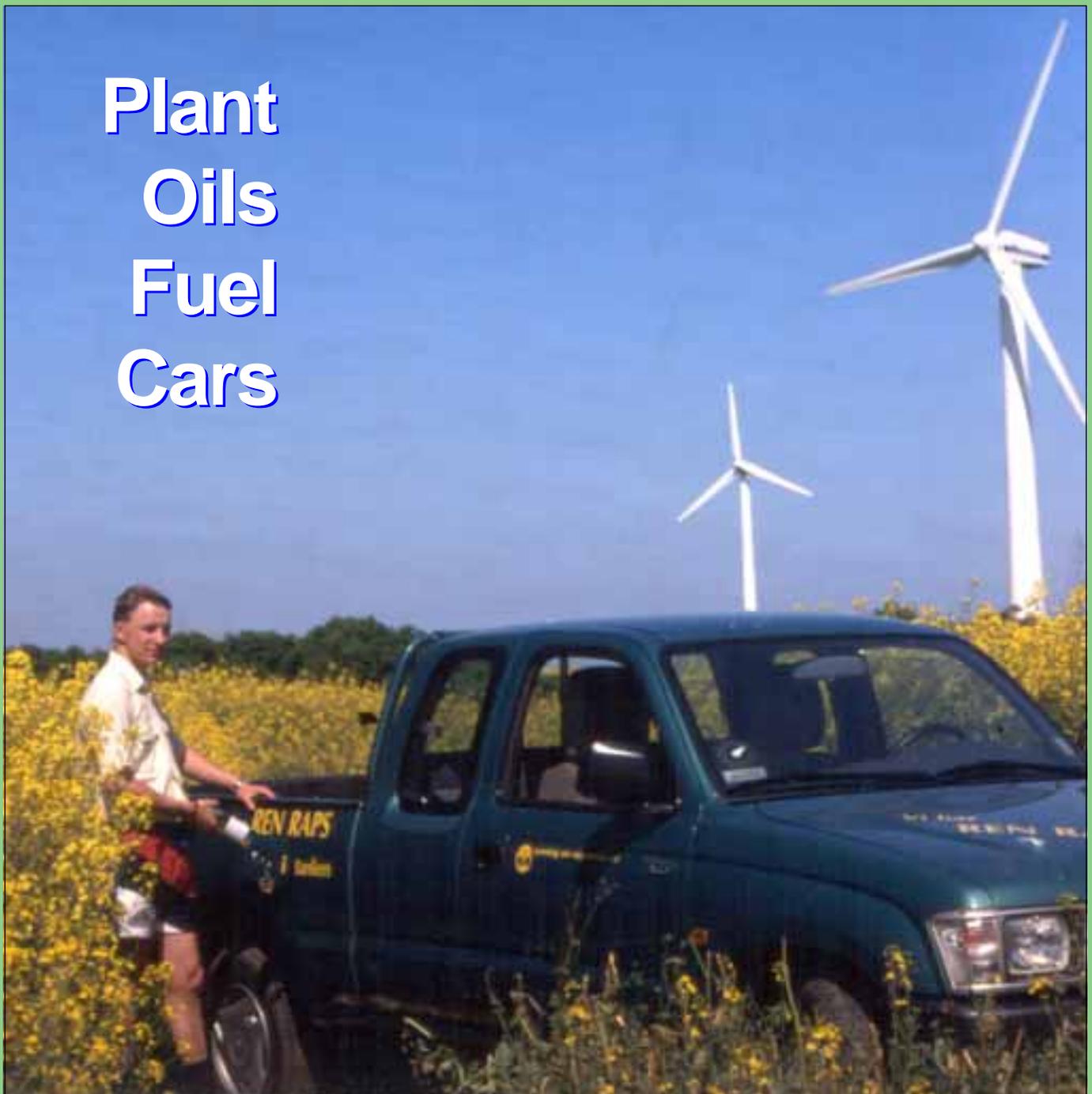


# SUSTAINABLE ENERGY NEWS

Newsletter for **INFORSE** International Network for Sustainable Energy.

No. 34, August 2001

Plant  
Oils  
Fuel  
Cars



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**INFORSE Secretariat:**

Blegdamsvej 4 B, 1st fl., 2200

Copenhagen N, Denmark.

Ph: +45-35-247700

Fax: +45-35-247717

E-mail: [inforse@inforse.org](mailto:inforse@inforse.org)

<http://www.inforse.org/>

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**Editorial Address:**

Sustainable Energy News

Gl. Kirkevej 56, DK-8530

Hjortshøj, Denmark.

Ph: +45-86-227000

Fax: +45-86-227096

E-mail: [ove@inforse.org](mailto:ove@inforse.org)

<http://www.inforse.org/>

**Editors:**

Gunnar Boye Olesen

Judit Szoleczky

Michael Kvetny

Niki Fowler (text advice)

**Advisory Board:**

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**Photo on the front page:**

Car fuelled by rape seed oil in a rape field in Denmark.

See article on pages 14-16

Photo by Jane Kruse, Folkecenter, Denmark.

# Turning Point for Climate - Time to Speed up in the Right Direction



Thousands of people demonstrated for action against climate change outside of the COP6 conference building in Bonn.

Photo: [www.foeeurope.org](http://www.foeeurope.org)

The Kyoto Protocol is alive and the Climate Convention process is going on to reduce man-made climate change. This is the good news of the climate conference "COP6bis" in Bonn in July. The conference ended months of doubts about the future of the Climate Convention. Even the US government, responsible for the largest economy in the world, could not stop this process.

The climate conference in Bonn did more than keep the process alive. Some of its achievements were that:

- Nuclear power cannot be used in "Joint Implementation" (JI) or "Clean Development Mechanism" (CDM) projects to reduce CO<sub>2</sub> emissions. The nuclear industries' claims that they have an environmentally friendly technology were severely damaged during the negotiations.
- The basis for national ratification of the Kyoto Protocol is in place; it can enter into force in 2002, if ratified.
- Smaller renewable energy and energy efficiency projects will have simpler procedures than other projects in the CDM.

While the climate negotiations have started to move in the right direction, the speed is slow. The Bonn Agreement has a number of loopholes, such as opportunities for large-scale use of greenhouse-gas sinks as alternatives to reducing emissions. This will probably lead to very low prices for greenhouse-gas emissions quotas. With such low prices, JI or CDM projects will not be able to support large-scale development of energy efficiency or renewable energy. The low prices will also tempt industr-

ialised countries to buy emission credits rather than to reduce greenhouse gases at home. Because of such loopholes, and because of the lack of commitments from the USA, probably the success in Bonn will only lead to stabilisation of greenhouse-gas emissions. It will not achieve the large reductions that we need, if we want to avoid severe problems with climate change. Thus, we have a large task ahead of us, to speed up the greenhouse-gas reductions to realise real reductions on a world scale.

The countries must now go on to ratify the Kyoto Protocol. The remaining loopholes and uncertainties in the agreement must be eliminated as far as possible. For remaining loopholes, it is important that they are used as little as possible. Each country must seriously consider which of the loopholes it wants to allow within its borders, and set limitations on those that it will allow. Further, it is important that the climate activities are not creating other problems. E.g., care must be taken that tree planting does not reduce natural forests and other valuable biodiversity. It is also important that all climate-related activities help societies in their strive for sustainable development.

When the climate negotiations cannot speed up the reduction of greenhouse gases, an extra push is needed. We have to look at the longer term, where the need for reductions is even more evident than for the "Kyoto-period" of 2008-2012. The process of the World Summit on Sustainable Development (Rio+10) will be an obvious opportunity to do that, to take new steps leading to a worldwide transition to sustainable energy.

Roque Pedace, Gunnar Boye Olesen, Decharut Sukkumod  
INFORSE Coordinators (Latin America, Europe, East Asia)



# Kyoto Protocol in Bonn & Ahead

The success and problems from global climate change negotiation

By Decharut Sukkumnoed (SENT), Roque Pedace (REJIMA), INFORSE Regional Co-ordinators (East-Asia Pacific and Latin America)

*Demonstrators carried a huge lifeboat model through Bonn as a symbol of the action needed against climate change. Photo: www.foeurope.org*

The global climate-change negotiations (COP6, second part) in Bonn in the last two weeks of July finished work that was begun at COP 6 in the Hague in November last year. Political agreement was finally reached to finalize the rules of the Kyoto Protocol, with a call for countries to ratify the Protocol quickly.

The negotiations can be considered a political success, but the environmental integrity of the Protocol has been affected negatively: it has become less effective in reducing global warming. Politically, this is not only a victory against those who do not want the Kyoto Protocol entry-into-force, it also proves that the global community can cooperate and reach agreement on combating this global environmental threat. Consequently, the environmental aspect of sustainable development will gain more recognition in the

on-going globalisation process, which has been narrowly focused on the trade and economic aspects.

