

# Overview and Perspectives of Biodiesel across the EU

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# Outline

- European Biodiesel Board
- EU Biodiesel Industry – Market Status and Member State production growth
- Important Drivers
  - Standards
  - European Legislation
  - Enhanced Security
- Perspectives
- Conclusions



# The European Biodiesel Board

- The European Biodiesel Board (EBB) represents 75 members from 21 European Member States accounting for nearly 80% of EU biodiesel production and nearly two thirds of the biodiesel produced worldwide.
- Deeply committed to offer a green alternative to fossil fuels in transport, EBB constantly works towards the reduction of EU energy dependency, the creation of green jobs and the protection of environment.
- EBB represents its members to the institutions of the European Union and in other international organizations
- We are constantly committed in the promotion of scientific, technological, legal and research activities.
- Our aim is to bring effective solutions to the biodiesel industry from different perspectives (economic, political, legal, institutional and technical)





# EBB

European Biodiesel Board

## EBB Members



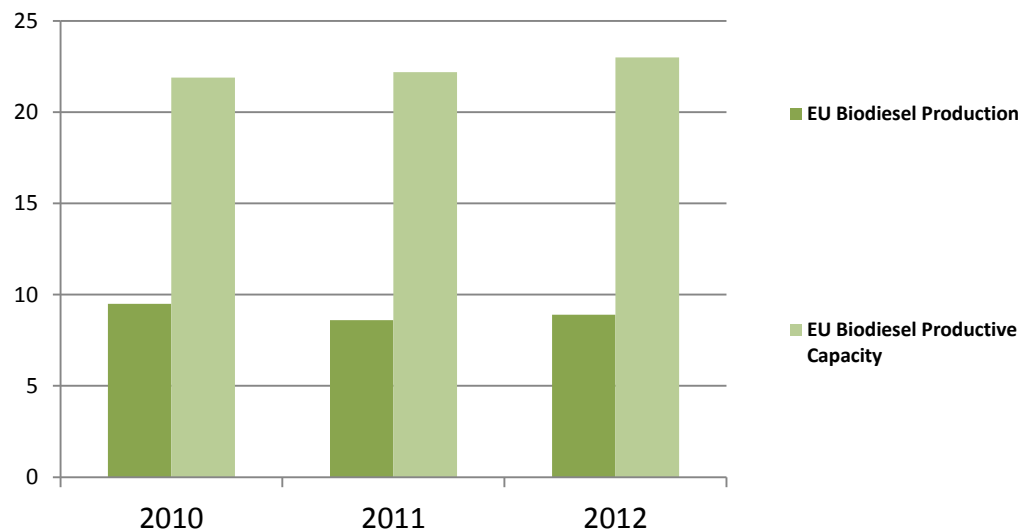
## EU Biodiesel Industry - Market Status

### EU Biodiesel Production

- 2010 → 9.5 million tonnes
- 2011 → 8.6 million tonnes
- 2012 → 8.9 million tonnes

### EU Biodiesel Productive Capacity

- 2010 → 21.9 million tonnes
- 2011 → 22.2 million tonnes
- 2012 → 23 million tonnes

