

# POTS

*2<sup>nd</sup>* INTERNATIONAL PALM OIL  
TRADE FAIR &  
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Changing Marketing Landscape - Challenges for Business Sustainability

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## **LESSONS FROM EUROPE - EU POLICIES ON RENEWABLE ENERGY AND BIOFUEL SUSTAINABILITY**

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**SESSION 3  
MARKET FUNDAMENTALS & PRICE OUTLOOK**

# Lessons from Europe - EU Policies on Renewable Energy and Biofuel Sustainability

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## Abstract

In March 2006, European Council made a request for Commission to prepare a directive for renewable energy. This request was justified by the will of European Union to 1) Combat climate change and to have better 2) security of energy supply. European Commission presented its proposal for Renewable Energy Directive in January 2008. This directive proposed a binding 20% target for renewable energy in total consumption in the EU by 2020 and a binding 10% target for the renewable energy in transport. This directive included strict sustainability criteria for biofuels with minimum GHG savings requirement compared to the fossil fuels. When coming to force, this directive will change the behaviour and fundamentals of the biofuel industry. The industry would then need to know the origin of the biofuel or biofuel feedstock and very detailed characteristics of its sustainability. This change will affect the feedstock suppliers who then would have to report on these sustainability criteria. The reporting of GHG characteristics will come as big change for the agricultural industry. The directive is currently under reviewing by European Council and Parliament. There are still many issues to be agreed upon but the main fundamentals to have sustainability criteria and GHG-savings minimum are going to stay. Biofuels and renewable energy is not the only area where these types of requirements will occur. The EU Commission has already said that they are going to make similar requirements for other users of the same biomass like for the food industry.

# Lessons from Europe - EU Policies on Renewable Energy and Biofuel Sustainability

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26.08.2008 POTS 2008

NESTE OIL

refining the future

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## Content of the presentation

- Background and position of our company
- EU legislation drivers
- Proposed legislation for renewable energy
- Impact on renewable energy market
- Lessons learned
- Future development in Europe

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## New Bio-To-Liquid Diesel by Neste Oil

### FLEXIBLE FEEDSTOCK



Vegetable oils and animal fats

### NExBTL PROCESS



First production unit in  
Porvoo, Finland

Worlds most advanced and cleanest biofuel in market

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## NExBTL Capacity Outlook

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1. Finland #1	170 000 tons	2007
2. Finland #2	170 000 tons	2009
3. Austria	200 000 tons	2010/11 JV with OMV, pending
4. Singapore	800 000 tons	2010/11
5. Rotterdam	800 000 tons	2011
6. Globally	Millions of tons	by 2015

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## Neste Oil Position On Biofuels

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- Technological Neutrality
  - legislation not to choose technology winners
- Feedstock Flexibility
  - EU needs sustainable feedstocks, domestic and imported
  - criteria for feedstock sustainability
  - sustainable criteria based on sound science, not to be used as trade barriers
- Performance Driven
  - legislation to set standards for outcome


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**EU Legislation**

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## Biofuels agenda has been justified by three elements in EU

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- Climate change
- Security of supply
- Domestic agriculture

**Biofuels set to gain considerable share in transportation fuels market**

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## Current EU directives on renewable energy

1. Renewable energy directive
  - Sustainability criteria for biofuels and bioenergy
  - Minimum requirement for biofuel GHG 35-60 %
2. Fuel quality directive
  - Sets 10 % GHG reduction target for oil refiners from 2010 to 2020
  - Sustainability criteria for biofuels



## Proposed Sustainability and GHG Criteria

- Only sustainable biofuels can be:
  - counted against the target
  - considered eligible for financial support
- Only one scheme for the whole EU
  - Member States must apply the criteria set in the Directive
  - Member states cannot refuse biofuels fulfilling the EU sustainability criteria



## EU Sustainability Criteria

- **Directive proposal:**
  - Avoid loss of high biodiversity land
  - Avoid loss of high carbon-stock land
  - Compliance with environmental requirements for agriculture
  - Social criteria for labor rights

**Raw material can't be used from high biodiversity area (such as rainforest) or nature protection areas**



## EU Green House Gas (GHG) Requirements

- Current directive proposal:
  - Minimum saving of 35% to 60%, compared to fossil fuel
  - Life-cycle analysis: from cultivation to final use
  - Method for calculating GHG saving
  - Land-use change is part of the life-cycle



