



Flash Report

EU

HIGHLIGHTS OF THE CONFERENCE “THE FUTURE OF BIODIESEL IN EUROPE”

Oct. 5, 2010

On Sept. 27 and 28, 2010 Hart Energy Consulting and the Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e.V. (AGQM) held a joint meeting on “The Future of Biodiesel in Europe” in Brussels. The conference sponsored by Petrobras and Lubrizol featured a keynote speech from the European Commission Directorate General on Energy (DG ENER) followed by four sessions on national policies for biodiesel, sustainability and national certification systems, biodiesel quality concerns and markets, feedstocks and production technology developments. The conference then featured an open dialogue session between a panel of experts and the attendants. The summary of the presentations and discussions is reported hereafter while the presentations are available on the [GBC website](#) and/or [IFQC website](#).

Keynote Speech

Oyvind Vessia from DG ENER presented on the implementation of the Renewable Energy Directive (RED), progress and next steps. The main points of his address were:

- The European Commission (EC) is assessing the National Action Plans (NAP) it has received so far (20/27) in light of compliance with the RED;
- Member States (MS) are required to put in place “adequate measures” to promote RED;
- Ultimately MS are responsible for the implementation of the RED, not the EC;
- There are gaps in the implementation process and the EC is working on them, it is not a smooth process as this is the first legislation of its kind.

Vessia then called all stakeholders to address their comments or concerns to the Commission in a structured and compact manner. Hart Energy Consulting has offered to all its members the opportunity to gather these comments, review them and then forward them to the Commission as a meeting has been called between selected stakeholders including Hart Energy Consulting and the EC in early October (Oct. 8 or 11).

KEY POINTS

- RED being implemented by MS and EC reviewing NAPs;
- However MS indicate that there will be delays in the RED implementation;
- B10 standard expected soon in the EU
- Limited potential to improve FAME manufacturing but other technologies have promising GHG reduction even though price is an issue;
- Biodiesel public image needs to be improved for consumption to increase.
- Members are encouraged to send their comments on the implementation of the RED to be submitted to the EC early October.

Session 1: National Policies for Biodiesel

The first session focused on the NAP showing how MS will implement the RED with three presentations from Poland by Andrzej Kulczycki, Spain by Zoe Onutu and Germany by Elmar Baumann. All three presenters explained that there would be delays in the implementation of the RED or difficulties in reaching the 2020 target.

- **Poland** highlighted the difficulty of reaching the biofuel consumption target of the NAP with B7 and intends on using hydrogenated vegetable oil (HVO) to make up for the difference. There is a difference in opinions between the oil industry and the government as to how to reach the 2020 target. The government would like to see a steady increase in biofuels share in the market as of today, whereas the oil industry promotes a staged option of modest utilization of first generation biofuels, including biodiesel, until 2015-16 and sharp increase after this date, when – as they expect – more technologies and more products with better greenhouse gas (GHG) emission performance will become available.
- **Spain** showed that the NAP forecasted a welcome consumption increase compared to the current depressed market (less than 20% capacity used, discrepancy between import and domestic production). The Spanish NAP showed as well that the renewable energy target will be predominantly fulfilled by biodiesel (76%). But the Spanish government is not putting forward measures to help reach the 2020 target and support the market. Imports are expected to decrease but again there is no concrete measure to curb imports.
- **Germany** is trying to meet the targets of both the RED and amended Fuel Quality Directive (FQD). After 2014 the main driver will be the FQD GHG saving target. The German NAP shows first a biodiesel consumption decrease and then three step changes in consumption increases. However, all the step changes are driven by imports even if Germany has enough capacity to meet its biodiesel demand. Advanced biofuels are not seen as an option before 2020. Germany asked the EC for a strategy beyond 2020.

Session 2: Sustainability and National Certification Systems

The second session focused on the national biofuels certification systems with presentations from Germany by Dieter Bockey, the U.K. by Sam Bond and the World Wide Fund (WWF) by Imke Lübbecke.

