



Innovation, technology and employment: energy delivering change by means of taxation

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*Alexander Wiedow
European Commission, DG Taxation and Customs Union*



Energy consumption

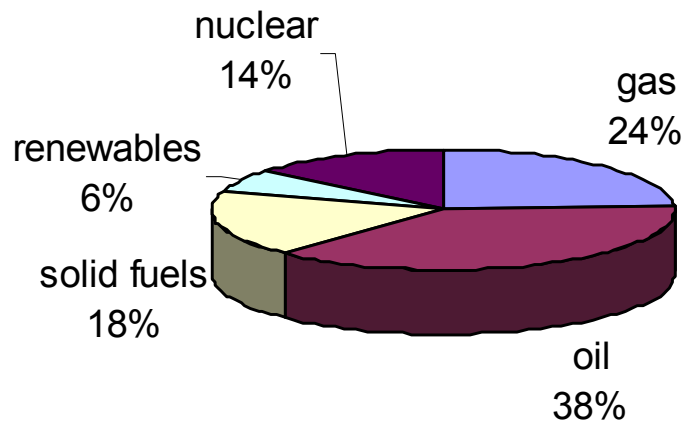
- Threats:
 - greenhouse gas emissions and pollution
 - security of supply
- Opportunities
 - innovation and growth
 - job creation
 - competitiveness
- Requirements on policies:
 - address the threats: deliver the objective of *less and cleaner energy consumption*
 - bear in mind broader economic and social objectives, explore the opportunities



Less and cleaner energy: the EU targets for 2020

- 20 % (30 %) reduction in greenhouse gas emissions
- 20 % overall share of renewable energies
- 10 % biofuels share in petrol and diesel for transport
- 20 % increase in energy efficiency
- Fair sharing of costs between sectors

EU energy mix (2004)

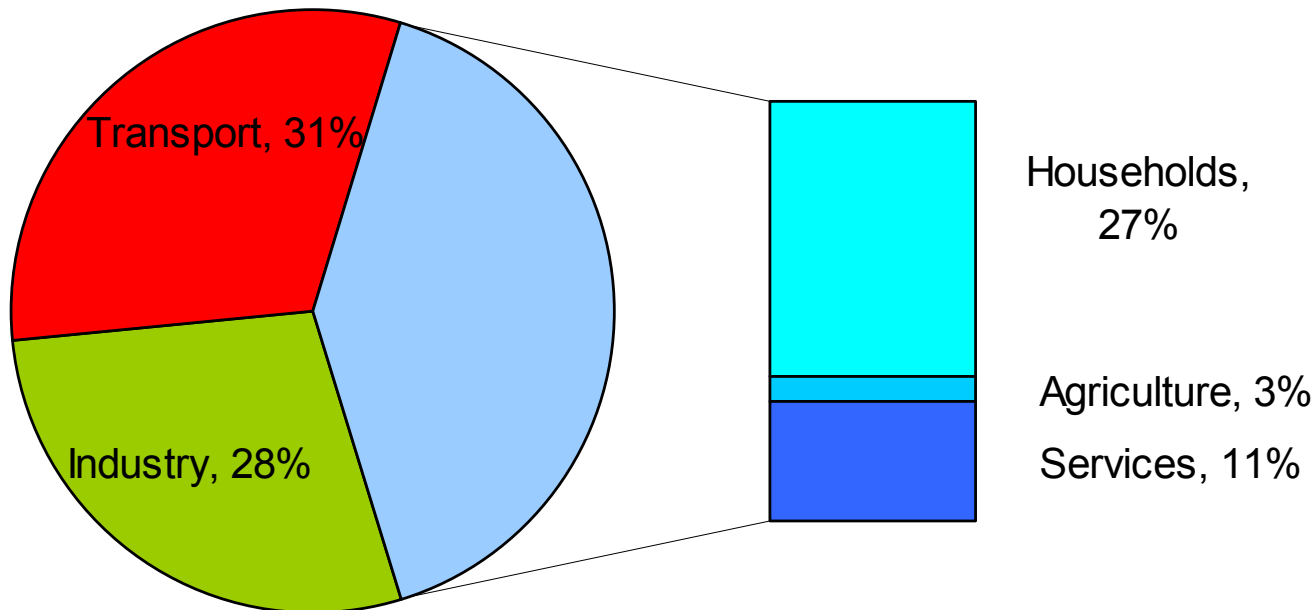


Source: European Commission



Structure of energy consumption in the EU

Energy consumption by sector, EU-27 average (2005)



Source: European Commission, Eurostat



Energy policies: the role of taxation

- Corrective taxes
 - Correct market failure (“polluter pays”)
 - Influence consumer behaviour away from polluting and scarce resources
 - *Indirectly* incentivise change in consumption/production patterns
 - Generate resources that can off-set the costs that energy policies generate for economic actors
- Direct fiscal incentives for positive behaviour
 - Subsidize market failure (“polluter is being paid not to pollute”) / correct positive externality
 - Influence consumer behaviour towards less polluting and available resources
 - *Directly* incentivise change in consumption/production patterns
 - Require financing from public resources (other taxes)
 - Administrative complexity



Less and cleaner energy: fiscal incentives

- Possible options:
 - Tax incentives for the consumer (VAT)
 - Personal income tax
 - Corporate income tax
 - Direct subsidies
- Design challenges
- Administrative complexity



