



Advanced biofuels and ILUC – is Europe up for the challenge?

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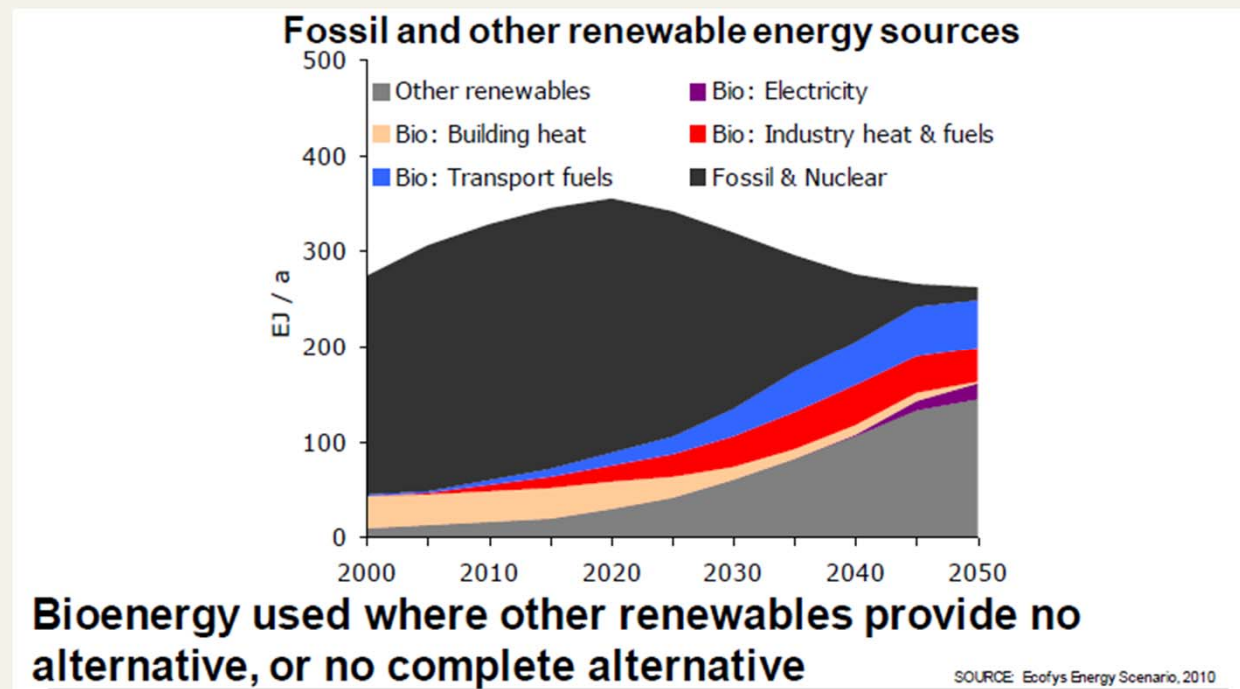


Advanced biofuels and ILUC: Is Europe up for the challenge?

1. Biofuels in our future energy system
2. Sustainability aspects of the use of agricultural residues
3. Policy recommendations

