



Bundesministerium für
Ernährung, Landwirtschaft
und Verbraucherschutz

Biomass and Sustainability – Developments in Germany

Presentation

by Dr. Hans-Jürgen Froese,
Federal Ministry of Food, Agriculture and Consumer Protection

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Wilhelmstraße 54
10117 Berlin, Germany

Tel.: +49 1888 / 529 - 3390
Fax: +49 1888 / 529 - 4968

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Most important Challenges / Objectives / Strategies

- **Food and Energy Security for 9 billion people in 2050**
- **GHG-Emission Reduction / Mitigation of Climate Change Effects**
- **Protection and Conservation of Natural Resources**
- **Maintainance of Biodiversity**

Many objectives and strategies, but lack of coherence and coordination, for example:

- **(Renewable) Energy Concepts are not focussing enough on land use competition and global area constraints**
- **GHG-reduction strategies do not consider adequately biodiversity issues**
- **Sustainability criteria are very much concentrated on biofuels; can this be justified? What's about the exploration of fossil fuels?**

European Energy and Climate Protection Targets

- **Starting point: European Council March 2007**
 - GHG emission reduction (binding): 20 % by 2020
if other industrialised countries take part: 30 % by 2020
 - **Share in renewable energies (Ø EU)** 20 % by 2020
(national target for Germany) 18% by 2020
 - **Share of renewable energies in the transport sector (first of all biofuels):** 10 % by 2020
 - Improvement of Energy Efficiency to save energy consumption of 20 % by 2020

Challenges for Biomass Production and Sustainability

➤ National Renewable Energy Action Plan (agreed on July 2010)

= contains strategies and measures how to reach the objective of a 18%-share of renewables in total energy consumption

= further growth in bioenergy needed:

in total we calculated a need of 1.400 Petajoule (PJ) in 2020 (compared to 888 PJ in 2008 - (growth of approx. 60%),

of which:

- 1.000 PJ could be covered by domestic biomass, (500 PJ from forest-biomass, 400 PJ from agriculture and 100 PJ from wastes)

- 400 PJ have to be covered by future biomass-imports

Challenges for Biomass Production and Sustainability

➤ Longterm National Energy Concept (decided by Cabinet on 28 September 2010)

Main Objectives of the Concept:

- **GHG-reduction of 80% until 2050 (compared to 1990-levels)**
- **Increase of Renewables-Share in Total Energy Consumption from 10% actually to:**
 - = 18% in 2020, 30% in 2030, 45% in 2040 and 60% in 2050**
- **Medium prolongation of operation of nuclear power plants = 12 years**

Challenges for Biomass Production and Sustainability

➤ Longterm National Energy Concept (Cont.)

Main Objectives of the Concept:

- **Reduction of Total Primary Energy Consumption (compared to 2008-levels):**

= of 20% until 2020

= of 50% until 2050

This means: Efficiency Increase of 2,1% per year especially through energy saving measures in buildings and in transport

- **Reaching these targets requires investments of around 20 billion Euros per year**

Challenges for Biomass Production and Sustainability

➤ Longterm National Energy Concept (Cont.)

Consequences for Biomass / Bioenergy:

- Bioenergy remains the most important renewable energy source in 2050 (60% of renewables and 30% of total primary energy consumption must be generated by biomass)
- Compared to 2008-levels, bioenergy has to be increased by the factor 2.5 (reaching 2.200 PJ)
- Assuming future 20% biomass-imports, leads to 1.760 PJ domestic biomass use in 2050

