CONUEE
COMISIÓN NACIONAL PARA EL USO EFICIENTE DE LA ENERGÍA

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BUILDING CONSENSUS FOR FAIR AND SUSTAINABLE DEVELOPMENT

Energy efficiency indicators in México: Industry

National Comission for the Efficiency Use of Energy (Conuee)

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Index

1. Background

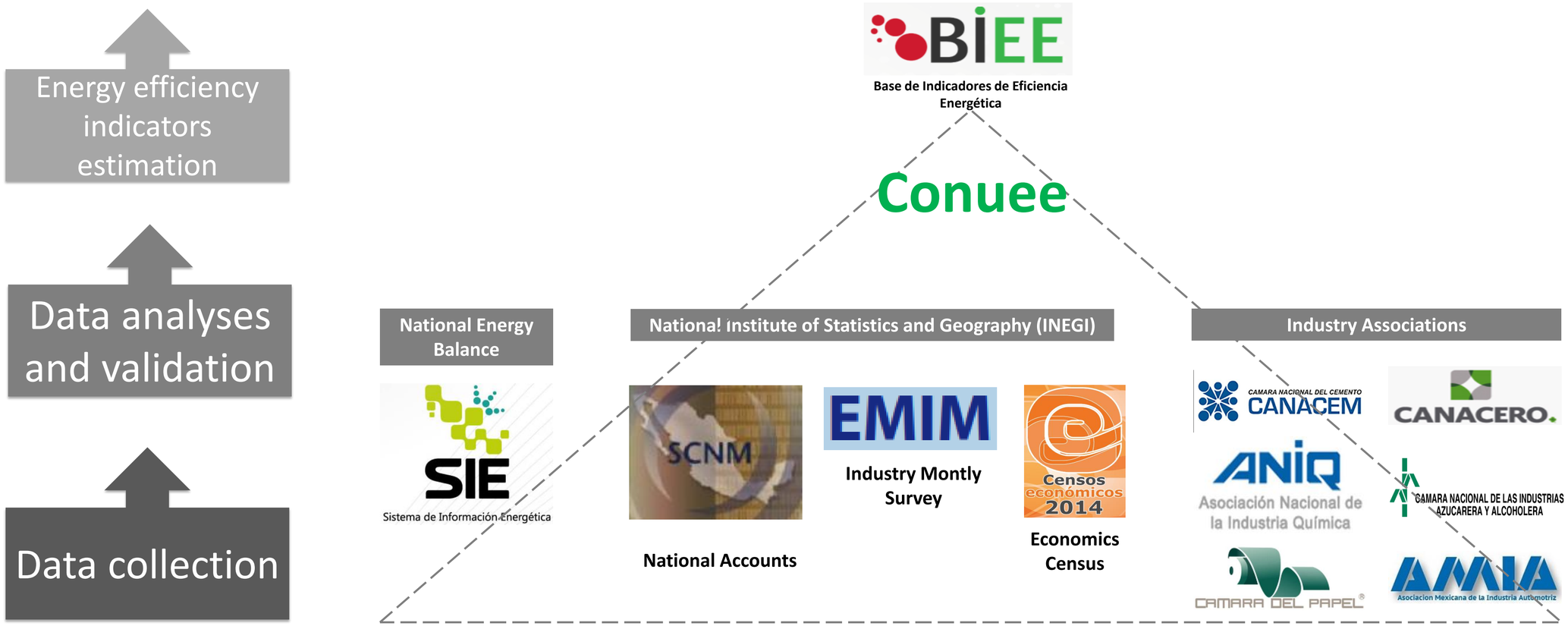
i. **2014**, lack of energy efficiency (EE) indicators for industrial sector and other sectors of final consumption

ii. **2015**, Started work to gather information on energy consumption, physical production and added value :
a) review of industrial surveys, economic censuses, statistical yearbooks, national accounts, information systems of Ministries and others
b) Close work with chambers and industrial associations to gather information on activity level and energy consumption

iii. **2016** In the framework of the BIEE-CEPAL program as well as the Mexico-AFD-ADEME cooperation, and with the technical support of Enerdata, the first indicators of EE are estimated, of two types::
a) energy consumption per unit of added value
b) energy consumption per unit of physical production

iv. **2017,** The Base of Energy Efficiency Indicators (BIEE) Mexico is presented, which includes information on the industrial sector, and for the following subsectors: Cement, Steel, Chemistry, Sugar, Automotive Manufacturing, Paper, Petrochemicals and Others

2. Work scheme on energy efficiency information in the Industry



Energy Efficiency Indicator

The BIEE was presented in September 2017 and included information of 7 sectors:

