



- Renewable energy policy

Biomass and biofuels sustainability

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● European energy and climate policy

- ❖ Emissions trading scheme – 20% target; carbon price signal
- ❖ Electricity and gas market liberalisation
 - ❖ Unbundling, European coordination, grid planning
- ❖ Renewable energy Directive 20% target (10% in transport)
 - ❖ mandatory national targets
 - ❖ national action plans
 - ❖ reduction of administrative and regulatory barriers
 - ❖ access to the electricity grid
 - ❖ sustainability regime for biofuels
 - ❖ “cooperation mechanisms”
- ❖ Forthcoming
 - ❖ 2011-2014 Action Plan
 - ❖ Energy infrastructure package
 - ❖ 2050 decarbonisation vision

● Renewable Energy Action Plans

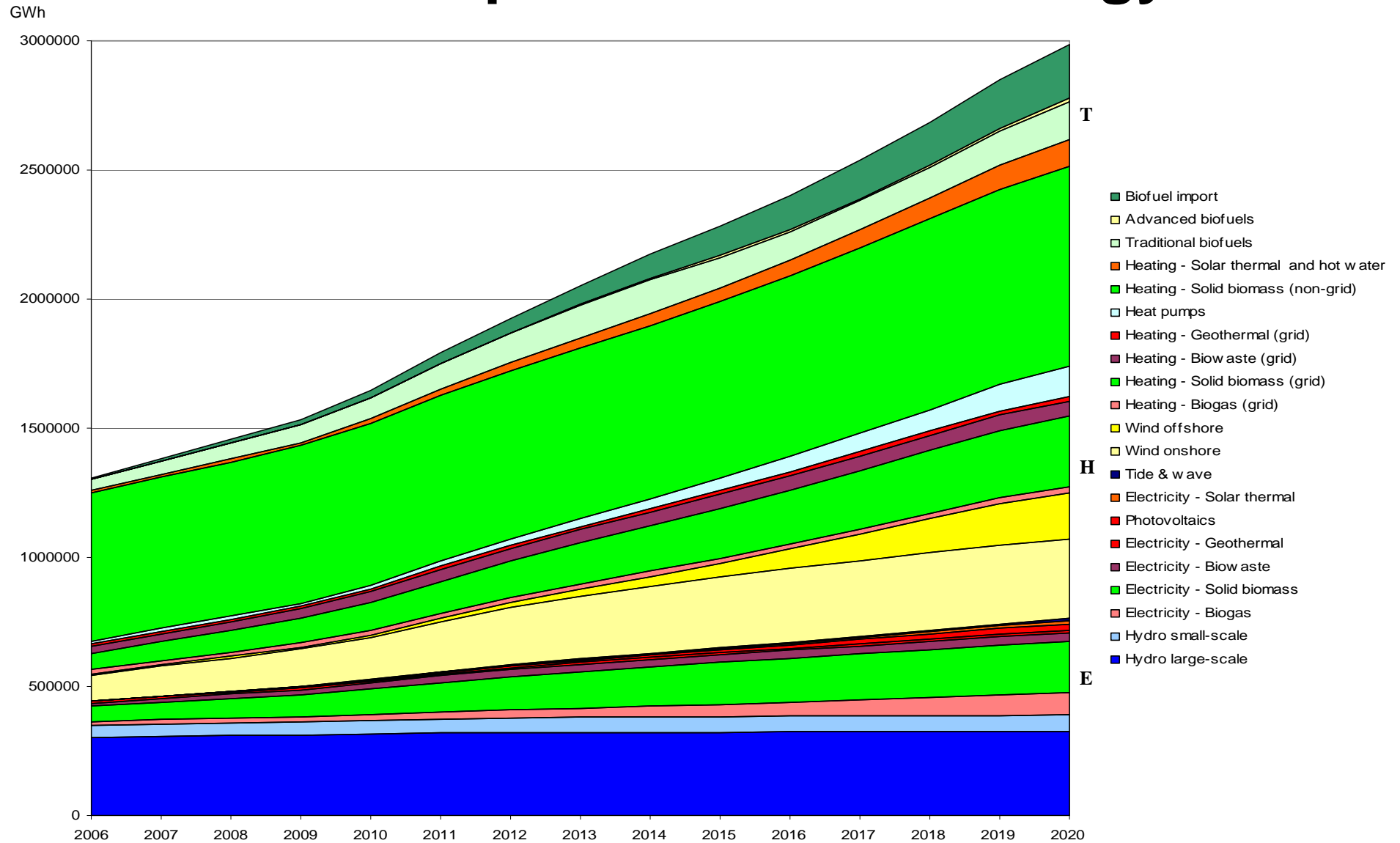
- ❖ National plans to be submitted by Member States by 30 June
 - trajectories, national sectoral targets, technology breakdown
 - national, regional and local measures to achieve the target
- ❖ Preparations facilitated by Commission template and national forecast documents

http://ec.europa.eu/energy/renewables/action_plan_template_en.htm

- ❖ Enforcement of the Directive
 - National action plans are Member States' own roadmaps
 - Deviation from the plan, failure to implement planned measures, complaints from citizens... all could trigger infringements



Plans will provide the technology mix...



