The EU Framework for Biofuel and its relevance for Ukraine

EU – Delegation in Kiev,
in cooperation with
DG ENERGY, European Commission

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The EU Energy Policy – Main Goals

- **Sustainability**
  - ➢Combat climate change
- **Security**
  - ➢Security of energy supply
- **Competitiveness**
  - ➢Green jobs and innovation

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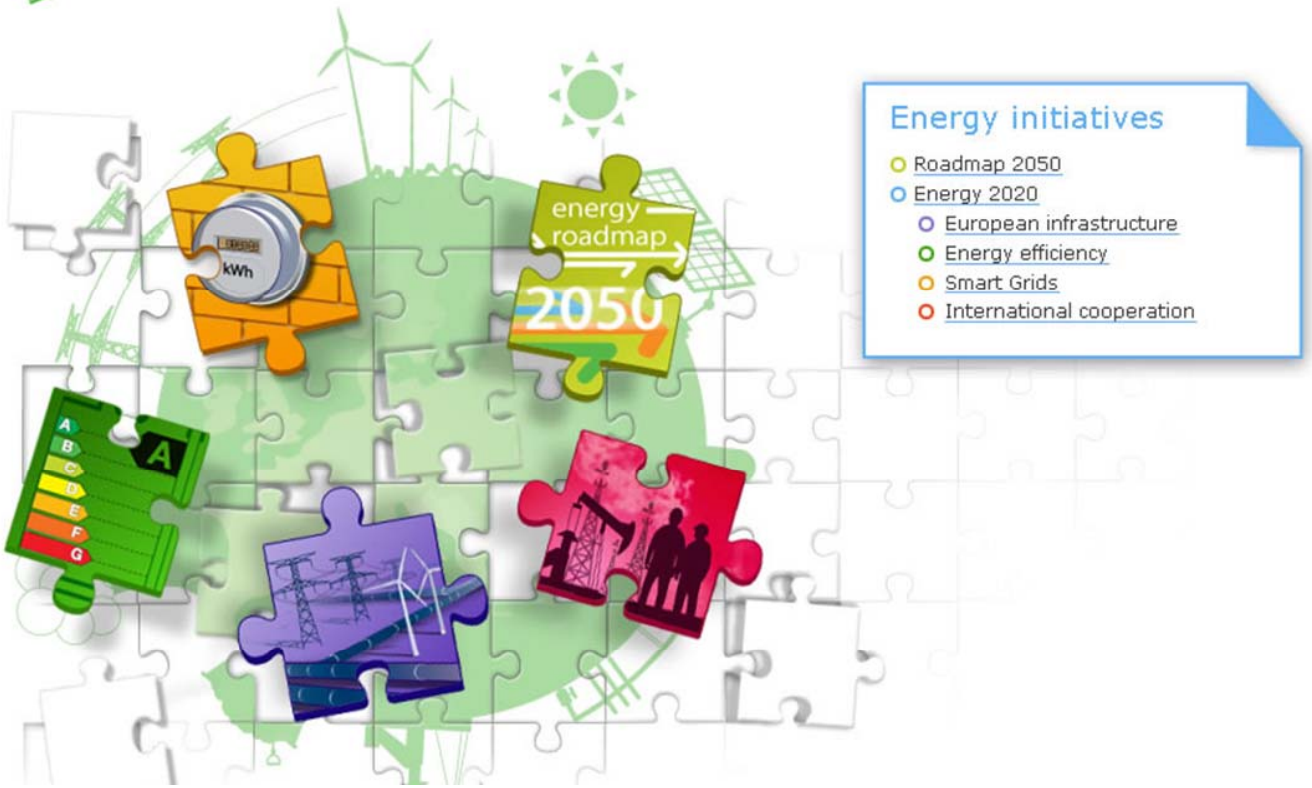
The European Union Strategy Documents

A strategy for competitive, sustainable and secure energy

The Communication "Energy 2020 - A strategy for competitive, sustainable and secure energy" calls for action in areas where new challenges are emerging. These areas are energy efficiency, infrastructure, choice and security for consumers, energy technology and the external dimension of the internal energy market.



