The Top-ten multi-benefits of monitoring energy efficiency

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ADEME

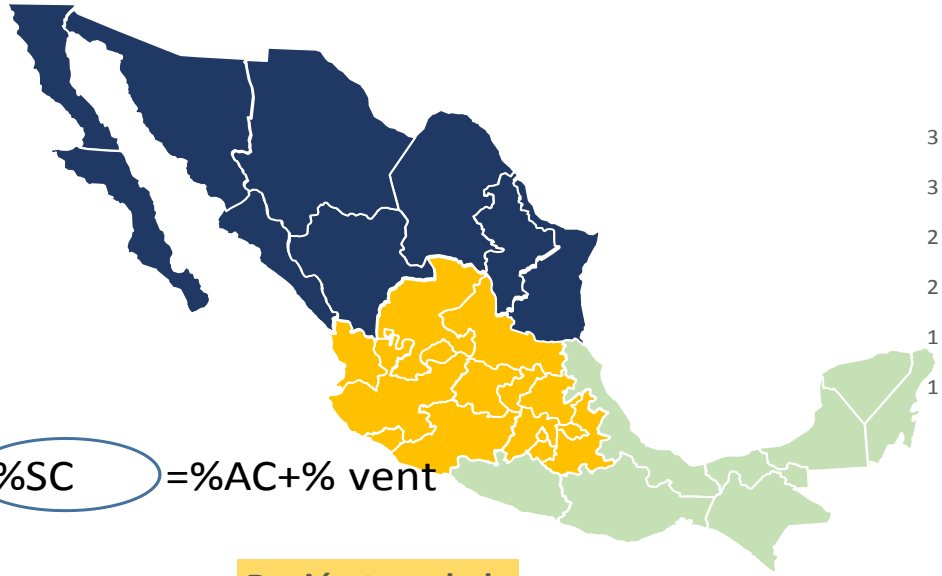
Agence de l'Environnement et de la Maîtrise de l'Energie

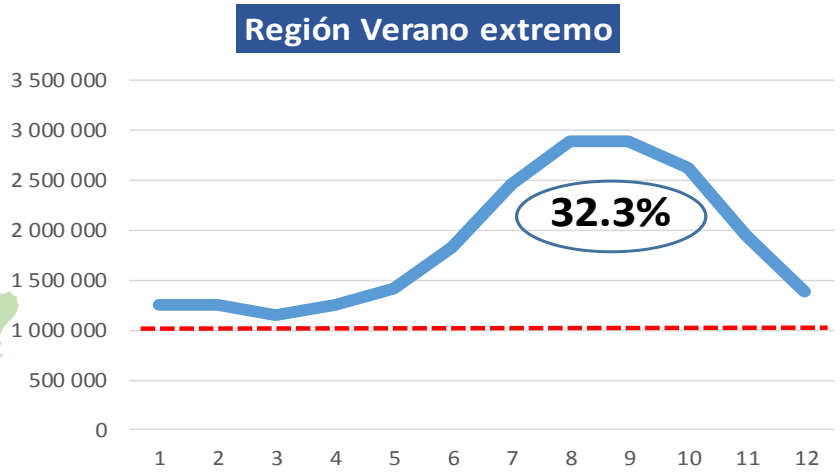
1a. Organizing the scattered information (1/3)

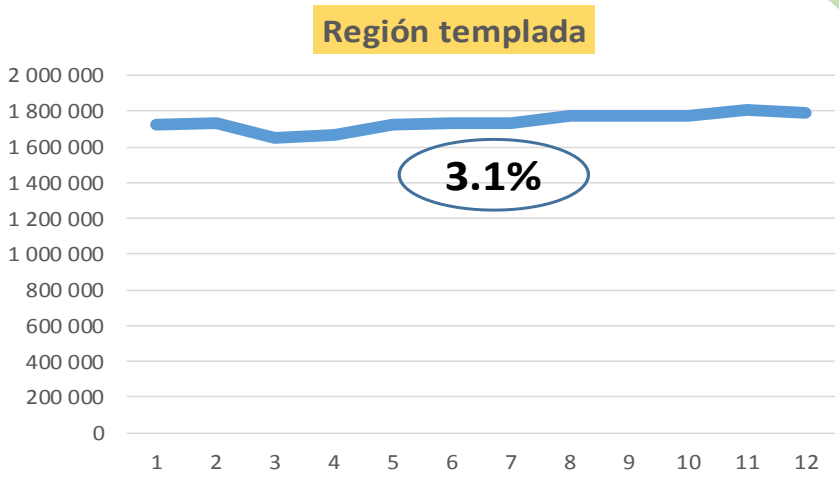
1a. Organizing the scattered information (2/3)

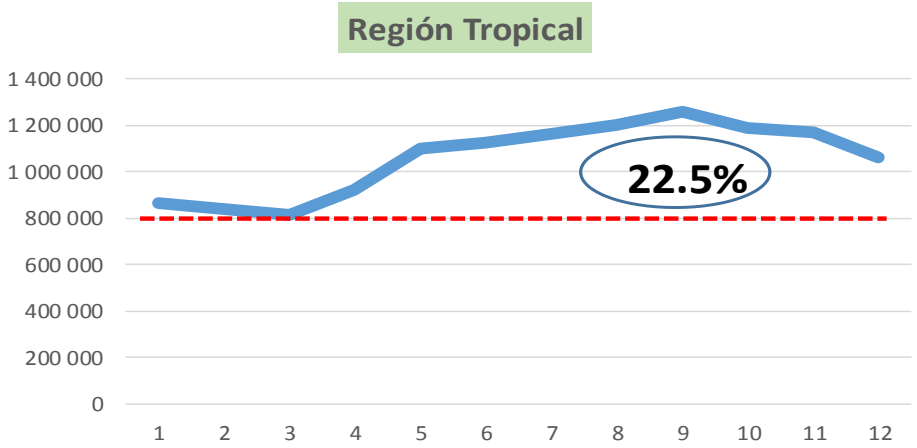
Mexico

1b. Organizing scattered information (3/3)







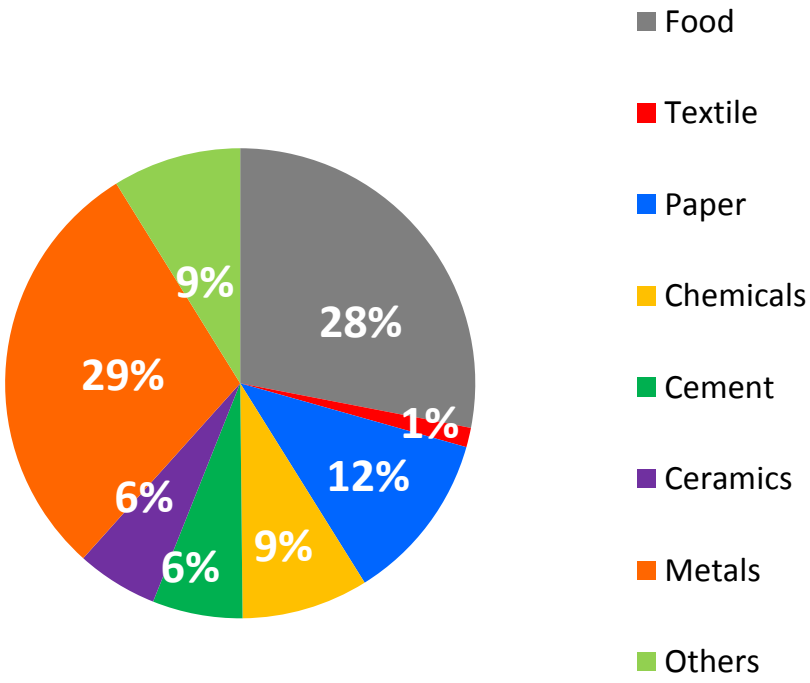


1c. Organize scattered information (3/3)
Interactive internet national BIEE data bases

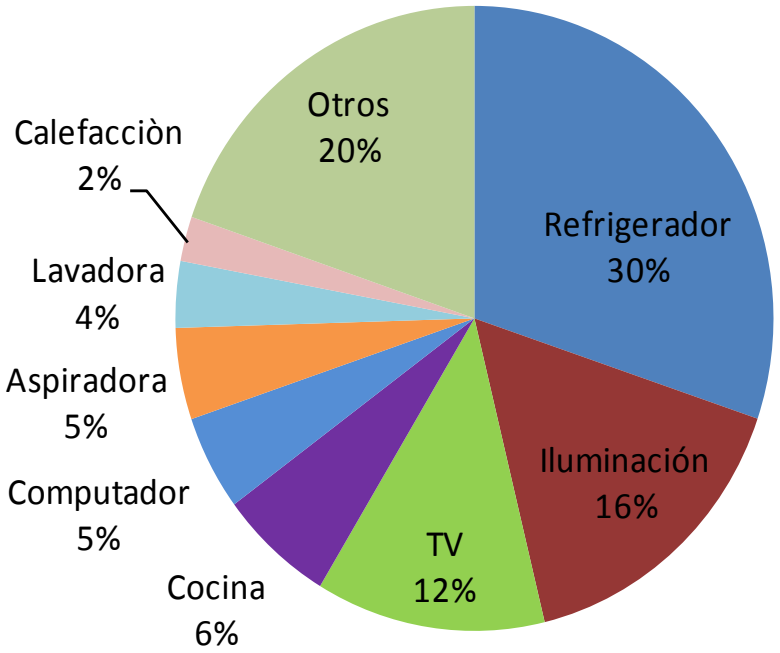
2. Energy efficiency markets insights (1/2)