1. Macroeconomic
2. Energy
3. **Industry**
4. Transport
5. Residential
6. Services
7. Agricultural

http://www.biee-conuee.enerdata.net/

Acceso:
Login: **biee**
Password: **publico**

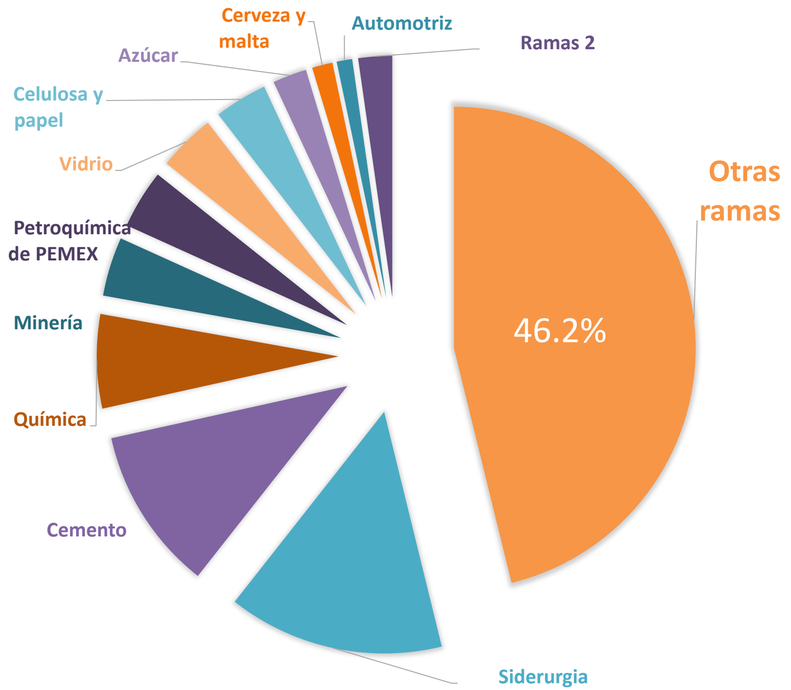
3. Challenges on energy consumption information of the industrial sector of Mexico

i. The energy consumption break into by subsector is not enough, there is a category of "Others" that concentrates 46.2%

ii. The classification of industrial sub-sectors of the National Energy Balance does not coincide with that used in the System of National Accounts (SCN) of INEGI, which hinders correct linkage

iii. There is no systematized information on energy consumption for large transformation or production processes

iv. The Economic Census (CE) reports aggregate information on the monetary expenditure for fuels and electricity, which may allow an approximation to the energy consumption of the subsectors, however the CE periodicity is five-yearly



4. Challenges on production information of the industrial sector of Mexico

i. The National Accounts of INEGI systematically reports the VA of the industrial sub-sectors but there is no physical production information with the same detail, making it difficult to know more precisely the energy performance of the industrial subsectors

ii. The Monthly Survey of the Manufacturing Industry (EMIM) reports physical production information for the main transformation activities, however it requires treatment to homogenize an equivalent unit

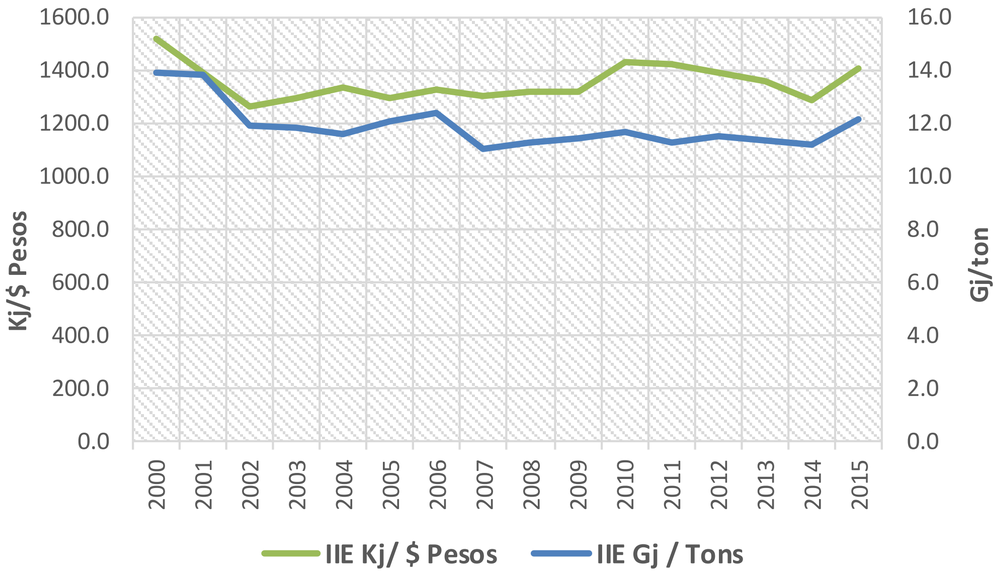
iii. The statistical yearbooks of Chambers and associations represent a valuable source of information on energy consumption and production, however in many cases these are not yet digital, which implies a greater processing effort