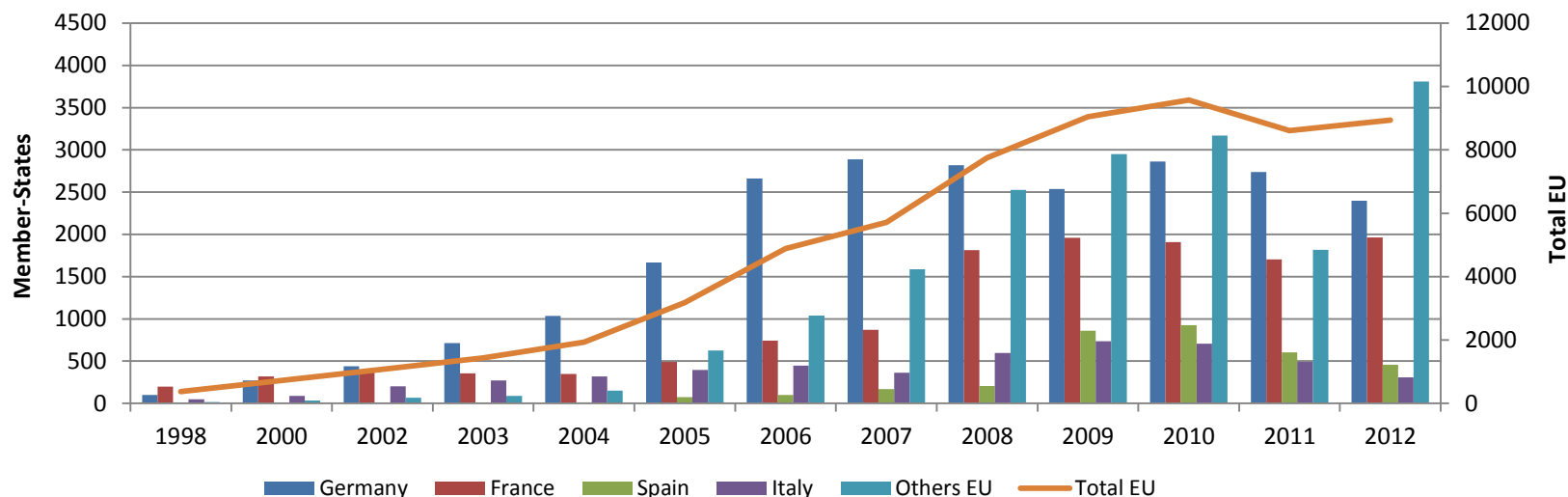


Member State Growth

# EU and Member States' Biodiesel Production

('000 tonnes) | Source: EBB

EU production (in ,000 tonnes)



Important drivers

## IMPORTANT DRIVERS



### Standards

- Fuel standard development
- Binding Specifications
- EN590
- EN14214



### EU Legislation

- RED (2009/28/EC)
- FQD (2009/30/EC)

Under discussion:

- Biofuels Policy Review
- 2030 Framework for climate and energy policies



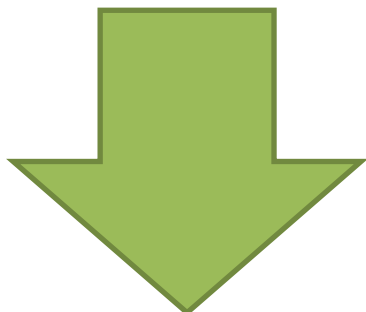
### Enhanced Security

- Diesellisation
- Security of Supplies
- Diversification of supply
- Reducing EU protein Deficit

## Underlining the Importance for Norms and Standards

Before 1995 (circa):

- No test methods
- No quality specification for biodiesel



- Everybody producing 'premium quality' on the paper
- But in reality 'bad quality'



**Consequences?**



## Underlining the Importance for Norms and Standards (II)

### Automotive failures

- didn't take long before biodiesel business and finally biodiesel fuel was blamed
- considered not suitable for diesel engines??
- biodiesel industry was down to zero!

**Significant challenge for key institutions like EBB to drive the set up of binding specifications for the whole business**



**Only by ensuring a constantly high quality, the car manufacturers agreed to the use of B100 in their cars**

## Underlining the Importance for Norms and Standards (III)

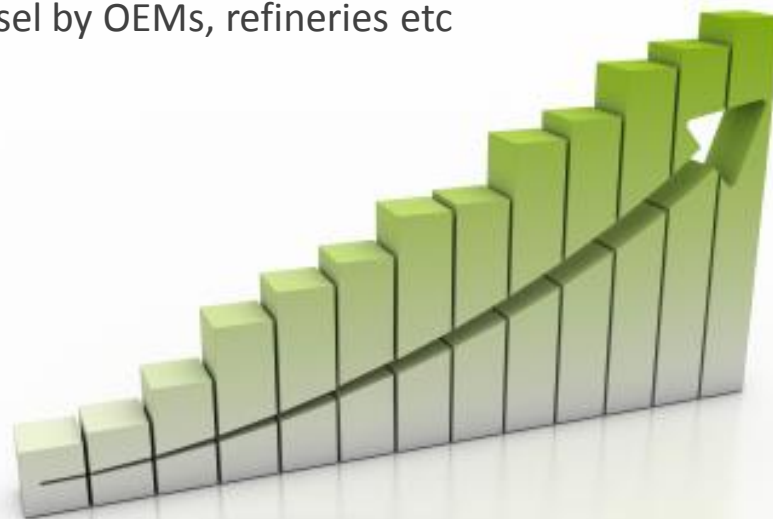
A process of evolution:

- Development of quality management handbooks
- On site laboratories for quality
- Periodical external quality control
- Important steps for the acceptance of biodiesel by OEMs, refineries etc



### Fuel Specifications

- EN590
- EN14214



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## Renewable Energy Directive 2009/28/EC

- By 2020, **20% of all energy used** in the EU has to come from renewable sources, including biomass, bioliquids and biogas. This translates into different targets for individual Member States.
- By 2020, each Member State must ensure that **10% of total road transport** fuel comes from 'renewable energy', defined to include biofuels and biogas, as well as hydrogen and electricity from 'renewable energy'.
- The biofuels sector has to respect **compulsory sustainability criteria** to ensure appropriate and certified land management (preserving primary forest, biodiverse grassland; land with high carbon stock)
- Member States must create national support schemes and respective framework conditions, which give additional benefits to renewable energy applications such as wastes, residues, non-food cellulosic material and cellulosic material (RED, Art.22).
- Double- counting provision (art. 21.2 RED)



