

Minutes
of the kick-off Meeting of Task 40
under the
Bio-energy Agreement of the International Energy Agency.
Sustainable International Bio Energy Trade: securing supply and
demand
Working period 2004 – 2006

Organized by: Essent Sustainable Energy and the Copernicus Institute for Sustainable Development – Utrecht University.

Rapporteurs: Andre Faaij and Rob Remmers.

Location: Deventer, the Netherlands

Date: 19 - 20 January 2004.

List of Participants:

Netherlands	Essent Sustainable Energy	Rob Remmers
Netherlands	Essent Sustainable Energy	Martijn Wagener
Netherlands	Essent Sustainable Energy	Paul van Son
Netherlands	Copernicus Institute	André Faaij
Netherlands	Novem / alternate member ExCo	Kees Kwant
European Commission		Komninos Diamantaras
Norway	Enova SF	Håvar Risnes
Norway	Enova SF	Solvar N. Klokk
Norway	European Forest Institute (SF)	Birger Solberg
Finland	Lappeenranta Technical University	Tapio Ranta
Finland	Lappeenranta Technical University	Jussi Heinimö
Canada	FPAC	Ed Mallory
Sweden	TallOil AB	Bo Hektor
United Kingdom	Imperial College	Frank Rosillo-Calle

Written statements were received from

World Bank

FAO

Brazil UNICAMP/CENBIO/

Ministry of Energy and Mines:

Italy

ETA-Florence

Boris Utria

Gustavo Best

Arnaldo Walter,
Jose Moriera,
Manoel Nogueira
Angela Grassi

Background and Key objectives of the meeting:

At the 52nd IEA Exco meeting held in Campinas – Brazil, 29-30 October 2003, the proposal for a new task under the IEA Bio-energy Agreement was presented and discussed by the delegates present. In the subsequent voting process the new task was accepted under Task number 40. Status:

- At present, the participation of the Netherlands, Sweden, and Norway is fully confirmed. Brazil also confirmed participation but awaits the formation of a national network or working group to deal with the Task work. FAO (under the current agreement with IEA Bio-energy) and the World Bank also agreed to get involved as full participants.
- The European Commission, Croatia and Finland confirmed observer status in Task 40, implying that representatives take part in all task activities for the first year without payment of the contribution. After one year, a decision is to be made concerning further participation, implying full membership is accepted. If not, those parties abandon the task.
- Pending countries are the UK and Italy. Canada and Denmark formally announced they cannot participate from the start but have serious interest in participating, e.g. when market parties are willing to take the lead. In addition, there have been serious contacts with Cargill and Shell on taking part in the Task work one way or the other.

Clearly, the unusually large numbers of observers and pending countries is a reflection of the fact that Task 40 is a new activity that still needs to be established. It is also clear that the areas addressed by the task program are extremely relevant to bio-energy in general and business interests in particular, which is excellent. It also means though, that is necessary to compile a confirmed working program that suits the needs of the wide diversity of parties and interest combined in the tasks presented. This is the main challenge of this meeting.

The main objective of the meeting is therefore twofold:

1. Obtain an overview of the activities, settings and priorities for different participating countries and parties with respect to international bio-energy trade.
2. Discuss, prioritize and fix the activities of the work program of Task 40 for this triennium (spring 2004 – spring 2007).

Preliminary program:

Monday 19th January

10.00: Welcome by Paul van Son, managing director Essent Sustainable Energy;

- 10.15: Short introductory round of participants
- 10.25: Explanation of agenda, objectives and practicalities
- 10.30: Presentations on the Task and setting for Dutch delegates
The task proposal: background, history and contents (Rob Remmers)
- 11.00: Coffee Break
- 11.15: Presentations
- Activities of Essent Sustainable Energy (Martijn Wagener)
 - Scientific research on international bio-energy trade: overview of activities (Andre Faaij)
 - European Commission, DG RTD (Komninos Diamantaras)
 - Forest sector partial equilibrium model (Borger Solberg)
- 12.30: Lunch
- 13.30 Presentations on specific experience and needs
All participants are invited to present the essentials from their (countries) point of view
- 15.30: Coffee Break
- 16.00: Summary and discussion on received priority lists of parties not present at the meeting (Brazil, Croatia, Austria, Italy,)
- 17.00: Task group Dinner (Courtesy of Essent Sustainable Energy)

Tuesday 20th January

- 9.00: The Dutch Bio-Energy Transition (Kees Kwant)
- 9.30: Discussion and inventory of gross list of desired activities, events (paper World Biomass Conference Rome) and products of the Task group
- 11.00: Coffee Break
- 11.15: Decisions on priority list and defining key events: meetings, combined events with other tasks, invited experts, special projects, definition of sub-tasks, acquisition of new parties and funds.