Energy initiatives

- Roadmap 2050
- Energy 2020
  - European infrastructure
  - Energy efficiency
  - Smart Grids
  - International cooperation

Energy

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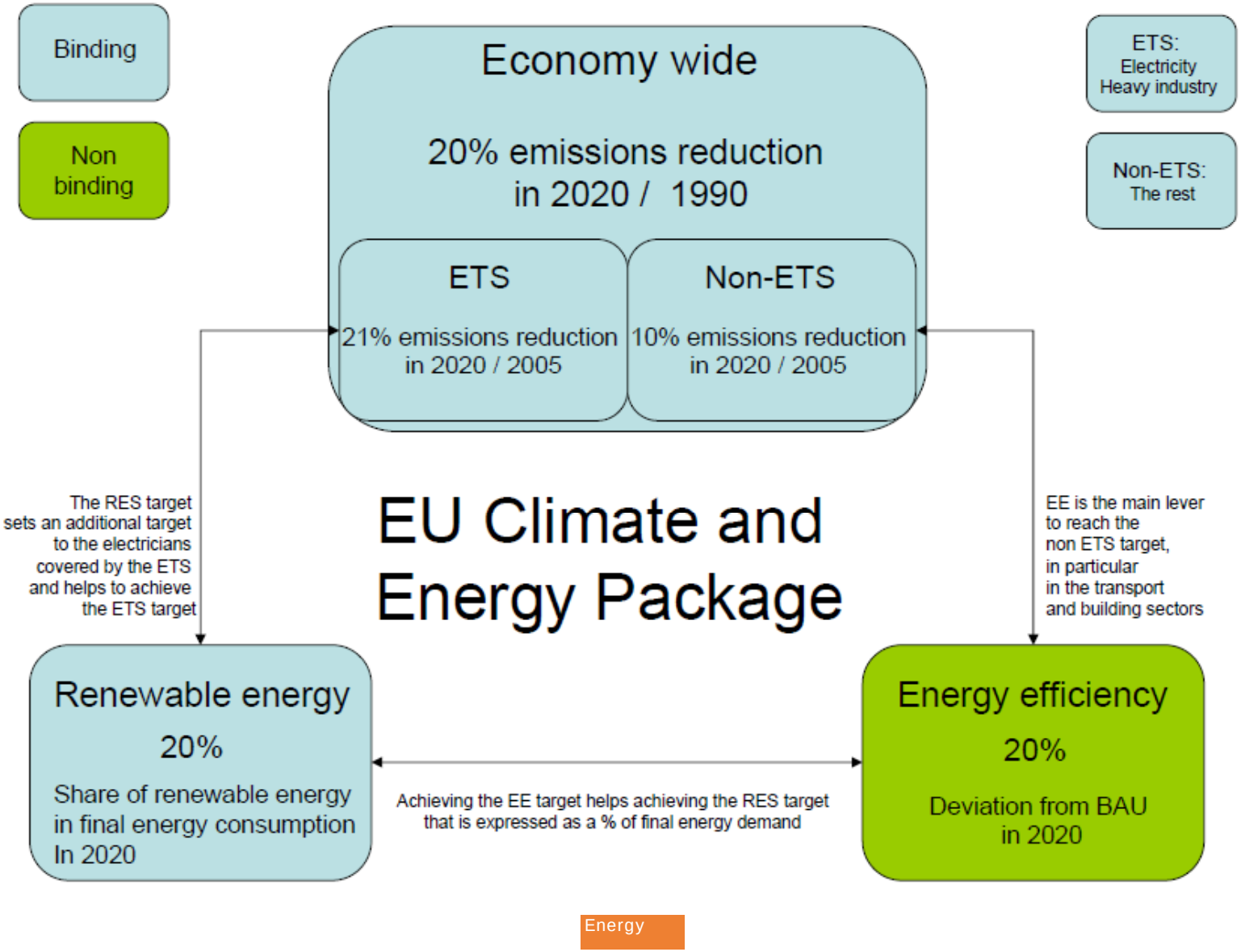

Energy Efficiency!

