

# The Green Paper on Energy Efficiency



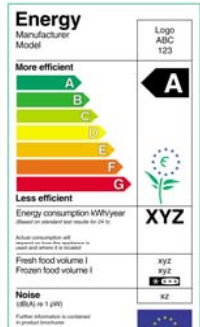
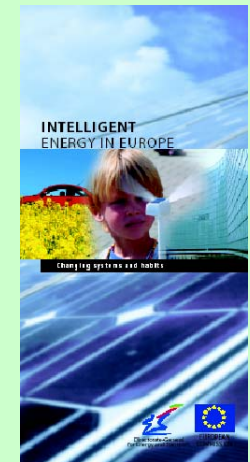
Energy	
Manufacturer	Logo
Model	ABC
	123
More efficient	
A	
B	
C	
D	
E	
F	
Less efficient	G
Energy consumption kWh/year	XYZ
Actual consumption kWh	
Fresh food volume I	XYZ
Frozen food volume I	
Noise	KZ
(dB(A) re 1 pW)	
Further information is contained	
in product literature	





# What has been done so far?

- Energy Performance of Buildings Directive
- Cogeneration Directive
- Eco-design Directive
- Proposal of a Directive on energy services and end-use efficiency
- A new programme “Intelligent Energy – Europe”
- Other measures including renewable energies

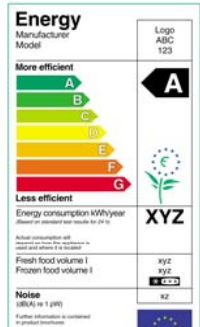




# Why publishing a green paper on energy efficiency? (1)

## The Priority dossier of the Commissioner

- An ever increasing energy consumption
  - 1 to 2% a year increase of energy consumption
  - Energy consumption could still increase by about 10% by 2020
- Broad discussion on how to curb rising energy use in EU and arrive at a reduction of 20% by 2020

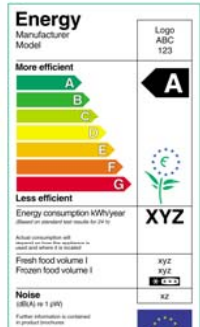




# Why publishing a green paper on energy efficiency? (2)

➤ Improve energy efficiency in EU to:

- Use energy more rationally
- Lisbon – growth & jobs
- Kyoto -climate change
- Limit avoidable pollution
- Increase our energy security position





# The energy efficiency potential (1)

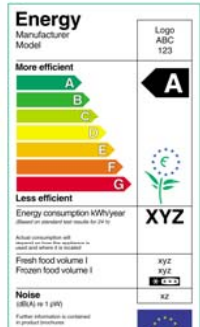
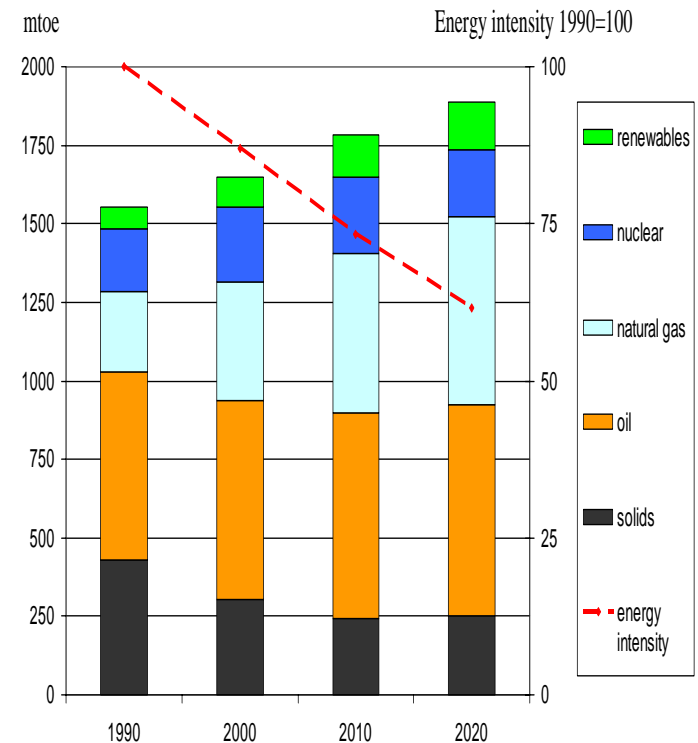
➤ A potential of 20% by 2020 compared with today consumption

