

Views

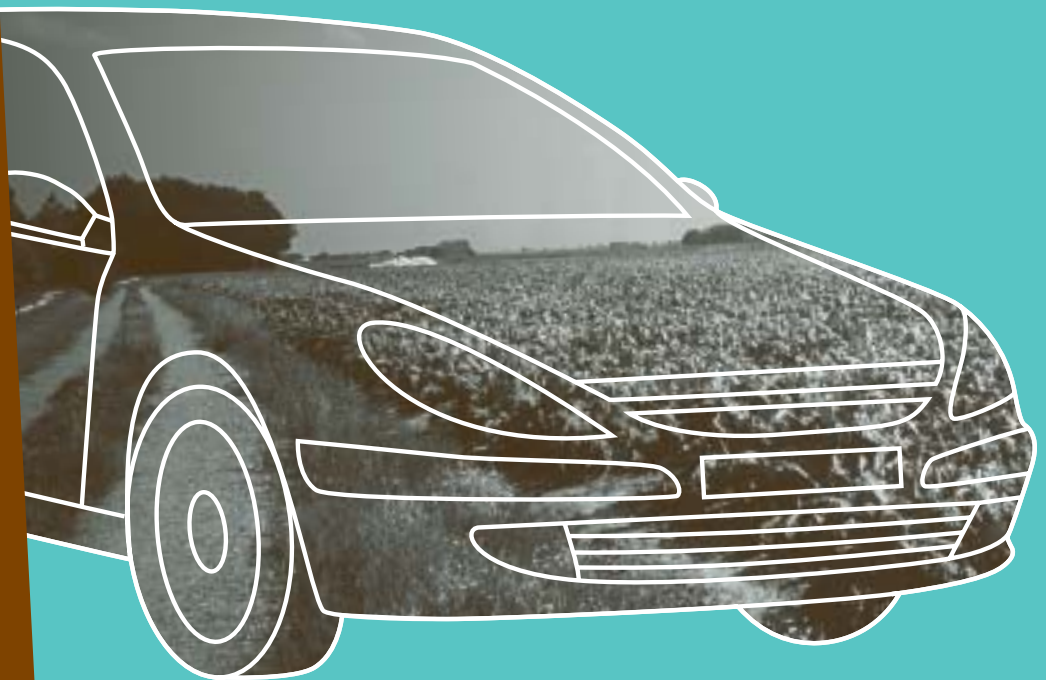
CLEAR VIEWS *on* CLEAN FUELS

Data, Potential, Scenarios, Markets and Trade of Biofuels



A European Commission-supported project

(NNE5-2001-00619)



Achieving clear views on information concerning, and prospects of, biofuels for transportation

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An encyclopaedia on biofuels

In the near future biofuels will undoubtedly play a more important role as energy source in the transport sector. However, there is still considerable uncertainty regarding the speed and scale of the introduction in the various European countries. Expanding current knowledge of these clean biofuels is therefore necessary. Our current knowledge does not seem to be accessible to everyone. There is no good overview of, and insight into, results of scientific studies and practical experience with biofuels. The project 'Clear Views on Clean Fuels' (VIEWLS) plans to resolve these problems. The project receives financial support from the European Commission, national budgets from the participating countries and from individual companies.

To achieve good results with VIEWLS, we want to involve all stakeholders who are in any way involved with biofuels. Hence this brochure! We ask that you make interesting information on biofuels available to the project. VIEWLS will collate, classify and analyse all this information. This will result in an 'encyclopaedia' of information, analyses and scenarios, which will be available on CD-ROM and on the Internet, thus allowing everyone requiring information on biofuels to search for specific details, e.g. by theme, country, biomass, or other characteristics. You will undoubtedly find that the encyclopaedia also becomes a source of inspiration and information. And thus VIEWLS provides a further contribution to the future of biofuels.

VIEWLS is a collaborative project by parties from Europe and North America, who collect, classify and analyse the information on biofuels. This brochure explains the kind of information that VIEWLS is looking for and how you can make this available. We also provide an insight into the project's background, objectives and working methods.