● EU-wide sustainability scheme for biofuels and bioliquids

- Criteria to be met in order to count toward the Directives targets

- Minimum rate of **greenhouse gas** savings (35%, rising to 50% in 2017, and to 60% in 2018 for new installations)

- No raw material** from land with high biodiversity value (primary forest, nature protection areas, highly biodiverse grassland...)

- No conversion** of land with high carbon stock (wetlands, continuously forested areas...)

- Single EU scheme

- » Applies to both EU production and imports
 - » Member States cannot set additional criteria

● ***Coming up....***

- Guideline on calculating land carbon stocks
- Explanatory communications (i) for MS/economic operators; (ii) on voluntary schemes and default values
- Comitology decision:
 - reporting by economic operators
 - biodiverse grasslands (consultation closed 8 Feb);
 - degraded/contaminated land
- Report: extending cultivation default value restrictions to 3rd countries (Art. 19(4))
- Report: ILUC
- Counting rules for electricity and hydrogen in transport (2011)

● Biomass Sustainability Report COM(2010)11

- Required by Article 17(9) of Directive 2009/28/EC
- Adopted on 25 February 2010
 - » Report
 - » Impact Assessment SEC(2010)66
 - » Impact assessment summary SEC(2010)67
 - » Report by COWI Consortium on international schemes
 - » Report by ECORYS Consortium on energy conversion efficiency
- Available at:
http://ec.europa.eu/energy/renewables/bioenergy/sustainability_criteria_en.htm

● Sustainability - current situation

- Less than 5% solid/ gaseous biomass is imported to EU (for electricity, heating and cooling).
- Many small sized energy-producers in the EU
- EU forestry and agriculture and waste management subject to environmental rules at national/EU level
- Solid biomass/ biogas - high GHG savings 80+%, from residues/ by-products
- Increasing imports (pellets)

● **1. Impact Assessment: availability of biomass**

- EEA estimated 235 Mtoe available for EU-25 in 2020 without harming environment.
- COWI Consortium found large variability in literature
 - EEA numbers: conservative productivity assumptions, and EU-2 not covered
 - Tested other studies' assumptions vis a vis sustainability criteria i.e. land exclusion criteria + GHG criteria and calculated additional costs of achieving those criteria

● 2. Impact assessment - sustainability of production and LULUCF

- Majority of biomass comes from forest residues and by-products of other industries. Only 24% of woody biomass for energy comes from direct removals from forests and agriculture in Europe.
- MCPFE and other regional processes for SFM – in Europe increase in forest stock
- But at global level deforestation and forest degradation continues. 8% of forests certified worldwide (45% in Europe).
- LULUCF accounting - global framework making countries, not economic actors accountable