12.30: Lunch

13.30: Practicalities: drafting list of actions, hosting next events, budgets.

14.30: Spillover time.

Report of the meeting

The meeting aimed at making an inventory on priorities and activities of everyone involved and comparing that to the draft work programme and planning in time. The final result was a (draft) work programme and intended set of deliverables of the task, based on the various contributions as well as written statements received from the parties that could not be present at this meeting. The draft WP and list of deliverables is the core of these minutes and are distributed for further comments after which the WP is final for this triennium.

Paul van Son (Director Essent Sustainable Energy) welcomed the group and explained the importance of the Task 40 for a company as Essent.

This was followed by a general discussion on the results of the IEA Exco meeting 52 in Campinas – Brazil, where the proposal for task 40 was presented and support for the task was formalized. During this discussion it was noted that:

1. the task should make a relevant distinction between the full participants (now The Netherlands, Sweden, Norway, Brazil, FAO and World Bank) and observers (now Finland, European Commission, Croatia) and interested parties (Canada, United Kingdom and Italy, which has the intention to request for observer status), in terms of voting rights and say in the final work programme. The status of observers was discussed according the rules of the IEA Bio-energy Agreement. Full participants clearly have stronger 'rights' than observers, e.g. obvious in voting rights.
2. Specific countries: it was reported that the USA was contacted for participation in the task, but this proved difficult to realize. There is serious interest from e.g. ORNL and NREL to join the task though. Austria was unable to confirm the observer status so far. Josef Spitzer would appreciate it to remain closely informed about progress of the Tasks' activities.

Rob Remmers provided an overview of how the Task proposal and team developed over time and explained the ratio behind the various proposed activities. (presentation attached to these minutes).

Martijn Wagener explained on the activities of Essent Sustainable Energy concerning bio-energy and bio-trade. Import of biomass plays a key role in meeting the projected demand in the Netherlands for green electricity. (presentation attached to these minutes, DVD movie handed over,). The sustainability of using biomass is a key issue for this market. Essent has developed a framework for certification (Green Gold Label) which is supported by scientific research activities (e.g. the FairBioTrade project funded by NOVEM).

Andre Faaij provided a global overview of research efforts relevant for Task 40 covering potential studies on different geographic scales (global – regional), analyses of supply chains and work on certification (presentation, attached to these minutes).

Borger Solberg presented results and possibilities of modelling exercises using an equilibrium model for the worlds' wood markets and forest supplies (emphasis on Europe, presentation attached to these minutes). It was clear that this modelling approach could prove extremely useful in assessing biomass markets and impacts (e.g. on price levels) by linking this type of modelling to transport models of international trading chains and agriculture.

Solvar Klok and Halvar Risness presented the developments in Norway with respect to energy policy and the (future) role of bio-energy (presentation attached to these minutes). ENOVA is involved in market studies and developing a bio-energy market in Norway. Experiences from other countries are therefore very valuable. Also because of Norway's geographical situation, international bio-trade is considered an option from the start, even more because parts of the indigenous biomass resources are relatively expensive. At the same time Norway sees opportunities for e.g. it's strong marine sector for bio-energy trade.

Bo Hektor (NTL for Sweden) gives an overview of behalf of Sweden on development of bio-trade and the context in which that is developing: In recent years the contribution of bio-energy to the Swedish energy supply is more or less constant. The role of imported (low cost) biomass in that contribution is however strongly increasing. Demolition wood was for example imported from the Netherlands and Germany, but recently costs have increased. Import from the Baltics and Russia is now on the rise. Key players in

the market have a strong influence on price levels; biofuels are just kept below the prices of pulp wood.