STAKEHOLDERS

- Governmental organisations
- Industrial organisations
- Financial institutions
- Agricultural groups
- Non-governmental organisations
- Knowledge centres
- Others



*Kyriakos Maniatis,
Principal Administrator, Directorate General Energy and Transport
of the European Commission (EC/DG TREN):*

“The European Commission needs the information produced by the VIEWLS project in order to forge its future policies on biofuels for transport applications. And, of course, to determine whether, and where, legislation regarding biofuels for transport needs to be modified. Therefore, the most important point is that the VIEWLS project needs to produce reliable information. That’s why it should aim to identify all studies or information on biofuels that are based on reasonable and justifiable assumptions and exclude all others from its analysis. We are also interested to learn the potential for trade in biofuels between the current and future Member States of the European Union as well as the other Eastern European countries. And last but not least, sustainability and certification of bio-origin are also very important issues when you’re talking about biofuels”.

WHY IS THE INTRODUCTION OF BIOFUELS SO IMPORTANT? THREE REASONS: SUSTAINABILITY, SECURITY OF SUPPLY AND ECONOMIC DEVELOPMENT.

A sustainable source of energy

More and more countries are now becoming aware that they need to use existing fossil fuel supplies carefully and that the environment is extremely important. To prevent further global warming through greenhouse gas emissions we all need to reduce CO₂ emissions. This is why the European Commission has developed strategies to promote the introduction of sustainable energy sources. Biofuels can play an important role in this policy. Greenhouse gas emissions (primarily CO₂) from biofuels can be significantly lower than those from fossil fuels.

EUROPEAN OBJECTIVES

The European Commission's objective is to have alternative fuels replacing 20% of the conventional fossil fuels for transport in the year 2020. For the period up to 2010 the primary aim is the further development of biofuels. In the period 2010-2015 the use of natural gas is promoted and in the period 2015-2020 the introduction of hydrogen is emphasised. The European Commission has already drawn up guidelines for using 2% of biofuels in 2005 and 5.75% in 2010.

Security of supply

Fossil fuels are still the most important source of energy in European countries, but these fuels will not always be available in this region. Over the next 20-30 years the European Member States will probably have to import 90% of their energy. This raises the security of supply issue. Sufficient reason, therefore, to look for alternative energy sources that are (or could be) available within Europe. Biofuels, for example.

Opportunities for economic development

There is yet another advantage. Increased use of biofuels could act as the driving force behind other activities in the agricultural and forestry sectors, particularly in Central and Eastern European countries, where this offers opportunities for economic development. As these countries will soon be joining the European Union (EU), these opportunities and possibilities should be studied *now*.





SOURCES OF BIOMASS

Classification	Type of resource	Example of resource
Energy crops	Woody lignocellulose crops Herbaceous lignocellulose crops Oil crops Sugar crops Starch crops Aquatic plants Others	Willow / eucalyptus Miscanthus / switch grass Rape seed / soybean / sunflower seeds Sugar beet / cane beet Maize / potatoes / wheat Lipids (from algae) Flax / hemp / tobacco stems
Residues	Forestry residues Agricultural residues Wood-processing residues Construction residues Food and nourishment industry Tallow / yellow grease Roadside hay	Wood residues / thinning wood Straw (maize / cereal / rice) Wood chips / sawdust Demolition wood Residue flows from food and luxury products industry Grass
Manure	Solid manure Liquid manure	Chicken manure Cattle / pigs / sheep manure
Sewage sludge		
Waste	Garden, fruit and vegetable waste Other organic waste	

Transparency is vital

The European Commission realises that there is a lack of transparent information and common understanding on biofuels. What are the environmental performances of the various biofuels, what experience do the various countries have regarding certain biofuels, what are the production costs, where is agricultural land available for producing biomass and how much land is involved? Clear information concerning these and other aspects is vitally important for users, suppliers and intermediaries. They must all be able to make well-informed decisions on investing in biofuels. For example, investing in biofuel production technologies, integrating the infrastructure in order to expand biofuels, or in developing the car industry.