5. Indicators of energy efficiency of the Industry

Name	Unity	Subsectors
Energy intensity per unit of added value	GJ/VA	Cement, Steel, Chemistry, Automotive Manufacturing, Paper and Petrochemicals
Energy intensity per unit of physical production	GJ/tons produced	Cement, Steel, Chemistry, Sugar, Automotive Manufacturing, Paper and Petrochemicals

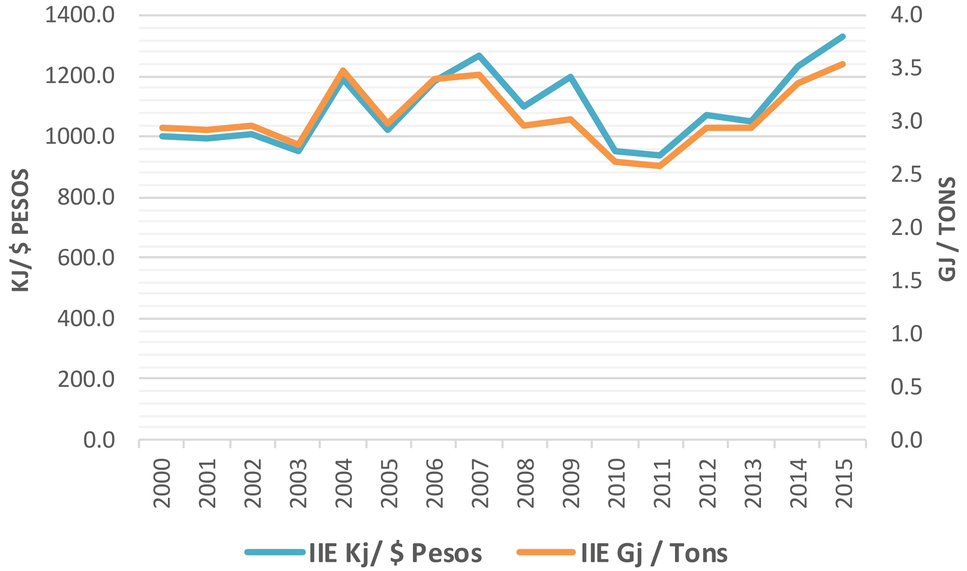
5. Industry Energy efficiency Indicators

Energy intensity index of the Iron and steel industry, 2000-2015



Fuente: BIEE, Conuee (2017).

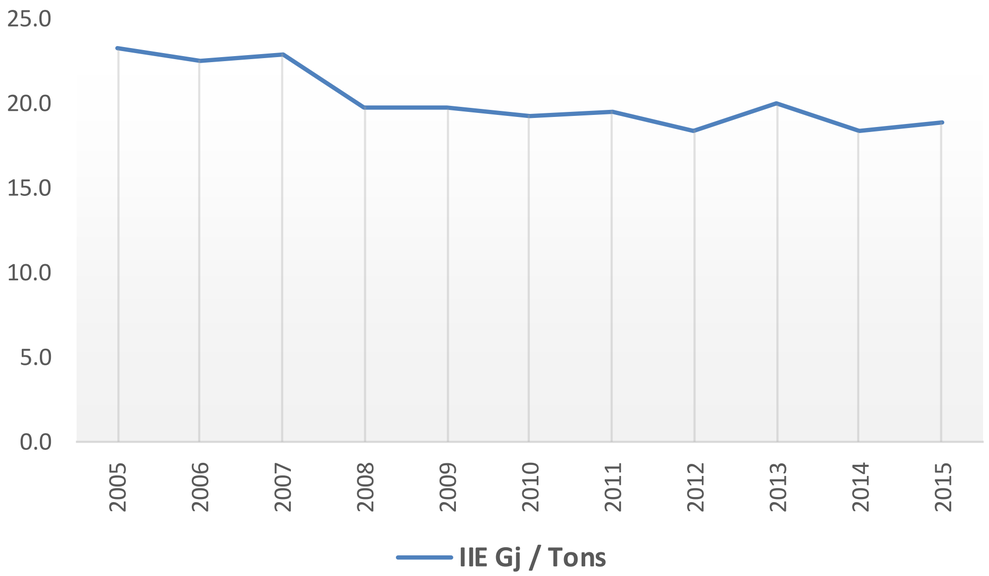
Energy intensity index of the Cement industry, 2000-2015



Fuente: BIEE, Conuee (2017).

