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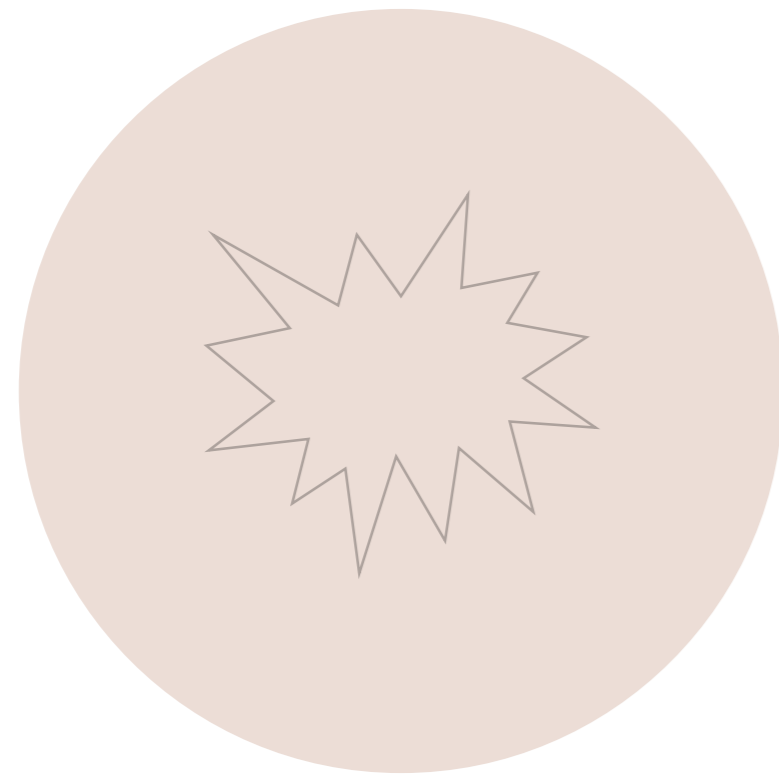
# Electrification of road transport and the future of infrastructure financing: a look at energy taxes

9<sup>th</sup> FSR Conference on the regulation of infrastructure

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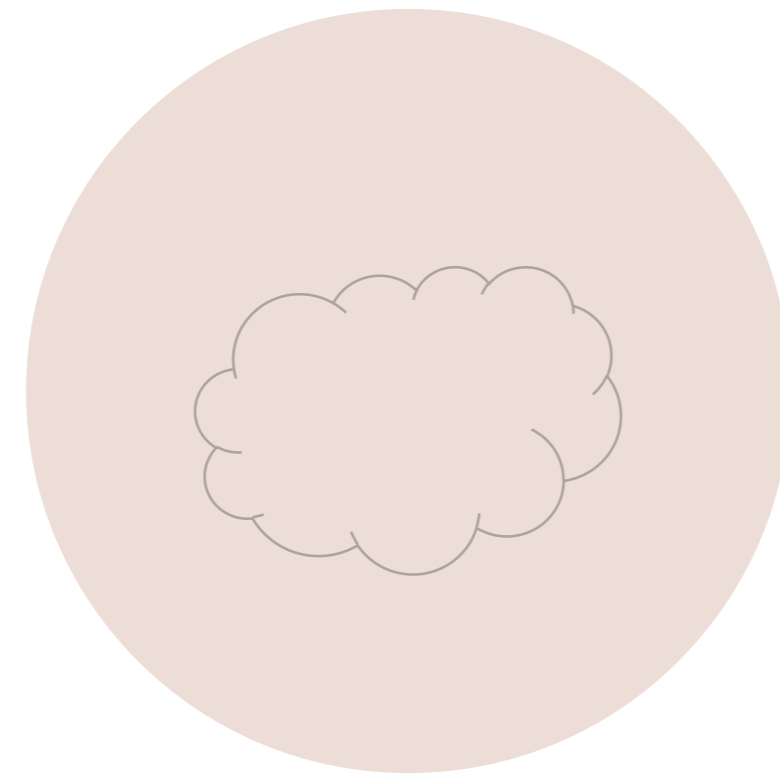