Knowledge of energy markets and energy efficiency equipments market are useful for utilities, ministries, equipment manufacturers, analysts…

Brazil



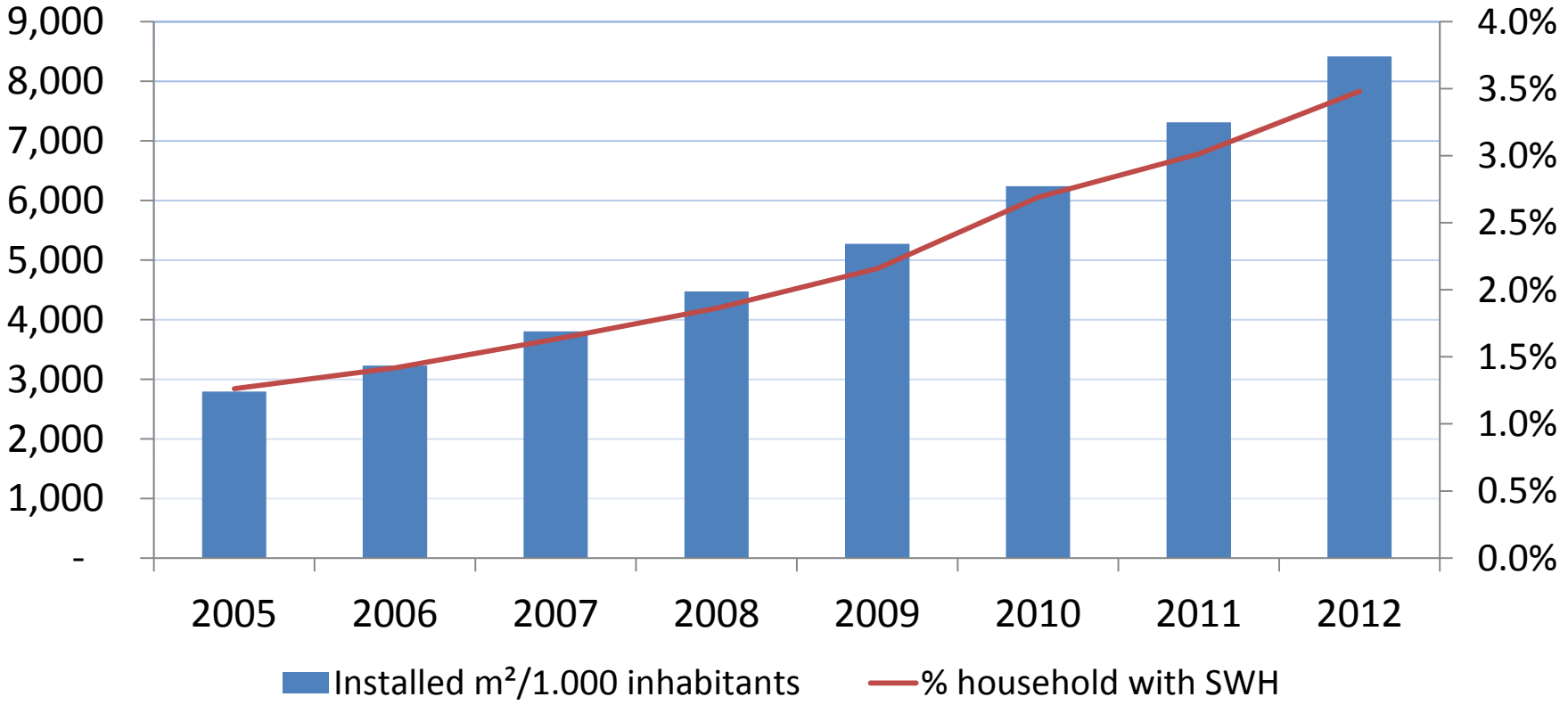
Chile



2. Energy efficiency markets insights (2/2)

Knowledge of energy markets and energy efficiency equipments market are useful for utilities, ministries, equipment manufacturers, analysts…

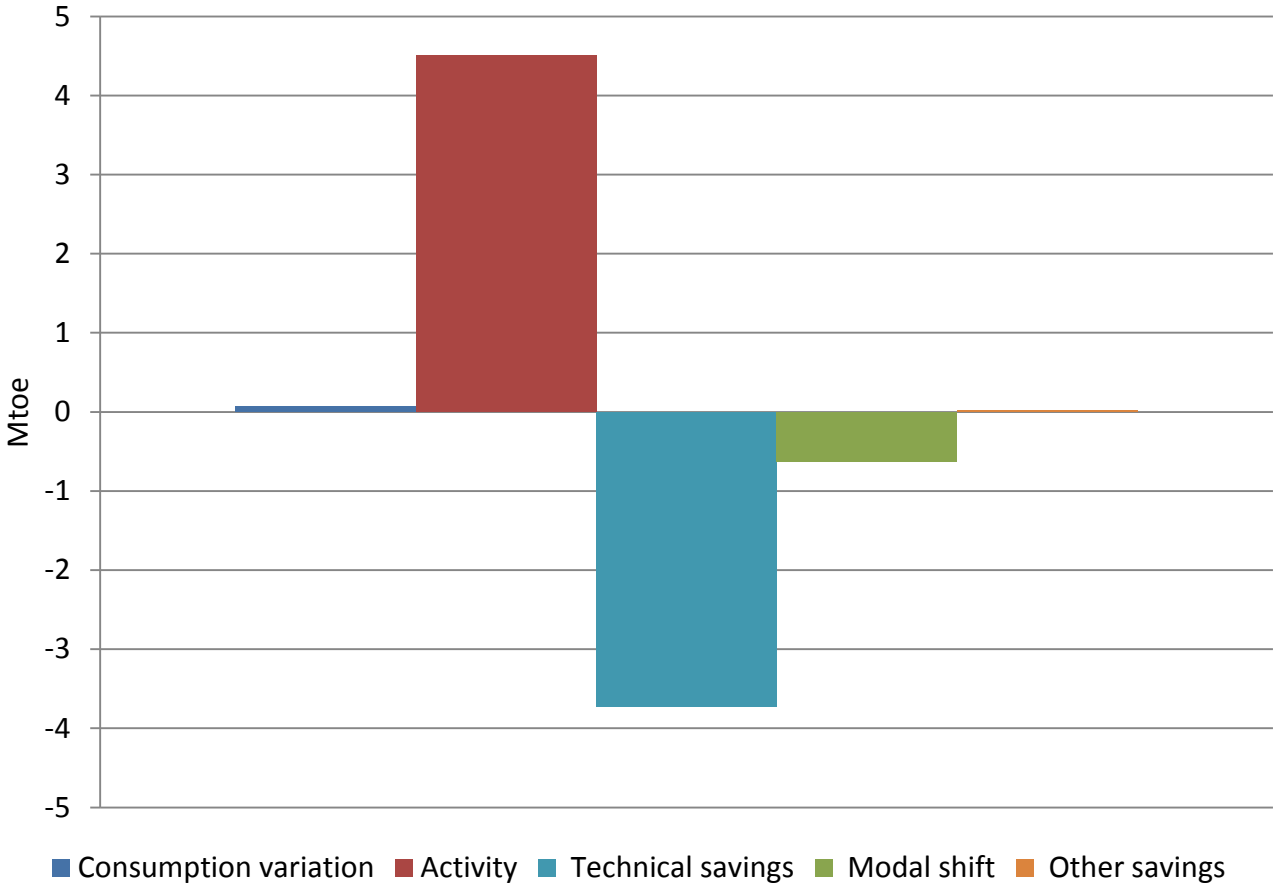
Penetration of solar water heaters: Brazil



Source: EPE from Brazilian Association on Refrigeration, Air Conditioning, Ventilation and Heating (ABRAVA)