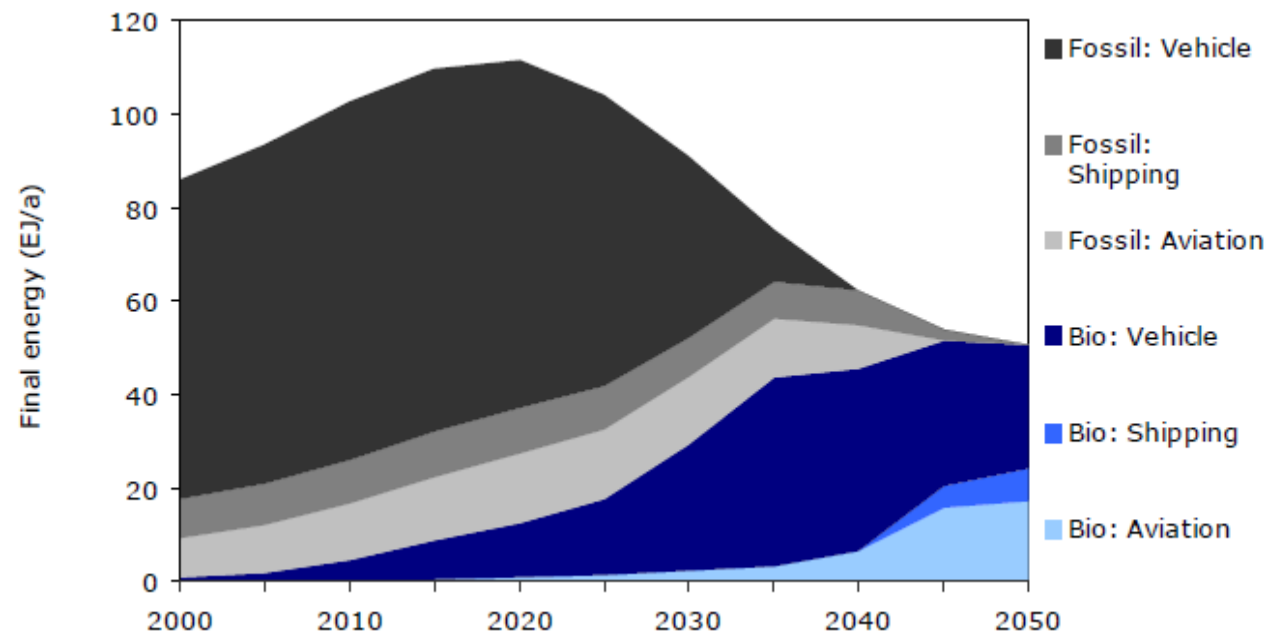


Bioenergy in WWF's 100% renewable energy vision





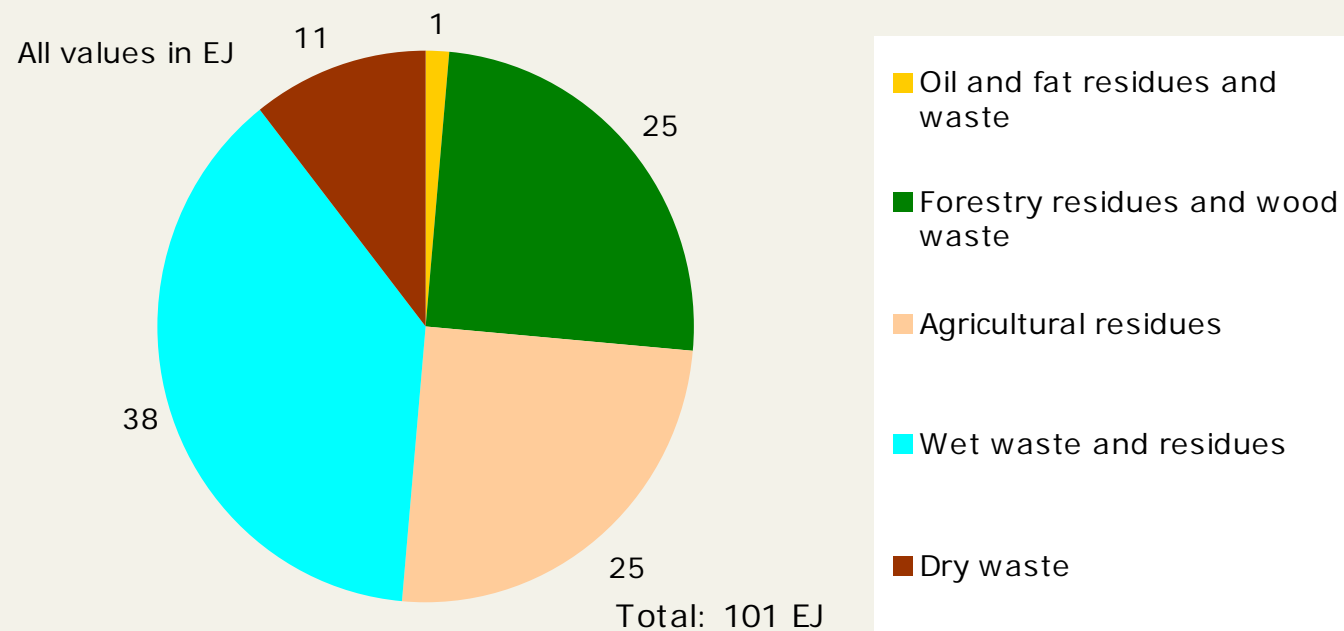
Biofuels in transport in WWF's vision





Estimated sustainable residues and waste potential in five categories in primary energy in WWF Energy vision.

WWF Energy Report, 2011





Residues use – potential pros and ?

1. No competition with food	+
2. Not causing indirect land use change	+ (impact of large scale deployment needs monitoring)
3. Potentially higher greenhouse gas emissions savings	+ (up to collection, no carbon accounting, e.g. role of soil carbon storage not clarified)
4. Other competing uses	To be assessed
5. Sustainability limits	To be assessed



Sustainability: green light for the use residues, if impacts on...

Soil organic matter

-loss of organic material which influences the humus balance of the soil.

Greenhouse gas emissions

-soil carbon changes when extracting residues, as well as emissions through the use of fertilizers and diesel caused by straw removal.

Biodiversity

-changed habitat functions like shelter, fodder source or nesting places.

Water and erosion

-reduced soil coverage may lead to a change in the humidity regulation of the soil.

...have been assessed and are low.



**Sustainability: green light for the use
residues, if impacts on...**



...have been assessed and are low.



WWFs recommendations for amendment of the proposed ILUC Directive:

1. Retain limit on food-based biofuels to 5%, and extend to FQD.
2. Introduce feedstock-based ILUC factors.
3. Add definition of suitable wastes and residues for the use of biofuels.
4. Require ex-ante evaluation of environmental impacts and indirect effects of large-scale projects to address local specifics.
5. Create an “EU roadmap” document - including sustainability limits of advanced biofuels

