IEA Bioenergy

DEVELOPING SUSTAINABLE TRADE IN BIOENERGY

ExCo 65, Nara, Japan

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Facilitating commercialisation and market deployment of environmentally sound, sustainable and cost-competitive bioenergy technologies……

IEA Bioenergy……..

- Provides an international forum for sharing information and developing best practice on
  - Technology development
  - Non-technical barriers and issues
  - Regulatory and legislative issues

- Produces authoritative information on key strategic issues affecting deployment

- Currently 22 Member Countries plus the EC

- 12 Tasks covering aspects of production and conversion of bioenergy, plus socioeconomic, environment and trade issues

Workshop Programme

Session 1 – Overview and Scene Setting

Session 2 – Trade in Solid Biofuels

Session 3 – Trade in Liquid Biofuels

Session 4 – Sustainability and Trade

Session 5 – Discussion and Conclusions

Questions to be Answered

•What are regional supply potentials, particularly for Asia Pacific Region?

•What are current trade flows?

•What is the long term prospect for traded biomass (or will indigenous markets for the fuels develop)?

•Are supplies sustainable?

•Are there significant barriers holding back market development?

•What role can IEA Bioenergy best play?

Session 1 – Overview and Scene Setting

- **Biomass for energy is spicy** : some like it hot, others like it soft, but
  market situation may change quickly. International biomass
  trade consequently increases.

- **Main drivers are** :
- - ***demand***, determined by policies (tariffs, regulations, incentives)
- and economics (oil, gas, coal prices and price stability, fuel
  competition)
- - ***supply***, has to meet demand and be stable, determined by biomass
  systems productivity, land availability, end use competition, logistics, fuel standardization

Session 1 Cont

- **<u>Sustainability certification systems</u>** can be seen as threats
  (bioethanol) or opportunities (biodiesel, pellets).
  Are they producers oriented?
  Many schemes developed : market and audit difficulties will regulate that.

- **<u>The role of IEA Bioenergy ?</u>**

- Continuous observation and analysis of international biomass trade
- Understand what works and why (policies, programmes, schemes)
- Be a source of harmonization : policies,
  sustainability certification,
  standardization
- How ? Tasks, using the IEA channel, networking, others ?

Session 2 – Solid Fuels

David Smith

- Australia has one export pellet mill (250,000 te/y)
- Export to Electrabel/Essent
- Altus Energy planning 50,000t/y mill in Queensland
- Large potential for Willmott Forests
- Costs to land pellets in NL, Euro 137/tonne
- Average market price now Euro 100/tonne
- Australia lacks incentives for bioenergy (CPRS delayed)
- Untapped residue supply

Session 2 Continued

Ken'ichiro Kojima

- Overview of Japanese pellet market and history
- Earlier stsrter in pellet market but subsequent fall and then rise again
- Around 100 mills now but mostly small supplying local market
- Domestic market ~ 60,000 t/y, prices 31-38 yen.kg fpr boilers and 37-43 for stoves
- Cofiring is a new market with TEPCO, Kansai, Chungu. Potentially 1 M tonnes by 2012
- Demand polarised between domestic and imports
- Barriers: raw materials, national standards, statistics, interdepartmental split
- Demand globally: 2007: 7Mt, 2010: 15Mt, 2015: 228Mt, 2030 350-400M Tonnes.
- **Issues: Price? Future market? Torrefaction? Standards? Nutrient balances?**

Session 3: Liquid Biofuels

Ethanol

- Most exported (e.g China and Thailand)
- EtOH [produced in Asia is mostly used for industrial uses and beverages
- Key commodities :sugarcane and oil price
- Alternative feedstocks coming into play: tapioca
- Too many specifications: no price index
- **Standardisation important for trade**

Session 3: Liquid Biofuels

Biodiesel

- Malaysia and Indonesia world's largest producers (palm oil as feedstock)
- Also largest exporters (to EU and US, Singapore)
- Different measures for sustainable production in place
  - Effective plantation management
  - Improved processing technology
- Policy helps to promote biodiesel use
- No local markets so far (B5 form 2011)
- Barriers: LUC – harmonisation of methodology necessary

Session 3: Liquid Biofuels

Overall

- New policies and markets driven by mandates and incentives will affect trade flows in the future
- Current trade flows are unstable as markets and production systems settle down

Session 4: Sustainability and Trade

- Clear need for coordination among all actors in defining sustainability
  - Along supply chain: producers to market demand
  - All regions of world
- Lessons gained from validation and evaluations of criteria for sustainable development are clear – schemes are made more useful as a result
- Micro- meso- and macro-scale evaluations indicate sustainable bioenergy development and trade can be achieved
  - Farmers/producers must be considered
- Long-term opportunities for bioenergy deployment are at risk
  - Need for better tools for biophysical and macro-economic analyses
  - Coordinated harmonization of systems is necessary
    - Focus at governance level
    - Consider producer-driven schemes as facilitating development of markets and market share and not generally contributing to fragmentation and complexity problems and issues
  - Focus on resolving issues along the whole value chain and supply chain
  - There is a clear role for IEA Bioenergy