FUELS CONSIDERED

Liquid transportation fuels	Gaseous transportation fuels
Biofuel <ul style="list-style-type: none">BioethanolBiodieselBiomethanolBiodimethylether (bio-DME)Bioethylbutylether (bio-ETBE)Biomethyl tertiary butyl ether (bio-MTBE)Fischer-Tropsch diesel (FT-diesel)Synthetic liquefied natural gas (SLNG)Liquefied biohydrogenPure vegetable oil	Biofuel <ul style="list-style-type: none">BiogasGaseous biohydrogenSynthetic natural gas (SNG)
Fossil fuel <ul style="list-style-type: none">GasolineDieselMethanolLiquefied natural gas (LNG)Liquefied petroleum gas (LPG)Liquefied hydrogen (LH)Ethylbutylether (ETBE)Methyl tertiary butyl ether (MTBE)Dimethylether (DME)	Fossil fuel <ul style="list-style-type: none">Compressed natural gas (CNG)Gaseous hydrogen (GH)



HOW IS VIEWLS ORGANISED? WHAT ARE THE ACTIVITIES THAT WILL BE INCLUDED UNDER THE FRAMEWORK OF THIS PROJECT? WHO DOES WHAT?

In order to ensure the widest possible application of biofuels, VIEWLS will gather all information that is currently available in Europe and North America on the economic and ecological performance of those biofuels. This mainly covers life cycle analyses (LCA), cost studies and research into energy systems. We know that there is limited information in the Eastern European countries that will shortly join the EU. However, in order to define the potential of these countries, calculations will be made based on the information available regarding production possibilities and the agricultural and forestry areas available. VIEWLS will then use this information as a basis for its analysis and set out a range of scenarios that show how the European Commission can achieve its objectives at the lowest possible price.

Partners involved

There are 19 institutes involved in this project. Most project partners are from Western Europe, but the group also includes institutes from Eastern Europe and two from North America. These are government support agencies, intermediate organisations, consultants and research institutes.

Who does what?

The VIEWLS project is divided into various work packages. All project partners work in one or more of these work packages. The first point of contact for the VIEWLS project is Novem, who is responsible for the overall project coordination and communication. Gathering and selecting existing and new information is primarily the task of JR and UU-STIS. ECN is then responsible for analysing the information and setting out the various future scenarios.





HOW CAN YOU BECOME INVOLVED IN VIEWLS?

In order to achieve the best results, we want to involve stakeholders in the field of biofuels. If you have information on biofuels available that you think might be interesting for the VIEWLS project (e.g. information on the economic or ecological performance of biofuels, life cycle analyses or cost studies), please send it via e-mail to Novem (VIEWLS@novem.nl) or send it to your nearest project partner. All address information can be found on the VIEWLS website (www.VIEWLS.org).

Throughout the course of the project we will continually disseminate information to stakeholders we know. If you wish, you can receive a newsletter telling you about new developments and publications. We will also organise workshops, to which you will be invited. Stakeholders can participate in the project at one of the following 'membership' levels:

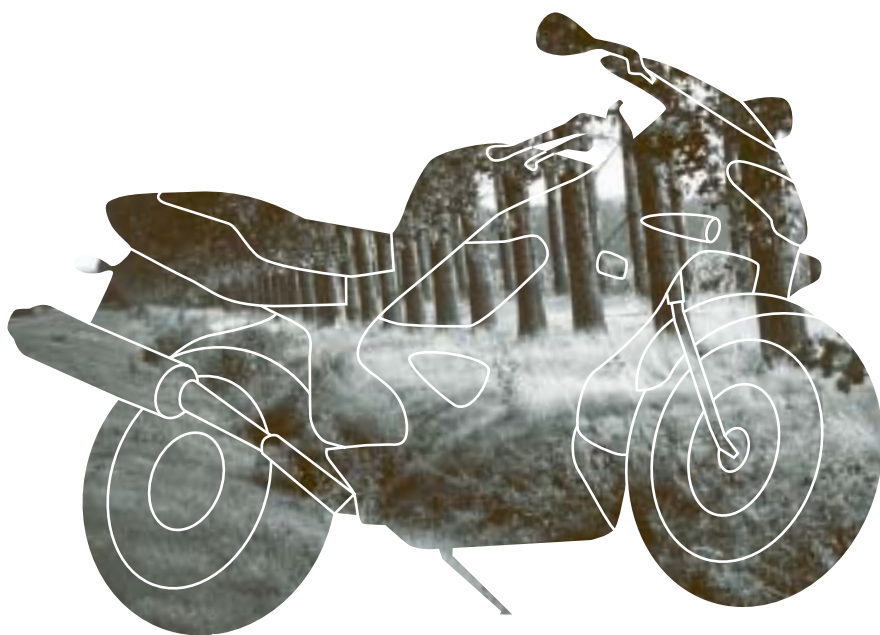
'VIP membership'

