Inter-Parliamentary Meeting on Renewable Energy and Energy Efficiency at the European Sustainable Energy Week 2008

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Wind power – Increase & Costs

Germany - Great Britain

feed-in tariff vs. certification model

Costs for wind energy
~7 Cent/kWh in Germany
~13 Cent/kWh in Great Britain

Reference: http://www.ewea.org & Hans-Josef Fell

www.hans-josef-fell.de
increase of photovoltaics

Germany - Japan

Installed Capacity in MWp

0 100 200 300 400 500 600 700 800 900 1000


Germany  Japan

& Hans-Josef Fell

www.hans-josef-fell.de
IEA Oil Price Prognosis

Estimate for 2007

WEO 1998 ($1996)
WEO 2004 ($2002)
WEO 2006 ($2005)
Uranium demand according to IEA scenarios and possible supply from known resources

- **Supply deficit 2006-2020:** 180 – 260 kt Uranium
- **Uranium Stocks:** appr. 200 kt Uranium

- **Fuel demand of reactors**
- **WEO 2006-Alternative Policy Scenario**
- **WEO 2006 Reference Scenario**
- **Constant Capacity as of 2005**

- **RAR < 130 $/kg:** 3,296 ktU
- **RAR+IR < 130 $/kg:** 4,743 ktU
- **Reasonably Assured Resources (RAR):** < 40 $/kg: 1,947 ktU

*) IR = Inferred Resources

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Climate problems can be solved only by two strategies:

1. **Stop greenhouse gas emission**
   (not only to reduce the emission)
   - promote cero emission technologies
   - completely canceling the use of fossil and nuclear energies

2. **Taking out carbon from atmosphere**
   - convert plants to humus soil
   - reforestation big areas
Climate-protection policies

Promoting renewable energy and chemistry:
• Laws for feed-in tariffs
• tax exemption for renewables
• canceling subsidies for fossil and nuclear
• research offensive for renewables
• reduce the approval obstacles

No: quota or certificate systems
both are unable to promote the renewables fast
Share of Renewables in the German Gross Electricity Consumption

Reference: BEE
1000 Jobs in 2006:

- hardcoal: 35
- nuclear: 30
- lignite: 23
- solar: 53
- renewables: 235
- Erneuerbare Energien gesamt: 500

Prognosis 2020
Key components of a successful feed-in law

- Privileged grid access
- Attractive feed-in tariff for each RE technology (must be high enough for cost-effective RE power production)
- Feed-in cost distributed via electricity price
- No cap on total amount of generated RE power
- Guaranteed feed-in period

- Also important: No obstacles through approval procedures in practice
German Government Proposal for Climate Protection and Energy, Dec 2007

- Amendment Cogeneration Law
- Amendment of Renewable Energy Act (EEG)
- Low-carbon power plant technology
- Regulation for biogas
- Energy Saving Regulation (EnEV)
- Low-carbon Refurbishment Program
- RE Heating Bill
- Low-carbon strategy for cars
- Increase of bio fuel blending
- Energy R&D (RE and CCS)
- Electric cars

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German Government Proposal for EEG Amendment

• PV: drastic decrease of feed-in tariff to 9.2% in 2009
• Wind: offshore privileged over onshore
• Biomass Sustainability Regulation insufficient
• Biogas feed-in still regulated by EEG – no proper Biogas feed-in tariff
Effect of the State Aid Program for RE Heating

www.hans-josef-fell.de
Nov 11th 2005
Coalition agreement contains introduction of a Heating Bill

Dec 05th 2007
Government Proposal for Heating Bill

July 2008
Introduction of Heating Bill???

www.hans-josef-fell.de
German Green Group: key components of a successful RE Heating Law

• Obligatory RE percentage for new developments and existing buildings
• Obligatory RE percentage continuously increasing
• Inclusion of every RE type
• Promotion of innovations through fund of compensation fees

- Not met by German Government Proposal
- Almost met by EU Commission Directive Proposal
Transport Sector

• German Government obstructs EU actions, e.g. 120g/km CO$_2$ limit

• No regulations to promote electric cars

• Insufficient regulations for sustainability in biofuel sector
Many thanks for your Attention!

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