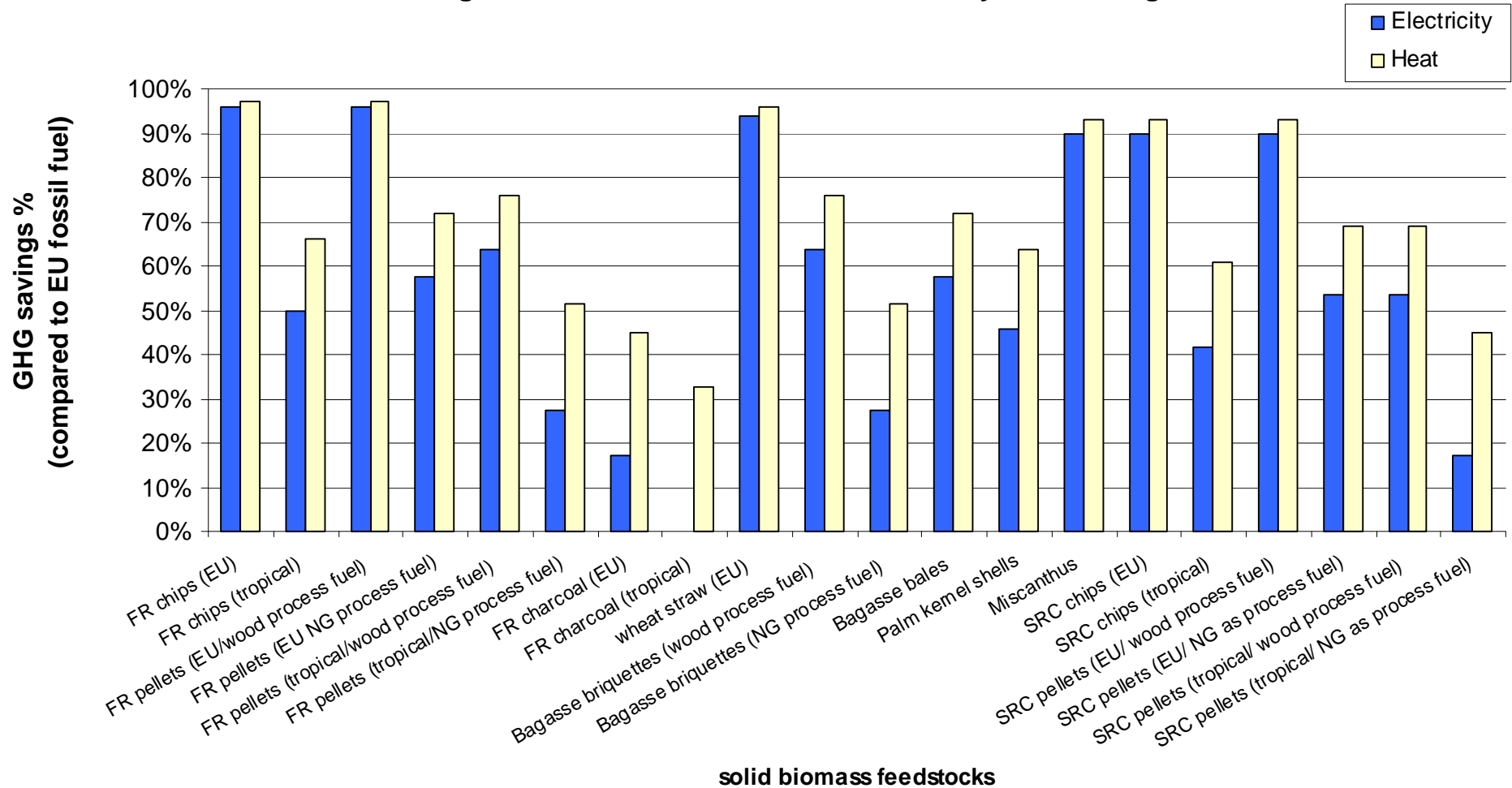
● **3. Impact assessment - Greenhouse gas emissions**

- Common methodology needed to compare GHG savings
 - includes conversion of fuel into energy
 - fossil fuel comparator based on EU fossil energy mix (no CHP comparator)
- Solid biomass and biogas pathways looked at, EU and non-EU feedstocks.



3. Impact assessment - GHG savings of

GHG savings from solid biomass used in electricity and heating



● 4. Impact assessment - energy conversion efficiency

- Conversion efficiency varies:
 - household biomass stoves and boilers (10-95%) – eco-design work under way
 - Cogeneration and district heating plants (80-90%) – Directive 2004/8/EC
 - Large scale power and waste incineration (10-35%)
- Common energy performance standards for fossil/ biomass is desirable to avoid switching

● Report COM(2010)11

- No binding EU scheme
 - » Production: existing EU legislation + low imports
 - » GHG: normally high savings
 - » Efficiency: for all energy resources
- Cost of meeting sustainability criteria can be high
- National schemes can be developed but with internal market and renewable energy targets in mind
- Commission recommendations for criteria

● **Report - Recommended criteria**

No criteria for wastes, and criteria to apply to 1MW+ plants

- Common GHG methodology (Annex I) – LUC counted
- Minimum requirement for GHG saving, relative to fossil fuel, of at least 35%, 50% in 2017 (60% for new installations) - use of default values to reduce administrative burden (Annex II)
- No conversion of highly bio-diverse and high carbon stock land
- ‘Cross-compliance’ rules in the EU’s common agricultural policy to apply
- Member States to support efficient uses of biomass

● **Report - Monitoring**

- Member States to monitor and report on origin of biomass through data gathering/ surveys etc.
- Commission to monitor LULUCF and wider sustainability regimes e.g. SFM certification schemes

● **Next steps**

- Some MSs will develop national schemes - Commission workshop to encourage harmonious development
- Study developments of national schemes and impacts on internal market
- Commission evaluation of NREAPs after June 2010 to see national policies and measures for biomass promotion
- Commission will review in 2011 whether further measures are needed to ensure sustainability

Thank you for your attention!



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