

Roundtable on Sustainable Biofuels

An initiative of the EPFL Energy Center



GHG Working Group – First Joint Meeting with ENV WG

June 28, 2007

Paper 4: GHG WG Goals and Timeline

The aim of this first meeting is to agree on common goals and on the process to reach these goals.

- **What are the goals of this Working Group?**

One of the main drivers of support for biofuels is their potential to lower GHG emissions. Whereas the GHG emissions from fossil fuels were originally underground, and thus contribute to climate change, the GHGs released when burning biofuels were originally captured from the atmosphere, and thus do not contribute to climate change. But the problem lies in the fact that during the production of biomass, emissions of GHGs occur. The quantity of greenhouse gases that is produced in the biomass supply chain is therefore crucial to estimate. Within the RSB, the GHG WG aims to identify and spread current best practice in assessing the GHG emissions linked to biofuel production.

We hope to, within one year, agree on and a tool that makes it possible to answer the following question:

How much emission reduction does the use of biomass yield for a specific producer, calculated from its source up to its use, and compared with the average use of fossil fuel?

With this tool, supply chains can then prove compliance with the following draft RSB principle regarding GHG emissions.

Biofuels should result in lower GHG emissions compared to fossil fuels when analyzed via a lifecycle assessment (with system boundaries from “well to wheel”). This should include direct and indirect GHG emissions, for instance from fossil energy used in growing, transporting and processing biofuels. It should also include GHG emissions resulting from land use changes as land is converted to biofuel crop production, or as production for other markets is displaced.

- **Who is participating in this Working Group?**

Co-chairs GHG WG:

1. Professor Bruce E. Dale, Dept. of Chemical Engineering & Materials Science, Michigan State University, USA
2. Second co-chair: to be determined

Coordinator GHG WG:

- Dr Tourane Corbière, tourane.corbiere@epfl.ch

List of participants (as of 20 June, 2007)

Emilio	Font-de-Mora	APPA Biofuels
Michael	Wang	Argonne National Labs
Laurens	Rademakers	Biopact
Agenor	Mundim	Brazilian Foundation for Sustainable Development
Matt	Cooksley	Cairneagle Associates
Lynette	Warren	Centre for Sustainable Technologies
François	Vuille	E4Tech Sàrl
Yen Chin	Tho	ED & F Man
Rainer	Zah	EMPA
Alexandra	Morel	Environmental Change Institute, Oxford University
Edgard	Gnansounou	EPFL
Hugo	Hays	EUREPGAP
Christian	Schaible	European Biodiesel Board
Julie	Robson	Fauna and Flora International
Jennifer	Taylor	Florida Agricultural & Mechanical University
Asep	Suntana	Forest Systems and Bio-energy Program
Ana	Bravo-Angel	Genencor
Gerald	Knauf	German NGO Forum on Environment and Development
Arrigo	della Gherardesca	Green Energy ITALIA srl
Philipp	Schukat	GTZ
Wyn	Ellis	GTZ
Susanne	Stulemeijer	Hill & Knowlton
Jeremie	Mercier	Imperial College London
Miles	Perry	Imperial College London
Erik	Meidell	Kingsman SA
Benjamin	Hay	Nandan Biomatrix
Lastikka	Ilmari	Neste Oil
Karen	Oxenbøll	Novozymes
Nathanael	Greene	NRDC
Uwe	Fritsche	Oeko-Institut (Institute for Applied Ecology)
Carlo	Pereira	Petrobio
Lars	Friberg	Potsdam University
Emilie	Pons	Science-Pos
Jeroen	Douglas	Solidaridad
Patrick	Avato	The World Bank
Heinz	Leuenberger	UNIDO
Bettina	Schreck	Univ of Cambridge
Jonas	Dallinger	University Muenster
Alex	Farrell	University of California at Berkeley
Jean-Baptiste	de vevey	University of Lausanne
Adam	Harrison	WWF Scotland
Patrick	Hofstetter	WWF Switzerland
Peter	Rowan	
Zane	Abdul	
Geoffrey	Wandesforde-Smith	
Amrita	Talapatra	
Enrique	Manzanilla	
Bijou	Lulla	
Scott	Hitch	
Flo	DiBona	
Sauman	Das Gupta	
Sylvia	Breukers	
Riina	Antikainen	
Maryline	Guiramand	

- **Rules of communication**

The GHG WG will work on a participative basis, meaning that each participant can initiate discussions on the topics of concern, debate with the other participants and form contrary opinions. Each decision regarding the draft and final principles, as well as the draft criteria and indicators, will be preferably agreed by consensus or by simple majority, but always through a democratic process of consultation. The communication and meetings will be held through any available technology that allows quick, clear and thorough exchanges among the participants with the aim of minimizing travel and consequent GHG emissions. This is why, in addition to the regional (cross-Working Group) stakeholder meetings that will be held in producing and consuming countries, web communication (wiki, blogs, emails) and conference calls have to be used as often as possible.

- **Expert Advisory Group**

A small Expert Advisory Group will be created in the next few weeks, made up of scientific experts from several different countries. They will tackle the most sensitive and controversial issues and, ideally, achieve consensus on the best available methodology to measure GHG emissions of biofuels production, which they will then present to the GHG WG. They will ensure the scientific basis of the methodology, which will be used as a basis to prepare the background papers for the Working Group. The Working Group will then make a recommendation to the Steering Board for a GHG calculation methodology.

The Expert Advisory Group will explore the following questions:

1. What are the main points in the life cycle of the biofuels which contribute the most to GHG emissions?
2. How far is it possible to make an inventory of the existing LCA tools/methodologies? e.g. EIO/LCA.net, GREET, GHG Genius (Concawe), EcoInvent, LEM (lifecycle emission model from Univ. Cal) etc., specifying which ones are free/well documented/transparent.
3. The Expert Advisory Group will focus on the areas where existent methodologies do not agree, and try to achieve consensus on an approach.
4. How should we tackle land use? Is the differentiation between direct and indirect land use changes a good discussion starting point? How far are we already able to determine the direct land use changes?
5. It should be clear that the GHG WG will focus on the GHG impacts of land use change, and not the food security or biodiversity impacts. Good coordination between the Working Groups will be necessary so that the same ground is not covered over and over again.

Please see Paper Two for a detailed timeline for the GHG Working Group.