Challenges for Biomass Production and Sustainability

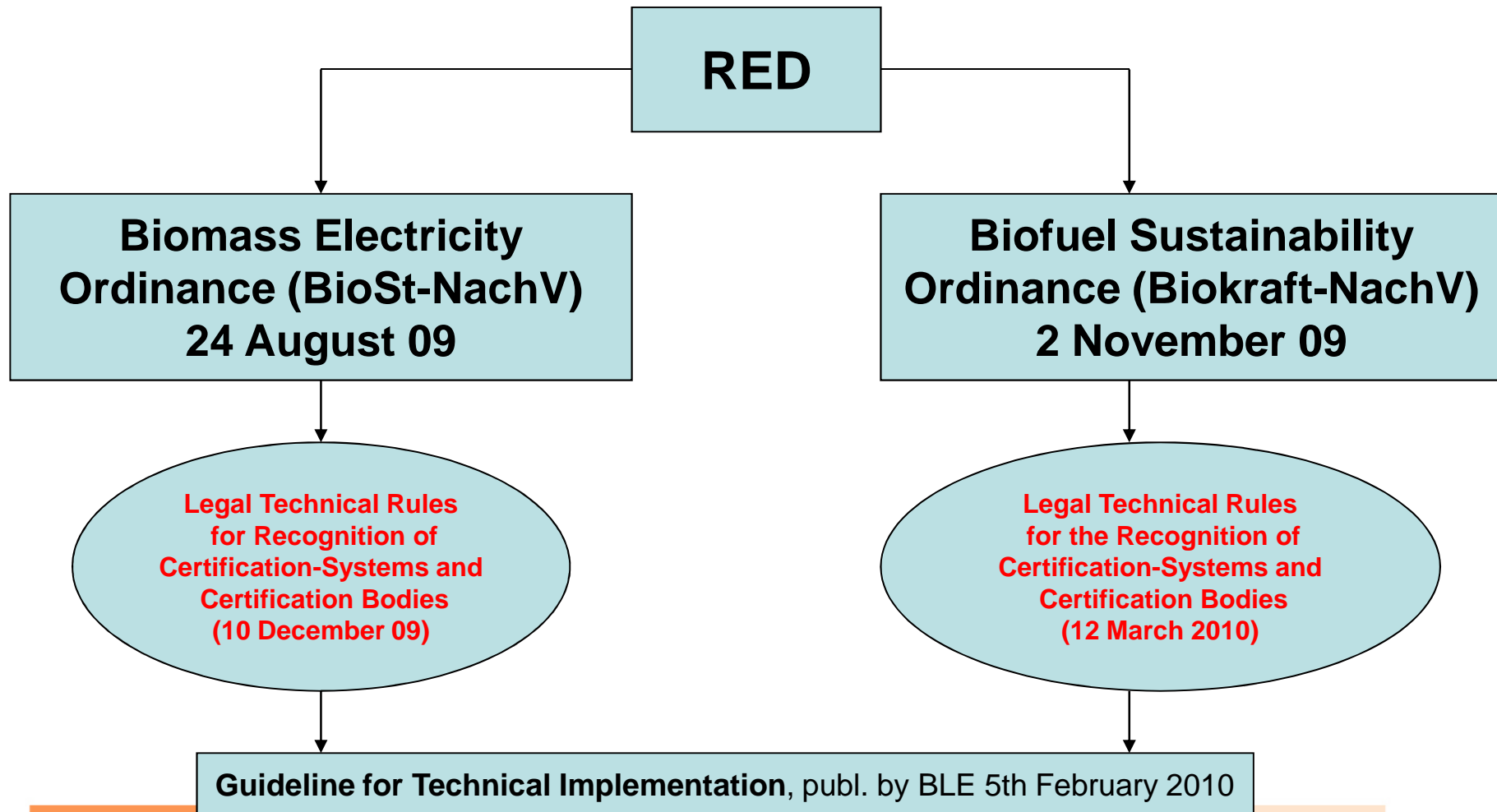
- **National Energy Concept (Consequences for Biomass):**
 - **Necessary domestic biomass cannot be obtained by simply expanding energy plant production, because an additional need of 760 PJ (on top of the estimates for 2020) would require additional 4,1 mill. ha energy plant-area (not available)**
 - **Without measures to considerably increase domestic biomass potential (better plant varieties, optimizing agro and forest cultivation systems to obtain higher energy yields, etc.) and without further biomass imports, objectives will hardly be reached.**

Consequences for Sustainability



- **Implementation of Sustainability Rules politically very important**
- **Sustainability criteria for biofuels are only the starting point for a broader sustainability-approach**
- **Sustainability Rules and Schemes need a close coordination, at least – as a first step – within the EU-27**
- **Sustainability Schemes need an independent control (preferably on member states level)**

Implementation of RED Sustainability Criteria in Germany



Implementation of RED Sustainability Criteria in Germany

The german approach is based on:

- Private certification systems (ISCC and REDCert)
- Private certification bodies
- The **BLE** as competent national authority for recognition and control

Where are we now - implementing the biomass-sustainability certification?