## Fuel Quality Directive 2009/30/EC

- FQD requires a reduction of the GHG intensity of the fuels used in vehicles by up to 10% by 2020 – a Low Carbon Fuel Standard
  - ✓ **6% reduction in the greenhouse gas intensity of fuels by 2020**, with intermediate indicative targets of 2% by 2014 and 4% by 2017;
- For biofuels to count towards the GHG emission reduction targets they must **meet certain sustainability criteria** set out in the Directive to minimise the undesired impacts from their production. These include that:
  - ✓ the greenhouse gas emissions must be at least 35% lower than from the fossil fuel they replace. From 2017 this increases to 50% and from 2018 the saving must be at least 60% for new installations;
  - ✓ The raw materials for biofuels cannot be sourced from land with high biodiversity or high carbon stock. (sustainability criteria echoing those of the RED)



## Implementation Renewable Energy Directive - Ireland

- The RED should have been implemented by EU MSs by 5 December 2010.
- Due to the complexity of the Directive certain MSs failed to fully transpose it.
- On 23 January 2014 The European Commission referred Ireland to the Court of Justice of the European Union for failing to fully transpose the Renewable Energy Directive.
- The Commission proposes a daily penalty of EUR 25,447.50. In case of an affirmative judgement of the Court, the daily penalty is to be paid from the date of the judgment until the transposition is completed.
- Ireland has already adopted a considerable amount of legislation required by the Directive. However, some provisions still remain to be transposed into national law. **In particular, these provisions relate to the national 10% target for renewables in transport and to sustainability criteria for biofuels and bioliquids.**





## Biofuels Policy Review: ILUC proposal

### Indirect Land Use Change (ILUC):

- The European Commission is currently considering amending its biofuel policy. The current policy, adopted in 2009, calls for 10% transportation renewable energy target (by energy content) by calendar year 2020. Among the options currently being considered is a cap for biofuels

### EUROPEAN PARLIAMENT:

#### Limitation of land-using biofuels

- 6% towards the consumption targets in 2020.

#### Advanced biofuels

- sub-target: 0,5% in 2016 and then 2,5% in 2020.
- UCOME and TME in Annex IX group B(i.e. counting-double but out of the advanced sub-target)
- Quadruple counting for algae and CCS (Carbon Capture and Storage)
- Non electricity sub-targets

**Although the EP agreed on this proposal no mandate to negotiate with the Council was granted to the Rapporteur.  
This will slow down the decision making process.**



## Biofuels Policy Review: ILUC proposal (II)

### Council of the EU – Lithuanian Proposal

#### ILUC factors

- ILUC “range” of +/- 13gCO<sub>2</sub>eq/MJ for oil crops
- ILUC reporting immediately in FQD
- ILUC free biofuels (yields increase)

#### Waste and Residues

- UCO and Animal Fats in Part B Annex IX
- UCO and Animal Fats count double towards the 10% RED targets
- Waste hierarchy

#### Targets

- **7% limitation to land-using biofuels**
- Possible statistical transfer

**MSs failed to agree on the Lithuanian proposal. With European elections approaching the directive is not likely to be approved before 2015.**



## 2030 Framework for Climate and Energy Policy

### Procedure:



- On January 22nd, the European Commission released its Communication on 2030 energy and climate framework.
- The White Paper explains the Commission views on forward policy but this document has no binding mandate.
- The Council of the EU (Member States) will discuss and vote on this communication.
- Only then, the Commission could be entitled to draft a binding legislative proposal for Energy and Climate policy.



## 2030 Framework for Climate and Energy Policy (II)

### The White Paper

The White Paper proposes as energy and climate objectives applicable beyond 2020. The targets to be reached by 2030 are:

1. A greenhouse gas emissions reduction target of **40% below** 1990 levels, to be achieved through domestic measures alone.
2. Renewable energy target at **27% percent** of energy consumption above 1990 levels, with flexibility for Member States to set national objectives. This would come with significant benefits in terms of greater reliance on indigenous energy sources and in terms of energy trade.

Although the Commission decided to include a renewable energy target after a heated internal debate, no target as regards transport has been set.



