

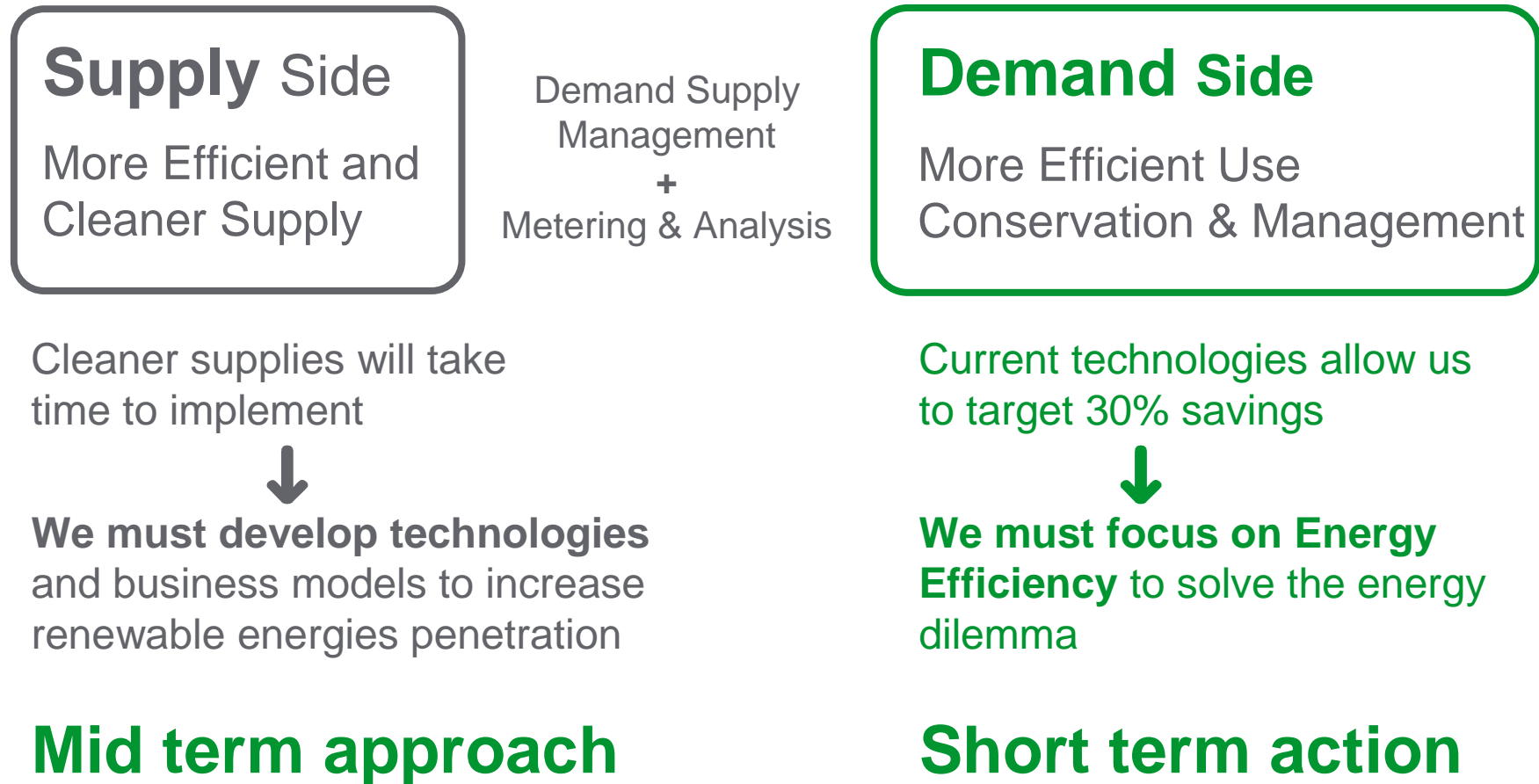
Renewable energies and Energy Efficiency : Cost & Opportunities for the Industry

Brussels

DG Competition

27 May 2008

Energy challenges & opportunities are everywhere



The end use energy consumption

- European energy end use split
(versus Worldwide split)



29%

(33%)

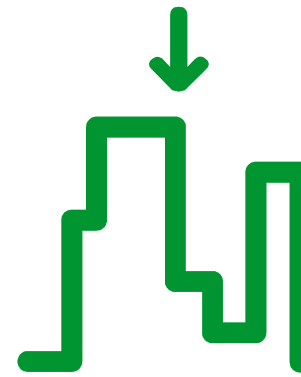
Industry (incl. Industrial building)