3. Understanding trends

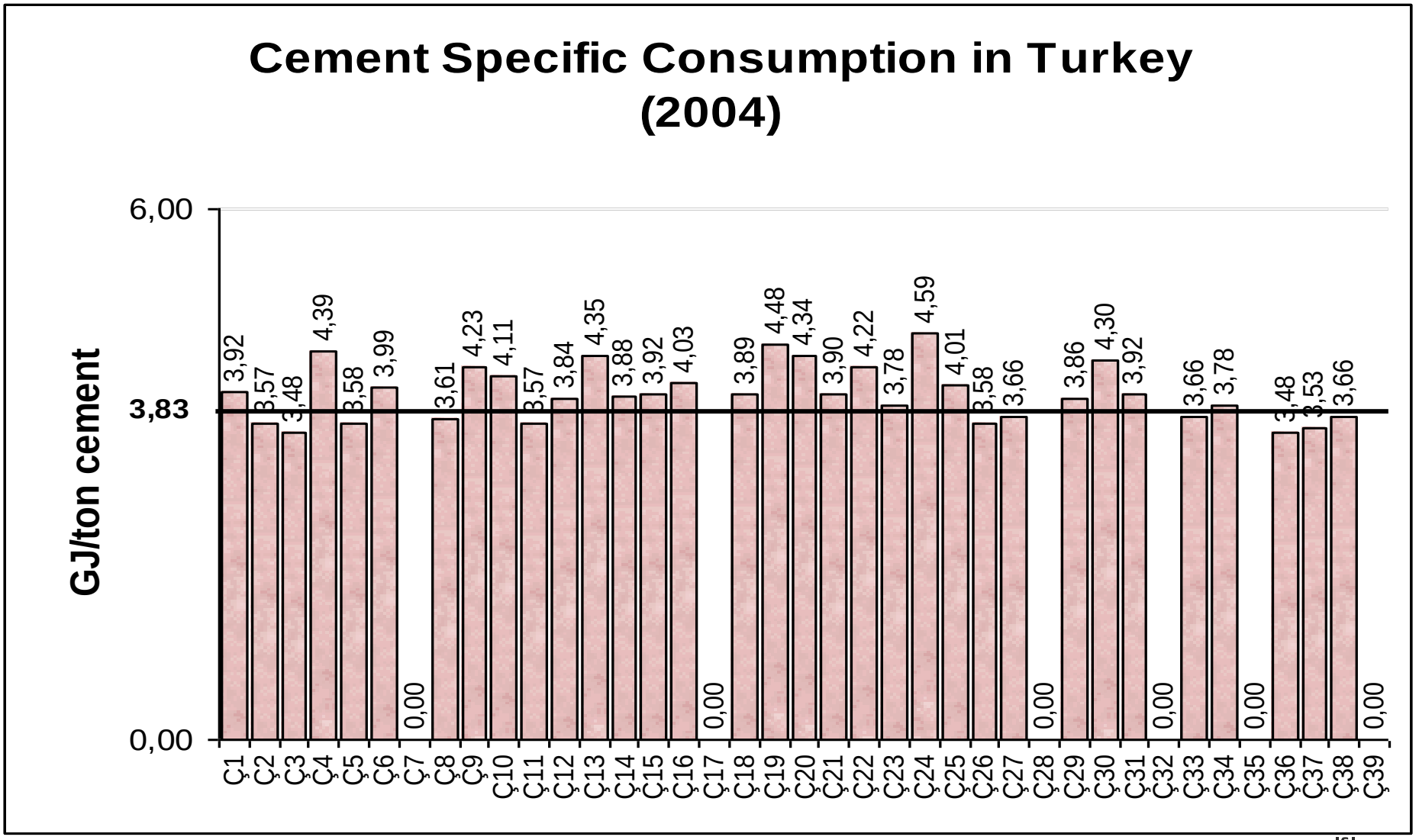
Factors of the energy consumption variation in transport: Mexico (2010-2014)



Energy consumption in transport was almost at the same level in 2014 as in 2010: energy savings (-3.7 Mtoe) and to a lower extent modal shift to less energy intensive modes of transport (-0,6 Mtoe) balanced the effect of the growth in traffic in passengers or goods (4.5 Mtoe) .

Source: CONUEE, ADEME, AFD project

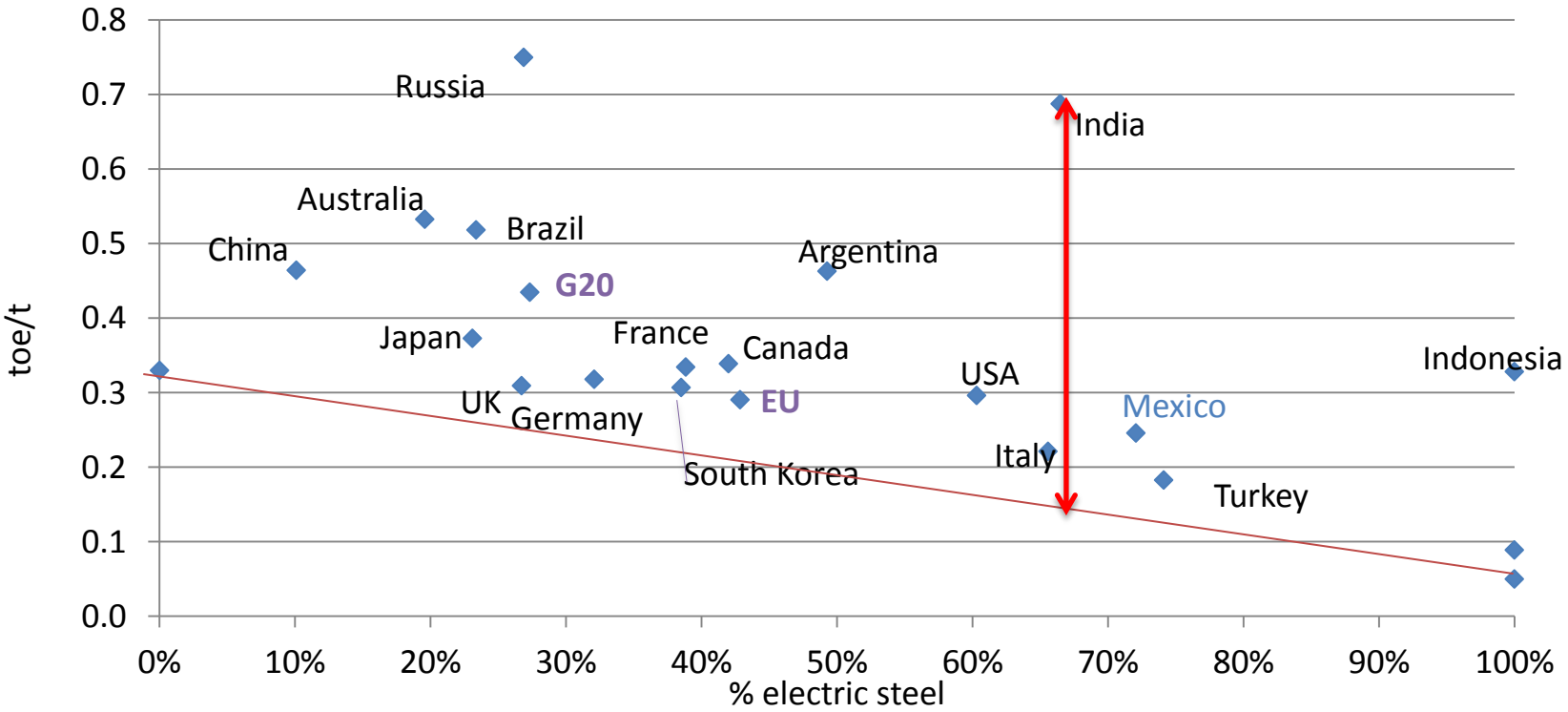
4a. National Benchmarking (1/3)
Usefull for policy design



4a. International Benchmarking (2/3)
Useful for E.E. potential assessement

Comparison of specific consumption for steel should be made at similar process mix as non electric steel is roughly 3 times more energy intensive than the non electric process.

Average energy consumption per ton of steel (2013)



orange line: world best practice

Source: WEC

4b. Benchmarking LAC's
The BIEE comparison tool (2/3)

BIEE - Comparison tool

Country: Argentina

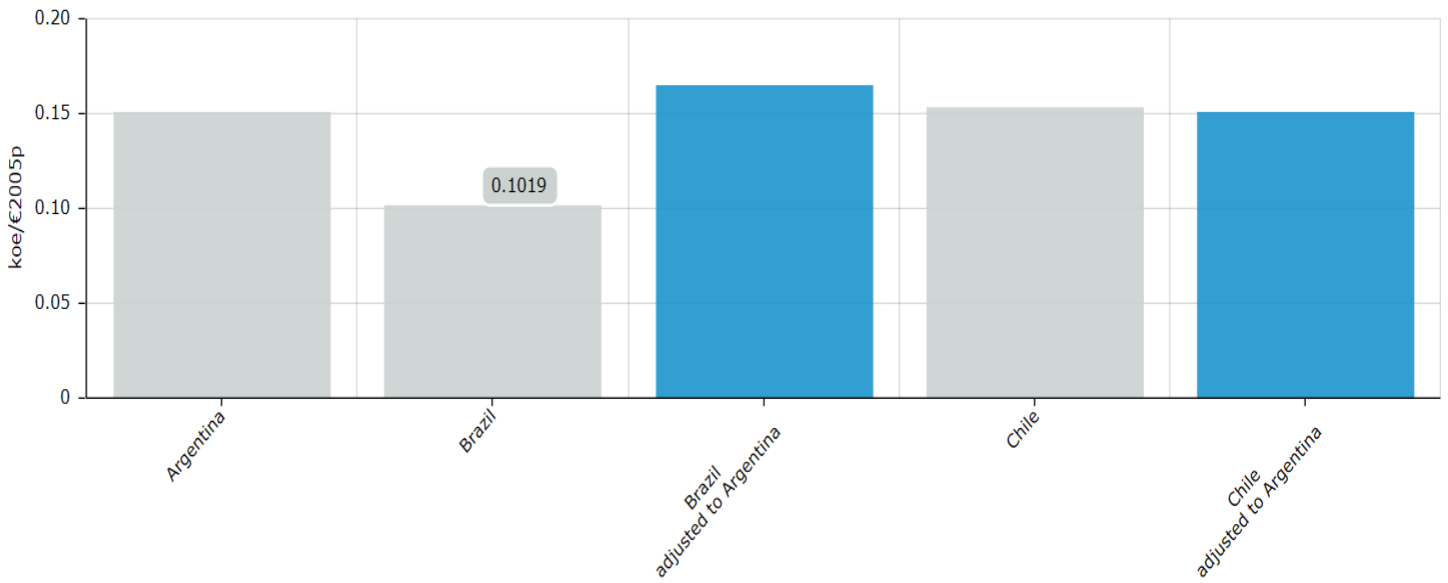
Comparison country: Chile

Sector: Macro

Indicators: Primary intensity

Adjustment: Both

Primary intensity adjusted to climate and power mix (2010)