VIPs (VIEWLS Interested Persons) are people who are interested in following the VIEWLS project. They receive the VIEWLS newsletter and invitations to workshops. Occasionally they will be asked to fill in a questionnaire. This type of membership keeps you up to date with the latest developments concerning biofuels for the transport sector.

'Diamond VIP membership'

This membership level includes the VIP membership plus several extras. It requires a more active contribution, e.g. more frequent invitations to fill in questionnaires, providing input (ideas and topics during workshop preparation) etc. Furthermore, Diamond VIP members are enabled to comment on 'near to publication' draft documents, thus directly contributing to the project's outcomes. You will also receive electronic PDF documents that are ready for publication.

Please let us know if you wish to become a 'VIP member' or 'Diamond VIP member' of the VIEWLS project. You can use the reply card in this brochure or send an e-mail to: VIEWLS@novem.nl. Membership is, naturally, free of charge.



*Annemarie van der Rest,
Environmental Affairs Manager at Shell Netherlands:*

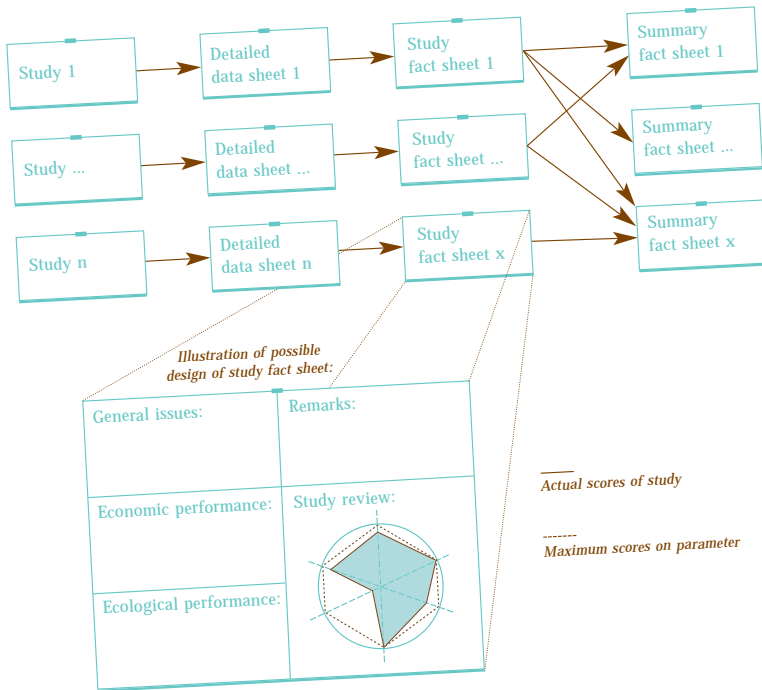
“We feel it’s important that there is legislative equality throughout the European market. International agreement is required, for example regarding the quality and combination of transport fuels to which biofuels are added. For the foreseeable future these sustainable fuels are expected to remain considerably more expensive than fossil fuels. Tax reductions might help to increase consumer demand for biofuels. We would like to see the governments of the various European countries make clear agreements regarding these types of measures, thereby ensuring a level playing field. VIEWLS provides a basis for drawing up guidelines for this type of subject”.