Sweden already met the targets set for biofuels (in the new EC directive on biofuels) and for renewable electricity. Bio-ethanol is currently (partly) imported. (TallOil AB is also involved in that).

Recent studies show that the need for biofuels in the Stockholm area will grow considerably on shorter term (i.e. 36 PJ/yr), which should largely come from imported biomass delivered by ships. Two additional harbour facilities are to be used for that. Clearly, bio-trade will grow further. This also means that understanding (and removing) barriers for trade is of key interest. Issues raised include:

- Price stability to ensure the feasibility of investments (i.e. for 10 years)
- Barriers in market development
- Competition with cheap agricultural residues and the potential role of SRC
- Ethanol import (Sweden can import bio-ethanol without paying taxes via a new licensing system).

Svaeskog (via Erik Ling and colleagues) will also contribute to Task 40.

Contributions foreseen are:

- To bring in practical experience with bio-energy trade
- Insight in obstacles in market development and access, which is generally poorly understood. Many countries do little about this field.
- Increasing knowledge, definition issues, etc.

Hektor states that the title of task 40 "bio energy trade" is unclear on the working area. Faaij confirms that although the title gives way for dealing with energy trade, the task will only be involved with biofuel trade.

Komninos Diamantaras gave a presentation on behalf of both DG-RTD (Research) and DG-TREN (Transport and Energy). The main interests of the EC for Task 40 relate to the renewable energy targets (in which biomass plays a key role) and the role bio-trade may play in reaching those targets and in formulating priorities for the research activities for the 6th Framework Programme (and beyond). Key points of interest for the EC would be:

- The socio-economic and ecological impacts of international bio-energy trade (and how it can contribute to strategic objectives of the Commission).
- The relevance of biomass production and trade for the CAP (Common Agricultural Policy)
- Provision of tools relevant for policy makers (e.g. using and combining existing models and databases), forecasting studies, etc.
- Exchange, communication, dissemination of information and experiences.
- Contributions to formulation of standards (e.g. certification).

It is recommended that Task 40 takes the initiative to submit an Expression of Interest in the 6th FP. A complete proposal should be submitted in September 2004.

Frank Rosillo Calle spoke on behalf of Imperial College (ICCEPT) addressing recent developments in the energy policy in the UK (presentation attached to these minutes).

Imperial College performs an array of relevant projects for Task 40.

The UK government is addressing the desired role of renewables on the long term; on foreseeable term the UK will shift from the current exporter of oil and gas to an importer of those energy carriers. In addition, a reduction of 60% of national GHG emissions is desired. The transport sector, and thus the use of transport fuels, shows the strongest growth in future GHG emissions. Import of biomass and (liquid) biofuels seems a very likely option for the future.

The point was also made that bio-ethanol plays a very important role in many countries. Some 3 billion litres are currently traded internationally. Ethanol programmes are for example started in India, China, Central America, etc. Japan is considering large-scale import of ethanol.

Taipo Ranta presented detailed and thorough work on the forest biomass supply base in Finland and organisation and optimisation of supply chains. (presentation attached to these minutes).

The presented approach provides a basis for further analyses of international (including marine transport) transport chains. Future work at Lappeenranta University covers analyses of marine transport systems and setting-up wood fuel procurement systems. This work could be brought into the task at the moment Finland decided to become a full participant.

Ed Mallory gave a brief statement on personal title (not on behalf of Canada). He particularly attends the meeting to be able to report back to FPAC.

Key issues for the new task from his perspective would be the communication and network role between market parties. Another key interest for Canada is likely to be the area of certification and how to make efficient use of different existing frameworks.

Kees Kwant presented the set-up and organisation of the current policy experiment of the Ministry of Economic Affairs of the Netherlands to formulate a long term 'transition strategy' towards realizing a sustainable energy system on longer term (i.e. 2040) (presentation attached to these minutes). He made clear that biomass plays an essential role in the vision that has been developed by a wide variety of stakeholders involved in this process: a contribution of some 30% of the total national energy supply. This implies that on longer term, biomass or bio-energy import is the backbone of this, large, contribution. The sustainability of such large scale supplies from other parts of the world is a key point of discussion.

