The design and structure of effective energy end-use policies and programs towards industrial SMEs

- Result from Task I, in IEA IETS Annex XVI in co-operation with Japan and Spain.

	Industry share in energy	SME's share in energy	SME's share in economic output
Japan	46%	11% of industrial energy-related CO2 emission in 2010	48% of manufacturing shipments in 2006
Sweden	38%	25% of industrial energy use in 2010	37% of manufacturing value added in 2011
Spain	27%	N.a.	N.a.
Belgium	35%	11% of industrial energy use in 2010	40% of manufacturing value added in 2010

Please note that share of industrial energy use might not be representative, as in 2010, industry still suffered from the global financial crisis. Moreover, 2010 was an exceptional cold year in Europe with a higher energy use for heating.

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Results
Informative policies

- *This study showed that informative policies formed the backbone in the various countries' energy policy mixes towards industrial SMEs.*
- *Energy audit programs towards industrial SMEs have often been proven to be very cost-effective.*

	Medium-sized SMEs and energy-intensive industrial SMEs	Small-sized SMEs and non-energy-intensive industrial SMEs
Amount of energy used	Medium	Small
Human resource for energy management	Limited, but they usually have a couple of responsible engineers	Very limited, often without responsible personnel.
Type of technology	Production and support[3] processes	Mainly support processes

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Results
Administrative policies

- *Administrative policy instruments for medium-sized enterprises may be a sound policy but may be less effective for small-sized enterprises.*

- *In regard to administrative policies, in Belgium, Japan, Spain, and Sweden, the governmental officials conducting the enforcement of the laws, many times are not well experienced in the energy issue, leading to problems of actually enforcing/stressing adoption of BAT (Best Available Technology).*

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Results
Economic policies

- *In both the energy audit programs and the Swedish LTA, informative policies are merged with economic policies, i.e. subsidies are given if joining the program.*
- *The level of subsidy has large implications on the policy's cost-effectiveness.*
- *There is little research on adequate levels of for example how much an industrial energy audit should be subsidized.*
- *Applying for funding for industrial SMEs should in any case be extremely easy!*

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EE-policies for Medium-sized and energy-intensive industrial SMEs

1. *Energy Conservation Law/LTA/VA*
2. *Energy audit programs for industrial SMEs, preferably but not necessarily located regionally or locally*
3. *Energy networks (preferably locally or regionally anchored)*
4. *Investment subsidies mainly for investments in production-related technologies*
5. *Benchmarking*
6. *Sector guidelines*

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EE-policies for Small-sized and non-energy-intensive industrial SMEs

1. *Energy audit program (preferably locally or regionally anchored)*
2. *Energy networks (preferably locally or regionally anchored)*
3. *Investment subsidy*
4. *Benchmarking*
5. *Sector guidelines*

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Conclusions

- *Overall energy use lower than larger and energy-intensive industry => one major reason why there historically has been a scarcity of energy policies towards SMEs.*
- *High impact on GDP from SMEs, and high cost-effectiveness for EE policies for SMEs.*
- *If only viewing the availability of low-cost potentials of energy efficiency measures in the market, the deployable energy efficiency potential among SMEs might in fact be high.*
- *The goal or aim with energy end-use policies may be stated to be an attempt to improve energy end-use efficiency, but equally or perhaps more importantly support these firms in their long-term survival and success.*
- *It can also be concluded that there is a demand for guidelines or standard procedures on how to evaluate energy end-use polices for SMEs in the studied countries.*

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Thanks for your attention!

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