unit consumption of phosphate (toe/t)

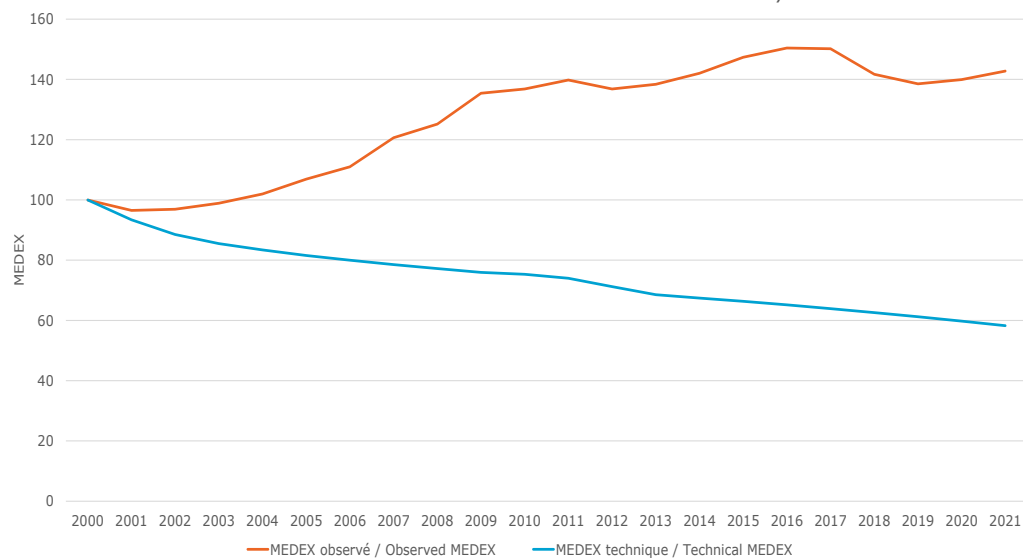
Average Annual Growth Rate:
2010-2021:18,5%/year





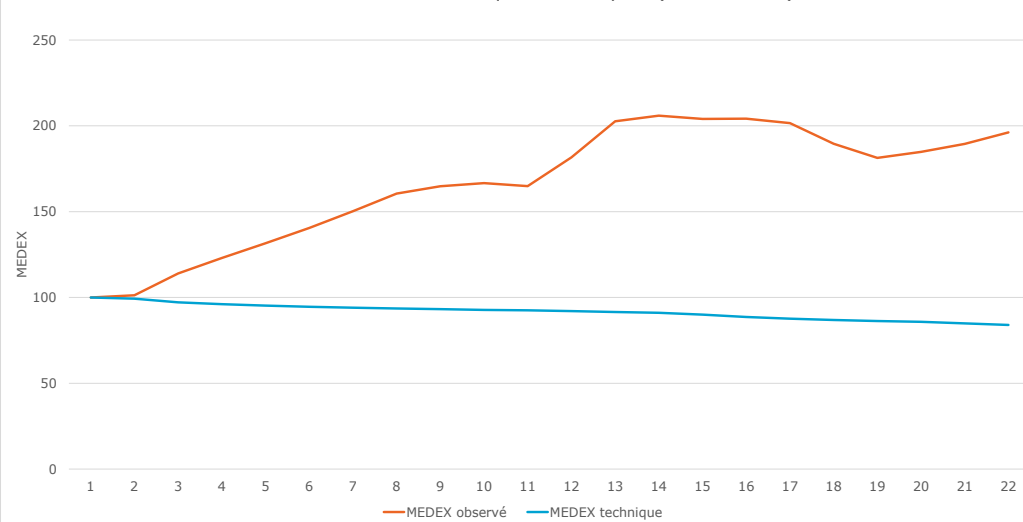
The overall EE index is relatively good, however a potential for energy saving exists, the latter could be achieved by improving the energy efficiency of the different sectors and branches moderately EE programs dedicated to each sector and branch

MEDEX observé et technique de l'industrie manufacturière
Observed and technical MEDEX of manufacture industry