However, during the negotiation process, some developed countries, especially the umbrella group<sup>1</sup>, created and promoted the issue of “cost-effectiveness” rather than environmental integrity. With their high bargaining power, many loopholes have been included in the rules of the Protocol proposed by these countries. Among others, their preferred option would be to use international mechanisms; namely Joint Implementation (JI), Emission Trading (ET), and Clean Development Mechanism (CDM), whose limiting regulations have been greatly reduced, rather than reduction of the sources of emissions.

Furthermore, both domestic and international sink activities, including affor-

estation and reforestation, are allowed in JI and CDM with very high quantitative limits and loose qualitative regulation. This will not only decrease the efforts to reduce GHG emission domestically in developed countries, but also will cause other environmental and social problems in developing countries.

In general, there is not much place for renewable energy in these mechanisms because change to renewable energy use usually is more expensive than (the loosely defined) sink activities.

Therefore, NGOs clearly need to put more effort into negotiation to improve regulations under the protocol, as well as to support and to put forward renewable energy initiatives in order to achieve the real objectives of the Kyoto Protocol and a more sustainable future.

More information: [www.climnet.org](http://www.climnet.org)

<sup>1</sup> Note: The umbrella group consists of USA, Japan, Canada, Australia, New Zealand, and Norway.

## Will Rio+10 Pass the Energy Litmus Test?

In our previous issue, we noted that the treatment of sustainable energy was a litmus test for the World Summit in Sustainable Development (WSSD or Rio+10, Johannesburg, September 2-11, 2002). When will we know the results?



### No Issues So Far

In December 2000, the UN General Assembly decided to organise a WSSD as a 10-year review of the implementation of the decisions taken at the Rio conference in 1992. Special focus shall be on identification of areas where further efforts are needed to implement Agenda21 and other outcomes of the Rio conference. Focus should also be on action-oriented decisions in these areas, but no list of ‘these areas’ was made.

### Coming Crucial Preparations

The first preparatory meeting (prepcom) for Rio+10 was held in New York, April 30 - May 2, 2001. It did not address the issues of Rio+10, but made a timetable for the preparations:

- meetings in the UN Regions (July - November 2001) to set priorities;
- the second prepcom (New York, January 28 - February 8, 2002) will evaluate progress since the Rio conference and results of the regional meetings;
- the third prepcom (New York, March 25 - April 5, 2002) shall discuss recommendations for further actions;
- the fourth and final prepcom (Indonesia, May 27 - June 7, 2002) shall discuss the documents for Rio+10. Probably, most of the documents will be ready at the end of that meeting.

In addition to these prepcom meetings, decisions will be made by the CSD-10 bureau and by the UN General Assembly. A number of regional meetings and other events will also prepare for Rio+10, but only one of them specifically ad-

dresses the topic of energy: the Rio02 conference, January 6-10 in Rio de Janeiro, Brazil.

From this timetable, it is clear that the decisions regarding the role of sustainable energy will first be discussed at the regional meetings, and can be finalised some time at the second and third prepcom. If new proposals, such as an International Sustainable Energy Agency, come onto the agenda, they will be discussed intensively at the fourth prepcom. The experience from the CSD9 (Commission for Sustainable Development 9th Session, on energy) was that most visionary proposals were rejected at the preparatory meetings in New York.

Read more about the preparations at: [www.johannesburgsummit.org](http://www.johannesburgsummit.org).

# New Push for a World Organisation

## NGOs Push for an International Organisation for Sustainable Energy

For many years, NGOs have called for international organisations for sustainable energy. Two new initiatives have put this on the agenda again. If the initiatives are successful, such an organisation could be on the Rio+10 agenda. The NGOs find that the existing units for sustainable energy in international organisations are not sufficient to support the worldwide transition to sustainable energy, thus an organisation is needed with a special focus on sustainable energy. In any case, it is increasingly difficult to explain why there is an organisation for atomic power (International Atomic Energy Agency - IAEA) and none for renewable energy or for energy efficiency.

### ISEA

The proposal for an International Sustainable Energy Agency was adopted by the NGO Energy & Climate Change Caucus to the UN Commission for Sustainable Development (CSD) at the CSD9 in April of this year. A Draft Model Statute was made by the Global Resource Action Center for the Environment (GRACE) for the Caucus. At meetings with NGOs during CSD9, the developing countries (the group G77+China) gave their support to the proposal, but the industrialised countries did not support it. The NGOs in the Energy & Climate Change Caucus are the main advocates for this proposal.

### IRENA

The proposed International Renewable Energy Agency was adopted by the more than 400 participants of the "Berlin Conference on the Technology Transfer for Renewable Energies" organised by EUROSOLAR, June 8-10. A representative of the German government and many others have supported the proposal. It will now be presented to a number of governments for their support. During the same conference, the World Renewable Energy Council (WREC) was formed. It will be the main advocate for the proposal. WREC has five chairpersons, one from each continent, including Herman Scheer, president of EUROSOLAR. It also has an interim board with 100 members, including Raymond Myles, INFORSE Coordinator for South Asia.

*In INFORSE, we supported the ISEA for CSD9, and we are positive towards the IRENA, which is currently up for discussion among INFORSE coordinators.*

*More information:  
ISEA, [www.gracelinks.org](http://www.gracelinks.org)  
IRENA: [www.eurosolar.org](http://www.eurosolar.org)*



*Drawing by Claus Møvin, Denmark*

## ISEA versus IRENA

### Common Elements of the Two Proposals. The Agency shall:

- support countries' development of policies and programmes to introduce renewable energy
- support development of global norms for renewable energy
- promote exchange of information on renewable energy and energy efficiency
- assist in technology transfer
- support research and development
- assist in organising financing of renewable energy
- assist in education and training
- make statistics/indicators for national progress in development of sustainable energy

Core activities of the Agency shall be covered by member-countries' contributions, as it is done for the UN and for other international organisations.

### ISEA for New Financing

In addition, the ISEA proposal includes:

- administration of funds for financing special sustainable energy programs and pilot projects
- assistance to countries for phase-out of subsidies for unsustainable forms of energy
- assistance to countries to integrate environmental costs into prices and to establish markets for sustainable energy technologies
- assistance to countries for identifying and harnessing their energy conservation potentials, including increasing their energy efficiency.

It is proposed that projects of the Agency can be financed via non-traditional sources of funding, such as re-direction of governments' subsidies away from unsustainable forms of energy.



## Climate News: E-mission 55

While some companies are very actively trying to stop the Kyoto Protocol, many companies support it.

During the climate conference in Bonn, more than 100 companies with combined annual turnover above 350 billion EUR publicly asked for ratification of the Kyoto Protocol in 2002. They did this as part of the new "E-mission 55" initiative.

*More info: [emission55@web.de](mailto:emission55@web.de).*

*The front of the huge lifeboat, made and painted by NGOs during the Climate Conference in Bonn. Photo from: [www.foeeurope.org/lifeboat](http://www.foeeurope.org/lifeboat)*

## UN for Sustainable Settlement



By Bjarke Rambøll, DIB, Denmark

In the first week of June, 144 delegations and 650 representatives of NGOs met in the UN building in New York.

The reason was Istanbul+5, a special session of the General Assembly of the United Nations held with the objectives of reviewing and appraising the implementation of the Habitat Agenda of 1996.

While the Agenda 21 focuses on global environment, the Habitat Agenda focuses on human sustainable settlement.

These subjects are of course closely linked and have many topics in common.

Housing and energy are also closely related. Several of the NGOs that attended the session are working with various sustainable initiatives such as solar water heaters and solar cookers.

Different examples were given of houses built with materials and designs that could reduce energy consumption.



## - Towards Rio+10



The session was an important step in obtaining broader knowledge of the complexity of human settlement around the world.

There is no doubt that the output will be very useful towards the preparation of Rio+10, the World Summit on Sustainable Development that will be held in Johannesburg next year.

#### Photos:

- Urban slum (left). Housing and energy are closely related. Photo by Bjarke Rambøll, DIB, -Closing session of the UN Meeting (right) Istanbul+5. Source: [www.iisd.ca/habitat](http://www.iisd.ca/habitat).

#### More information on Istanbul+5:

[www.iisd.ca/habitat/istanbul+5/index.html](http://www.iisd.ca/habitat/istanbul+5/index.html), and  
[www.unchs.org/istanbul+5/](http://www.unchs.org/istanbul+5/)

## G8 Report on Renewable Energy

Among globalisation and economic recession, the G8 leaders also discussed renewable energy at their summit in Genoa, Italy in July, 2001.

The G8 Renewable Energy Task Force presented a progressive report for the meeting “*Providing Clean, Affordable, and Reliable Energy – A Key Element Towards Sustainable Development*”.

The Task Force believes that the G8 should give priority to efforts to trigger a step change in renewable energy markets. Concerted action is needed, particularly to benefit the more than 2 billion people in developing countries who do not have access to reliable forms of energy. In order to address the barriers, the G8 is recommended to:

- reduce technology costs by expanding markets, also domestically
- build a strong market environment
- mobilise financing
- encourage market-based mechanisms.