Less and cleaner energy: the role of energy taxation

- Less energy: energy tax making energy more expensive (i.e. security of supply aspects)
- Cleaner energy: modulation of the tax according to environmental performance of different energy sources (since the 1990s)
- Twofold approach?
- One instrument approach? (no tax for clean energy)
 - vs. energy efficient consumption
 - vs. price stabilisation role of energy taxes



Cleaner energy: the role of energy taxation

- Cleaner energy:
 - CO₂ emissions (GHG emissions)
 - Other environmental aspects
- Cleaner energy: modulation of the tax according to CO₂ emissions
 - wide range of instruments available (e.g. emission trading); combination of instruments
 - all sectors shall contribute equally (double burden vs. no burden issue)
 - Additional environmental impact to be addressed? (renewables vs. nuclear)



Energy policy: economic impacts

- Inflation – policies reinforce the raise in energy prices
 - Tax reform to cut other costs in the economy?
- Negative competitiveness effects for businesses (only if unilateral policy)
 - Tax responses: reduced tax burden on labour (labour intensive vs. energy intensive businesses), CIT incentives for R&D, innovation
 - Direct subsidies to sectors mostly exposed to carbon leakage (vs. the overall costs of the policy for the society)
 - Other ways of addressing adverse competitiveness impacts:
 - Exclusion of certain sectors (no policy)
 - External measures: sectoral agreements, border tax adjustments (vs. WTO), addition to customs tariffs?



Energy policy: social impacts

- Private consumer = ultimate payer
- Substitutes available?
- Targeted measures to address undue burden on *low income* consumers
 - environmental tax reform, social allowances linked to heating costs? vs. reductions in energy taxes, reduced VAT rates
 - favourable tax treatment of public transport



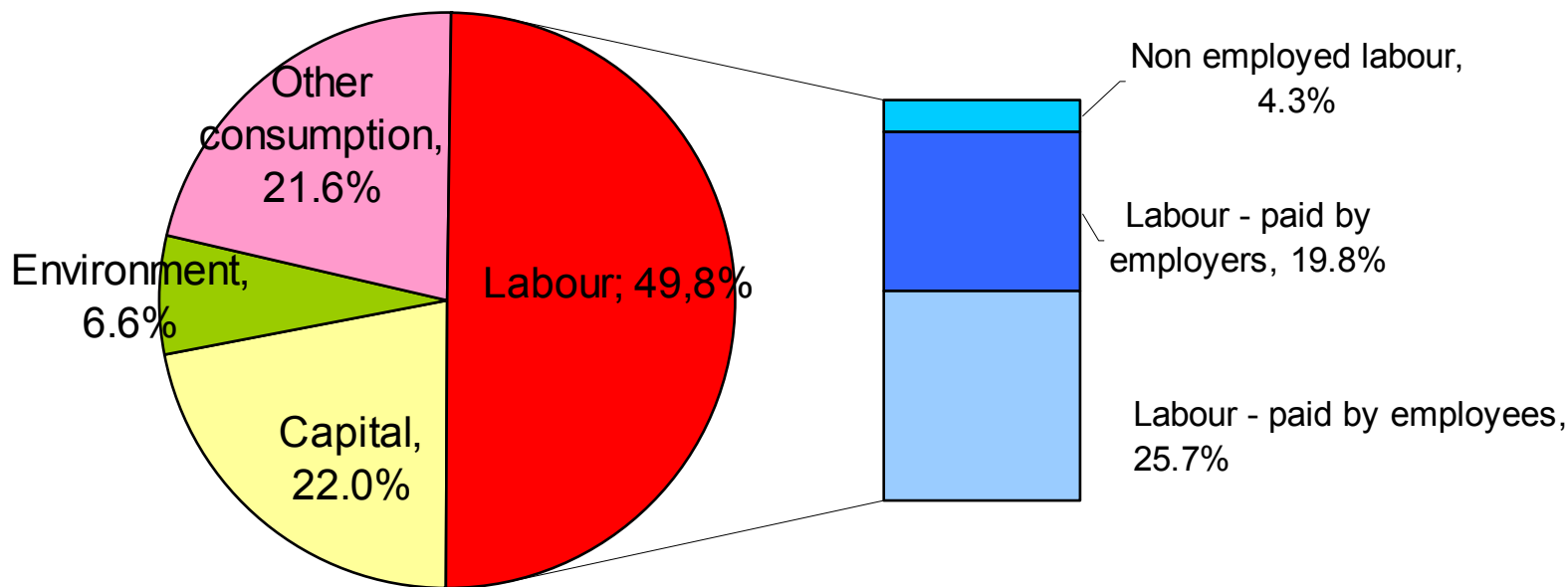
Energy: new impetus for environmental tax reform?

- Environmental tax reform (ETR) *1990s*
 - Need to reduce distortive taxes to foster growth and employment (high unemployment, low growth, high tax burden)
 - Environmental taxation (energy taxes) = alternative tax base
 - EC White Paper on Growth, Competitiveness and Employment (1993)
 - EC proposal for the CO₂/energy tax (1992)
- Environmental tax reform (ETR) *now*
 - Need to tackle growing environmental and related problems, in particular in the energy area
 - ETR = accompanying, alleviating measure (short-term competitiveness, social issues)
 - Alternatives to ETR (tax incentives, green subsidies, direct recycling of revenues to those adversely hit by the policies)



Structure of taxation in the EU

Distribution of tax burden (EU-27 average)





Thank you for your attention!

Questions?