## LCA-GHG emissions

(e.g Renewable diesel, source Neste Oil & RES-dir.draft JEC table)

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<u>Cultivation</u>	<u>Transport</u>	<u>Processing</u>	<u>Distribution</u>	<u>End use</u>
CO <sub>2</sub>	CO <sub>2</sub>	CO <sub>2</sub>	CO <sub>2</sub>	CO <sub>2</sub>
N <sub>2</sub> O	(N <sub>2</sub> O)	(N <sub>2</sub> O)	(N <sub>2</sub> O)	(N <sub>2</sub> O)
CH <sub>4</sub>	(CH <sub>4</sub> )	CH <sub>4</sub>	(CH <sub>4</sub> )	(CH <sub>4</sub> )
10 ... 50	1 ... 4	5 ... 10	(included in transport)	0 gCO <sub>2ekv</sub> /MJ

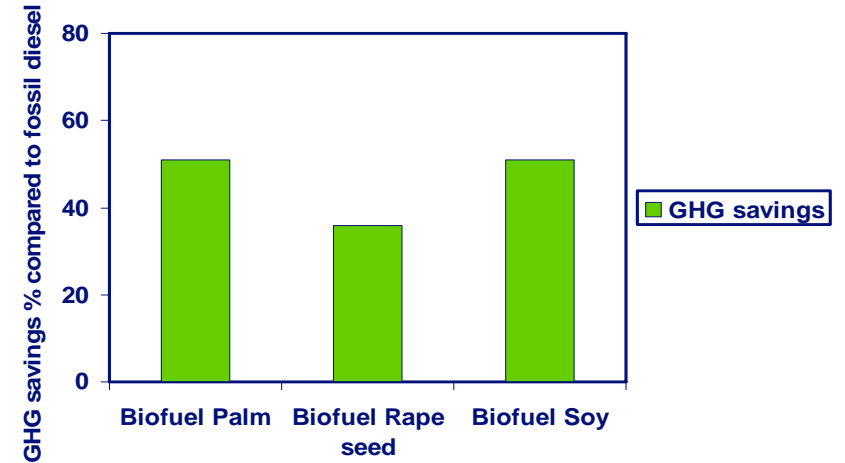


Well to wheels

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## Life Cycle Emissions of Diesel Fuels

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Source: RES Directive 23.1.2008

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## Lessons Learned - Future Requirements

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- EU Biofuel Directives will have major impact on the entire market
  - Only biofuels that fulfill the EU requirement are credited to targets and are eligible to tax reductions

### Sustainability criteria

Requirements of sustainable cultivation  
Requirements to safeguard natural habitats  
Requirements to ensure labor rights

### Green House Gas criteria

Minimum GHG reduction of 35-60%  
Well performing GHG fuels can receive additional incentives

Eligible Biofuels

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## Lessons Learned - Implementation

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- Sustainability
  - Verification will come as challenge, where the need to use relevant standard for cultivation is highlighted (e.g. RSPO)
  - Feedstock that has relevant standard will enjoy premium price in market
- GHG calculation
  - GHG data collection will be problem for whole agricultural industry (inclusion of GHG data to RSPO would solve the problem for palm oil)
  - Majority of GHG emissions are generated on the raw material production where there are vast potentials for added savings
  - Different crops have very different GHG emissions (Palm Oil has one of the best potential)

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## Lessons Learned – Advocacy in EU

- Support for domestic agriculture is strong
- NGO's are considered as experts on Sustainability issues
- Strong presence from imported feedstock to EU is required to get rational outcome (Palm oil, Soy etc.)



## Next steps in EU

- The directive will likely to be approved on 2009
- Sustainability criteria and GHG methodology will come laws in most member states around 2010
- Sustainability criteria and GHG reduction requirements are expanded to other uses of biomass (EU commission has already stated that they will include food and chemical industry in 2 years)



## Take Home Message

Sustainability and GHG data verification will be the requirements of market entry to Europe's Renewable Energy and Biofuel market. Feedstocks that are grown according to a relevant environmental standard (e.g. RSPO) and have good GHG data to provide will most likely enjoy considerable market premium over other feedstocks.



## Thank You

