Enabling Policies for Financing Energy Efficiency Investments

Case study: Industry sector in Tunisia

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Content

- Tunisian industrial sector characteristics
- Industry EE policy evaluation
- EE policy implementation instruments
- Perspectives
Tunisian industrial sector characteristics

Economic issues

- **6000** Companies
- **35%** du GDP
- **80%** Exports of goods and services
- **500** thousand of direct jobs
Tunisian industrial sector characteristics
Energy situation

2.3% Growth per year

Source: ONE
Energy Consumption Structure in the Industrial Sector

2000 ktoe

Tunisian industrial sector characteristics

Energy situation
Industry EE policy evaluation

Energy Intensity

Industry Energy Intensity

-3% per year
Industry EE policy evaluation

Energy saving

Energy Savings achieved over the period 2005-2011

- Industrie: 45%
- Tertiaire / Residentiel: 40%
- Transport: 5%
- Agriculture: 0%
- Electricité renouvelable: 5%

Total: 3500 ktoe

Industrial Energy Savings achieved over the period 2005-2011

- Audits & Contrats Programmes: 93%
- Cogénération: 7%
- Eolien autoproduiteurs: 0%

Total: 1600 ktoe
Industry EE policy evaluation

Impacts

Total EE Investment = 300 MUS$
Average pay back period~ 2 years
EE policy implementation instruments

Institutional instrument
- ANME
- National Fund for Energy Conservation
- Energy Auditors, ESCOs, etc.

Regulatory instruments
- Mandatory Periodic Energy Audit
- Mandatory Energy audit for new project

Incentive Instruments
- FNME Subsidy
- Tax incentives

International cooperation
Technical Support
EE policy implementation instruments

Regulatory instrument

- Mandatory periodic Energy audits
  - Industrial companies consuming more than **800 toe / year**
  - Target **320** companies

- Mandatory Energy audits for new projects
  - Industrial new projects consuming more than **800 toe / year**: ANME permission
  - Industrial new projects consuming more than **7000 toe /year**: Authorization from the minister in charge of energy
EE policy implementation instruments

Incentive instrument

- Subsidies for energy audits:
  - 70% of the cost of the audit with a limit of 30,000 DT

- Subsidies for EE investment:
  - Immatériel Investissement: 70% of the cost with a limit of 70,000 DT
  - Matériel Investissement: 20% of the cost with a limit depending on the energy consumption
    - less than 4000 toe: 100,000 DT
    - between 4000 and 7000 toe: 200,000 DT
    - more than 7000 toe: 250,000 DT
Specific Framework for the promotion of cogeneration

- **20%** subsidy for cogeneration investment with a maximum of 500,000 dinars per project.
- Obligation for the utility company STEG to buy the excess of electricity produced by cogeneration plant.
- Third part access to STEG transmission Network.
- An incentive purchase price for the excess of electricity sold to the grid
  - Prix Jour : 0,2401 x Prix Gaz/tep + 16 (millimes)
  - Prix Pointe : 0,3110 x Prix Gaz/tep + 60 (millimes)
  - Prix Soir : 0,3039 x Prix Gaz/tep + 40 (millimes)
  - Prix Nuit : 0,2179 x Prix Gaz/tep (millimes)
EE policy implementation instruments
Technical assistance

- Awareness and assistance to industries on identifying and implementing EE actions plan.
- Assistance to industries on the verification, evaluation and monitoring of the implemented EE projects.
- Assistance to industries on implementing Energy Management System.
- Awareness to commercial banks to finance EE projects in industrial companies.
Energy Efficiency Industry program (GEF) : 7 M$

Credit Line Environment AFD: 40 M€

- A loan from AFD, soft rate through an EU subsidy
- 3 banks partners:
- Cogeneration, Energy Efficiency and Renewable Energies

Credit line World Bank: 40 MUS$

- A long term loan from the world bank with the guarantee from the Government of Tunisia
- 2 banks partners
- Cogeneration and Energy Efficiency in industries
### EE action plan 2013-2016

<table>
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<tr>
<th>Economies (ktep)</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Industrie</td>
<td>170,3</td>
<td>303,1</td>
<td>448,1</td>
<td>599,2</td>
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<td>Résidentiel et Tertiaire</td>
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<td>133,5</td>
<td>226,1</td>
<td>308,8</td>
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<tr>
<td>Transport</td>
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<td>129,4</td>
<td>298,1</td>
<td>336,9</td>
<td>857,6</td>
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<td>1,3</td>
<td>2,3</td>
<td>2,6</td>
<td>6,5</td>
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<tr>
<td>Total EE</td>
<td>322,7</td>
<td>567,3</td>
<td>974,6</td>
<td>1 247,5</td>
<td>3 112,2</td>
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</tbody>
</table>

**Objective:** Energy Saving of 3 Mtoe with 50% in Industry
Better mobilizing the CHP potential: regulatory framework, awareness of industries...

Explore new solutions for EE in the industry:
- Measures focusing on Utilities, Process optimization,
- Best available technologies...

Strengthen and improve the EE services for customers:
- Coaching
- Guarantee of results

Establish bottom up Energy Efficiency Information System for Industry

Promote the progressive integration of EE into the overall management system of companies: ISO 50001 standard
Thanks