- **Germany** has two certification systems: the RED-cert and the international sustainability and carbon certification (ISCC) system. Only the ISCC system has applied to the EC for acknowledgement so far. The aim of the RED-cert system is to have a simple certification system in place. The system starts with self-declarations from farmers but only first collectors will have a certification requirement. If one element in the certification chain is not sustainable, then only that element will be penalized, not the whole chain. The time element for acknowledgement by EC has been underestimated according to Bockey.
- The **U.K.** Renewable Fuels Agency (RFA) is working on “RED ready” guidelines. But these will not be ready by December 2010. The U.K. Department for Transport is responsible for the implementation of the RED and the sustainability criteria and having a certification system in place.
- The **WWF** is working through the Round Table for Sustainable Palm Oil (RSPO) on a certification system for palm oil only. This system goes beyond the RED requirements in terms of social standards, for example, and covers all types of palm oil based products (is not restricted to biofuels). The RSPO is trying to set up voluntary “adds-on” to its standard for compliance with the RED. The objective is to have 50% of total palm oil production RSPO-

certified. However total palm oil consumption is divided between 80% for the food industry, 17% for the pharmaceutical industry and industrial processes and only 3% as fuel. WWF highlighted that the Asian market is more important for palm oil (China, Indonesia, Malaysia, etc.) where palm oil is the main cooking oil, than other markets such as the European one. RSPO is currently in the process of application to EC for the recognition.

Session 3: Biodiesel Quality Concerns

The third session focused on the topic of biodiesel quality. It featured presentations from a car manufacturer, Gérald Crépeau from PSA Peugeot Citroën, a chairman from the European Standardization Committee (CEN), Jacco Woldendorp and from the largest French biodiesel producer, Kristell Guizouarn from Diester.

- **PSA Peugeot Citroën** highlighted the main issues that arise when increasing the blending limit of fatty acid methyl ester (FAME) to B30. These are cold flow issues, oxidation stability issues and post treatment durability issues. All new PSA Peugeot Citroën cars can run on biodiesel blends up to 30vol% FAME. This has been achieved through changes in many of the engine components over the last 10 years.
- The **CEN** has been given two mandates by the EC for biodiesel: fatty acid ethyl ester (FAEE) and B10. However FAEE is not on the market currently so the certification work has been suspended. For the B10 standard, the CEN also needs to modify diesel standard EN 590 to allow the 10vol% FAME. The CEN underlined the problem of reaching an agreement between all stakeholders that made the B10 standardization process slow. CEN mentioned that a political decision was required, too, which was beyond the scope of the CEN.
- **Diester** presented the views of a biodiesel producer. In particular, it highlighted the difficulties for quality control when new imported feedstocks are used, as traceability issues then appeared. Diester stated that it experienced a big jump in demand for biodiesel when B7 was introduced in 2008, and that another jump was to be expected with the introduction of B10 that producers will have to supply. Diester underlined that impurities are the main challenge for quality control at producer's level because of FAME being a vegetable product thus containing many different components.

Session 4: Markets, Feedstocks and Production Technology Developments

The fourth session focused on research and development in terms of new feedstocks for biodiesel as well as new or improved production processes in order to meet the increasing biodiesel demand and sustainability requirements. The three presenters were Martin Mittelbach from the University of Graz, Anna Grevé from the Fraunhofer UMSICHT and Michel Bloch from Axens.

- **Dr. Mittelbach** presented a classification of various feedstocks, separated into six different types and all leading to different requirements in terms of FAME manufacture processes. He concluded that conventional FAME feedstocks were still the most used and will continue being used since alternatives are mainly at the research stage. He also stated that current production technologies offer little potential for GHG emission reduction.
- **Dr. Grevé** has presented her latest research results on a new and promising catalyst for the manufacture of FAME choline hydroxide. This catalyst offers several advantages over conventional catalysts and can be called a green catalyst because it also allows for applications in the food and feed industries. The biodiesel waste products can then be used as raw material for other chemicals or even as a renewable energy source as it can be combusted without producing salts.