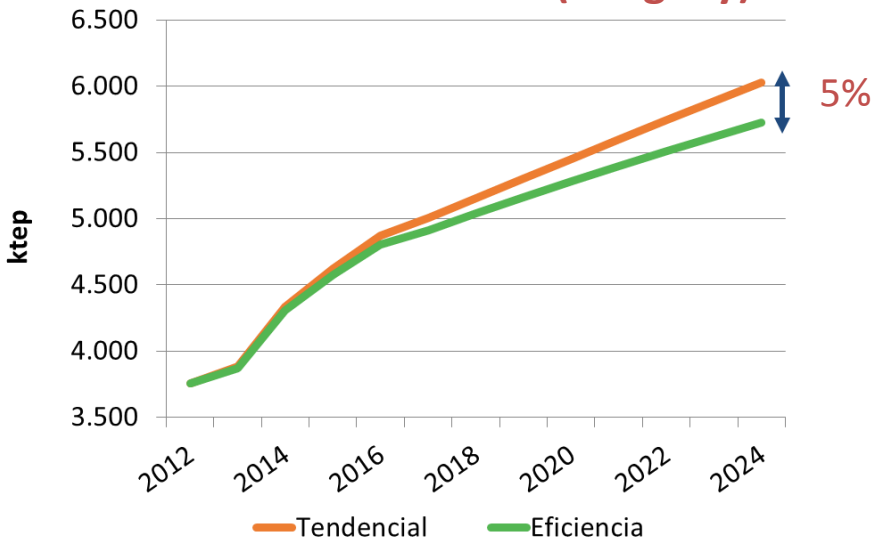


This graph shows what would be the primary energy intensity of Brazil and Chile with the climate and power mix of Argentina.

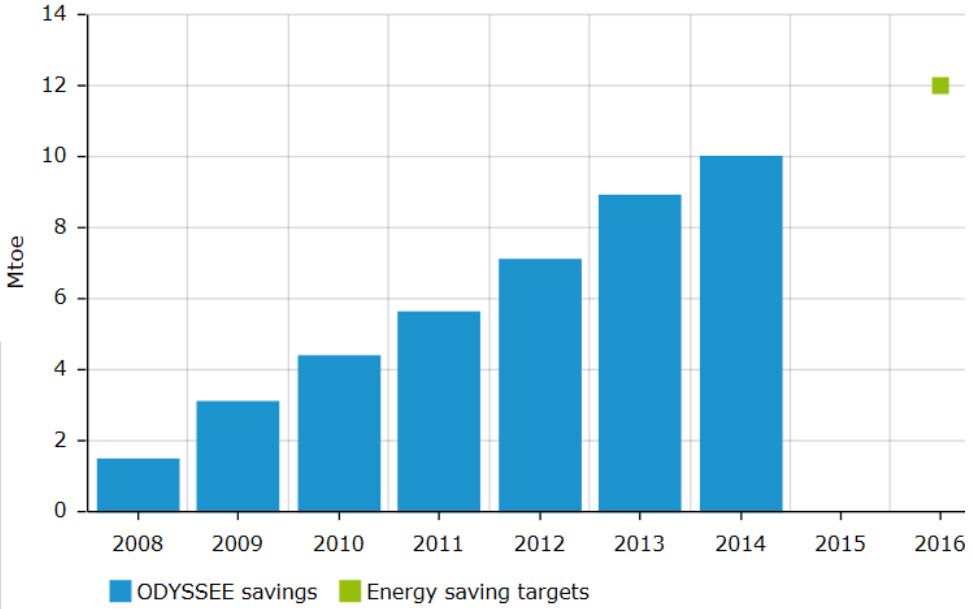
Country	Comparison countries
Argentina	Brazil Chile

5. National or sectoral targets monitoring

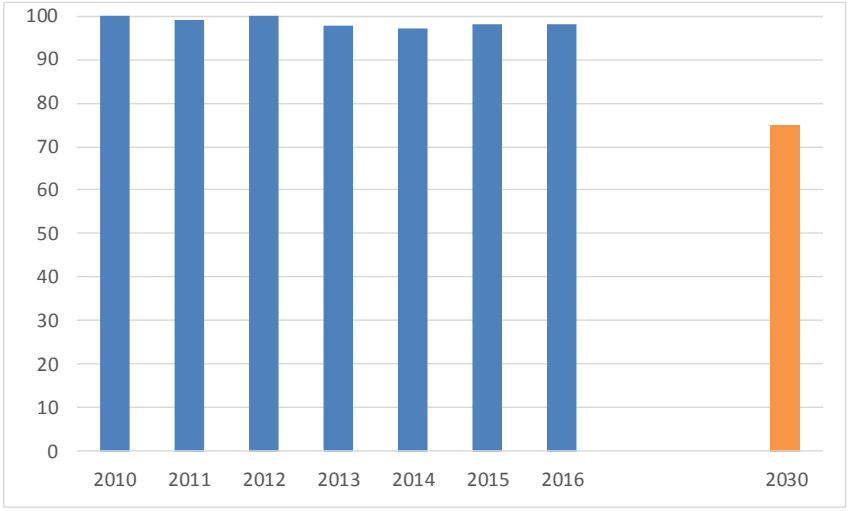
Plan Nacional de EE (Uruguay)



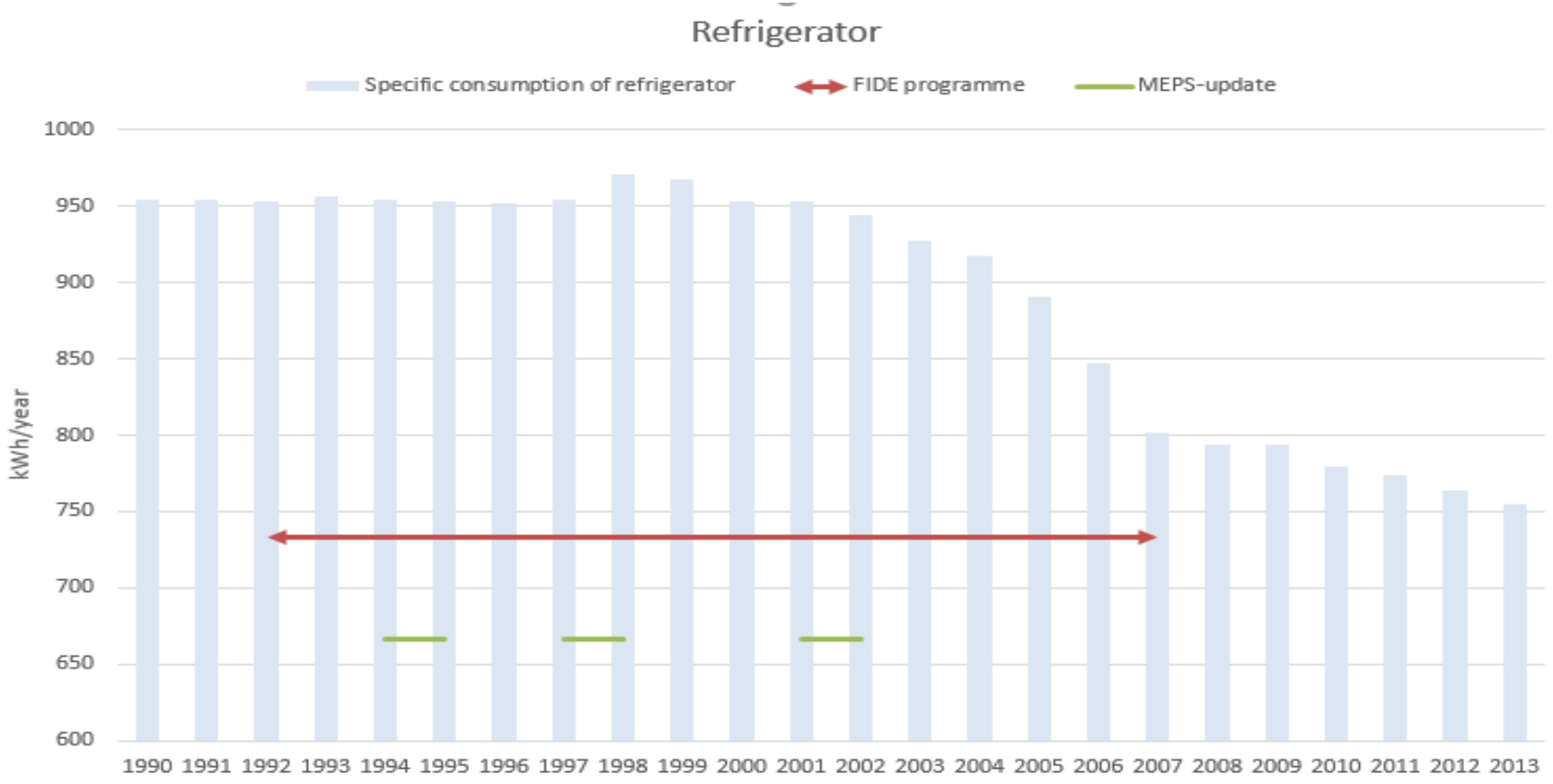
Energy savings (NEEAP, France)