The G-8 leaders took a less ambitious approach. They recognised the importance of renewable energy for sustainable development and decided to:

- ensure that renewable energy sources are adequately considered in their national plans and encourage others to do so as well
- encourage continuing research and investment in renewable energy technology, throughout the world.
- help developing countries strengthen institutional capacity and market-oriented national strategies that can attract private sector investment in renewable energy
- call on Multilateral Development Banks (MDBs) and national development assistance agencies to adopt an innovative approach and to develop market-based financing mechanisms for renewable energy
- stress the need to commit adequate resources to the third replenishment of the Global Environmental Facility (GEF).

See the full report: [www.solaraccess.com/download/g8report.pdf](http://www.solaraccess.com/download/g8report.pdf)

*M.Sc. Bjarke Rambøll is secretary general of the Danish International Human Settlement Service (DIB). DIB is a member organisation of the Forum for Energy & Development (FED, -host of the INFORSE Secretariat).*

*He has been working with sustainable housing projects in Bolivia, South Africa, and Malaysia. (DIB, see [www.dib.dk](http://www.dib.dk), e-mail: [dib@dib.dk](mailto:dib@dib.dk))*



# Fresh Air Blows in the Asian Cookstove Network

Traditional stoves have about 10-15% efficiency, while currently improved ones reach over 20%. Some of the improved cooking stoves (ICS) are reported to achieve efficiencies of more than 40% and very low CO/CO<sub>2</sub> ratios. Recently, a wood/gas stove has been developed that uses forced draft and that shows very promising results. Training programs, newsletters, and videos are marking the way of the Asian cook stove network ARECOP, which has been reactivated.

## New Phase

The Asia Regional Cookstove Program (ARECOP) started its second-phase 3-year program in June, 2000.

Among the aims are to:

- Stimulate, catalyze, and strengthen the development of NGO participation and the decentralization of technical expertise on the national level;
- Strengthen cooperation among government agencies, NGO's, and other interested institutions;
- Facilitate the exchange of information.

Therefore, the network publishes:

- The magazine "Glow" which publishes reports of new initiatives, successes, and concerns related to improved cook stoves;
- A Web site;
- Letters from the Secretariat;
- Dossiers of recommended publications;
- Manuals and videos for the training programs.

## Climate Change

A new justification for cook-stove programs is that they reduce emissions of the greenhouse gases (GHG).

In the Asian countries, biofuels account for more than 60% of total carbon emissions, mainly in the household sector. Naturally, improved cook stoves are an important option for reducing the CO<sub>2</sub>, as well as CO, CH<sub>4</sub>, and other products of incomplete combustion. The network draws our attention to a new possible way of financing of the improved cook-stove programs, i.e., through the GHG emission trading of the Clean Development Mechanism, under the Kyoto Protocol.

## Efficiency

With adjustments, new designs adapting already developed stoves to local requirements could greatly reduce these emissions.

## INFORSE Network Involved

The Centre for Rural Technology (CRT), the INFORSE National Focal Point in Nepal, is one of the Country Contact Points (CCPs) of the ARECOP's network in the South Asia Region. The networking managed by CRT has resulted in the implementation of projects such as "The healthy kitchen for healthy family" and "The stove improvement for agro-processing". A number of other organizations are also engaged in these projects by implementing as well as by co-financing. With ARECOP's support, CRT, Nepal has recently organized a Trainer's Training on Improved Cooking Stoves for the members of ICS Networks held in Nepal from 16 to 21 July, 2001 at Dhulikhel. The main objective of this training is to further strengthen the capacity of the ICS-related organizations involved in the national program for the

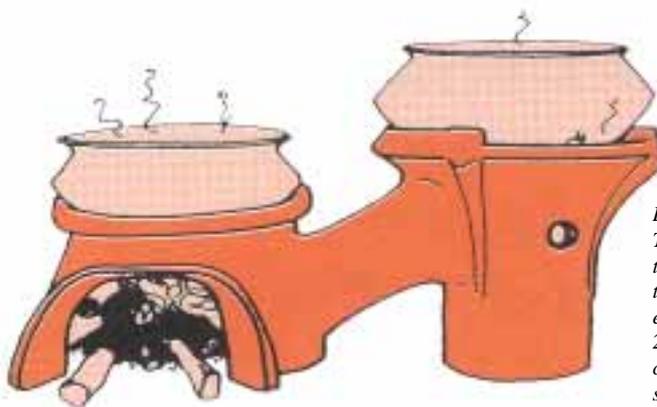
## Stove Commercialization

There are several good examples in which an improved stove entered the market as a result of a commercialization program. One such example is the 2-pothole Anagi stove in Sri Lanka.

The commercialization has passed through a number of phases since 1974, with growing results.

The main elements included:

- identifying potters;
- designing the stove with users and potters;
- training the potters to make the stoves;
- training workers to install the stoves, which also becomes an income-generating activity;
- creating awareness by training stove promoters, having promotional campaigns (TV advertisements, video, leaflets, posters, stove introduction, etc., where texts used in each language should be tested for acceptance, clarity and cultural sensitivity), and integration of other relevant programs (e.g., nutrition, poverty, forestry, credit);
- developing financing schemes like cooperatives of the potters which handle credits and savings;
- maintaining the quality of the stove produced, as well as the level of the consumer service. For instance, a leaflet was produced to accompany the stove, pointing out the advantages and including a guide to installation and use. Another aspect to maintaining the level of customer service was insuring that there were retail points in different shops;
- involving grassroots organizations from the very beginning of the process.



*Drawing of the Anagi: The consumers like the fact that the Anagi was saving time and fuel. Due to the efficiency of the stove and the 2-pothole design, they can cook two types of food simultaneously and quickly.*

promotion and dissemination of improved cooking stoves. The program is supported by the government, national and international NGOs, and donor agencies.

**The International Network on Gender and Sustainable Energy, (ENERGIA)**, another member organization of INFORSE, together with ARECOP, actively participated in a workshop on Gender Issues in Wood Energy in Asia. The workshop was organized by the Asian Institute of Technology - Gender and Development Studies for FAO, Regional Wood Energy Development Programme (RWEDP) and held at Bangkok, 21-23 November 2000. For the future, ENERZIA will be looking to collaboration with ARECOP, in the extension of ENERZIA's activities to Asia.

*More information: ARECOP, PO Box 19, Bulaksumur, Yogyakarta 55281, Indonesia. Ph: 62-274-885247, fax : 62-21-885423, e-mail: secretariat@arecop.org, www.arecop.org.*

*This article was edited from materials provided by ARECOP, CRT and ENERZIA.*



## ARECOP

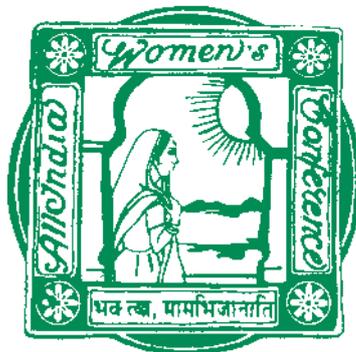
**1991-96:** 1st Phase. Activities with major support from the Dutch Energy and Environment Program of the Dutch directorate for International Co-operation (DGIS)

**1997-99:** Secretariat based at Yayasan Dian Desa in Indonesia without the DGIS's support, but with support from the members. It continues activities in cooperation with the FAO's program, the Regional Wood Energy Development Program (RWEDP), Bangkok, Thailand.

**2000-2003:** 2nd Phase. Renewed support from DGIS. Cooperation plans with the Intermediate Technology Development Group (ITDG), Bangladesh, and with the RWEDP.

The network's member countries are: Bangladesh, Nepal, Sri Lanka, Vietnam, Thailand, Cambodia, Laos, Indonesia, the Philippines, India, China, Pakistan, Bhutan, and Myanmar.

# Active Women in India: Achievements and Plans



*By Lalita Balakrishnan, All India Women's Conference, (AIWC), Rural Energy Department, India.*



## NGOs continue to play an important role in the dissemination of renewable energy in India.

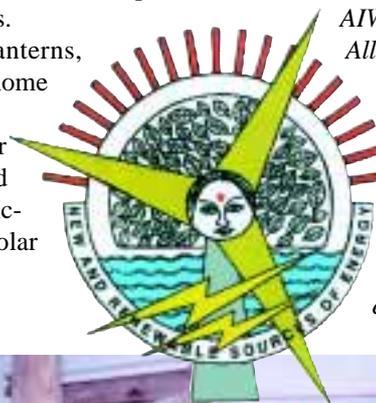
In the year 2000, the All India Women's Conference (AIWC), which is an INFORSE member organisation and a National Focal Point, had several successful activities. Among the results of these are:

- 1,228 biogas plants constructed; 30 biogas-user training courses; 4 biogas construction and maintenance training programmes.
- 8 training programmes about improved Chulha cookstoves.
- 1,000 solar PV lanterns, and 375 solar PV home systems installed.
- 50 solar cooker demonstrations and publishing of publicity materials on solar cookers.