Inventory of activities and inputs to the task and desired outputs

The table below summarizes the discussion on desired deliverables. The maximum number of deliverables was kept limited to 4-5 per party

Participant/actor	Desired deliverables	remarks
Full participants		
Norway	<ol style="list-style-type: none"> 1. Obtain overview of the market status and (possible) developments with respect to bio-energy and trade (assessment work; e.g. using equilibrium modelling). 2. Investigate and optimize international logistic chains (especially marine components) 3. Support the development of building international bio-energy market 4. Provide a business forum. 	
Sweden	<ol style="list-style-type: none"> 1. Support the development of business and bio-energy trade. 2. Creation of a business Forum for exchange of information on trade, barriers and opportunities 3. Overview of trading experiences (e.g. best practice). 4. Assessment (analysis) of trading opportunities (market studies and the like). 	
Brazil	<ol style="list-style-type: none"> 1. Assessment of trading barriers and opportunities, e.g. for export of ethanol, wood and wood products and bio-diesel 2. Identify and develop sustainable development schemes for international bio-energy trade. 3. - 4. - 	Summary of written statement
FAO	<ol style="list-style-type: none"> 1. The link between bio-energy, trade and sustainable development in DC's. 2. International framework, certification and related modalities for international trade. 3. Best practice guidelines for developing sustainable bio-energy projects and trading schemes. 4. Impact studies (i.e. case studies of successful projects) showing benefits and costs of mentioned schemes. 	Summary of written statement
World Bank	<ol style="list-style-type: none"> 1. Develop pilot and/or demonstration projects for sustainable bio-energy trade with Developing Countries (emphasis on Sub-Saharan Africa). 2. Impact assessment of trading schemes (how can trade contribute to sustainable development) 3. Provide an international network & platform on sustainable bio-energy trade (communication!) 4. Ethanol trade and Green electricity key commodities. 	Summary of written statement
The Netherlands	<ol style="list-style-type: none"> 1. Raise the awareness of potential for bio-energy and its (positive) impacts (communication role) 2. Provide overview/inventorize experiences with 	

	trading schemes (bio-energy as well as related markets). 3. Identify barriers and opportunities for developing 'new' trading chains and schemes (especially for longer term based on active biomass production in DC's). 4. Contribute to realization of pilot and demo projects for sustainable bio-energy trade.	
<u>Observer/interested parties.</u>		
Finland	1. Assessment and analysis for (further) optimization of long distance supply chains and schemes (marine options; development and deployment of tools and models). 2. Inventorize and develop relevant regulations and standards. 3. Identify barriers for trade; contribute to improved access to markets (also leading to pilot/demonstration projects). 4. Inventorize market status with respect to biomass trade (overview/monitoring). 5. Focus on forest supply chains (experience and impacts; e.g. attention for Russia).	
Canada	1. Provide overview of market barriers and contribute to improved market access. 2. Overview of trading experiences (broad) 3. Certification and sustainable forest management 4. Dialogue with stakeholders.	Statements made on personal title/FPAC
European Commission	1. Contribute to the formulation of RD&D needs (strategic advice) in the area of bio-energy. 2. Contribute to formulation of regulations and standards relevant for bio-energy trade. 3. Provide insight in the impacts of trading schemes in a broad sense (e.g. on European level; socio-economic benefits). 4. Serve as a network and improve communication and dialogue on the topic.	
United Kingdom	1. Make the case that bio-energy trade can make an important contribution to longer term goals of the UK with respect to renewables and GHG emission reduction. 2. Provide insight in trade barriers and rules of conduct for international trade. 3. Focus on transport fuels and co-firing. 4. Communication on the topic.	Statements made by Imperial College; not official standpoint of UK (DTI).
Italy	Strategic interest in the working field of the Task has been confirmed	Summary of written statement; Observer status requested.
Croatia	Strategic interest in the working field of the Task has	Observer

	been confirmed	status; not present at meeting
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Synthesis of the discussion.