- **Dr. Bloch** reviewed the FAME manufacturing process so as to identify the steps which could be improved thus allowing better economics and GHG savings. Dr Bloch stressed that most of the carbon dioxide (CO₂) footprint of FAME biodiesel comes from the methanol used in the manufacture because of its fossil origin and concluded that by using bio-methanol or bio-ethanol, the GHG savings of biodiesel (FAME or FAEE) would be greatly increased. Dr. Bloch also reviewed other diesel substitutes obtained through different processes such as hydrogenation through Axens' VEGAN™ process. This product, however, is for now more expensive than FAME biodiesel and Dr. Bloch stated that the most promising technology today was a combination of CTL, GTL and BTL diesel.

Open Dialogue on the Future of Biodiesel in Europe

Greg Archer from the Low Carbon Vehicle Partnership (LowCVP) moderated the open dialogue session and the panel was constituted of Ken Rose from CONCAWE, Ilmari Lastikka from Neste, Sauter from the German Biofuels Association, Kyriakos Maniatis from DG ENER and Raffaello Garofalo from the European Biodiesel Board (EBB). Some of the questions asked were:

- How can the public image of biodiesel be improved?

The answers included an improved dialogue with NGOs that need to be better aware of all the issues surrounding biodiesel. It was also mentioned that national governments needed to receive better information on biodiesel. Another approach put forward was to have an equal transparent benchmarking between all biofuels companies.

- Is it possible to meet the renewable energy target of RED and GHG reduction target of Article 7 of the FQD at the same time?

The answer was that B10 was needed in order to increase the share of renewable energy in transport; however t HVO will help meet the increasing biodiesel demand and GHG emission reduction target. But in the view of one panelist, next generation biodiesel such as BTL volumes would be absorbed by the maritime and aviation usage of biodiesel instead of going for the on-road biodiesel usage.

- How is the oil industry going to adapt to clean fuels and sustainability?

The FQD puts pressure on the oil industry so that it is the biggest promoter of biofuels in the EU because it will use biofuels as a mean to reduce its GHG emissions. A lot of research and development activity into biofuels and biodiesel is sponsored by the oil industry. However, the refining industry does not only supply transportation fuels but also chemicals and plastics. Even if biofuels take an important share of road transportation fuels, other transport modes will rely heavily on fossil fuels such as the maritime and aviation sectors. Oil and biofuel sectors are adapting to new requirements for sustainability, as mentioned by Neste for example. However, all panelists agreed that the current situation with no voluntary schemes recognized by EC and uncertainty as to the future practical elements of the sustainability systems does not help the industries with their strategic and investment plans.

- Is the B10 mandate going to be enforced soon?

The answer was that it will depend on how quickly the car industry wants to change because some car manufacturers are already indicating that they welcome B10 or even higher blends, while others are already not comfortable with B7. The EC might ask CEN what has happened with the mandate to update EN 590 (the diesel standard) to have 10vol% FAME as this was the original mandate given to CEN over three years ago. It was mentioned that the push for further work on B10 mandate may come from policy makers in the EU and Member States, especially those concerned about the

fulfillment of the renewable energy targets. And this is because already today Member States have the possibility to allow for higher biodiesel volumes in diesel than 7vol% or for other biocomponents with no limits (e.g. HVO), they are unwilling however to allow for products for which there are not technical standards or which are not in compliance with the standards.

- Are there concerns about the slow implementation of the RED?

Some speakers had suggested that a staged implementation of the RED should take place as some biodiesel producers are already on target to meet sustainability criteria while others need more time to meet a certification system. The panel indicated that a voluntary EU-wide scheme was desirable, not 27 national schemes that would make certification complicated and fragmented. It was stressed that it is critical for the biodiesel industry to have EU-wide specifications for sustainability criteria. The fact that CEN is also working on a sustainability criteria standard was underlined. The panel stressed that it would be reasonable to have a transitional implementation for the large majority of biodiesel producers who is not ready while rewarding the few producers who are already ready to implement certification systems.

If you have any questions or feedback on this Flash Report, please contact [Maelle Soares Pinto](#), director, Europe and Africa, Global Biofuels Center or [Ula Szalkowska](#), director, Europe and Africa, International Fuel Quality Center (IFQC) at +32.2.287.08.21.

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