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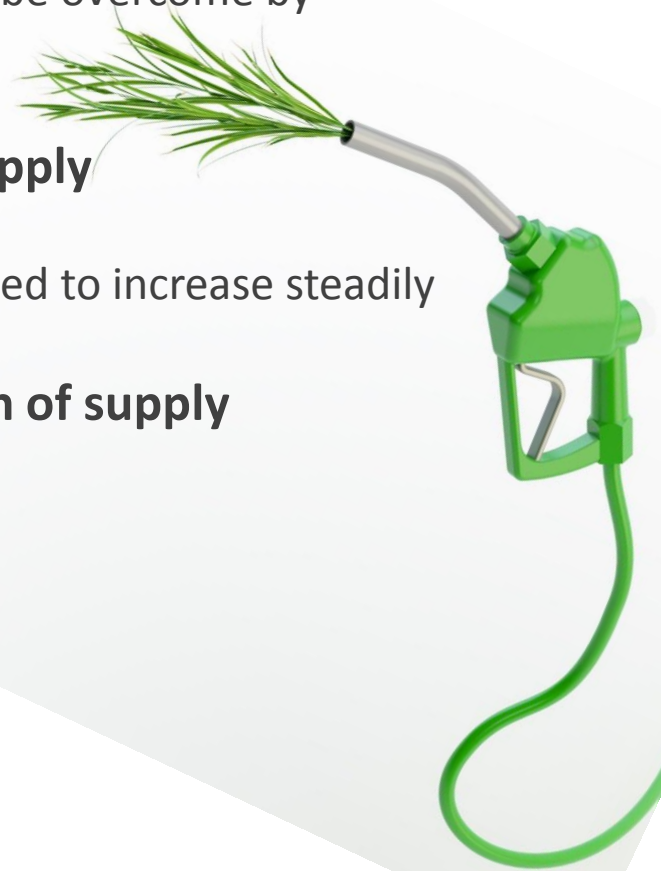


### Enhanced Security

- Dieselisation
- Security of Supplies
- Diversification of supply
- Reducing EU protein Deficit

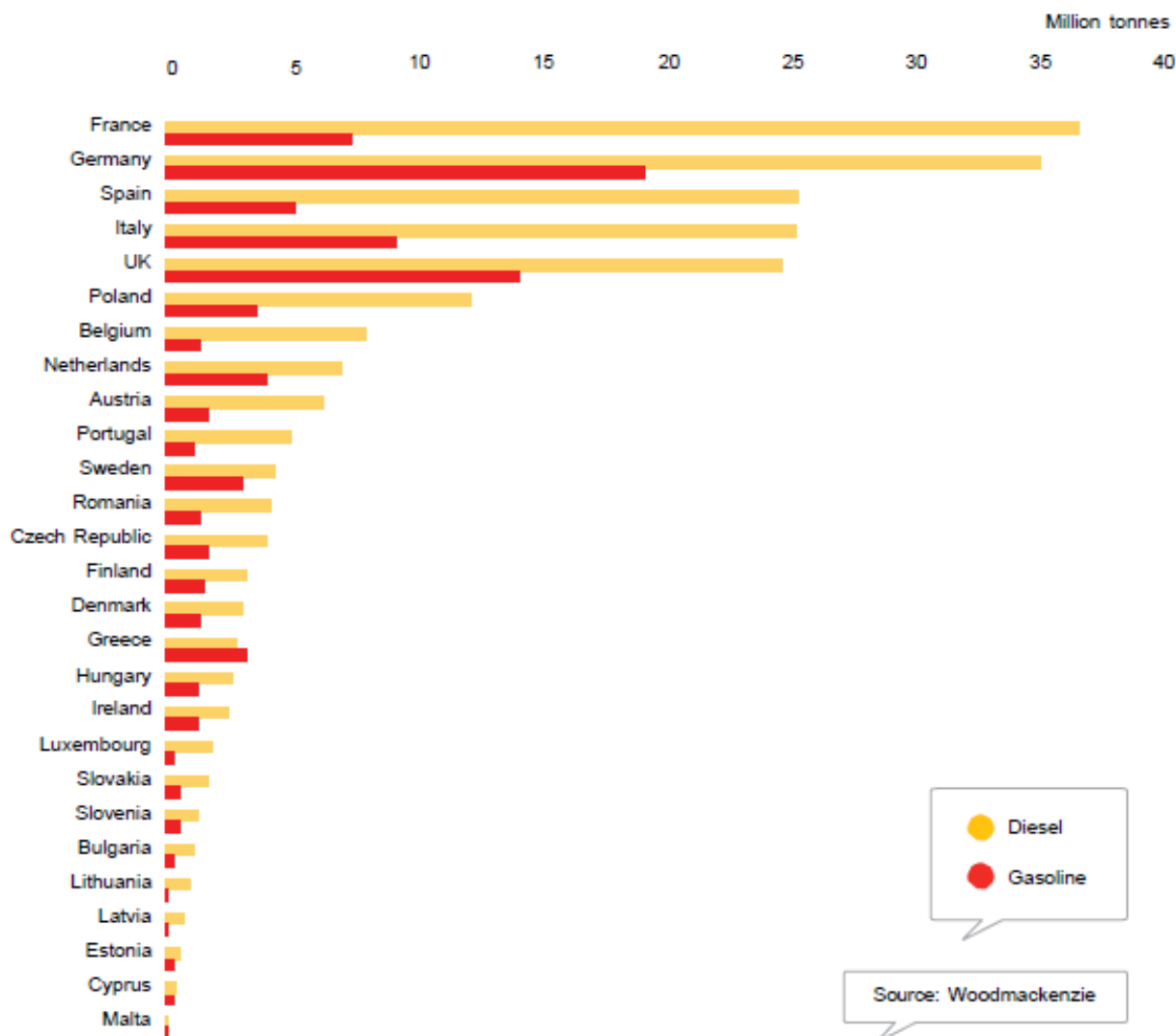
# Why does the biodiesel experience matter?

