T&E: 27 COUNTRIES
50 MEMBER & SUPPORT GROUPS
CURRENT EU TOOLS


A target of 10% renewable energy in transport by 2020 - to be achieved by EU Member States

Fuel Quality Directive (2009/30/EC)

A target of 6% reduction in carbon intensity of the fuel supplied in road transport in 2020 - to be achieved by EU fuel suppliers
Background

- Biofuels first came into legislation in Europe in 2003 with indicative targets.
- Replaced by binding targets in 2009:
- European Parliament mandated the EC on ILUC impact.
- A difficult fight
- To get the studies out!
- To get the proposal out!
WHAT IS ILUC?

Peter and Jane: A Short Film about Biofuels
Biofuel emissions vs. fossil fuel emissions

% of carbon emissions compared to fossil fuel (fossil fuel = 100%)

-50%  0%  50%  100%  150%  200%  250%  300%

1G Biodiesel
- Rapeseed
- Palm
- Soy
- Sunflower
- 1G Biodiesel average

1G Bioethanol
- Maize
- Wheat
- Sugar beet
- Barley
- Sugar cane
- Maize silage
- 1G Bioethanol average

Advanced
(non food-based)
- Short-rotation coppice
- Perennials
- Forest residues
- Cereal straw
- Advanced average

Source: Lifecycle analysis by Transport & Environment based on Globam study (2016)
BIODIESEL: the cure worse than the disease

Crop-based biodiesel on average 80% worse for climate than fossil diesel.
EU DRIVERS TOP CONSUMERS OF PALM OIL

The image shows a bar chart illustrating the consumption of palm oil in the EU from 2010 to 2014. The chart breaks down consumption into categories:

- **Biodiesel**: 8%, 14%, 12%, 16%, 45%
- **Electricity and heating**: 57%, 59%, 48%, 39%, 34%
- **Food**: 12%, 10%, 12%, 16%, 16%
- **Industrial use, Animal feed**: Data not shown separately

The chart indicates a significant increase in biodiesel consumption from 2010 to 2014, peaking at 45% in 2014. The chart also shows a decrease in electricity and heating consumption from 2010 to 2014. The food category shows consistent consumption levels throughout the years.

Source: FEDIOL
POLITICAL VICTORIES

1. **CAP AT 7% FOR BIOFUELS FROM FOOD CROPS** (for the 10% target only)

2. **ILUC EMISSIONS RECOGNIZED AND REPORTED** (but not accounted)

3. **POST 2020:** NO PUBLIC SUPPORT FOR FOOD-BASED BIOFUELS (Commission communication)
RED II
RED II AND TRANSPORT

**Crop-based biofuels**
Phase down from 7% to 3.8%

**Advanced biofuel**
Target of blending 6.8% of advanced fuels

**Electromobility**
Direct emissions plus land emissions

- Sunflower
- Rapeseed
- Soy
- Palm
- Wheat
- Maize
- Sugar beet
- Sugar cane
- Cereal straw
- Short-rotation coppice
- Forest residues
- Waste wood
- Used cooking oil
- Diesel

Source: RED II, ILUC directive, Gloriom, IFPRI

Transport & Environment: Transenv
EC PROPOSAL – NOT A REAL PHASE-OUT

Land-based biofuels in Europe: business as usual or phaseout?

- European Commission’s business-as-usual proposal: 4.9%
- Proper phaseout: 3.8%

2014 - 2030
BLENDING OBLIGATION – ADVANCED FUELS

[Graph showing the blending obligation for advanced fuels from 2021 to 2030, with target increases each year.]
ADVANCED BIOFUELS

DEFINITION?
- Residues.
- Waste.

SUSTAINABILITY?
- GHG savings.
- Biodiversity & soil quality.