Among the plans for 2001 are:

- Starting of a Micro Credit Programme for poor women in India through networking of AIWC's 500 branches.
- Propagation of briquetting of agricultural residues.
- Integration of renewable energy with all other aspects of Women's Empowerment Year. A two-day National Workshop on Women's Empowerment through Renewable Energy is planned in collaboration with the Ministry of Non-Conventional Energy Sources.

*More information: AIWC, Annual Report 2000, All India Women's Conference, Rural Energy Dept., Sarojini House, 6 Bhagwan Dass Road, New Delhi 110001, India. Ph: +91 -11-3389680/3381165, fax: +91 -11-3384092, e-mail: aiwc@satyam.net.in.*



# Network on its Way in Ghana

By Gunnar Mortensen,  
Forum for Energy and Development (FED), Denmark



Solar water pump prevents the outbreak of water borne diseases, and also reduces the workload in fetching water over long distances.  
Photo by Gunnar B. Olesen

## NGO Network Needed

In Ghana, most energy NGOs work primarily with service delivery projects at the community level and the projects most often have elements of both energy and environment. A few of the bigger energy NGOs are member of formal governmental committees and have informal contacts among the civil servants in ministries of energy and environment. But they do not think they have much influence on energy policy-making. One reason is that they have little experience in how to analyse and present their knowledge and points of view to the politicians and the civil servants. Furthermore, the NGOs do not coordinate and network very much to increase their influence. The networking activities among energy NGOs are mainly small joint projects.

At the same time, NGOs have different experiences and competencies within technical projects at the community level, like improved cooking stoves, wood-plot planting, and renewable-energy technology such as PV power. Other NGOs have experience in conducting awareness-raising activities targeting the general public or journalists. If these experiences were combined in a common network, it would be easier to influence the decision makers in the country.

The Ghanaian NGOs have expressed a large need for and interest in establishing a national network for energy NGOs. At a meeting on June 26th, a task force of NGOs was established to prepare ideas for the structure and activities of such a network. The NGOs see a number of advantages for themselves in establishing a network. That is, for instance, a stronger platform for lobbying in relation to energy-sector policy, information-sharing, joint fund-raising, co-ordination of activities, and so on.

## Right Time for Change

It seems to be the right time to change directions of energy policies in Ghana because there are some very serious problems. Cutting down trees for fuel wood and charcoal constitutes a huge environmental threat to most parts of Ghana. Secondly, the power production and distribution utilities are very ineffective and highly indebted, which puts a lot of pressure on the Ghanaian economy.

In principle, 35-40% of the population has access to electricity, but the government has to subsidize the electricity prices to make electricity affordable in Ghana. Recently, the electricity prices have been raised 100%, but they should be raised ca. 400% from previous level, just to cover the costs. The government has also

tried to reform the power sector by opening it up to private operators in transmission and distribution, but so far only a few private operators have entered the field. Unfortunately, the problems of waste of electricity and of inefficiency have changed very little.

The very slow reform process on the side of the government strongly indicates a potential role for NGOs in applying pressure on the government to take action on the problems. However, there is not a tradition among policy makers in Ghana of asking for inputs from NGOs. On the contrary, there has been a mutual suspicion between government and NGOs. However, the joint work between government and civil society on a strategic partnership indicates that the path for NGOs to political participation is opening up.

### Bigger role for NGOs

One major problem for many citizen-based NGOs working with energy activities around the world is that they are too seldom involved in the formulation and implementation of national energy policies.

Therefore, the Forum for Energy and Development (FED) has decided that it shall develop a strategy to assist energy NGOs in playing a bigger role in the energy-sector policy formulation at the national and international levels.

FED will select three countries in which to establish a partnership program to strengthen citizen-based NGOs. The ambition is that the experiences of

these partnership programs can be transferred to other countries later.

FED is a member of INFORSE and hosts the INFORSE's Secretariat.

More information: FED  
Forum for Energy  
and development,  
Blegdamsvej 4B,  
Copenhagen N,  
2200, Denmark.

Ph: +45-35-247700,

fax: +45-35-247717

e-mail: [inforse@inforse.org](mailto:inforse@inforse.org),

<http://www.inforse.org/>



In Ghana, the government and DANIDA (the Danish Official Development Assistance Agency) are preparing a program for the Energy Sector of Ghana. The program includes a long-term national energy strategy up to 2020. The program also includes improvement of the management of natural resources, and an increase of off-grid electrification via renewable-energy technologies.

From Denmark, the Danish NGO network Forum for Energy & Development (FED) will try to encourage DANIDA to institutionalise the participation of NGOs in energy policy formulation and implementation in the Energy Sector Program. So far, DANIDA has supported the startup of the network of energy NGOs, which is mentioned above.

## International Partnership

Due to little experience in networking and the need for capacity-building among NGOs, there is a strong argument for establishing a Partnership Program between the upcoming energy-NGO network in Ghana and an experienced national NGO network such as FED. Such a Partnership Program could provide technical assistance and maybe also financial assistance to member NGOs. At the moment, the Ghanaian NGOs are in the process of describing the objectives, the activities, and the organisational structure of this network. It is also important to FED that it be the NGOs in the future national network who define what their network is going to do.



*PV panels provide electricity, and solar collectors provide hot water at a health center.*

*Photo by Youssef Arfaoui, FED.*

# Harmful Subsidies Addressed

## Series of Workshops

As mentioned in Sustainable Energy News 31, the International Energy Agency (IEA) and the United Nations Environment Programme (UNEP) conducted a series of regional workshops on reform of energy subsidies and sustainable development. Workshops were held in Paris (France), Durban (South Africa), Bangkok (Thailand), Santiago (Chile). The workshops were held in preparation for CSD9.

The workshop in Durban revealed a number of interesting facts about subsidies of fossil fuels in Africa, such as:

- Modern energy sources are subsidised in almost all countries in Africa.
- Due to potential consumers' lack of ability to pay for energy services and due to the small size of the market, it is unlikely that energy services will be available to the poorest without some form of subsidy.
- Unfortunately, there seem to be no linkage between the energy subsidy and sustainable development - benefits are rather enjoyed by middle- to high-income groups instead of by the poor.
- Only a few countries have succeeded in removing subsidies, particularly in oil products.

- In spite of the problems, there are cases where subsidies are justifiable and benefits are larger than costs.

A case study of Ghana, presented in Durban, showed some of the problems of subsidies (See box).

From this and other case studies, it became apparent that:

- Subsidies must be targeted in order to ensure that they reach those who need them most.
- Subsidised prices must reflect costs of the fuel to avoid over-consumption and waste.
- It is important to choose the right energy sources to subsidise according to local conditions.

*This article is based on a presentation by Wisdom Ahiataku - Togobo, Ministry of Mines & Energy, Ghana.*

*The outcome of the workshops are available in brief at [www.uneptie.org/energy/activities/Policy/Subsidy\\_workshop.htm](http://www.uneptie.org/energy/activities/Policy/Subsidy_workshop.htm)*

## Better Supply Without Subsidies

### - A Case Study in Ghana

Some of the problems of subsidies:

- Diesel was subsidised in Ghana to lower the transport costs for the poor, but as the poorer villages lack access roads, the main beneficiaries of this subsidy was middle-income people.
- LPG gas (propane/butane gas) was subsidised to allow poorer people to change from wood and charcoal to LPG for cooking. Because of the subsidy, LPG was cheaper than petrol and many commercial cars switched from petrol to LPG. The effect was that LPG was not adequately available for cooking. When the subsidy was ended, LPG became available for cooking again.
- Kerosene was subsidised to decrease the cost of lighting for poor, rural people who rely on kerosene lamps. Because the subsidised kerosene was cheaper than diesel, it was mixed with diesel and used for cars and trucks. As a result, kerosene became difficult to get for lighting. When the subsidy was ended, the mixing stopped and sufficient supply of kerosene became available for lighting.

# INFORSE National Focal Point in Uganda Created

## Charting Out the Future: Uganda Consultative Forum Agreed on a National INFORSE Action Plan

Uganda hosted its first-ever national INFORSE meeting and workshop in Kampala on 25th January, 2001.



By Timothy Byakola,



Climate & Development Initiatives, CDI Uganda. INFORSE National focal point.

### Objectives

The national INFORSE Meeting and workshop was dedicated to three main objectives:

- increasing awareness of the Network among NGOs and private-sector institutions in Uganda,
- developing a National INFORSE Action Plan , and
- agreeing formally on the establishment of a National INFORSE Coordinator.

### Action Plan

Participants at the workshop consisted of representatives from the network's membership, other NGOs involved with sustainable energy, and private-sector institutions, including representation from various government departments.

The workshop consisted of presentations of INFORSE and the World Summit for Sustainable Development (Earth-Summit 2002, Rio+10). A video documentary called "The Sky Is Crying" was presented; it had been filmed as part of the earlier Rio+8 Conference in Copenhagen.

The workshop produced a National INFORSE Action Plan for use in the formulation of the overall Eastern Africa Regional Action Plan (EA-RAP).