- EU energy reliance on third-country (Russia, MENA) can be overcome by alternative fuels
  - **enhancing security of supply**
- Share of diesel in the overall transport modes is forecasted to increase steadily
  - **permitting diversification of supply**





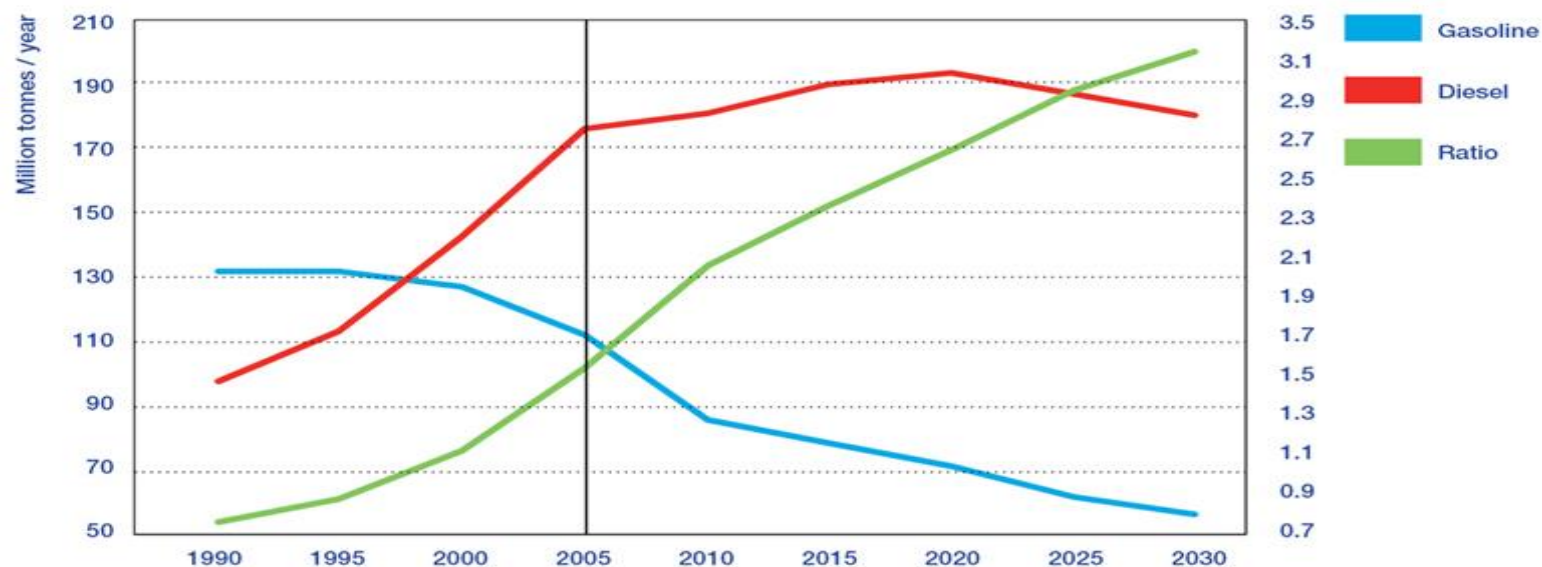
## Dieselisation - Road fuel demand by country 2012



## Biodiesel contributes to lower the EU Diesel Deficit and soaring diesel imports

### THE TAX INCENTIVIZED DIESELISATION TREND IS SET TO CONTINUE WITHOUT A REVISION OF THE ENERGY TAXATION DIRECTIVE

Sources: Wood Mackenzie - Historical demand 1990-2005, JEC Fleet & Fuels model - Projection 2010-2030



EU currently imports >45 million tonnes of diesel

# The widening EU mineral diesel deficit: a major strategic challenge

**The EU is confronted with an enduring deficit in conventional diesel**

- Biodiesel can provide a practical and sustainable solution to this challenge
- National Action Plans forecast strong progression of biofuels and specifically biodiesel demand until 2020
- Diversification of supply
- France and Germany expected to remain major consumers of biodiesel in 2020; strong progression of Italy and UK