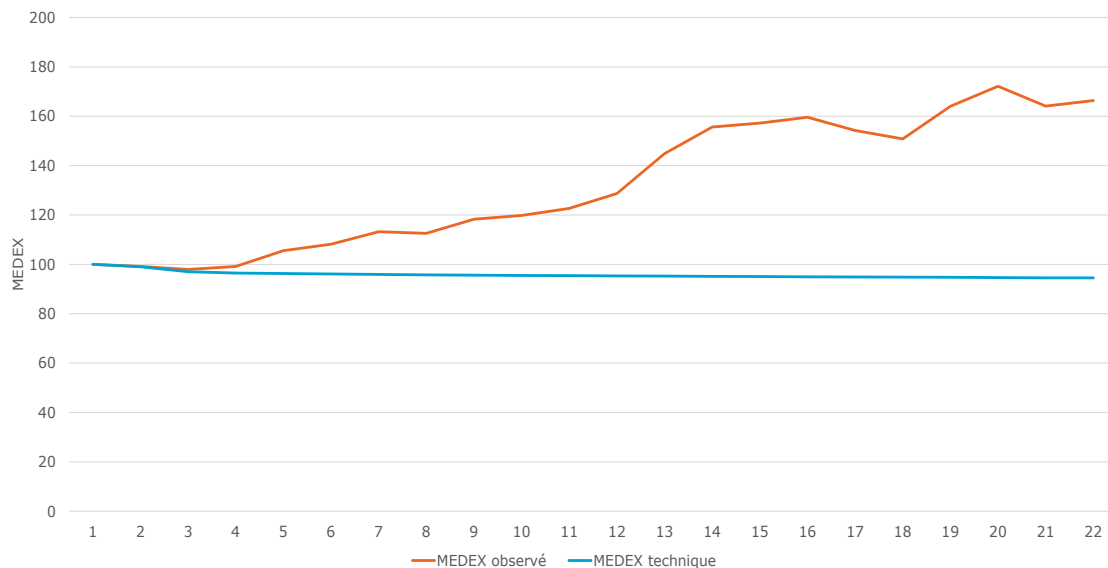
Strong growth in the energy efficiency index linked to the increase in the energy intensity of industrial branches and the unit consumption of intensive products. But slight drop in the technical medex index thanks to some energy efficiency gains in a few branches. (Building materials, agro-food, organic chemistry, mines and quarries)

MEDEX observé et technique du transport (aérien inclus)



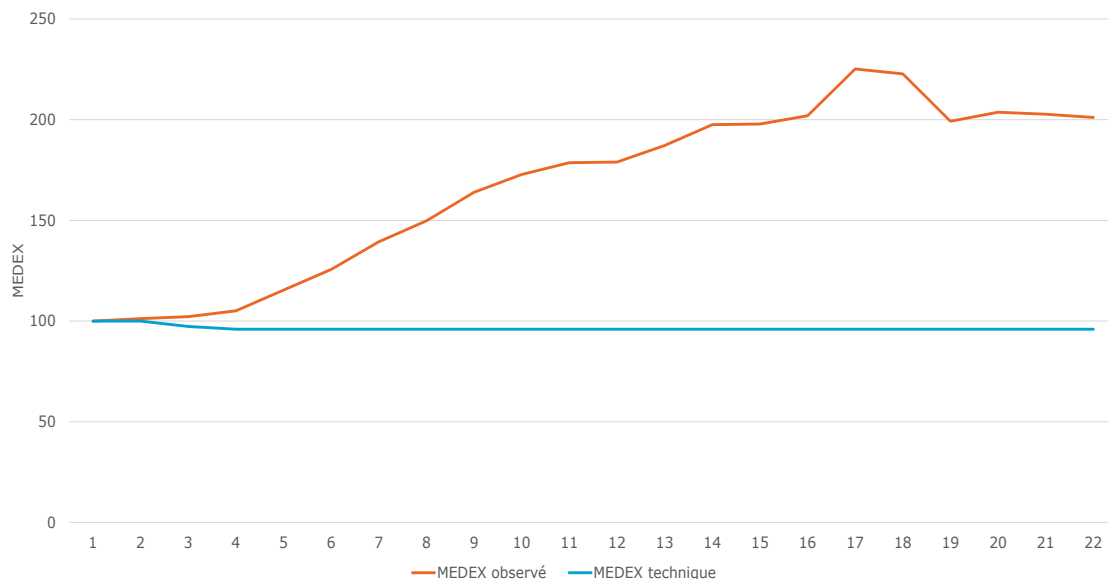
Decrease in the specific consumption of commercial vehicles under the effect of the introduction of new cars and the massive use of public transport. Road transport consumption in car equivalent gives a better approximation of energy efficiency in road transport.

MEDEX observé et technique du résidentiel



Trends related to the increase in equipment rates and comfort in households outweigh gains in energy savings, particularly for heating, lighting and, to a lesser extent, cooking uses

MEDEX observé et technique du tertiaire



Difficulty of highlighting the progress of energy efficiency in the uses of the tertiary sector for lack of refreshing surveys and sufficiently detailed data at an aggregate level trends linked to the increase in the rate of equipment and comfort and to advances audio-visual equipment and ICT technologies.

The methodology for calculating energy efficiency indicators implemented in the four afore mentioned countries is globally relevant and feasible.

More specifically, the data and indicators of the Med Observ'EER database allow:

- Evaluate and compare the progress of energy efficiency by sector and by use and link them to the trends observed in the evolution of energy consumption;
- Support the monitoring of national energy efficiency targets;
- Assist in the preparation of the next strategic objectives.

However, efforts to collect data on energy demand and its determinants must be strengthened to improve the quality of evaluations of policies and measures to be taken.

- Also, several axes can be developed: Set up specific surveys by sector; Institutionalize data collection; Strengthen the communication of EE indicators, by sector, at the national level, and involve their users more;
- Translate the indicators into terms of GHG emissions based on emission factors considered locally;
- Benchmark (BD-MEDEX/ODYSEE/ODEX)/MURE)

Contact us!



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Together We Switch to Clean Energy

For any inquiries or comments, please
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