- based on several scientific studies
- cost-effective

➤ Half of this potential can be realised with adopted legislations

➤ Technical potential of around 40% reduction

Total energy consumption by fuel and energy intensity

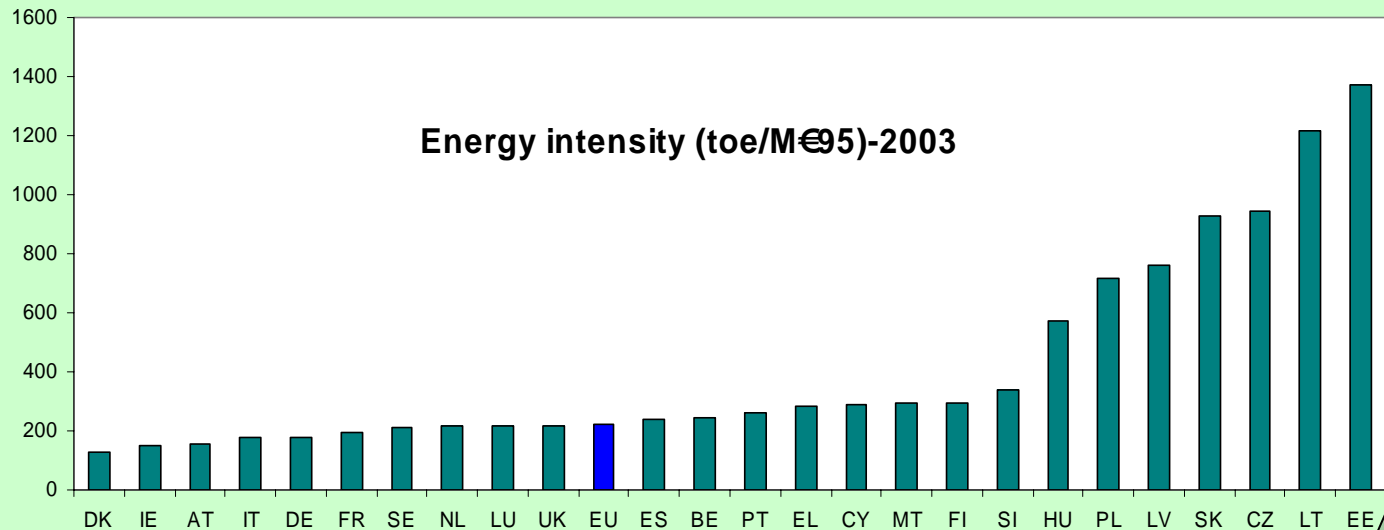
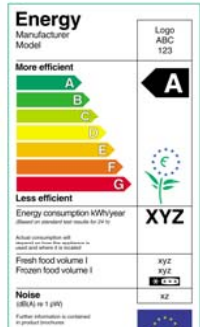




# The energy efficiency potential (2)

## ➤ EXAMPLES of possible savings

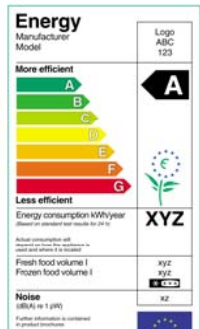
Electricity production and cogeneration	70 Mtoe
Extension of buildings Directive	30 Mtoe
Eco-design	30 Mtoe
Transport	45 Mtoe