Energy Security



## Biodiesel recovers EU Protein Deficit

- EU imports 70% of the plant protein
- Imports increased from 9 to 12 billion Euros between 2008 and 2012
- Higher ratio of rapeseed crops in the rotation:
  - reduces soil acidification,
  - enhances disease resistance of plants,
  - controls weeds and improves pollination through greater biodiversity

### Resulting in long term improvement of crop yields and land fertility

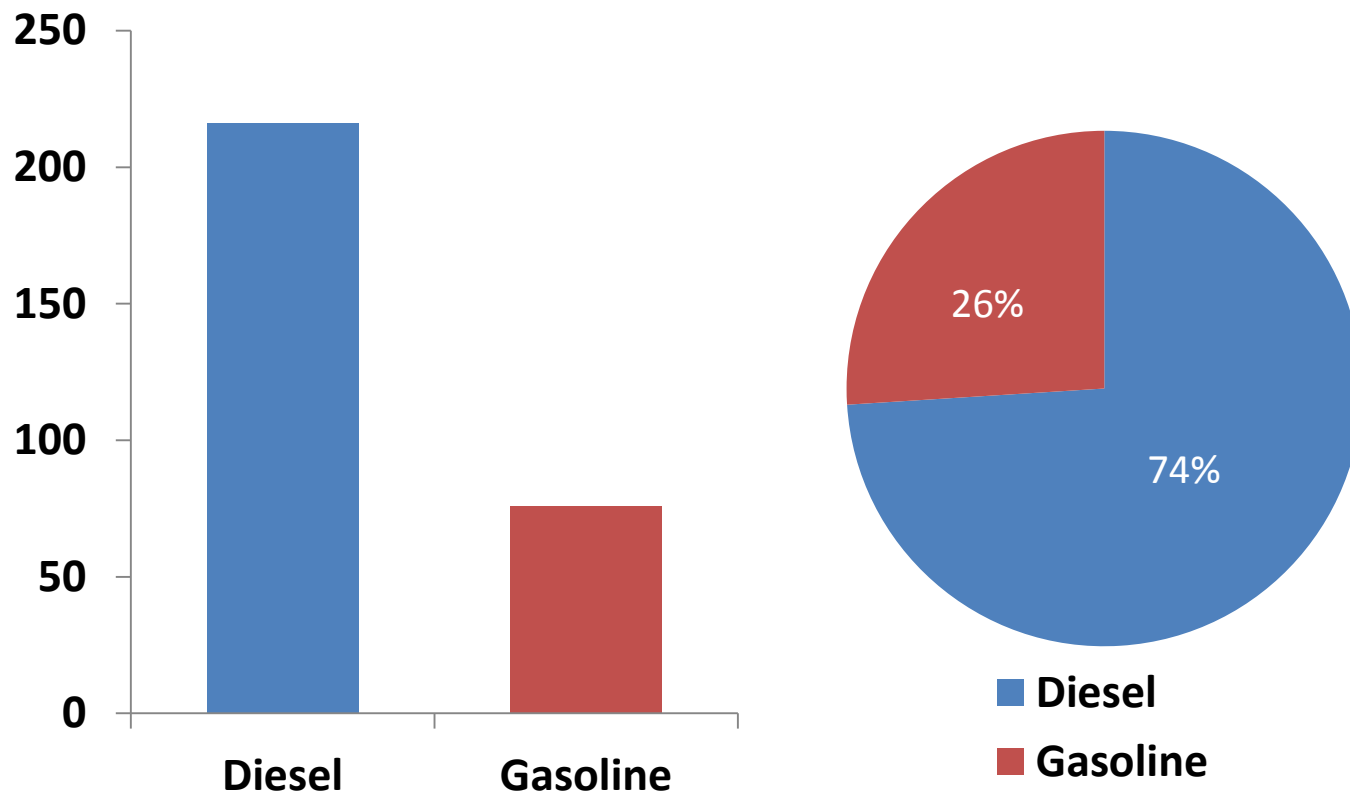
- Rapeseed utilised by the EU biodiesel industry :
  - 60% is turned into meal
  - 40% turned into oil