The Plan reflects changes in stakeholder expectations and allows INFORSE to be more responsive to developments and events in the worldwide sustainable-development agenda. Such events include the 9th Session of the UN Commission for Sustainable Development, the Earth-Summit 2002, and the Conference of Parties to the Desertification and Climate Change Conventions. In general, the Ugandan plan consists of a number of national activities to complement international preparatory work to these events.

### Coalition for Rio+10

Another national NGO workshop dealt with the Earth Summit 2002 (Rio+10). It resulted in the formation of an NGO coalition on the Rio +10. Within this coalition, INFORSE-Uganda has been mandated to lead activities in the thematic areas of energy and climate change. This coalition is to implement the Ugandan component of an international project, Rio+10, with southern NGOs. The coalition receives support as part of the Danish "92 Group's" assistance to strengthen civil society involvement in the World Summit for Sustainable Development.

### Broaden INFORSE

Those present at the meeting recognized that INFORSE provides a very unique forum, meeting point for groups working on sustainable-energy issues engaged in international collaborative projects.

However, participants observed that INFORSE's role could be improved if the channels of information dissemination about the network and its activities were further broadened.

Participants acknowledged the good work of the staff and contributors of Sustainable Energy News, but suggested that instituting an international INFORSE e-mail listserv would reinforce the impact of the newsletter.

At national level, a newsletter, information brochures, members' catalogue, and national meetings were suggested to facilitate networking, and these were included in the Action Plan.

### National Focal Point

In compliance with a decision made during the Co-ordinators' Conference in Denmark in 1999 to establish National Coordinators, the meeting formally elected the NGO Climate and Development Initiatives (CDI) as Uganda's National Inforse Coordinator.

*More information:  
Timothy Byakola,  
Programme Coordinator,  
Climate and Development Initiatives.  
P.O.Box. 8849, Suite C204,  
Amber House, Kampala Road,  
Kampala, Uganda.  
Ph: 256-41-259521,  
fax: 256-41-234248,  
e-mail: acs@starcom.co.ug.*



*Demonstration of hay box and solar cooker in Uganda.  
Photo by Youssef Arfaoui, FED.*

## USA News

Compiled by the editors

"Yes to Kyoto"  
Photo from the  
Earth Day,  
April 22, 2001,  
New York, USA.



Photo by Gunnar B. Olesen

### Economic Boycott

Several NGOs have started campaigns against the companies that are driving the Bush administration to turn against the Kyoto Protocol and to propose an energy strategy with increased CO<sub>2</sub> emissions in the USA. The international campaign to pressure Exxon Mobil over its stance on climate change and its influence on US energy policy seems to be gathering steam.

According to the campaign, Exxon Mobil funds multi-million-dollar propaganda campaigns orchestrated by front groups like the Global Climate Coalition. Using tactics perfected by the tobacco companies, these campaigns confuse the public and policymakers about global warming and sap political will to address it. Globally, Exxon Mobil is aggressively pushing for more oil consumption, despite the risks. The company targets developing countries, promising that the way to improve quality of life is to burn more and more oil. Exxon Mobil doesn't offer sustainable energy solutions.

More information at:  
[www.stopesso.com/](http://www.stopesso.com/),  
[www.campaignexxonmobil.org/](http://www.campaignexxonmobil.org/),  
[www.boycottbush.net/](http://www.boycottbush.net/)

### Renewables Progress in USA

In spite of president Bush's emphasis on fossil fuel and nuclear power, renewables are developing fast across the USA. Wind turbines, PV power, and biofuels for transportation are all increasingly used.

More states are demanding that power companies should include renewable energy in their supply. Energy conservation is developing, too: in California, 1/3 of electricity customers have used 20% less electricity within a year, following last year's call for greater energy efficiency as one of the responses to the local power crisis.

Source: [SolarAccess.com](http://SolarAccess.com)

### US Coalition Urges Action on Climate Change

A coalition of US community leaders has urged U.S. politicians to slow its contribution toward global warming.

A three-day 'Citizens Summit on Climate Change' in

Washington DC in June was attended by 40 business executives, religious leaders, economists and scientists from 12 states. They represent 100 million Americans and \$300 billion in corporate revenues.

"We come from different backgrounds and perspectives, but we all agree that global warming is one of the century's most pressing environmental, economic, and ethical concerns," explains Howard Ris of the Union of Concerned Scientists. "All segments of society have a responsibility to act, and our government, including both the Congress and the Bush administration, should lead the way."

Twelve petitions signed by 800 scientists were delivered to Capitol Hill, demanding stronger Congressional leadership and policies to stem global warming. The scientists agree that an unprecedented consensus exists among the world's climate change community that global warming is underway and that its effects will become increasingly obvious.

The event was organized by the Union of Concerned Scientists, the Business Council for Sustainable Energy, Environmental Law & Policy Center, Midwest Global Warming Leadership Council, and the National Religious Partnership for the Environment.

Source: [SolarAccess.com](http://SolarAccess.com), 2001-06-27



Energy efficient bulbs designed in the USA.  
Photo by Gunnar B. Olesen.

### US Should Show Leadership in Emissions Reductions

In a new report, the US-based World Resources Institute concludes that the U.S. should take action on climate change before asking developing countries to do so. "The U.S. should attend to curbing its own prodigious output of greenhouse gases before asking developing countries to do more," said Kevin Baumert, one of the study's authors.

See the report, "The U.S., Developing Countries, and Climate Protection: Leadership or Stalemate?" at [www.wri.org](http://www.wri.org).

# Pan-European Energy Efficiency at a Crossroad



By Gunnar Boye Olesen,  
Co-ordinator of the  
European ECO-forum  
Energy & Climate Group



**Pan-European cooperation for energy efficiency should develop into cooperation that is useful for a larger public and that really improves the framework for energy efficiency throughout Europe, including former Soviet Republics.**

**The same applies to potential future cooperation on renewable-energy initiatives.**

## A New Impulse is Needed

Unfortunately, visionary decisions made at the Pan-European Environment Ministers' meeting in Århus in June, 1998 have not yielded much actual cooperation. Follow-up on the decisions from Århus98 is the responsibility of the Energy Efficiency Working Group of the European Energy Charter, a group that has as its main task to implement the Energy Charter's protocol on energy efficiency and related environmental aspects. This protocol has a long list of proposals for cooperation on energy efficiency, but the only binding commitments of the countries are that they shall make reviews of their energy efficiency policies. The working group is busy trying to get these reviews finished. It has not worked on many of the proposals for international cooperation from Århus98 or from its own protocol. A new push is needed to improve the Pan-European co-operation on energy efficiency.



## Practical NGO Proposals

In the ECO-Forum Energy & Climate Group (co-ordinated by INFORSE-Europe), we are discussing the possibilities of new cooperation on energy efficiency.

We have taken the best parts of previous official decisions (from Århus98 and elsewhere) as the basis. The proposals will be discussed on the ECO-Forum Energy & Climate Group email list, as well as at the Pan-European NGO Energy Seminar, September 16-22 in Denmark.

The proposals include:

- **Energy Price Reforms.** The ministers at Århus98 recommended a phase-out of environmentally harmful energy price subsidies and introduction of measures to internalise external (environmental) costs by 2005. The OECD countries have agreed upon a similar goal. This is an obvious issue for international co-operation. An important first task would be to make a guideline for phase-out of these subsidies, with quantification of the subsidies, examples of optimal phase-out strategies, and policy recommendations. Price reforms should also include internalisation of external costs, and a guideline for this would be an obvious task to complete before the Pan-European Environmental Ministers Meeting in Kiev in 2003.

- **Energy Market and Environment Initiative.** Restructuring of energy markets, in particular liberalisation and privatisation, is often done without proper environmental concern. International cooperation should be started to disseminate models for market regulation that encourage energy efficiency and that integrate environmental concerns into the market framework, nationally and internationally. National indicative goals should be set for renewable-energy use and for implementation of energy-efficiency technologies.
- **Cogeneration and Renewable Supply Initiative.** The current situation in CEE is that gas and other fossil fuels are promoted to the extent that it threatens CHP and the development of renewable energy. The first international co-operative task could be to organise the dissemination of information on best practice of sustainable technical solutions and of supportive market structures. This could include the creation of international centres for CHP and for renewable-energy supply.
- **MDB Energy Efficiency Initiative.** The importance of MDBs (Multilateral Development Banks such as the World Bank) in CEE is widely recognized. MDB investments should focus more on energy efficiency and local solutions, and MDBs should integrate energy efficiency into all of their energy lending projects, to include at least energy-efficiency investments that are more cost-effective than energy-supply investments currently under consideration.
- **Efficiency Labelling and Standards Initiative.** All countries should be invited to participate in relevant schemes, including the EU energy labelling system.
- **Energy, Environment and Employment Initiative.** Experience with job creation and energy investments should be shared and information should be exchanged internationally. Methodologies for quantifying employment effects of investments should be shared internationally and should be tested in relevant CEE countries.