# What are the benefits?

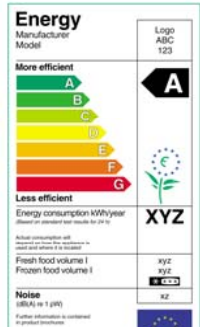
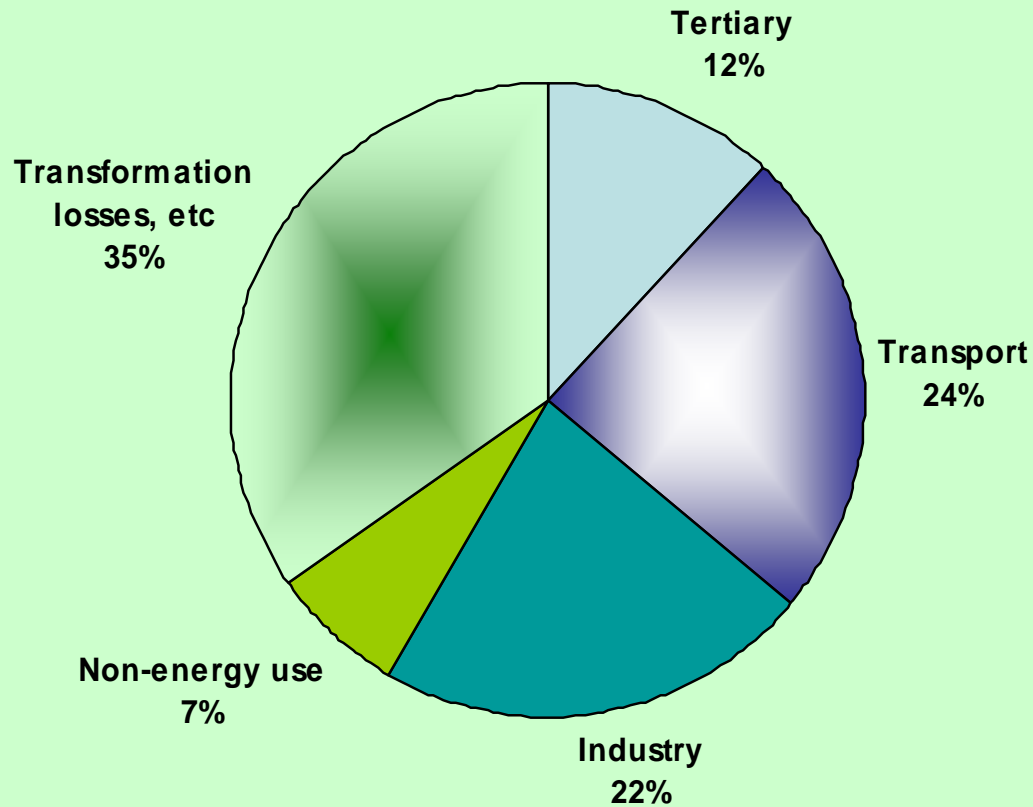
- Savings representing 60 billions €
  - 200 to 1000 €/year for an average household
- Around a million jobs could be created
- Reduce waste of scarce resources
- Strengthen the security of supply
- Strengthen our competitive position
- Gives new push to RTD





# Where energy can be saved?

Estimated gross energy consumption (1 725 Mtoe) by sector in 2005 (EU-25)