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EU policy framework: The Renewable Energy Directive

- *Main policy framework for the development of the RE in Europe. Published 23rd April, 2009; ref: 2009/28/EC*
- *Amends and repeals the 2001/77/EC and 2003/30/EC*
- *Electricity, Heating and Cooling, Transport*
- *Main features:*
  - **Binding target of 20%** for renewable energy's share of energy consumption in the EU by 2020 and establishes national overall targets for each Member State
  - **Binding 10% target** for the share of renewable energy in **transport** in each EU MS
  - EU countries must develop national action plans to meet their targets and set specific objectives for electricity, heating and cooling and biofuels.

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EU Renewable Energy Directive

NB! Definitions are differently used in different countries outside the EU

Energy from renewable sources: energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases (for example, no peat)

Biofuels: liquid or gaseous fuel for transport produced from biomass

Bioliquids: liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass

Biomass: the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and *municipal waste*

The case of biofuel

What the EU Directives call for?

- At least 35 % GHG emissions reduction to be taken into account
- From 1 January 2017, 50 %
- Produced using raw materials coming from outside or within the Community
- Not to be produced using raw materials from land with high biodiversity value or with high carbon stock.
- Criteria of “sustainability” given in the RED
- Can benefit from financial support only if the criteria are met

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Implementation and verification of the EU sustainability criteria

- **European Commission guidance adopted in June 2010:**
  - *Communication on the practical implementation*
  - *Communication on 'voluntary schemes' and 'default values'*
  - *Decision on the calculation of land carbon stocks*
- **Documents available via** *http://ec.europa.eu/energy/renewables/biofuels/sustainability_criteria_en.htm*

- **Implementation by Member States from 5 December 2010**

Monitoring and reporting

- **31 January 2011:** *Communication Renewable Energy: Progressing towards 2020 target*
  - *Accompanying documents include also statistical data and analysis on biofuels production and imports from third countries*

- **By 31 December 2011:** reports of each EU Member State on progress in the promotion and use of energy from ***all*** renewable sources

- **Before 31 December 2012:** first biannually report of the European Commission to the European Parliament and the Council on the origin and impacts of the biofuel production in the EU and in third countries

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Commission's further work on the sustainability criteria

- **Definitions** of 'biodiverse grasslands' and 'severely degraded/heavily contaminated land'

- **Indirect land use change ('ILUC')**
  - Report December 2010:

    ILUC can reduce the GHG-benefits of using biofuels

    But considerable uncertainties and limitations associated with the modelling remains. Deadline for Impact Assessment: July 2011 (not adopted yet)

  - Spring 2012: Impact Assessment and, if appropriate, a legislative proposal for amending the Renewable Energy Directive and the Fuel Quality Directive as necessary

- **Transposition law (deadline notification 5 December 2010)**
  - Infringement procedures launched
  - Assessment ongoing

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Assessment of voluntary schemes

- **About 25 requests for recognition**
  - 7 recognised, 1 recognition process ongoing
  - Further recognition processes to follow soon
  - No new applications since August 2011
- **Updating of recognised schemes**
  - Exploring working method and procedure
- **Non-mandatory issues**
  - Exploring assessment framework

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Ukraine's role in the EU biofuels supply in 2008

Ultimate origin of feedstock for biodiesel consumed in the EU in 2008.

