



- METHODOLOGICAL ISSUES IN  
GHG CALCULATIONS IN THE EU  
RENEWABLE ENERGY  
DIRECTIVE

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# **I Attribution of emissions to consignments**

# **II GHG calculation for policy analysis: introduction**

# **III Conclusion**

# ● I Attribution of emissions to consignments: background

## Binding EU targets for 2020:

- >> 20% overall share of renewable energy
- >> 10% renewable energy in transport
- >> 6% reduction in unit GHG emissions in transport

To count towards the targets, biofuels must

- meet **sustainability criteria** including minimum GHG saving (35%, rising to 50/60%)



- *Method* for calculating emissions is laid down in the Directive (Annex V, Part C)

- *Data* for the calculation of default values come from the JEC well-to-wheel study



## The method is **attributional**

- - » Allocation approach to attributing emissions to co-products (energy allocation)
  - » Land use change taken into account “directly” (reference date: 2008)
    - Emissions divided over 20 years
  - » Fossil fuel comparator
    - Intention is to use actual average life cycle petrol + diesel emissions
    - It is not certain, however, whether these will be available under Fuel Quality Directive

Same method recommended for **biomass**

## ● II GHG calculation for policy analysis

Not the same as for consignments



● Directive suggests use of marginal approach (substitution method for co-products)

● Commission currently trying to apply this

● approach to indirect land use change



## Indirect land use change calculation –

- **methodological** issues

- » Modelling of governmental policy (e.g. the sustainability criteria)
- » Treatment of land types (recently abandoned arable land, recently deforested land)
- » What is the marginal fossil fuel comparator?

## **Data** issues

- » Armington elasticities
- » Yields in baseline and in policy scenario
- » Co-product substitution ratios
- » C stock values
- » Yields and C stocks of converted land

## ● III Conclusion

Coming back to the assigning of GHG emissions to individual consignments – how should emissions from land use change be attributed to all the products on the shelf in the supermarket? (as well as to the biofuels in the petrol sold outside)

Thank you

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