# Perspectives



## EU road diesel and gasoline demand 2020



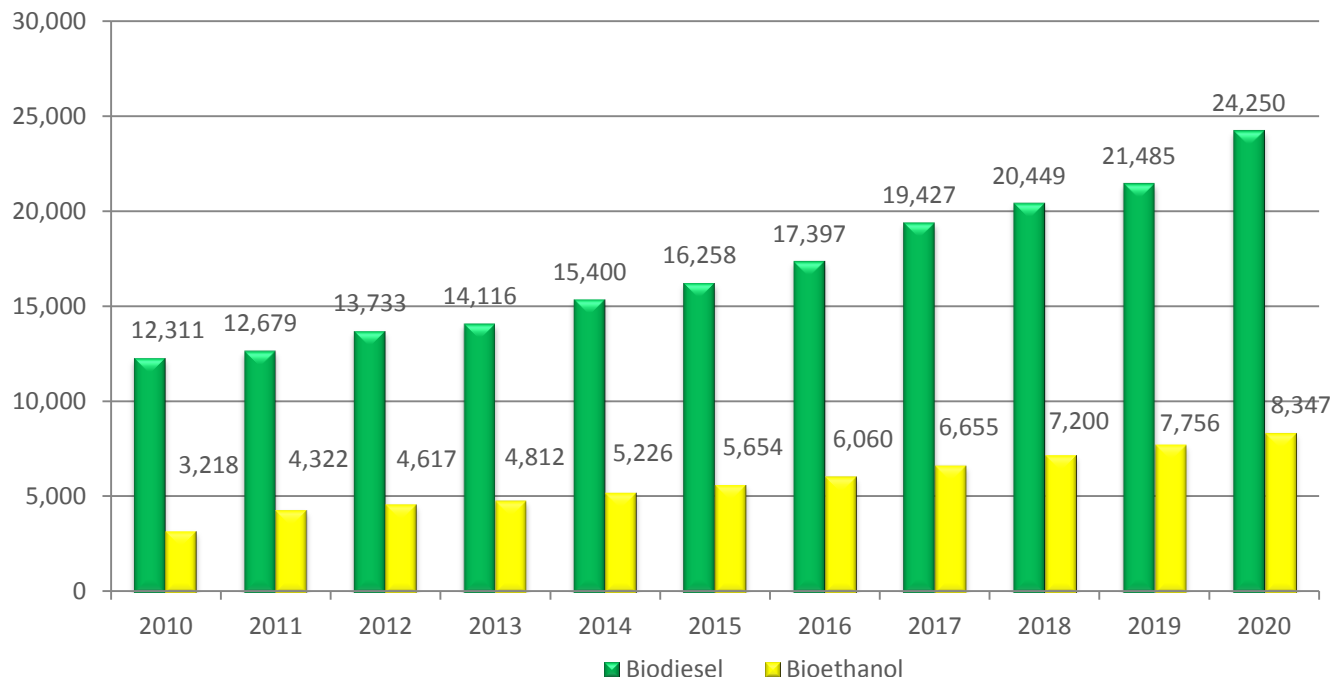
WoodMackenzie

Diesel will continue to be the biggest factor



# Biofuels Consumption Forecasts

**EU biofuels consumption forecast 2010-2020**  
(in '000 tons, based on the 27 National Action Plans)



# Perspectives

## Standardisation

- Current diesel standard (EN590) permits up to 7% (v/v) Fatty Acid Methyl Ester in diesel fuel across Europe (B7) – Blend wall
- European Commission 2006 Mandate 394 imposed the revision of EN590 to increase the concentration of FAME to 10% v/v
- After several years of working on M/394, the European Commission citing compliance issues with the Fuels Quality Directive, decided in 2013 for the establishment of a separate grade standard for 10% blend of biodiesel (FAME)
- Not ideal situation in having a separate standard but is a stepping stone in having B10 on the market and within EN590 in the future
  - B10 standard is expected in 2015 whereby Member States to have ability to increase their National biofuels obligation in helping them achieve their 2020 targets



# Perspectives

## Ireland 2020 Targets

- RED puts forward legally binding national renewable energy targets for 2020 and indicative trajectories for the Member States
- Member States are showing mixed progress towards climate and energy targets for 2020, even though the EU as a whole could reduce GHG emissions
- Renewable Energy Share (RES-E, RES-H, RES-T) Ireland, reached their indicative national trajectories for 2011–2012 outlined in the RED but did not reach the average 2011–2012 level from their expected national NREAP trajectories
- In 2012 Ireland's gross final energy use represented 7.1%. Ireland's target under the EU Renewable Energy Directive is to achieve a 16% renewable energy penetration by 2020

# Perspectives

## Ireland 2020 Transport Targets

- Renewable energy in transport (RES-T) reached 2.4% in 2012, or 3.8% when weights are applied to biofuels from waste and second generation biofuels.
- Ireland's target is 10% by 2020 and still have some way to go to meet these targets
- The biofuels obligation increased to 6% in 2013 and is expected to increase over time in order to satisfy Ireland's target of 10% renewable in the transport sector by 2020.
- It must not be forgotten Transport share of energy-related CO2 emissions was 33% in 2012
- Transport sector will play a big role in Irelands ability to achieve its emissions targets
- Biodiesel provides performance benefits including higher cetane, lubricity and oxygenation, as well as reduced sulfur, air toxics, particulate matter and carbon