From the obtained overview a number of issues clearly jump out:

1. Obtain an overview of current trading experiences and markets as well as potential future markets. Monitor the development of biomass markets and trade over time.
2. Inventorize barriers for developing working biomass markets and (international) trade and strategies to cope with those barriers.
3. Provide insight in the development of biomass resources and supplies in relation to market demand; e.g. by applying various (modelling) tools.
4. Attention for performance and further development/optimization of long distance supply chains, in particular including sea transport.
5. Certification, standardization and terminology for sustainable bio-energy trade.
6. Sustainable forest fuel-supply chains (e.g. Russia).
7. Provide strategic advice on how to develop and support bio-energy trade, e.g. for the EC, IEA Exco, FAO, etc.
8. Identify possibilities for pilot- and demonstration projects and aim for supporting their development; especially in developing countries (e.g. Africa).
9. Provide insight (e.g. through case studies and best practice examples) in the socio-economic and ecological impacts of biomass production and trading schemes and demonstrate how bio-energy trade can contribute to general (sustainable) development targets.
10. Ethanol (trade) and (green) electricity are key energy commodities to consider. Besides residues (forest, agriculture) cultivated biomass should be part of the portfolio.
11. Improved communication, raising awareness, networking and information exchange on the fields covered by the Task.

Subsequently a list of concrete deliverables and actions is derived. This list is divided in concrete actions for 2004 and in more aggregate terms for the period 2005 – 2006. It was noted, that in particular in the starting phase (first half of 2004) the status of various observers or potential participants is not clear and therefore the team (and budget) is relatively small. The task should therefore not be overambitious in the first phases but aim for a few valuable and concrete deliverables.

An appealing suggestion made by Kees Kwant in the meeting was to cover (in random order) Profit, People and Planet coming 1.5 years as themes for biotrade. This would result in three key events on trading and markets (possibly Rome in autumn as offered by FAO), an event in 2005 with Task 29 on socio-

economics and an event later 2005 with tasks 30 and 31 on sustainable production systems.

Intended deliverables and actions (2004)

- Fix work programme based on the minutes of meeting and final comments of all involved (short term)
- Organize a business FORUM to start of in autumn with a major workshop on biotrade experiences, opportunities and barriers (with invited speakers); key event for 2004. This is likely to be combined with the invitation of FAO to host and event around that time.
- Launch website and start building library and network (lead by Essent; short term).
- Start preparing events for 2005 (see above; partly in combination with other tasks).
- Write an expression of interest for EC's FP6 (2 pager; short term); aiming for a full proposal in autumn 2004.
- Start working on country reviews on biomass use and the role of trade and development of markets (Norway, Sweden, Netherlands, a.o.)
- Write a leaflet/short paper for presenting the task with it's rationale and objectives on the biomass conference in Rome. Oral presentation of the task background and (planned) activities is approved by the conference organizers.
- Later in 2004: work on a complete position paper for the scientific press (Faaij + Task team).
- Lobbying for expanding the team (first aimed for Canada (Mallory/FPAC/Natural Resources), Finland (Ranta & Heinimö), EC (Diamantaras), UK (Imperial College), Italy; some actions taken on Japan (Bo Hektor), Australia and New Zealand (Andre Faaij, March 2004)

Intended deliverables and actions (2005-2006)

- Start up activities for launching a special issue on Sustainable bio-energy trade for the Journal Energy for Sustainable Development (to be published in 2005; lead by UU).
- Plan an early evaluation of the progress of the Task in 2005 in order to sketch the work programme for the intended next triennium.
- Explore possibilities for starting trajectories towards pilots/demo's.
- Event (spring 2005) combined with IEA Task 29 on socio-economic aspects of bio-energy trade; bio-energy trade and potential contribution to (rural) development
- Event (Autumn 2005) combined with IEA Task 30 and 31 (forestry and Short Rotation Coppice) on ecologically sound biomass production systems and certification for export.
- Process information gathered on trading experiences and market development (based on country information and the business forum) into a

standard publication on bio-energy trade. This publication could be updated with a certain frequency.

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Appendices: powerpoint presentations of:

- Borger Solberg
- Frank Rosillo-Calle
- Taipo Ranta
- Solvar Klokk **and** Halvar Risness
- Kees Kwant
- Rob Remmers
- Martijn Wagener
- Andre Faaij