Final energy intensity (EEDP, Thailand)

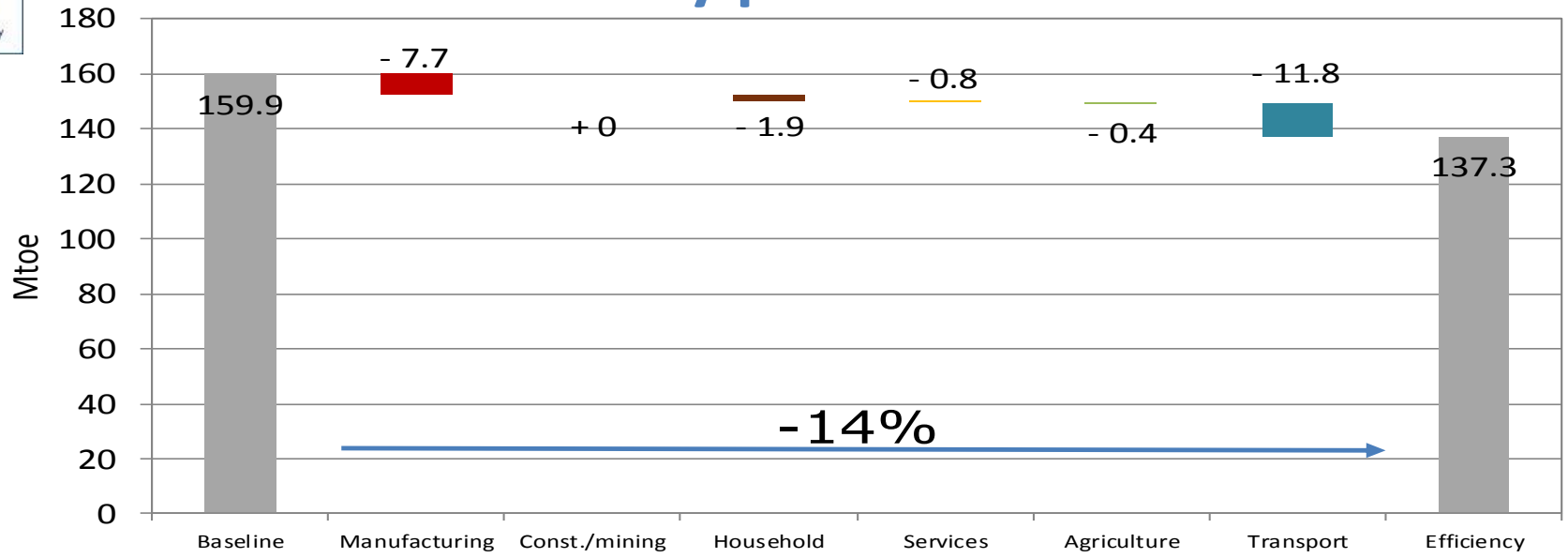


6: Monitoring the NEAAP through indicators: acse of Mexico (3/3)

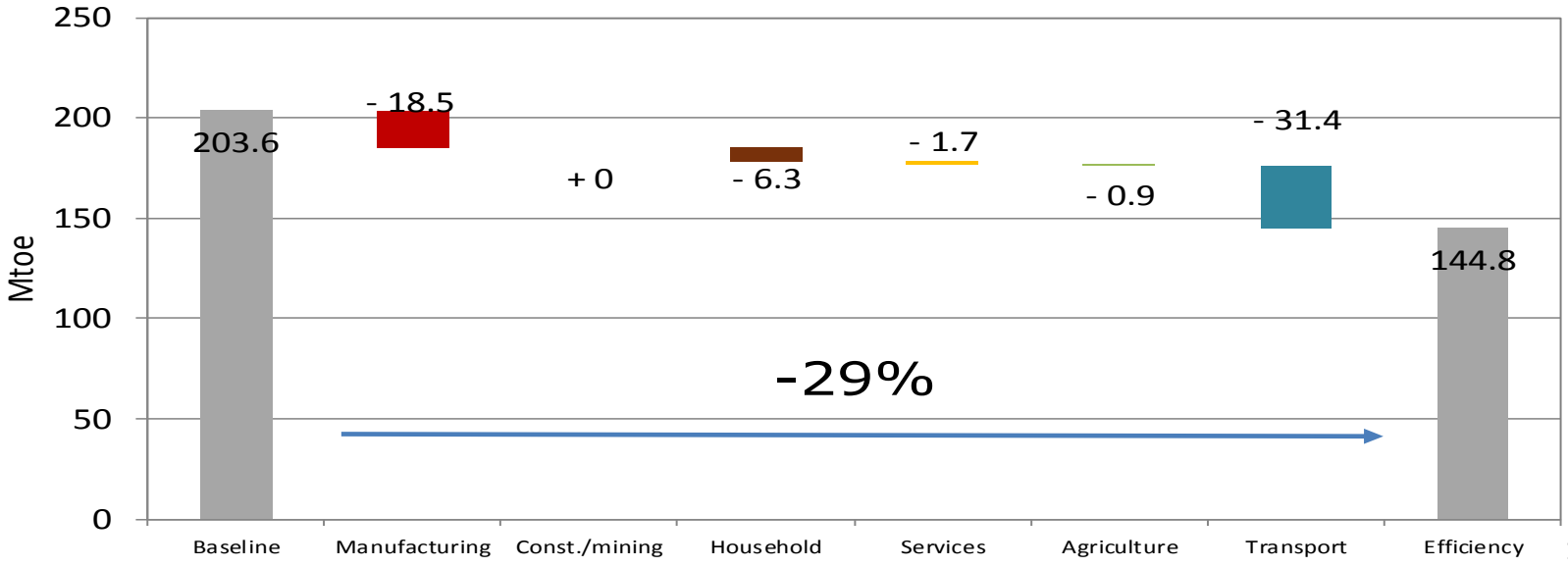


7. Long term impact assessment of the energy efficiency potential: Mexico

2030

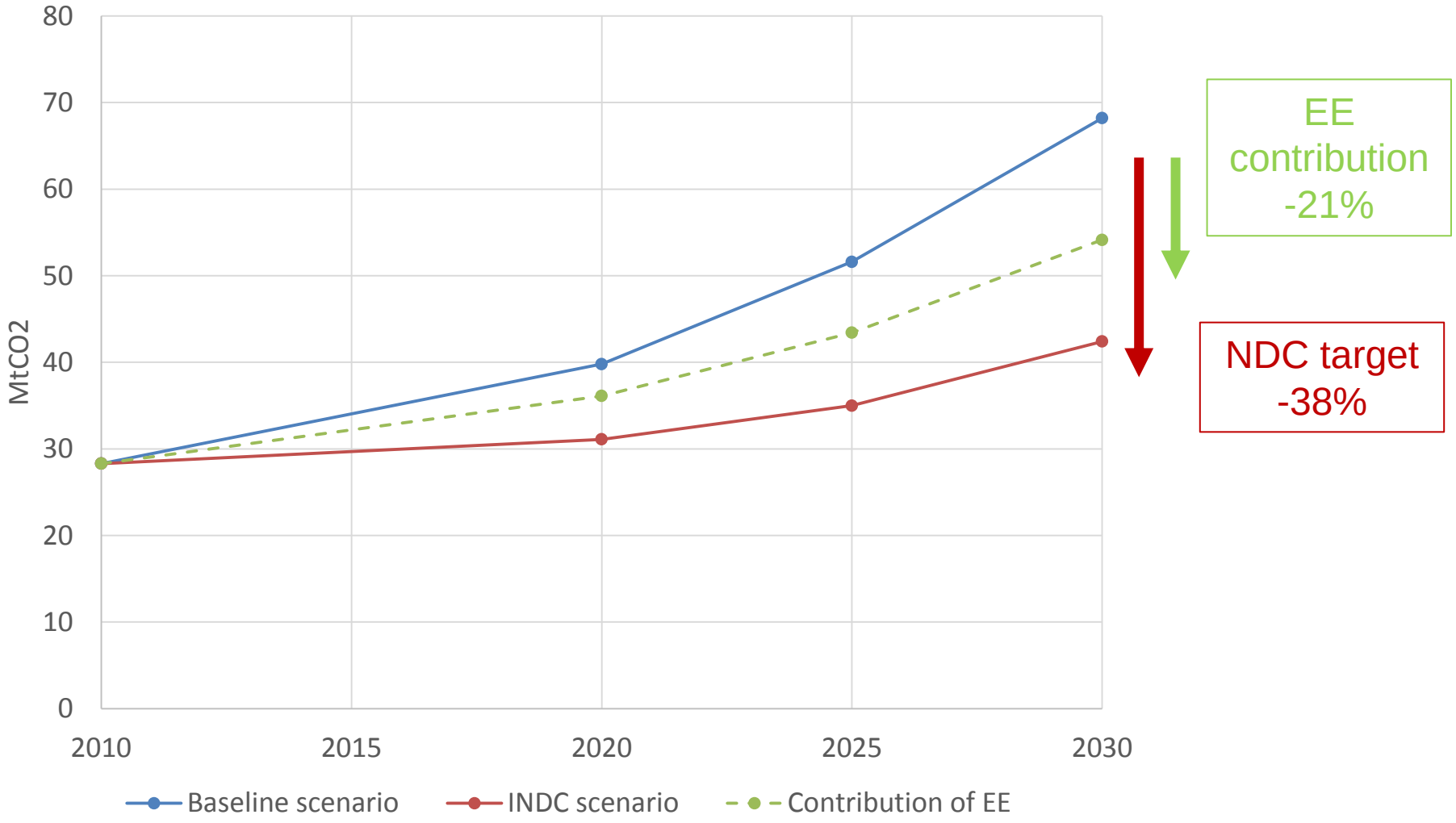


2050



8. Assess the contribution of EE in NDC's

Case of Tunisia



Source: based on an on going UNDP study (draft)