Expressed in volume of biodiesel (ktoe)

	Rapeseed / oil	Soybean oil	Palm oil	Sunflower oil	Tallow	RVO	Total
EU	3,233	82	14	124	212	235	**3,900**
Canada	122	18			4	6	**149**
Ukraine	252	10	0	0	0	0	**261**
USA	13	528			133		**673**
Argentina	4	238					**242**
Brazil		342					**343**
Indonesia			624				**624**
Malaysia			414				**414**
Other	111	52					**164**
Total	**3,734**	**1,269**	**1,053**	**124**	**348**	**241**	**6,770**

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Yield increases needed to avoid crop expansion in case of doubled EU demands for biofuels compared to 2008

Country	Crop	Total production in 2008	Production for EU biofuels in 2008	Average yields in 2008	Yield increases needed to avoid crop expansion if production for EU demands would double
		kt	kt	(t/ha)	%
Argentina	Soybean	46,238	1,528	2.8	3.3%
Bolivia	Sugarcane	7,009	480	43.8	6.8%
	Soybean	1,260	2	1.6	0.2%
Brazil	Sugarcane	645,300	7,226	79.3	1.1%
	Soybean	59,242	2,201	2.8	3.7%
	Oil Palm	660	2	10.0	0.3%
Ethiopia	Sugarcane	2,300	12	107	0.5%
Guatemala	Sugarcane	25,437	12	88.6	0.9%
USA	Maize	307,142	218	9.7	0.001%
	Soybean	80,749	3	2.7	4.2%
Indonesia	Oil Palm	85,000	3,394	17.0	3.8%
Malaysia	Oil Palm	83,000	3,236	21.3	2.5%
Pakistan	Sugarcane	63,920	2,096	51.5	1.3%
Peru	Sugarcane	9,396	334	136	3.6%
Ukraine	Rapeseed	2,873	831	2.1	26.5%
	Sugarbeet	13,438	334	35.6	0.1%

The case of solid biomass

Importance of solid biomass in the EU to meet the 20% target:

- **Today: 5% of final energy consumption is from bio-energy**
- **Has to double by 2020 (half of the total effort for reaching the 20% target)**

Contrary to biofuel, the RED does not include a sustainability scheme for solid biomass

A report was published to fulfill this gap: Sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling (25/02/2010)

Growing market – increase in international trade

EU framework guarantees sustainability for biomass produced in the EU – unlike some exporting countries

Main Sustainability issues:

- ***Production***
- ***Land use, land use change and forestry accounting***
- ***Life cycle greenhouse gas performance***
- ***Energy conversion efficiency***

Main conclusions and recommendations on solid biomass

Principles used to draw recommendations:

- **effectiveness in dealing with problems of sustainable biomass use,**
- **cost-efficiency in meeting the objectives and**
- **consistency with existing policies**

Conclusions:

- **No binding criteria at EU level but recommendations**
- **Same sustainability critria as in the RED**
- **LULUCF and REDD**
- **Criteria should apply only for installation > 1 MW**

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The Energy Community - Provisions on Renewable Energy

Obligations:

- **Implentation of the directives 2001/77 and 2003/30**
- **Implementation of provisions of the RED 2009/28**
  1. A renewable energy plan – assessing the available potential and opportunities to develop renewable energy sources
  2. Implement appropriate incentives to support renewable energy – such as support schemes when appropriate
  3. Framework conditions for promotion of renewable energy – the administrative procedures, regulation and codes, grid system issues, guarantees of origin for electricity, heating and cooling as well as certification of installers;
  4. Biofuels sustainability criteria – measures to be implemented to allow economic operator to show they comply with the requirements of the Directive;

Framework: Encom-SREAP.pdfs

Ukraine RE target: the result

Baseline RES Share 5.4%

- **Renewables: 3,722.6 ktoe**
- **biomass 2,691.0, normalised hydro 1,031.6**
- **GFEC: 68,377.0 ktoe – note relative scale vs. other CPs**

Flat Rate Increase 5.5%

Residual Effort Share 0.7%

- **Residual effort: 532.9 ktoe (GDP per capita index 7.9%)**
- **GDP growth 2009 → 2020: 58%, CAGR 4.2%**
- **2020 forecast GFEC: 77,760.7 ktoe (14% growth)**

Total RES Target 12%


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Thank you for your attention!
Further information:
http://ec.europa.eu/energy/renewables/biofuels/biofuels_en.htm
Energy