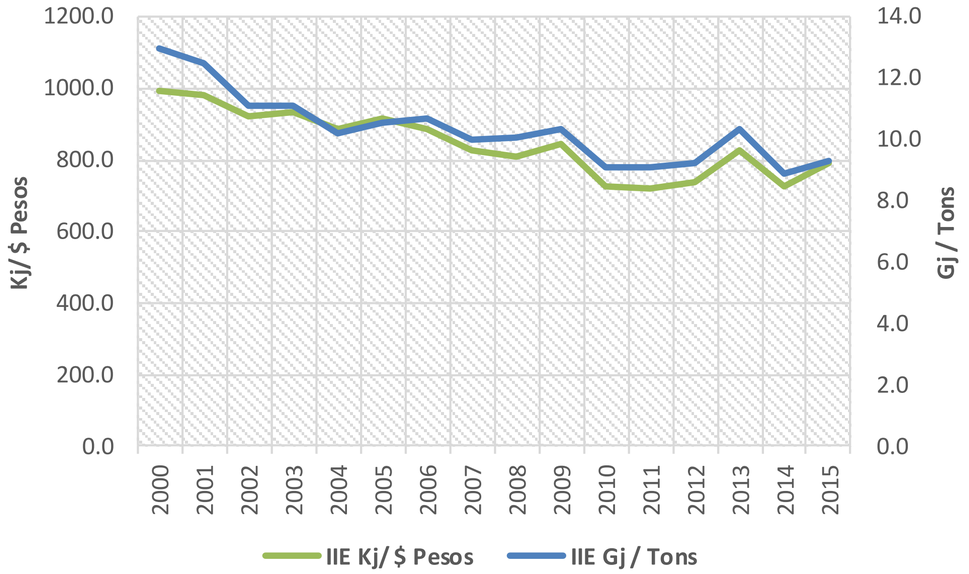
5. Industry Energy efficiency Indicators

Energy intensity index of the Sugar industry, 2000-2015



Fuente: BIEE, Conuee (2017).

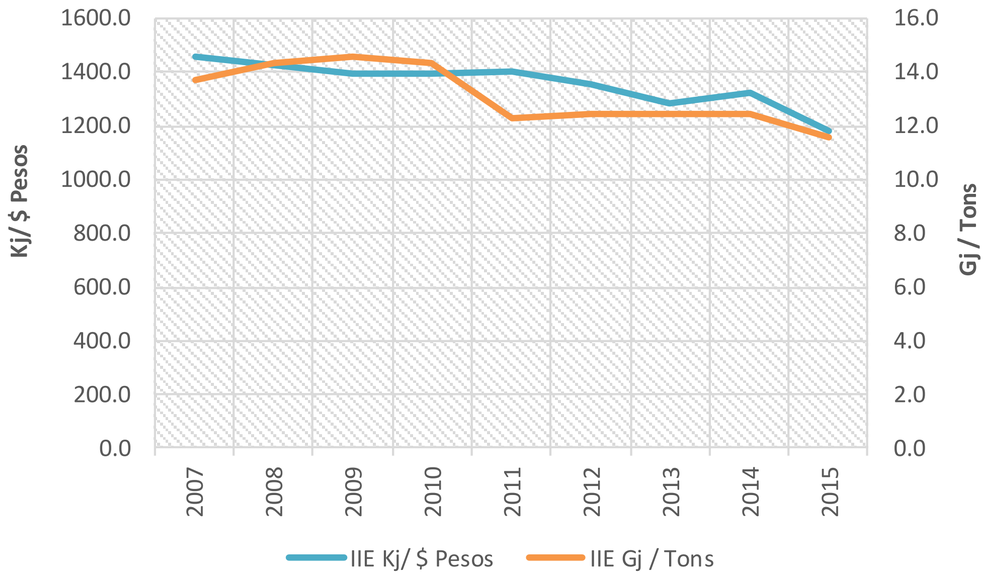
Energy intensity index of the Paper industry, 2000-2015



Fuente: BIEE, Conuee (2017).

5. Industry Energy efficiency Indicators

Energy intensity index of the Glass industry, 2000-2015



Fuente: BIEE, Conuee (2017).

Conclusions

i. With EE indicators is posible an energy policy design based in evidence

ii. Assessment and monitoring of the energy targets and climate change policy (EE goal y NDCs)

iii. Energy management of large consumers or industrial subsectors : *Benchmarking*

Lines of future work

i. Improve data and energy efficiency indicators with information of environment sector

ii. Disseminate the BIEE with industry chambers

iii. Strengthen of Energy Efficiency Roadmap of Industrial Sector based on data and indicators of BIEE

iv. Implement the PRONASE –Mexican NEEAP- assessment with EE indicator provided by BIEE

Gracias!

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