9a. Disseminate the results: BIEE Data mapper

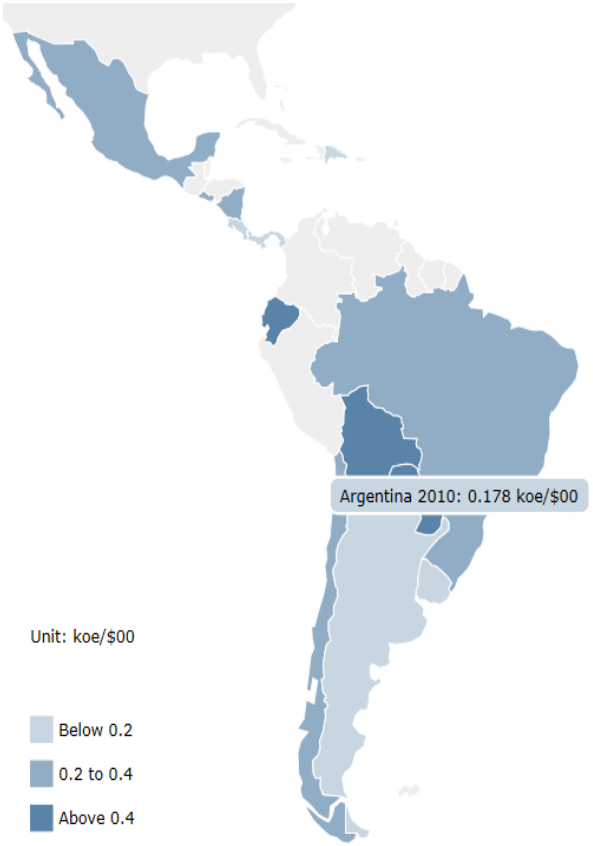
BIEE - *Base de Indicadores de Eficiencia Energética*

English | Spanish

- Global indicators
- Power sector
- Industry
- Transport
- Households
- Services
- Agriculture

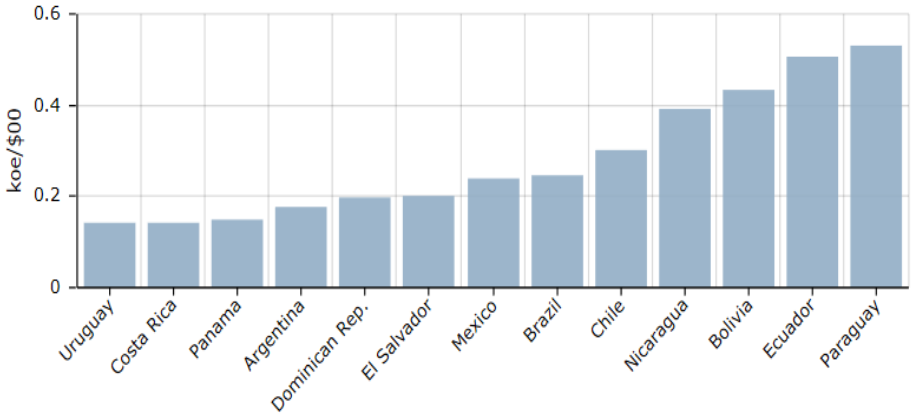
Primary energy intensity at exchange rate

2012 | 2000/2012 | Map | Excel



Primary energy intensities in $ at exchange rates vary significantly among countries