*Renovation of district heating - one of the areas where Pan-European cooperation is needed.*

*Photo by Hans-Henrik B. Gustafsen, Denmark.*

*More information available at  
[www.orgve.dk/inforse-europe/](http://www.orgve.dk/inforse-europe/) and  
[www.eco-forum.org/](http://www.eco-forum.org/).*

## INFORSE-Europe Meeting

INFORSE-Europe members are invited to a regional INFORSE meeting for Europe, Friday afternoon, September 21, 2001, at the Danish Folkecenter for Renewable Energy.

It will be part of the "Pan-European NGO Seminar & Tour on Sustainable Energy".

INFORSE-Europe members have directly received a call for the meeting and an agenda. On the agenda will be a plan for European activities in the coming year, future co-operation of INFORSE-Europe with other networks, and INFORSE-Europe's involvement in global activities such as Vision2050 and preparations for Rio+10.

Read about INFORSE-Europe's past and present activities at:  
[www.orgve.dk/inforse-europe/](http://www.orgve.dk/inforse-europe/).

## EU Directives on Renewables and Buildings

The new EU Directive on Renewable Energy for Electricity (COM/2000/116) was approved by the EU Parliament this July. The Directive will ensure that renewable energy has priority in the electricity network. It also sets indicative targets for development of renewable energy in the electricity supply of all 15 EU countries. With these targets, 22% of the EU's electricity will come from renewables by 2010. In this way, the targets in the EU's White Paper for Renewable Energy have come an important step closer to realisation.

The most difficult negotiations concerning the Directive were about the role of waste in the energy supply. The EU Parliament agreed that energy from unsorted municipal waste should not be supported as renewable energy. With this decision, incineration of this waste should not be supported.

The EU Commission proposed in May a directive on renewable energy for buildings (COM/01/226). This will be discussed by the EU countries in the second half of this year.

The directives can be found on the EU Commission website: [Europa.eu.int/comm/](http://Europa.eu.int/comm/)



This year's INFORSE-Europe Meeting will be at the new training center of the Danish Folkecenter for Renewable Energy.

## K2/R4 Still Discussed

The future of the two half-built Ukrainian nuclear power plants, Khmelnytski 2 and Rivne 4, is still uncertain, in spite of the principal approval of loans by EU and the European Bank for Reconstruction and Development (EBRD), last December. Ukraine's new minister of Ecology and Natural Resources, Sergey Kurykin, has stated that he is against the projects. He has also proposed that the government should evaluate K2R4's economy and environmental effects again, before accepting the foreign loans. In the meantime, the loan from EBRD is postponed until the IMF (International Monetary Fund) resumes its loans to Ukraine.

More information:  
[www.bankwatch.org/k2r4/](http://www.bankwatch.org/k2r4/).

## EU Parliamentarians for Renewables

For the third time, a group of members of the EU Parliament and members of national parliaments met to discuss renewable energy, this time on June 8-10 in Gotland, Sweden. The group called for:

- supporting renewable energy (RE) because of RE's lower environmental costs.
- phase-out of subsidies of conventional energy.
- integration of renewable-energy priorities into agricultural policy, into the EU's regional and international policy, as well as into national and local administration.

Information:  
EUFORES, [www.eufores.org](http://www.eufores.org)

## EU En Route to Ratifying Kyoto

The EU Climate Change Program (ECCP) is now finished with publishing of final reports and organising a large conference, July 1-2. The next step will be a communication from the EU Commission on ratification of the Kyoto Protocol, to be released in September or October. The NGOs involved in the process do not agree with all of the proposals, such as those for increased research and development of CO<sub>2</sub> capture and underground storage. On the other hand, they support many of the proposals of the ECCP, and will push for the fastest possible introduction of some of the proposals, such as directives for promotion of CHP (Cogeneration of Heat and Electricity) and of renewable energy for heating.

More information:  
[www.europa.eu.int/comm/environment/climat/eccp.htm](http://www.europa.eu.int/comm/environment/climat/eccp.htm) and at Climate Network Europe [www.climnet.org/](http://www.climnet.org/).

## Russian Nuclear Waste Import

In spite of the large public protests, the Russian Duma voted in favour of the law for import of radioactive waste to Russia, and the President signed the law. It will probably take some time before new imports of radioactive waste start arriving in Russia. The import of spent fuel of US origin will require permission from the US, a permission that the US seems unlikely to give soon. In the meantime, NGOs and the political Yabloko party are trying to stop the import, maybe by calling for a referendum, as NGOs tried to do last year with the collection of 2.5 million signatures.

More information: WISE News  
Communiqué, [www.antenna.nl/wise](http://www.antenna.nl/wise).

# Pure Plant Oil: Clean Engine Fuel Today & Tomorrow

By Niels Ansø and Jacob Bugge, Folkecenter  
for Renewable Energy, Denmark



Plant oil fuelled car in a winter rape field in Denmark



Demonstration of oil press and plant oil car. The simple technology is always convincing and creates immediate sympathy. Århus, Denmark, 2000.

Photos by Jane Kruse, Folkecenter.

**Oil plants support sound agricultural practices. They can substitute the fossil fuels now, and they can supplement the emission-free technologies in the future.**

## Predicted by Rudolf Diesel

The first diesel engines could run on plant oils. In 1912, the inventor, Rudolf Diesel, predicted that plant oil could gain the same importance as fossil engine fuel.

## Engine with Higher Efficiency – on Plant Oils

In the 1970's, another German, Ludwig Elsbett, developed the special ELSBETT engine for plant oils with more than 40% efficiency, one third better than contemporary diesel engines. It has also higher efficiency than present fuel cells in cars (Fuel-cell efficiency 40%, conversion of wind-electricity to hydrogen 70% efficiency: the total efficiency for car fuel cells is about 30%).

## Prospects in Most Countries

Oil plants are grown in most parts of the world, and they all have one thing in common: the extracted oil is only one of the products. Therefore, oil extraction can be truly integrated in the local agriculture. In some cases, oil as fuel can create a whole new local industry and market.

## Winter Rape Seed, a Coming Success

One of the many possible plant oil sources is the winter rape, which is grown in Europe. The oil is useful both as food and as fuel, while the press cake is a valuable fodder.

So far, the success has been limited outside Germany by a number of factors; especially the EU tax rules including the mineral-oil directive, engine modification expenses, and misunderstandings about the environmental aspects of cultivation, production, and use.

## Winter is not Spring

Many concerned environmentalists are misjudging rapeseed oil production, simply because they are unaware of the fact that there are two types of rape plants with totally different properties: the robust winter rape and the vulnerable spring rape.

The obvious basis for a large-scale rapeseed production is therefore winter rape.

## The Best Crop for Pesticide-free Cultivation

A Danish cross-ministerial investigation into the consequences of pesticide reduction in Danish agriculture, the so-called Bichel-Committee, concluded that pesticide-free cultivation would result in a tremendous overall yield loss (23% in average for corn).

But it also came up with an extraordinary conclusion: winter rape would be the least affected sales crop, with only 7 % yield loss. One of the recommendations by the Committee for a Pesticide-free Agriculture was therefore a significant increase in winter rape cultivation (and a reduction in spring rape).

## Organic Cultivation

Winter rape is now finding a place as a natural part of Danish organic agriculture. The production has increased by a factor of four in the last two years. Winter rape is recommended by national agricultural scientists, not only as a crop in itself but also for its beneficial effects on crop rotation and weed problems in other crops.

Why has organic winter rape not reached this position earlier? Because of poor results and many problems with spring rape.

## Returns Fertiliser to the Soil

Like winter wheat, winter rape requires more fertiliser (manure or industrial) than average grain cultivation.

But unlike wheat, winter rape returns the difference to the soil, so the next crop can benefit from it. In fact, wheat after rape requires no more fertiliser than the average for grain. So in effect, winter rape only uses average amounts of fertiliser.

## Preserves Humus

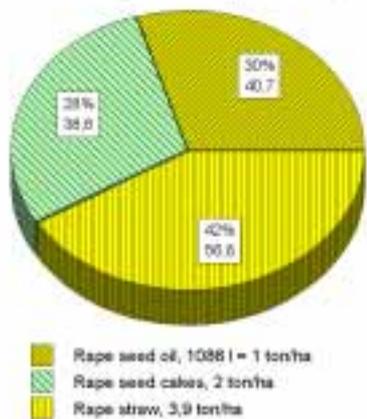
One argument against using energy crops and straw as fuel is that the humus is depleted by the removal of the biomass. Winter rape produces a large amount of biomass, and much of it is left in the field in the form of leaves, pods, lower part of stems, and roots, even if straw is harvested for energy purposes. So, if the straw is ploughed in, only an insignificant amount of the produced biomass is removed with the oil. Therefore, winter rape can actively build up humus.

## Integrated Agriculture: Fodder, Food, and Fuel

Unlike energy crops, rapeseed is a truly integrated production. The seeds can be pressed at the farm and yield two thirds of valuable protein fodder which replaces imported fodder and remains in the biomass cycle. The one third which becomes oil can be used to run tractors and other machinery, sold as fuel for cars, or eaten.