**THE VIEWLS PROJECT WILL BE FINALISED IN 2005.
WHAT RESULTS ARE EXPECTED? HOW WILL THESE BE PUBLISHED?**

VIEWLS results

Review of existing studies

Many studies describe the economic and ecological performances of various biofuels. As many studies as possible have been collected. Of these, around one hundred are selected for a thorough analysis of all relevant information within these studies, in order to achieve a better understanding of the practical significance of various biofuels. This information will be transferred into detailed data sheets and condensed into study fact sheets. Based on that, summary fact sheets are produced which contain information from the reviewed studies for a single fuel. Policy-makers, industrial parties and other stakeholders can then use this as a basis for their decisions.



One example of the analyses is the collection and review of relevant studies containing LCA, cost and other information on biofuels. Quantitative information on environmental and economic results, assumptions and fuels will be uniformly transferred into fact sheets, so that the result can be compared easily. At the same time a methodology review will be carried out, providing insight into the way in which the result was established and how it should be interpreted. Whether or not visually attractive presentations, such as the spider diagram shown above, can be used to achieve this is still under consideration.

Opportunities in Eastern Europe

This concerns gaining further insight into the opportunities for Eastern European countries as they prepare to join the EU. There is limited information on biofuel developments in these countries, but now that they are about to join the EU it is sensible to analyse their agricultural and forestry opportunities regarding biomass production potentials. Once this outcome is known, possible future scenarios can be developed.

Optimisation of biofuels introduction

Insight is needed into the possibilities for trading biomass and biofuels between European countries. The European Commission's objective for biofuels (5.75% in 2010) applies to all European Member States. However, there are huge differences in the amount (and costs) of biofuels that each country can produce. By using optimisation models, VIEWLS will find out which countries might be capable of producing more biofuels than necessary for their own use and which countries would be better off importing their biofuels. This can result in investment savings for the various countries involved, while still fulfilling their European commitments.

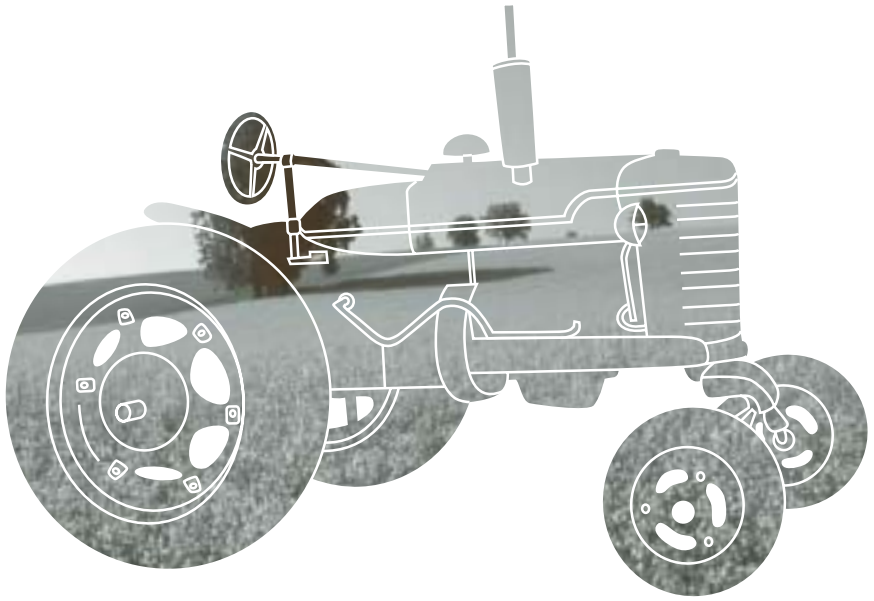
Future policies

A report, including recommendations, will be sent to the European Commission. The Commission will then base future biofuel policies, to some extent, on these recommendations. The report is also aimed at stakeholders, who can use this information to make their decisions regarding future developments.