25%

(21%)

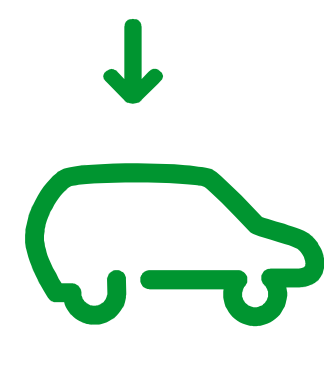
Residential



15%

(18%)

Building



31%

(28%)

Transportation

Main energy consumption is for heating, cooling, motors, lighting, electronics and appliances

European end use energy consumption

Demande énergétique finale

2002	Bâtiments (Secteur résidentiel et tertiaire)		Industrie		Transport		Demande finale par secteurs	
	Mtep	En % de la demande finale	Mtep	En % de la demande finale	Mtep	En % de la demande finale	Mtep	En % de la demande finale
Combustibles solides	12,2	1,1	38,7	3,6	0,0	0,0	50,9	4,7
Pétrole	96,8	8,9	46,9	4,3	331,5	30,6	475,2	43,9
Gaz	155,6	14,4	105,4	9,7	0,4	0,0	261,5	24,2
Électricité (dont 14 % d'énergie renouvelables)	121,3	11,2	91,2	8,4	6,0	0,6	218,5	20,2
Chaleur dérivée	22,8	2,1	7,5	0,7	0,0	0,0	30,3	2,8
Renouvelables	29,0	2,7	16,2	1,5	1,0	0,1	46,2	4,3
Total	437,8	40,4	306,0	28,3	338,9	31,3	1 082,6	100,0

Commission européenne

Comment consommer mieux avec moins – Livre vert sur l'efficacité énergétique

Luxembourg: Office des publications officielles des Communautés européennes

2005 — 45 p. — 21 x 29.7 cm

ISBN 92-894-9820-X

Energy Efficiency : it's easy, just follow the 4 sustainability steps

1 Measure

- Energy meters
- Power quality meters

2 Use efficient devices

- Low consumption devices
- Power quality
- Power reliability

3 Automate

- Building Management Systems
- Lighting Control Systems
- Motor control systems
- Home control systems
- Variable speed drives

4 Monitor

- Energy management software
- Remote monitoring systems

Lifecycle solutions for Active Energy Efficiency

Energy Audit & Measure

building, industrial process...

Fix the basics
Low consumption devices,
Insulation material

Passive
Energy Efficiency

Optimize through Automation and regulation
HVAC control,
lighting control,
variable speed drives, power factor correction...

Monitor, maintain, improve
Meters installation
Monitoring services
EE analysis software

**Active
Energy Efficiency**

**Control
Improve**

Energy Efficiency: a major growth engine

- 10% potential annual growth is achievable
 - “Electra” sizes it between 20 and 30B€ (European Market)
- Payback range from 3 to 10 years with achievable savings of 10 to 20%
 - 10 to 20% thanks to “Electra” technologies
 - or at least 30% in total
- The “cheapest” way of cutting greenhouse gas emission in particular on installed base
- Technologies are readily available
- No barriers to start now, priority on installed base

Europe must lead the pack

- A real potential differentiation
- Needs a big competitive “home” market
- EU must foster the development of specialized “clusters” covering the whole business chain : R&D, Industry, Services, Integration
- Focus on creating market growth versus “extra taxes”
- Concrete measures are proposed by ELECTRA initiative, jointly developed by EC and ORGALIME

ELECTRA key recommendations

Energy Efficiency & CO2 reduction as drivers of innovation

- R&D support and early demonstration projects
- Exemplarity of public authorities thanks to Public-Private partnerships
- Massive communication and training campaigns at EU level
- Consistent financial/tax incentives across Europe, adapted to each sector
- Reinforced regulation with minimum energy efficiency performance criteria for homes & buildings, at products and systems level
- Visible & harmonized benchmarking

Conclusion

- Opportunities greater than constraints if market growth is present and European “rules” respected by all actors
- European policies : primary focus on growth, investment in EE and Renewable sources
- Emergence of European world leaders is key
- Installed base deserves specific attention

Make the most of your energy