Used as engine fuel, the oil from 10% of the Danish agricultural area could fuel up to 25% of the present passenger traffic

Distribution of gross energy content, GJ/ha



on the Danish roads, or the total amount of agricultural machinery - in addition to the protein fodder and the possible energy production from rape straw. In the 1930ies, it took 25% of the area to feed the working horses.

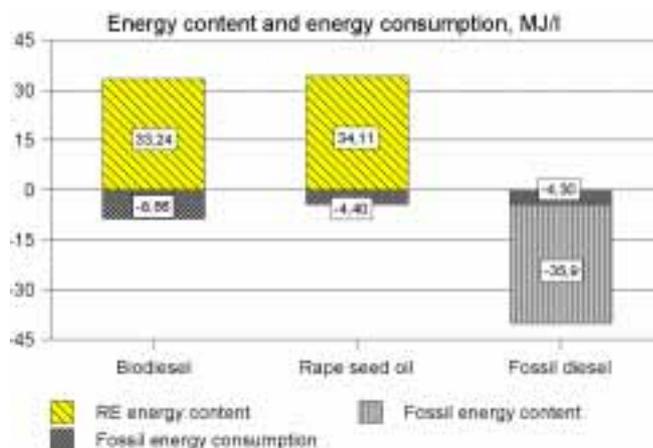
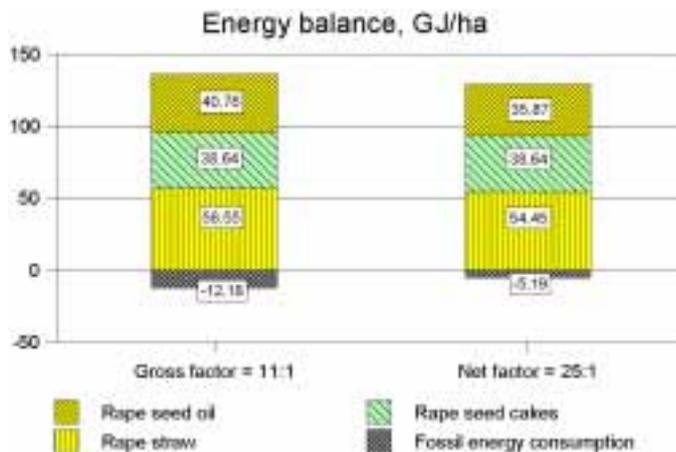
## Fine Energy and CO<sub>2</sub> Balance

30% of the available energy produced by the crop is in the oil, 28% in the press cake, and 42% in the straw. When this available energy is compared to the total amount of energy needed for cultivation and processing, the gross factor is 11:1. If renewable energy is used at the farm (plant oil for machinery, straw based CHP), the net factor is as high as 25:1. This means that 25 energy units of biomass can be produced with 1 unit of fossil fuel.

The corresponding gross and net factors in the CO<sub>2</sub> balance are 9:1 and 14:1. When the rape seed oil is viewed separately, disregarding the energy potential of the straw, a calculation based on the EMBIO Report (the Danish Energy Agency's environmental/economic model) shows that about 13% of the energy is lost in the production, the same level as for production of fossil diesel which in addition gives CO<sub>2</sub> in use. According to the EMBIO Report, the loss is twice as much for biodiesel where 26% of the energy is lost in the production.

## Engine Conversion

With the present diesel engine technology, it is necessary to convert the fuel injection system to plant oils. In Denmark, conversion of standard diesel engines costs 1500 USD without VAT. The price of the corresponding self-builder kit is about 700 USD. This expense would not exist if all diesel engines were constructed to run on bio fuels. In Germany, some thousands of cars have been converted. The number rises rapidly like the number of workshops offering conversion, today



counting 60–70 workshops. In Denmark, the number of converted cars is less than 50, and the further development depends on politics.

## Emissions: Same as for Diesel

When used in diesel engines, plant oils seem to produce the same emissions as fossil diesel, except that plant oils are sulphur-free and naturally CO<sub>2</sub> neutral. So, improvements leading to cleaner diesel technology will benefit both fuels.

## Plant Oils are Green - Biodiesel is Grey

Pure plant oils are completely risk-free. No special precautions are needed: the fuel is harmless to humans, water, and soil. In contrast, biodiesel requires an additional industrial process based on the poisonous methanol, so it requires much more energy and must be handled like fossil diesel. In the German system of water pollution classes, rapeseed oil is not even classified in the lowest class 0, whereas biodiesel is in class 1, and fossil diesel is in class 2.

*Continues on page 16*

## What is Needed?

It is time to push the development towards a more sustainable transport sector in the industrialised countries. Plant oils offer the realistic short-term alternative to fossil fuels, and they will also be a necessary supplement to the emission-free technologies further ahead.

The policy instruments to start this should include:

- Fuel Tax exemption for pure plant oils (as proposed in the Danish Parliament in 2001),
- Legal requirements of adequate automobile technology including adaptation to bio fuels, use of most efficient engine technology, and fuel consumption limits.

These achievements would accelerate the development, not only in the industrialised countries but also in the developing countries: with no need to convert engines, it would be much easier to replace imported fossil diesel with local plant oils, for cleaner environment and better economy, especially in the rural areas.

*The authors of the article:*  
*Niels Ansø, (left) Engineer, works with transfer, implementation, and demonstration, of plant oil technology.*  
*Jacob Bugge, (right) Senior Consultant, works with background analyses and agricultural aspects.*



*Looking into a plant oil fuelled car at Folkecenter for Renewable Energy, Denmark*



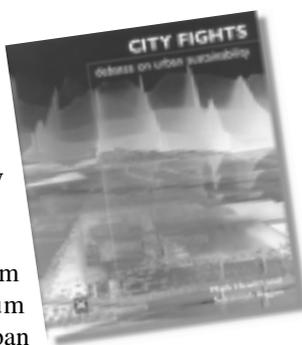
*Folkecenter for Renewable Energy is an NGO supported by the Danish government since 1983.*

*Folkecenter has promoted plant oils as engine fuel, especially within Denmark, since the beginning of the 1990s. Folkecenter is member of INFORSE.*

*More information:*  
*Folkecenter for Renewable Energy, Denmark Ph: +4597956600, fax: +45 97956565, e-mail: energy@folkecenter.dk, www.folkecenter.dk/plant-oil .*

## Publications

### **CITY FIGHTS:** debates on urban sustainability



City Fights follows on from the symposium "Energy & Urban Strategies", which brought together contributors from a wide variety of disciplines, with the aim of developing sharp ideas about making better and more sustainable cities in environmental, social and economic terms. The result is a passionate and illuminating debate on this vast question, bringing into focus the complexity and diversity of the issues involved. City fights is essential and thought-provoking reading for all with a common interest in the future of the city - from architects to policy makers.

*Edited by Mark Hewitt and Susannah Hagan, architects*  
 127 pages, 2001, ISBN 1-902916-17-4  
 Contact: James & James (Science Publishers) Ltd, 35 - 37 William Road, London NW1 3ER, UK.  
 e-mail: james@jxj.com, www.jxj.com

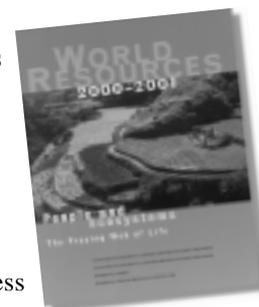
### **Investment Research Report** **The Stuart Oil Shale Project: Implications of Carbon Emissions Constraints for Suncor Shareholders**



The challenging analysis *shows the carbon liability of Suncor's investment in the Stuart Oil Shale Project in Australia.* The high carbon content of the oil shale product makes it a high-risk investment in a world that is beginning to address climate change. Oil shale is 400% more greenhouse intensive than conventional oil production. Suncor withdrew from the project shortly after the Greenpeace released the report, and followed it with a 22 million dollar investment into a Canadian wind power project.

28 pages, April 2001.  
 By Innovest Strategic Value Advisors, New York, USA.  
 Contact: Karl Mallon, Ph.D, Director Energy Solutions, Greenpeace International, Stichting Greenpeace Council, Keizersgracht 176, 1016 DW Amsterdam. The Netherlands.  
 www.greenpeace.org

### **World Resources 2000-2001: People and Ecosystems: The Fraying Web of Life**



To properly harness our ability to change the vital systems of this planet for the better, we must recognise that the well-being of the people and ecosystems is interwoven and that the fabric is fraying. We need to repair it, and have the tools at hand to do so, now.

The report includes chapters on Linking People & Ecosystems, Taking Stock of Ecosystems, Living in Ecosystems, Adopting an Ecosystem Approach, and Data Tables in 10 topics according to countries of the world. The topics include: Energy & Resource Use, (production by sources, consumption by sectors).