# Co-existing understandings of energy in tax law



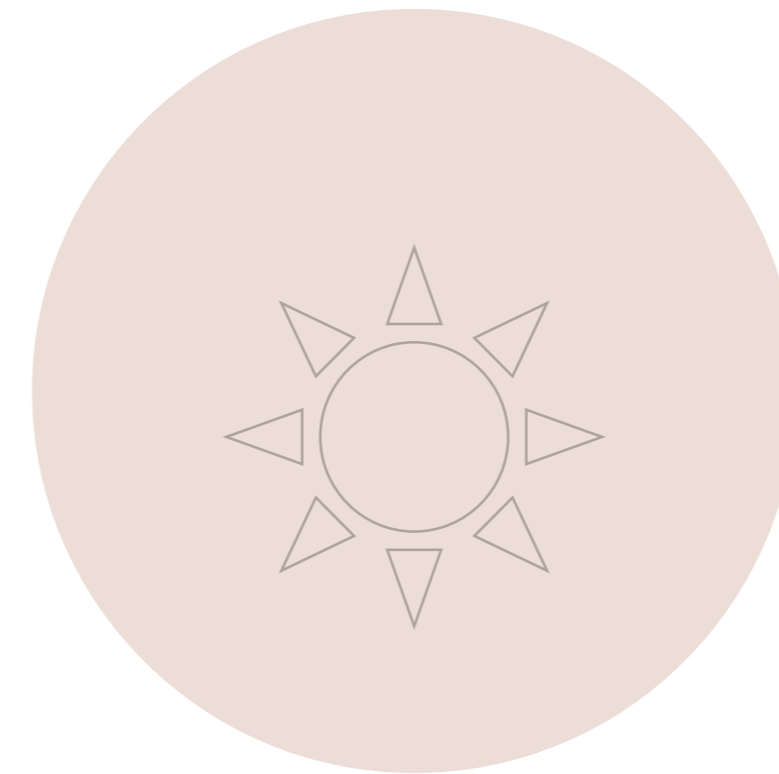
## SOURCE OF REVENUES

Justify EU harmonization  
(large source of revenues) of  
mineral oil and of then  
energy taxation



## COMMODITY

EU freedoms of circulation  
- Tax impede the free  
movement



## SOURCE OF ENVIRONMENTAL DAMAGE

Taxes as regulation



## FUEL FOR TRANSPORT

Specific rules for  
transport sector +  
infrastructure and external  
costs

# 1. SOURCE OF REVENUES & COMMODITY

## Oil

- EU Harmonisation of excise duties on energy started with oil – Directives 92/81/EC and 92/82/EC
- Rationale: needs to freely circulate
- Excise duties on mineral oil are a large source of State revenues and thus possibly create high distortions
- Tax rates were influenced by rates in Member States
- Themselves influences by a variety of concerns: raising revenues, practicability, ensuring competitive balance

Possible implications: loss of revenues, use of revenues (earmark), distribution of revenues, significant disparity of electricity tax rates between EU Member States

## Electricity

- EU harmonization by EU Directive 2003/96/EC on Energy products → later and broader scope
- Significantly lower rate, which corresponds to the historical difference between oil and electricity taxation at the level of Member States
- Economic rationale: less externalities
- Important difference in tax rates also in Belgium, but the structure is much more complex, and at the level of different entities

## 2. SOURCE OF ENVIRONMENTAL PROBLEMS

### Oil

- Long acknowledged in EU policy
- Linked to securing EU energy supply
- Pursued in different ways, notably via taxation
- Initially focus on biofuel to mitigate climate change
- Different tax rates based on environmental criteria (eg. leaded and unleaded petrol and in Belgium, low/ high sulfur)
- Proposal of carbon tax in 1992 and 2011
- Implicit CO<sub>2</sub> price: in Belgium +/- 250 euros per ton in 2015 for diesel and 150 for petrol

### Electricity

Specificity: secondary source of energy

Either tax input or output

In the Energy taxation directive, output

But recognized not to allow differentiation based on environmental performance

Possibility to add non-harmonized input tax or refund

Emission Trading System covers large electricity installations, not motor fuel supplies (now fully auctioned)

This implies carbon pricing of electricity is primarily conducted at EU level

However, deficiencies in the system including high

price volatility

Possible implications: If Member States want to ensure electricity is produced from renewable energy, interactions with the ETS need to be considered

# 3. FUEL FOR TRANSPORT

## Oil

- Dependence of the transport sector on oil
- Economic and social considerations linked to transport justified some derogations / specific treatment in terms of taxation
- Eg. historical gap between diesel and petrol; local public passenger transport, disabled people
  - But not compatible with understanding of oil as a source of environmental damage
- Internalizing external costs as a key objective of transport policy – taxes internalize externalities
- Infrastructure costs can be recouped via tax law - there is some link between fuel consumption and infrastructure costs but not directly proportional (in some countries earmark)
- Leads to a higher rate when fuel is used for transport purposes than heat

## Electricity

Historically not linked to transport in EU tax law , except carriage of goods and passengers by metro, rail, etc.

Economic and social consideration but not associated with transport

In particular, energy affordability has been a major concern of EU energy policy

In EU tax law, exemption for charitable households/ organisations

In Belgium, notions of protected clients

Possible implications: Reduction of the extent to which infrastructure costs will recouped and external costs internalised

# Conclusion

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1. If Member States want to increase charge electricity taxation in light of electricification of transport, differentiation according to the purpose may be necessary based on social and economic concerns (but practically possible ?)
2. Interaction with ETS
3. Road pricing, a solution to explore ?