ISCC-system as the first certification system recognised by BLE the 18 of January 2010 – second system (REDCert) has been recognized the 2 of June 2010

- **29 Certification bodies recognised (by end of January 2011)**
- **More or less 80% of domestically produced biomass can be considered as sustainable according to RED-criteria**
- **Late implementation or absence of sustainability schemes in other member states led and still lead to difficulties for german biomass importers**
- **Mutual recognition of notified national schemes should be practised by all member states, not only by a few; otherwise national schemes will not be effective**

Actual problems /difficulties of Implementation led to some amendments

- **Introduction of a special treatment of small holders by mid November 2010**
 - = **Smallest oil mills or traders which have a yearly trade or elaboration volume of up to 250 t (solid biomass or equivalent fluid biomass) get a Certificate valid for 5 years**
 - = **Small oil mills or traders which have a yearly trade or elaboration volume of up to 500 t (solid biomass or equivalent fluid biomass) get a Certificate valid for 3 years (instead of 1 year for all others)**
- **Extraordinary period for mass balance calculation from the 1 of July 2010 up to the 30 of June 2011**
- **Late issue of sustainability proof for consignments which were already delivered to storage-facilities, temporarily applicable until 31 March 2011 if sustainability over the chain of custody can be fully documented**

German Government sees a strong need for some amendments and technical improvements

- **Nationally recognised certification systems and future EU-wide recognised voluntary schemes should co-exist and closely be coordinated. This also holds for interrelation of EU-wide recognised voluntary schemes (harmonizing electronic formats, clearing process for used sustainability proofs, etc.).**
Therefore, BMELV asks for a binding mutual recognition of national schemes between member states, if those schemes were previously accepted by the commission
- **Member States have a certain responsibility and should have a right to control the procedures of conformity assessment bodies which are normally recognised/accredited by the national accreditation unit or – as in the German model – recognised by the competent national authority (BLE)**

Further improvements of RED – Sustainability Criteria

- **Mass balance systems should be equally implemented in all member states, therefore we need EU-rules with similar sectoral and regional scopes (mass balance for a storage facility, a group of storage facilities or throughout a multinational company with many production sites ??)**
- **Rules for double counting should also be equally implemented within the EU, therefore we see a strong need for a positive (and negative) list for corresponding wastes**
- **Sustainability criteria for bio-methane should be established so that economic operators are able to calculate GHG-reduction values (quite difficult for the used inputs/substrates)**
- **We need immediate solutions for still not existing default values in Annex V, i.e. bioethanol on the basis of barley, rye, triticale, etc. and solutions for biomass in EU-regions which are not able to finalize the NUTS-II report**
- **We are still waiting for a definition and area-assessment for highly biodiverse grasslands.**

Lessons learned for Sustainability Requirements for other Biomass uses

- Sustainability Schemes for Biofuels are only the first step of a broader sustainability approach (regional and sectoral) which is needed to avoid greater ILUC- and other undesired effects.
- On the other hand, the actual implementation process shows a lot of deficiencies and financial and burocratical burden for economic operators
- Before starting an analysis of sustainability schemes in other energy and industrial uses of biomass, we first want to see the systems perfectly running in the biofuels sector throughout Europe
- If we are not able to solve the mentioned problems in the biofuels-sector in the EU, we will not get the acceptance for extending these or similar sustainability systems in other countries and other uses like wood for heating or biobased industrial products which are even more complex.

Thank you for your attention!