*By the World Resources Institute (WRI) in collaboration with the UNDP, UNEP, and the World Bank.*  
 389 pages, 2000, ISBN 1-56973-443-7  
 Price: £22.95, Available also on CD.  
 Contact: The Eurospan Group, 3 Henrietta Street, Covent Garden, London WC2E 8LU, UK.  
 www.wri.org/wr2000

# EVENTS

\* = **INFORSE** is Participating

September 4-7, 2001

## **Int'l Sarigerme Solar Electricity Workshop & Exhibition, Mugla, Turkey**

Info: Tanay Sidki Uyar, Marmara University.  
Ph: +90 532 774 45 25, fax: +90 216 3480293,  
e-mail: tanayuyar@superonline.com.

September 11-13, 2001

## **7th Grove Fuel Cell Symposium, London, UK**

Info: Ph: +44 1865 843691, fax: +44 1865 843958, email: sm.wilkinson@elsevier.co.uk,  
www.grovesfuelcell.com.

September 13-15 2001

## **Windpower on Islands Conf. & Study Tour, Gotland, Sweden**

Info: Tore Wizelius, Gotland University Col-  
lage, Ph: +46498299882, www.wpi.nu.

September 18-22, 2001

## **WindtechHUSUM, Husum, Germany**

World Exhibition of Wind Energy.

Info: Messe Husum, Kielsburger Str 8-10,  
25813 Husum, Germany. Ph: +48 41 90 2104,  
fax: +4841902266, email: info@messehusum.de  
www.windtechhusum.de .

September 19 – November 14, 2001

## **Sustainable Building & Urban Design, Rotterdam Training, The Netherlands**

Info: Att. Mr. Jaap de Vries, HIS, PO Box  
1935, 3000 BX Rotterdam, The Netherlands.  
Ph: +31 10 4021 554, fax: +31 10 4045 671,  
e-mail: sbud@his.nl, www.his.nl .

September 16-22, 2001 \*

## **European Sustainable Energy NGO Seminar, Denmark**

### **INFORSE-Europe Meeting**

Info: INFORSE-Europe/OVE-Europe,  
Gl. Kirkevej 56, 8530 Hjortshøj. Denmark.  
Ph: +45-86227000, fax: +45-86227096  
e-mail: ove@inforse.org  
www.orgve.dk/inforse-europe

See article on p.13, & in issue 33 on p. 6.

September 25 – 28, 2001

## **BIOEnergy 2001, Aarhus, Denmark**

Nordic & European Conf., Exhib., Study Tour  
Info: DANBIO Danish Biomass Association,  
Niels Bohrs Vej 9, 6700 Esbjerg, Denmark.  
Ph. +45 65504166, fax: +45 65501091,  
e-mail: jhn@esb.sdu.dk, www.biomass.dk.

- September 27-30, 2001, Biella-Italy

- September 13-16, 2001 Melhouse-France

- October 4-7, 2001 Straubing-Germany

- April 4-7, 2002, Lons le Saunier-France

- May 2-4, 2002. Quebec-Canada

## **5 Wood Energy Shows - Exhibition**

Info: CARMEN, Schulgasse 18, 94315  
Straubing, PO Box 662, Germany.  
Ph: +49 9421 960300, fax: +49 9421 960333,  
e-mail: contact@carmen-ev.de,  
www.carmen-ev.de

October 1-2, 2001

## **Delivering Kyoto: Could Europe Do It? London, UK**

Info: The Royal Institute of Int'l Affairs,  
Chatham House, 10 St. Jame's Square, Lon-  
don SW1Y 4LE, UK. Ph: +44 20 79575754/  
00, fax: +44 2073212045, e-mail:  
conferences@riia.org, www.riia.org.

October 2-6, 2001

## **Milano Energia, Energy Exhibition and Conference, Milano, Italy**

Traditional and Alternative Energy

Info: EIOM, viale Premuda, 2, 20129 Milano,  
Italy. Ph: +39-255181842, fax: +39 255  
184161, e-mail: eiom.fairs@bias-net.com  
www.bias-net.vom.

October 4-6, 2001

## **Renewable Energy for a Competitive Europe, Conf. & Exhibition, Vienna Austria**

Info: Danube European Program for Technol-  
ogy & Training, Zieglergasse 28, 1070 Vi-  
enna, Austria. Ph: +43 1524 060611, fax: +43  
1524 060699, amoser@danube.or.at,  
www.bio-solar.at, www.danube.or.at/energy.

October 16-18, 2001

## **Annual Conference of BWEA, Brighton, UK**

Info: British Wind Energy Association,  
(BWEA) Ph/-fax: +44 207 4027102/-7107,  
e-mail: info@bwea.com, www.bwea.com

October 22-26, 2001

## **Photovoltaic Solar Energy, Munich Germany**

17th European Conference and Exhibition  
Info: WIP- Munich, Sylvensteinstr., 2, 81369  
Munich, Germany. Ph: +49 89 7201235, fax:  
+49 89 720 1291, e-mail: wip@wip-  
munich.de,  
www.wip-munich.de.

October 31 - November 3, 2001

## **Renewable Energy - Indonesia, Jakarta, Indonesia**

International Exhibition along with Electric-  
, Power-, Elenex-Indonesia  
Info: Overseas Exhibition Services,  
Ph: +44 20 7862 2090, fax: +44 20 7862  
2098, e-mail: elecindo@montnet.com.

November 6-10, 2001

## **VI Global Conference on Environmental Education, New Delhi, India**

Special Focus on RIO+10

Info: India Environmental Society, U-112, 3rd  
Fl. Vidhata House, Vikas Marg, Shakarpur,  
Delhi 110092, India.  
Ph: +91-11 2450749, fax: +91-11 2223311,  
e-mail: iesenro@del2.vsnl.net.in.

November 20-21, 2001

## **European Renewables 2001 Summit, Brussels, Belgium**

Investment Strategies and Opportunities

Info: CWC Associates, The Business Design  
Centre, 52 Upper Street, London N1 0QH.  
Ph: +44 20 7704 6161,  
e-mail: iosmo@thecwcgroup.com  
www.the cwcgroup.com.

November 25- 30, 2001

## **ISES 2001 Adelaide, Australia**

Solar World Congress of ISES with a session  
about gender organised by ENERGIA.

Info: c/o Hartley Mgmt. Group, PO Box 20,  
Kent Town, Adelaide, SA 5071, Australia.  
Ph: + 61 8 83634399, fax: +61 8 83634577,  
e-mail: ises2001@hartleymgt.com.au,  
www.unisa.edu.au/ises2001congress.

December 10-12, 2001

## **Offshore Wind Energy Conference of EWEA, Brussels, Belgium**

Info: European Wind Energy Association  
(EWEA) Ph:+32 2 5461940, fax:+32  
25461944, e-mail:ewea@ewea.org,  
www.ewea.org.

January 6-11, 2002

## **RIO 02, Rio de Janeiro, Brazil**

World Climate and Energy Event

Info: Prof. Stefan Krauter, UFRJ-COPPE, EE,  
C.P 68504, Rio de Janeiro 21945-970 RJ,  
Brazil. Ph: +552 15478298, +552 15628032,  
e-mail: info@rio02.com, ww.rio02.de.

January 19- 21, 2002

## **Int'l Conference. on Renewable Energy for Rural Development, Dhaka, Bangladesh**

Info: AKM, Sadrul Islam, Department of Me-  
chanical Engineering, Bangladesh University  
BUET, Dhala 1000, Bangladesh. Fax: +880  
2 8613046, e-mail: sadrul@me.buet.edu.

April 8-20, 2002

## **Alternative Ways to Combat Desertification Cape Town, South Africa**

Rural Community Interaction and Workshop  
Info: Roben Penny, Woodbine, Essex Road,  
Kalk Bay, 7975 Cape Town, South Africa.  
Fax: +27 21 7881285,  
e-mail: robenpen@jaywalk.com.

June 17-21, 2002

## **Biomass for Energy, Industry and Climate Protection, Amsterdam, Netherlands**

12th European Conference and Exhibition  
Info: WIP- Munich, Sylvensteinstr., 2, 81369  
Munich, Germany. Ph: +49 89 7201235, fax:  
+49 897201291, e-mail: wip@wip-munich.de,  
www.wip-munich.de.

June 29 - July 5, 2002

## **World Renewable Energy Congress - VII, Cologne, Germany**

Info: Prof. A Sayigh, WREN, 147 Hilmanton,  
Lower Early, Reading RG6 4HN, UK.  
Ph: +44 118 961 1364, fax: +44 118 961 1365,  
e-mail: asayigh@netcomuk.co.uk,  
www.wrenuk.co.uk.

September 02- 11, 2002 \*

## **Earth Summit on Sustainable Development, Johannesburg, South Africa**

Info: Charles Nouhan, UNED UK,  
3 Whitehall Court, London SW1A 2EL, UK.  
Fax: +44 207 9305893,  
e-mail: cnouhan@earthsummit2002.org,  
www.earthsummit2002.org,  
www.johannesburgsummit.org,  
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