2012 *

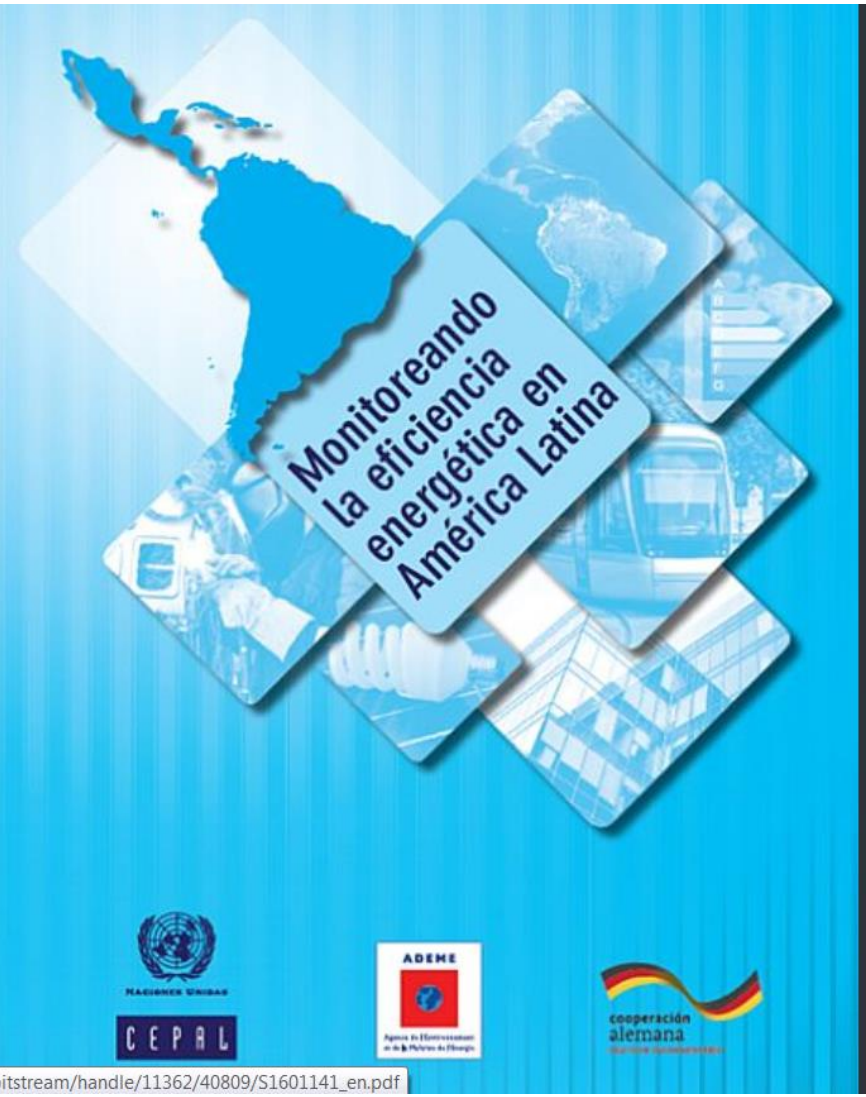


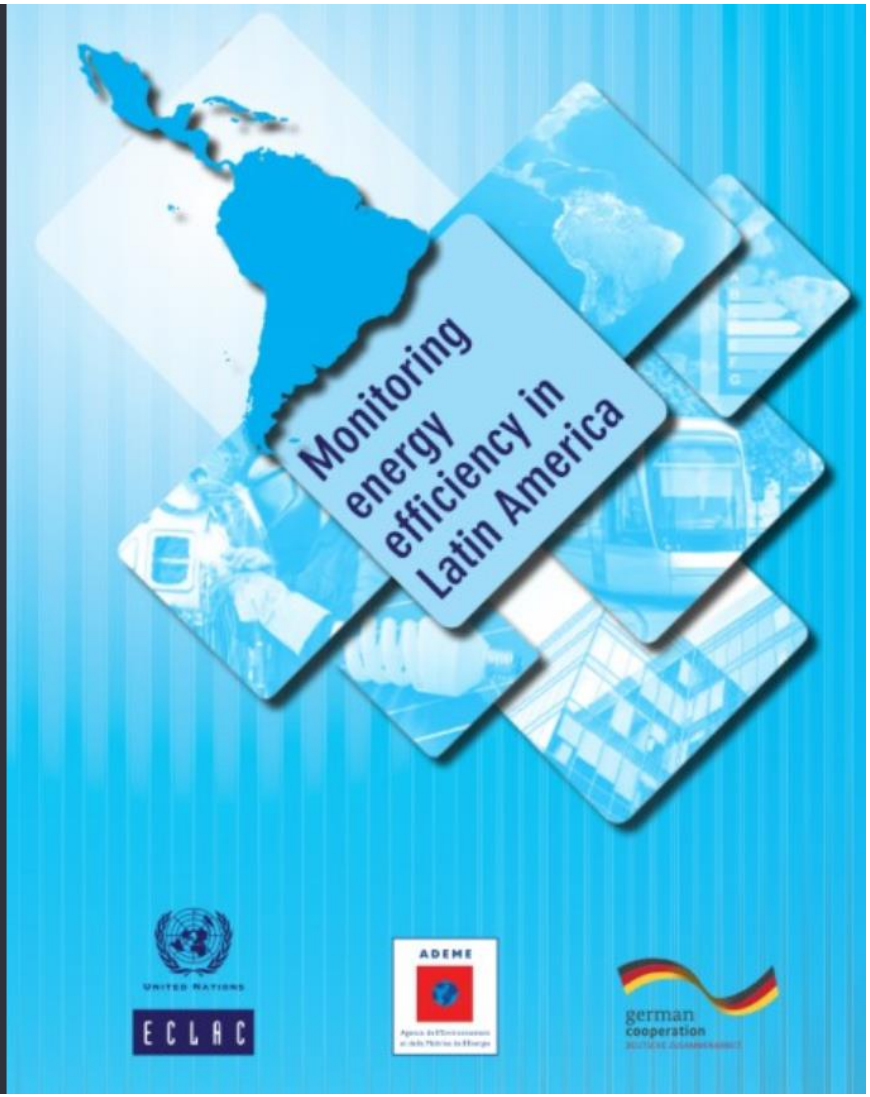
The primary energy intensity in US$ is the ratio between the total energy consumption of a country and its Gross Domestic Product (GDP) measured at 2000 prices and exchange rates. It measures the total amount of energy necessary to generate one unit of GDP. Uruguay, Panama and Costa Rica have the lowest energy intensities. Bolivia Ecuador and Paraguay, countries that are larger producers and transformers of energy, require four times more energy to generate one unit of GDP than Uruguay, as Paraguay that is a large user of biomass with a low efficiency. However intensities at purchasing power parities are more relevant for comparisons.

Advanced indicators

* Last year available depending on countries.

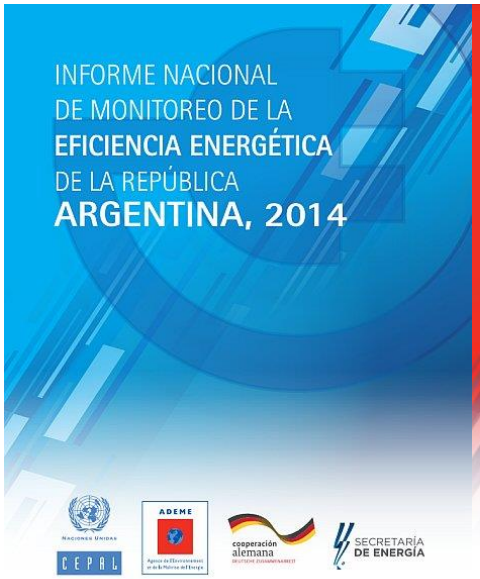
9b. BIEE regional report

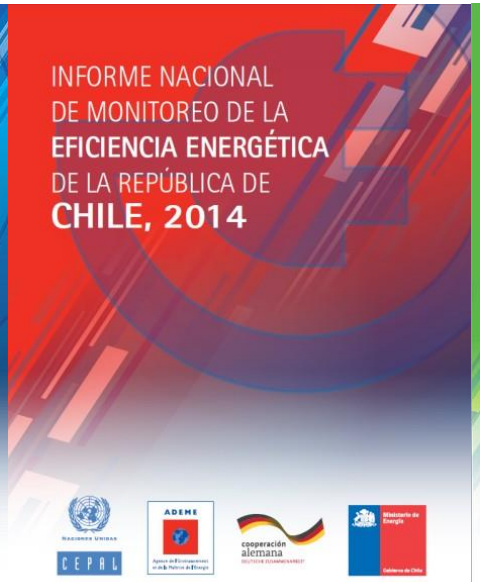


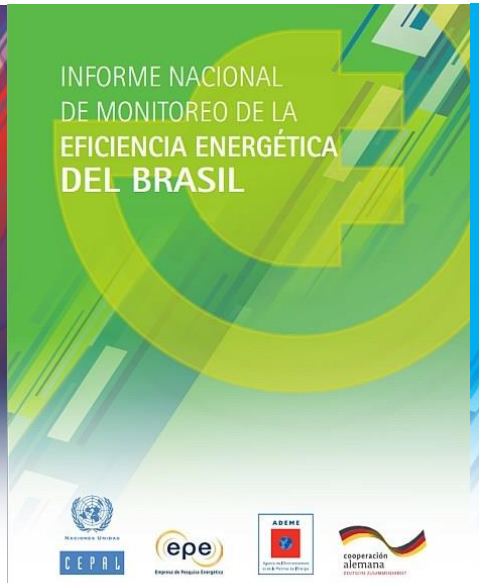


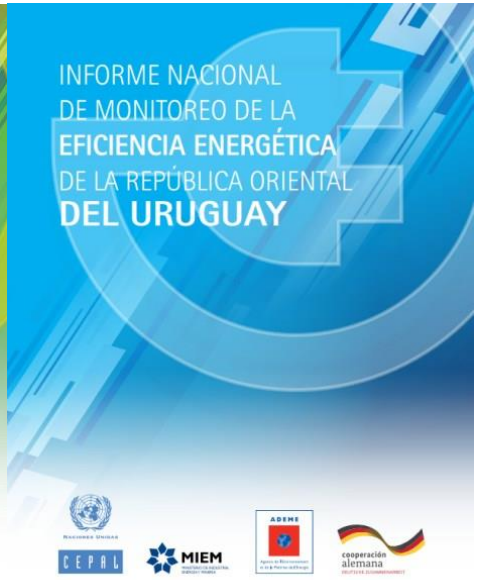
itstream/handle/11362/40809/S1601141_en.pdf