Virtual office

In order to make the information, analyses and scenarios available worldwide, VIEWLS has created a new website: www.VIEWLS.org, which contains all the general project information and an overview of the publications. The website also provides access to our 'virtual office', which is primarily used by the project partners. However, it will also have a public function. There will be a 'reading room' where you can read through project publications, plus a number of conference rooms.





*Tony Sidwell,
New Opportunities Manager of British Sugar:*

“The VIEWLS project will give us a look into the future. It gives valuable information about the whole spectrum of biofuels, not just the more commonly known ones like bioethanol and biodiesel. And about the resources that are available for the production of those biofuels. Based on that information, governments can start taking decisions on how to reach the targets from the new European directives. The information can also help companies like British Sugar to make sure we are concentrating our research and technology in the right direction: that is on the fuels that are most likely to succeed. After all, we don’t want to spend all our time and money chasing a certain biofuel if it is going to have a limited market or lifetime”.



Frequently asked questions

What is the main objective for VIEWLS?

VIEWLS aims to ensure a broad and cost-efficient use of biofuels in the future, with a top environmental performance.

Why are biofuels so important?

Biofuels offer a clean and renewable alternative to fossil fuels. The European Commission wants to see 5.75% of the conventional fossil fuels used for the transport sector replaced with biofuels in 2010.

Who is behind the VIEWLS project?


VIEWLS is implemented and part-financed by the European Commission.

How can I support VIEWLS?

By making available any interesting studies on biofuels that you may have in your possession. Simply send the information to Novem or to your nearest project partner. You can also send information via e-mail (VIEWLS@novem.nl). This e-mail address can also be used to tell us whether you would like to become a VIP member or Diamond VIP member of the VIEWLS project.

What can I expect to receive from VIEWLS?

The information that is gathered on all types of biofuels will be made available in an encyclopaedia of data, analyses and scenarios, both via the Internet and on CD-ROM. You are free to use this information as you wish. VIEWLS will also publish a report on biofuels that will be submitted to the European Commission. The report will contain recommendations for European policies on biofuels. By making your information available to VIEWLS, you are also contributing to the final report and its recommendations, thus indirectly influencing the European Commission.



TIME SCHEDULE

	2003												2004												2005
	feb	mar	apr	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	jun	jul	aug	sep	oct	nov	dec	jan			
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- 1 Project management
- 2 Design methodology review and stakeholder involvement
- 3 Review of existing studies
- 4 Collection of new data on biomass availability in Eastern Europe
- 5 Chain definition of biofuel production and transportation
- 6 Modelling and analysis
- 7 Results and recommendations
- 8 Communication/dissemination

Contact information

For more information about the VIEWLS project you can contact Novem via e-mail at VIEWLS@novem.nl. You can also contact your nearest project partner. All contact information can be found on the VIEWLS website (www.VIEWLS.org).

Project partners

- Novem - Netherlands Agency for Energy and the Environment, the Netherlands
- ECN - Energy research Centre of the Netherlands
- UU-STC - Copernicus Institute of University Utrecht (Department of Science, Technology and Society), the Netherlands
- JR - Joanneum Research Forschungsgesellschaft mbH, Austria
- CIEMAT - Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain
- UBC - University of British Columbia (Department of Wood Science), Canada
- COWI - COWI AS, Denmark
- STEM - Swedish National Energy Administration, Sweden
- IEA - International Energy Agency (Bioenergy Agreement Task 39 Liquid Biofuels), USA
- IE - Institute for Energy and Environment, Germany
- Chalmers - Göteborg University (Chalmers University of Technology), Sweden
- ECBREC - EC Baltic Renewable Energy Center, Poland
- USAMBV - University of Agronomic Sciences and Veterinary Medicine Bucharest, Romania
- RILOG - Research Institute for Ornamental Gardening, Czech Republic
- HIAE - Hungarian Institute of Agricultural Engineering, Hungary
- ADEME - Environment and Energy Management Agency, France
- NTUA - National Technical University of Athens, Greece
- BLT - Federal Institute of Agricultural Engineering, Austria
- TML - Transport & Mobility Leuven, Belgium