

DEVELOPMENT OF ENERGY EFFICIENCY IN INDUSTRY: BARRIERS AND DRIVERS

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French study on energy efficiency in industry

Study launched in 2016 by:

- French public actors (ministry of Industry, Agency for the Environment and Energy Management (Ademe))
- Private industrial associations (Gimélec and Cetiati)



Study carried out by Deloitte and Nomadéis in 2017



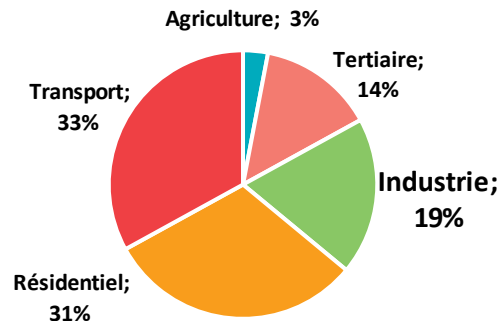
Objectives of the study:

- Analyse the French market (supply and demand) in energy efficiency in the industry
- Study the situation in other countries to assess the exportation potential for French companies
- Propose strategic recommendations to help public authorities develop and structure the French offer and to foster energy efficiency work

Final report published in October 2017: <https://www.entreprises.gouv.fr/etudes-et-statistiques/acteurs-offre-et-marche-de-effectiveness-energetique-a-destination-de-industrie>

The energy consumption in French industry is decreasing and concentrated in a few sectors

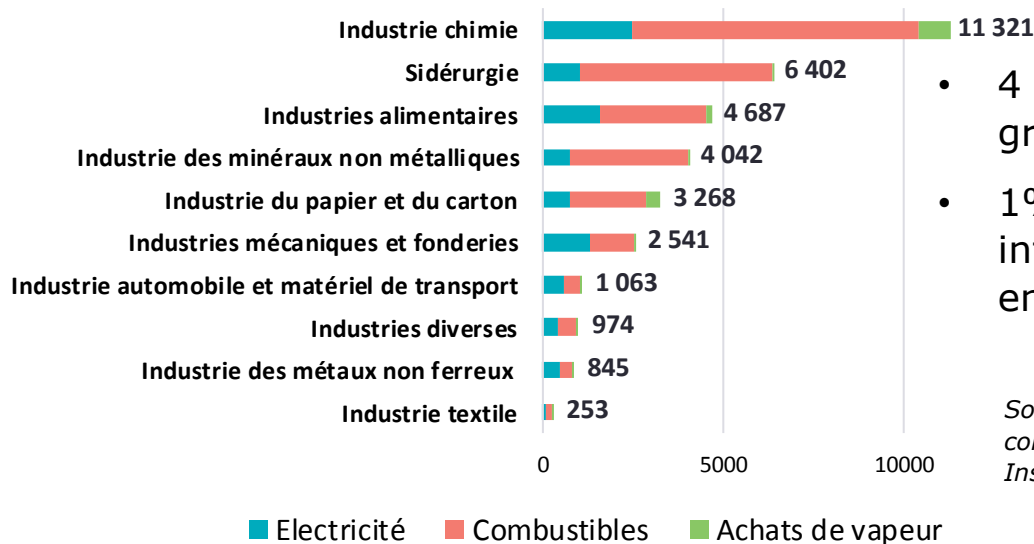
Energy consumption down in France since the 1970s



With 29 Mtoe, the industry's share accounted for 19% of total final energy consumption in 2014 in France (164 Mtoe)

Source: CGDD, « Chiffres-clés de l'énergie 2015 », 2016

Energy consumption is highly concentrated in a small number of sectors



- 4 industrial sectors accounted for 75% of gross energy consumption in 2014
- 1% of industrial sites (the most energy-intensive) account for 2/3 of the total energy industrial demand

Source: Enquête annuelle sur les consommations d'énergie dans l'industrie, par Insee, SSP, 2014

Barriers to the development of energy efficiency in industry

Demand side

External obstacles:

Unfavourable external economic factors

- **Energy prices (crude oil price) and carbon prices (EU ETS) are low**
⇒ Economic incentive to invest in energy savings is low.
- Public tools to support investment in energy efficiency exist but **industrial companies do not take enough benefit from them.**
 - In France, white certificates are available for industrial companies but suffer from several limitations (a.o. administrative complexity for specific industrial projects).

Internal obstacles:

Lack of willingness and/or competence from industrial companies and financial institutions

- Industrial companies and financial institutions still **lack expertise** on energy efficiency.
 - It is difficult for an industrial company to mobilize financing (internal and external) for energy efficiency projects, mainly because of difficulties in making investors understand such projects.
- Energy and energy efficiency occupy an **unclear place in the organization** of industrial companies and the decision-making processes are very fragmented.
 - Energy efficiency is a topic treated by different directions (purchase, maintenance, operations, environment, etc.).

Key drivers for a better adequacy of supply with demand

1 >

Make the supply of energy efficiency services and products more readable

- **Structure the supply:** Make the market more readable (adopt a clear and consensual definition of energy efficiency)
- **Communicate:** Make the companies providing energy efficiency products and services more visible

2 >

Encourage new and massive investments in energy efficiency projects

- **Adopt a more systemic approach:** Group different services and products together to offer integrated solutions
- **Strengthen marketing approaches:** Better integrate energy efficiency into more global projects
- **Develop confidence:** Strengthen the confidence of industrial companies in the available energy efficiency solutions
- **Develop assessment tools:** Provide financing actors with clear and easy-to-use tools to assess investment projects related to energy efficiency

3 >

Foster innovation

- **Take full benefits of digital development**
- **Strengthen partnerships** between industrial companies and research centers

A few key drivers in a nutshell

Demand side

- Encourage industrial companies to **fully engage** in the mobilization of energy efficiency
- More systematically include energy performance in **investments aiming at improving processes**

Supply side

- Foster innovation, especially in relation to **digital developments** and **systemic approach** to energy efficiency
- **Clearer structure of the supply** so as to be more easily understandable by industrial companies and financial institutions
- A **common understanding** to be developed between supply companies, industrial actors and financial institutions
- **Wider communication** on the benefits and the operation of energy efficiency projects

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The image shows the cover of a report. At the top, there is a red header with the French Republic logo and the text 'REPUBLIQUE FRANÇAISE' and 'MINISTÈRE DE L'ÉCONOMIE ET DES FINANCES'. Below this, there are three black and white photographs: a hand touching a glowing 'innovation' button, two people in a factory setting, and a large industrial facility with tall chimneys. A red banner on the right side of the photos contains the text 'ÉTUDES ÉCONOMIQUES'. The main title 'PROSPECTIVE' is in large white letters, followed by the subtitle 'Les acteurs, l'offre et le marché de l'efficacité énergétique à destination de l'industrie' in smaller white text. The background of the bottom half is a solid blue color.