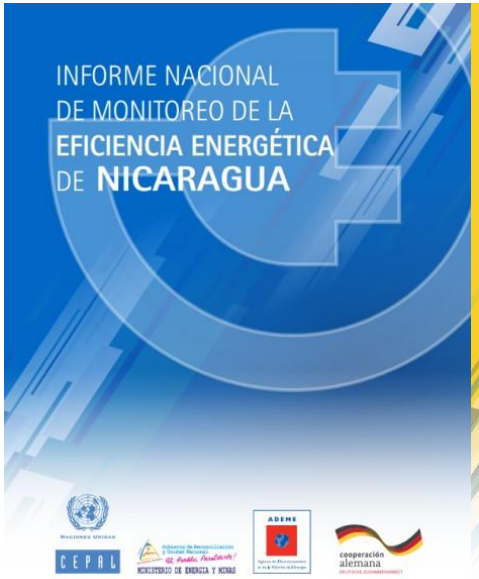
9c. BIEE national reports

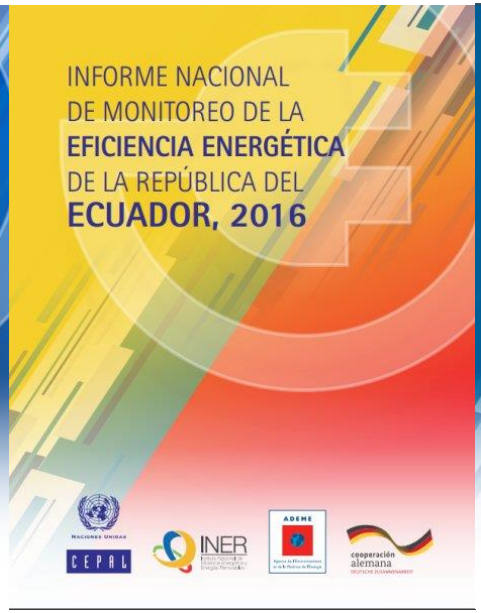


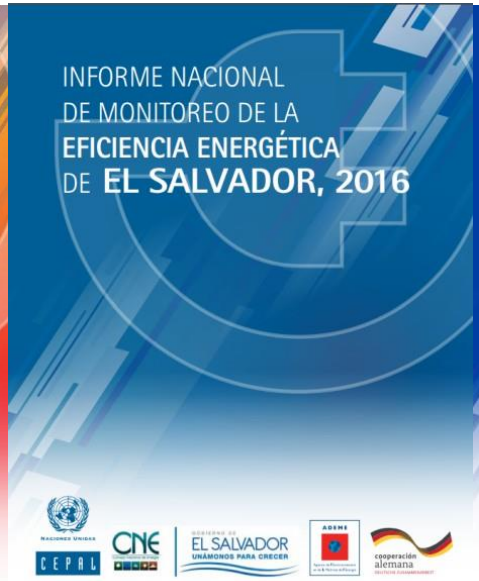


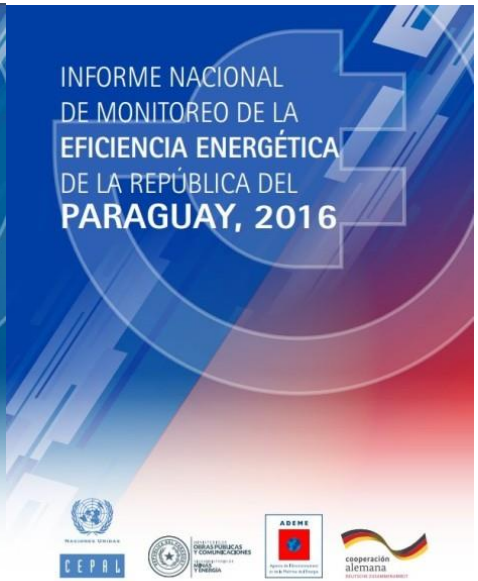












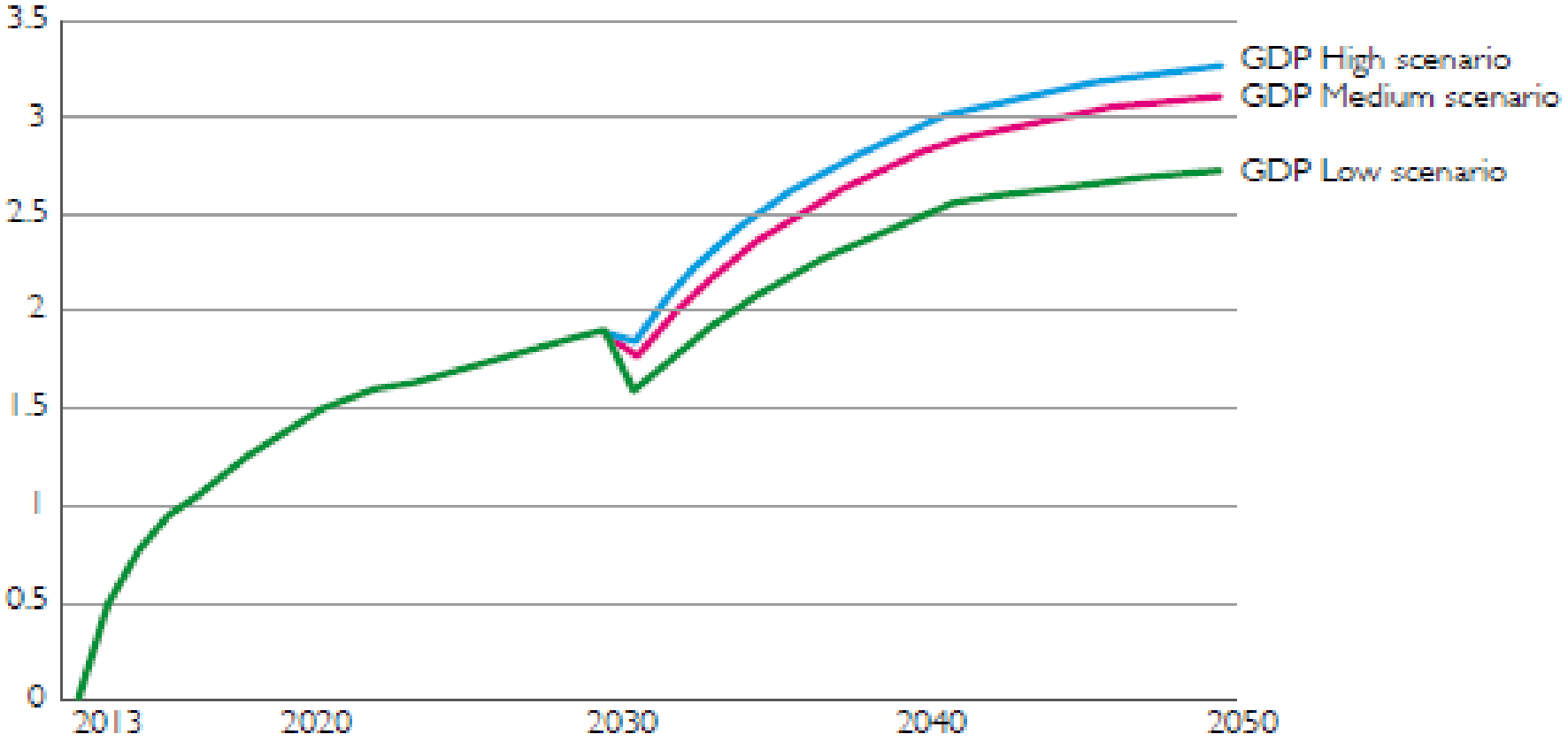
10: Assessing the Multi-benefits of EE (1/3)

- Impact of Energy efficiency on:
  - GDP
  - Job assessment
  - Trade balance
  - Public deficit Carbon and energy efficiency prices
  - Energy bill
  - Households expenditures

10: Assessing the Multi-benefits of EE (2/3)

Energy transition is good for economic growth

Impact on GDP of the 3 energy and ecological scenarii (France Shared vision 2050)

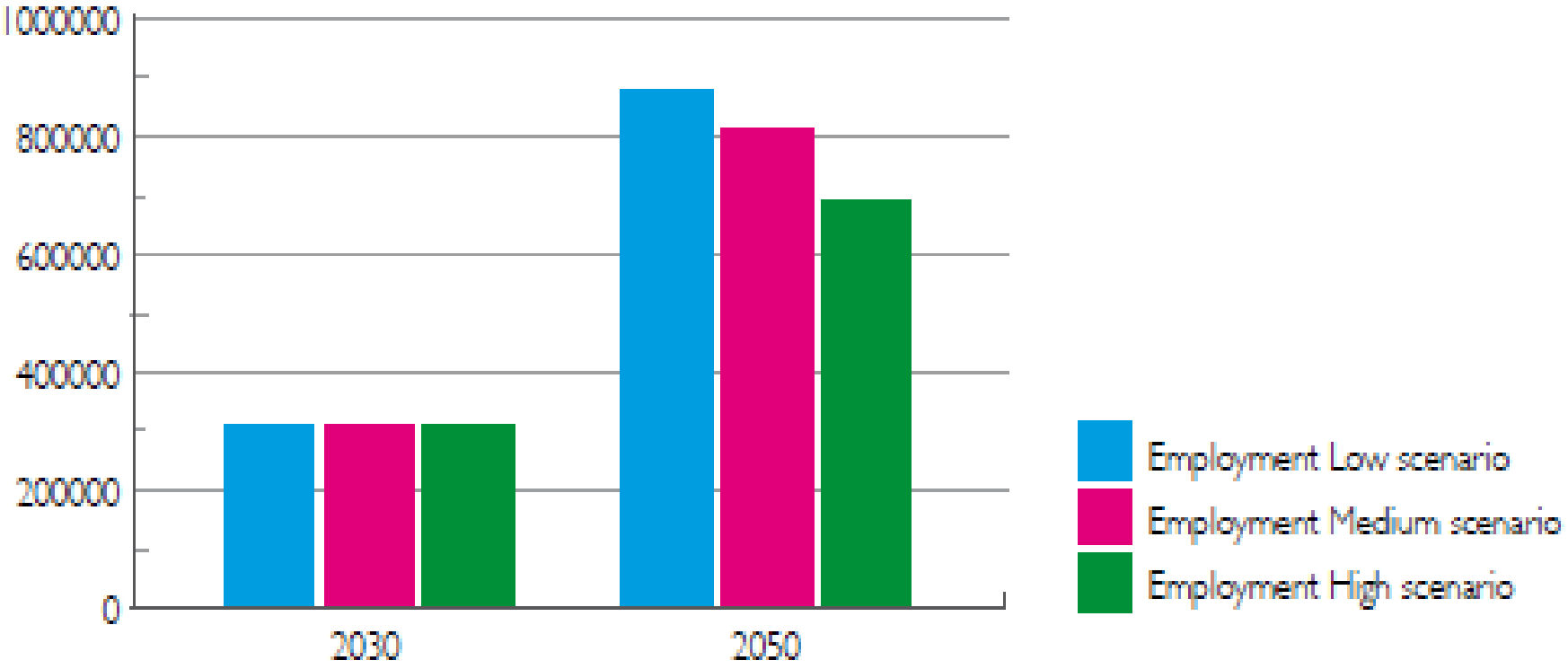


DEVIATION FROM THE BASELINE SCENARIO IN INDEX POINTS – SOURCE: THREEME 2013

10 : Assessing the Multi-benefits of energy efficiency

Energy transition is good for job creation

Impact on employment of the 3 energy and ecological scenarii (France Shared vision 2050)



DEVIATION FROM THE BASELINE SCENARIO – SOURCE: THREEME 2013

Conclusions

- The BIEE program has already provided inputs about the 10 benefits of energy efficiency indicators.
- The 2018 BIEE program will allow to enhance the results already achieved through:
  - Exchange of information on good practices (regional meetings, dialogo)
  - Capacity building (regional meetings, on job assistance)
  - Tools updating (energy indicator data base, data mapper, comparison tool)
  - Dissemination (Regional and national reports and workshops)
- New developments in BIEE (2018), in particular on the link between indicators and bottom –up ex-post (bottom-up) policies evaluations
- BIEE can document the link between indicators and forecasting