# The Negajoules concept

**Energy**

Logo ABC 123  
Model

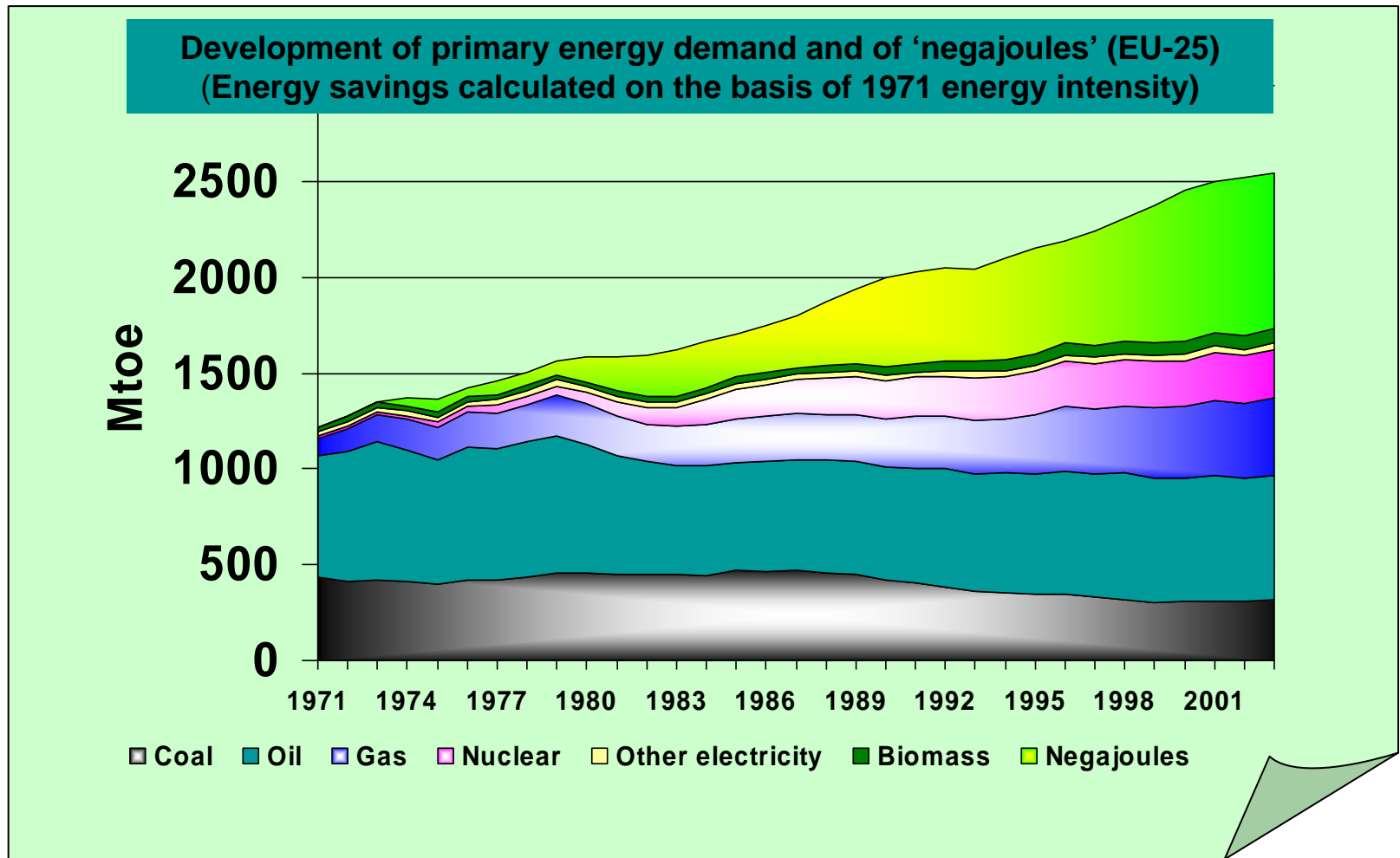
More efficient  
A  
B  
C  
D  
E  
F  
G  
Less efficient

Energy consumption kWh/year  
XYZ

Fresh food volume I  
Frozen food volume I  
XYZ  
KZ

Noise  
dB(A) re 1 pW  
KZ

Further information is contained in product literature

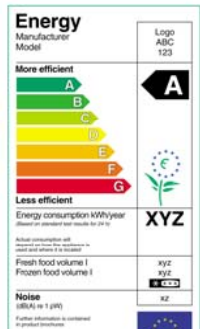




# Obstacles - Why is the potential not realised?

In theory market will achieve the best result, but...

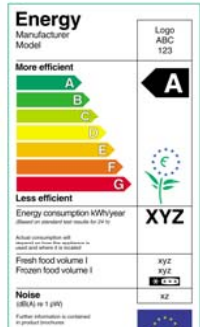
- Financial obstacles
- Insufficient regulatory action
- Lack of market for energy efficiency
- No transparent and cost-reflective prices
- Lack of information and education





# Obstacles – The financial obstacles

- Lack of information on costs and profitability
- Split-incentive
- Risk aversion
  - Address with: better and more (targeted) information
  - Global loans and right intermediaries
  - Role of Energy Service Companies (ESCO's)

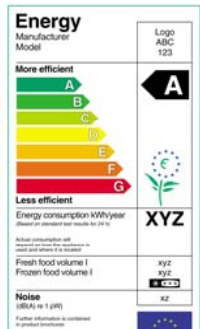




# Obstacles - The regulatory obstacles

Address with:

- Better information towards decision makers
- To create the political will and awareness
- Better use of tax and state aid
- Rationalisation of subsidies

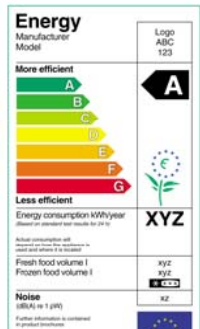




# What can be done at European level?

## ➤ Broad policy options

- Streamlining EE in all policy
- Research and Development
  - EU is in the lead
  - Need to strengthen its efforts
- Benchmarking National Action Plans
  - Good example in all Member states but not replicated elsewhere
  - Commission can act as a catalyst
  - Exchange of best practices: gathering information and pass it on





# What can be done at European level?

- Financing options
- Better use of taxation
  - Better targeted state aid
- Public procurement
- European co-financing
- Coordination of policies with the EIB, EBRD, World Bank

Energy	
More efficient	Logo ABC 123
A	A
B	
C	
D	
E	
F	
G	
Less efficient	
Energy consumption kWh/year Based on standard test cycle for energy	XYZ
Fresh food volume I Frozen food volume I	XYZ XYZ + GSD
Noise dB(A) re 1 pW	KZ

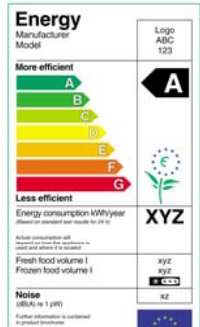




# What can be done at European level?

- **Specific option**

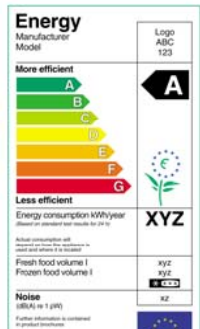
- **Extension of the Buildings Directive**
- **Domestic appliances (Minimum efficiency and labelling)**
- **Increasing fuel efficiency of vehicles**
- **Foster market transparency**
- **Information and protection of consumers**





# What can be done at National level? (1)

- White certificates : a market instrument for energy efficiency
- Electricity industry
  - Regulation of electricity networks
  - Regulation of supply activities – metering
  - Improving electricity generation







# What can be done at regional and local level?

- Many measures can be taken at regional and local levels
- Action will only produce all its potential gains if operations are reflected locally
- Creation of regional and local energy agencies (networks)
- Programme Intelligent Energy – Europe
- Specific financing instruments: clearinghouse facilities
- Information and communication



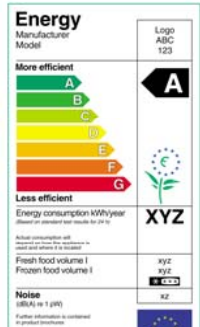
Energy	
Manufacturer Model	Logo ABC 123
More efficient	<b>A</b>
A	
B	
C	
D	
E	
F	
G	
Less efficient	
Energy consumption kWh/year	XYZ
Energy consumption kWh/year	XYZ
Fresh food volume l	XYZ
Frozen food volume l	XYZ
Noise (dB(A) re 1 pW)	XZ





# What can be done by Industry?

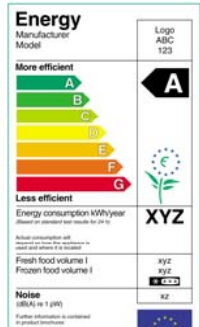
- Promote best practices and exchange of information on results of various voluntary agreements
- constructive contributions and commitment to efficiency goals, e.g. supporting voluntary agreements/code of conduct initiatives





# Corner stones: Transports

- Optimise traffic management (including air)
- Develop a market for clean vehicles
- Improvement in tyres
- Promote public transport





# The debate

- Broad discussion till 31/03/05
  - With all stakeholders including citizens
  - All options are open, all contributions welcome
- On basis of results of consultation ---  
Action Plan in 2006

More information:  
[http://europa.eu.int/comm/energy/efficiency/index\\_en.htm](http://europa.eu.int/comm/energy/efficiency/index_en.htm)