AVAILABILITY?
- Availability at sustainable levels.
- Competing uses.
COMPETING USES

Advanced biofuels and their competing uses

- Straw
- Animal bedding
- Manure
- Heating
- Bio-chemicals
- Agricultural residues
- Bark
- Saw dust
Transport & Environment RES-T proposal

- Overall target
- Advanced biofuels, renewable electricity and RFNBO
- Sub-target for advanced biofuels, Annex IX part A
- Maximum share of biofuels from Annex IX part B

Share of energy in all road and rail transport fuels

- 1.5% in 2021
- 1.9% in 2022
- 2.2% in 2023
- 2.6% in 2024
- 2.9% in 2025
- 3.6% in 2026
- 4.4% in 2027
- 5.2% in 2028
- 6.0% in 2029
- 6.8% in 2030

Source: Transport & Environment
**RED II proposal**

- Electricity is part of overall blending mandate.
- Accounting exercise, no real incentive.
- National or EU level RES-E share used to count renewable electricity in transport.

**T&E recommendations**

1. Create space for electricity in the blending mandate.
2. Create a market for renewable transport energy (Article 25(4)).
3. Do not punish electricity for being efficient: insert a multiplier of 2.5
4. Use national share of renewable electricity.
SUMMARY

- **PHASE OUT CROP BASED BIOFUELS**
  - Bring the current proposed cap to 0% in 2030.
  - Quicker phase-out of crop biodiesel.

- **ADVANCED BIOFUELS**
  - Appropriate sustainability criteria needed for all types of biomass, including for advanced biofuels.
  - Review list of eligible feedstocks.
  - Target level should reflect availability at sustainable levels.

- **ELECTRICITY IN REDII**
  - Create space in blending obligation
  - Create a market for renewable transport energy
  - Do not punish electricity for being efficient
THANKS FOR YOUR KIND ATTENTION! 😊

veronica.aneris@transportenvironment.org
BACK UP SLIDES

veronica.aneris@transportenvironment.org
**PHASE-OUT LAND BASED BIOFUELS**

**RED II proposal**
- No specific renewables target in transport with crop biofuels.
- Decrease of cap on food & feed crops from 7% to 3.8% in 2030.
- Lower limit can be set on crop-based biodiesel.

**T&E recommendations**
1. No new national transport target in the RED.
2. Phase-out of crop-based biodiesel as soon as possible and by 2025 at the latest.
3. Phase-out all crop based biofuels completely by 2030 - 0% crop cap.
4. Ensure alternatives to crop biofuels are made sustainably.
**T&E recommendations**

1. Review the list of eligible feedstocks & remove unsustainable ones.
2. Include appropriate sustainability criteria.
3. Target level should reflect realistic sustainable availability – 2.3%.

**RED II proposal**

- Separate target in the blending obligation.
- Target focuses on quantity - quality needs to be improved.
- Weak sustainability criteria.
**ELECTRICITY**

- **Climate benefits**
  Cleanest fuel available. EVs have best WTW CO2 performance compared to conventional and other alternative fuels (DG Move, 2015).
  Electricity becoming cleaner - renewables share in electricity is growing - 28% in 2015.

- **Environmental benefits**
  Electrified transport will result in less local pollution (SOx and NOx) and less noise pollution.

- **Job creation**
  EV shift will create many jobs in the EU - Between 660,000 and 1.1 million net additional jobs could be generated by 2030 (2013 study by CE).

- **Cost & competitiveness**
  EVs are becoming mainstream - all car manufacturers are entering the race, which will further reduce the cost of ownership.
## INVESTMENTS INTO FOOD AND FEED BIOFUELS

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
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</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td>Capacity used</td>
<td>Capacity use</td>
</tr>
<tr>
<td>Biodiesel (FAME)</td>
<td>250</td>
<td>44%</td>
</tr>
<tr>
<td>Biodiesel (HVO)</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Bioethanol</td>
<td>68</td>
<td>65%</td>
</tr>
</tbody>
</table>

Source: USDA FAS

Only a few new plants since 2010

**Ecofys 2012** Grandfathering study

By 2017 95% of biodiesel plants paid back

Usual payback period is 5-10 years

HVO plants could use or are using non-food feedstocks – more flexible technology