# Perspectives

## European Targets

- Overall the EU is on towards its target of 20 % of renewable energy consumption in 2020. The EU met its 10.8 % indicative target for 2011–2012.
- EU Member States need to double their use of renewable energy by 2020 compared to the 2005–2011 period to reach the legally binding renewable energy target
- Uncertainty on support policies in the EU provides an important downside risk, and might undermine the sector's growth potential
- Biofuels need long term policies that continue to provide predictable and reliable market and regulatory framework
- Transport emissions are increasingly damaging EU efforts to decarbonise its economy. While EU GHG emissions decreased by 17%, transport emissions increased by 36% compared to 1990.



## Conclusions

- Stable policy is needed to trigger further commercialisation
- Long term views required for future investments
- Binding legislative targets for transport fuels post 2020
- Biofuels remain major part of the solution in achieving emissions reduction, but regulatory confidence is required





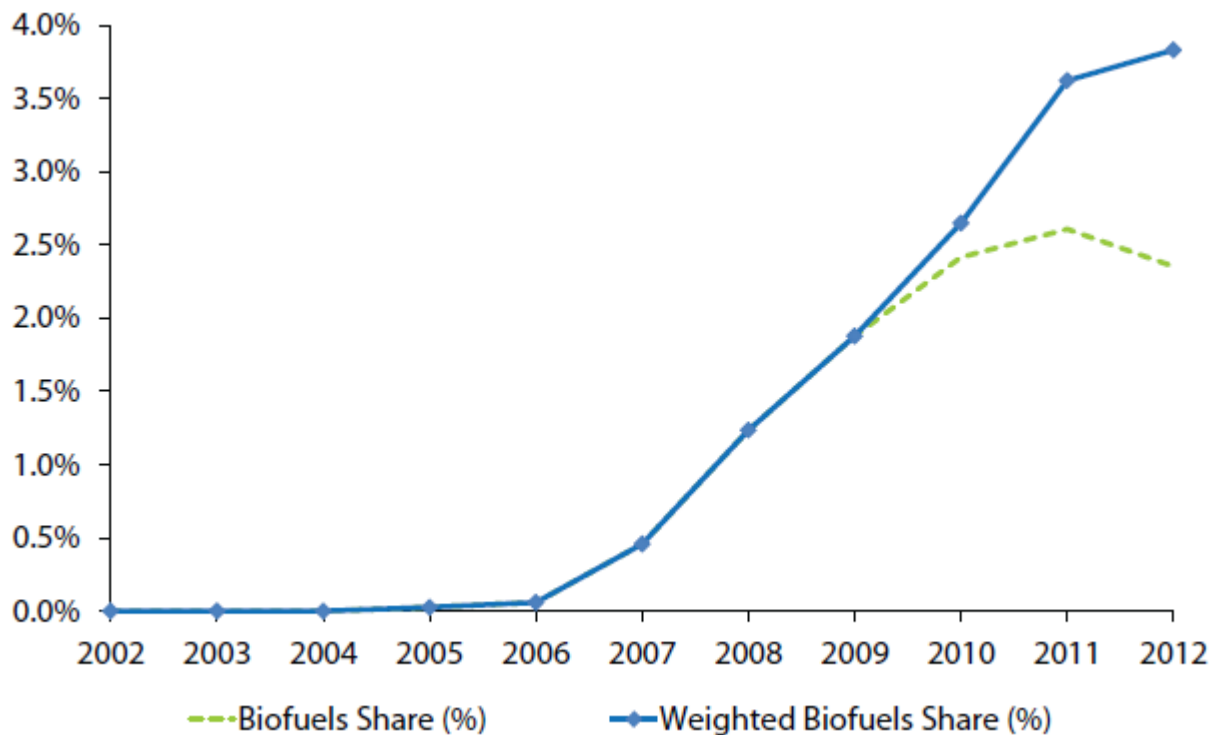
Thank you for your attention

[www.ebb-eu.org](http://www.ebb-eu.org)

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## Perspectives

### Renewable Energy as a proportion of Petrol & Diesel Transport (RES-T) 2012



Source: SEAI

## Food Security and Biofuels Policy

- The **World Bank** states that the role of biofuels in food commodity prices has been exaggerated.
- The **EU Commission** also acknowledges the minor impact of the EU biofuels policy.
- **FAO** released recently a report reducing the number of people suffering from chronic hunger by 26 million in 2011-2013 compared to 2010-2012. This is mainly due to continued growth in developing countries, increased public and private investments, leading to improved food availability