SUSTAINABLE ENERGY NEWS

Newsletter for INFORSE International Network for Sustainable Energy No. 57, August 2007

INFORSE-Europe Activities'07 in 9 European Countries & in South Asia

DIERET
Online Education Starts Again

UN CSD Failed on Energy
- New Global Initiatives Needed

Biomass Opportunities for China

Uranium Costs

Sustainable Energy News
ISSN 0908 - 4134
Published by:
INFORSE-Europe

International Network for Sustainable Energy (INFORSE)
is a worldwide NGO network formed at the Global Forum in Rio de Janeiro, Brazil, 1992.

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Deadline for the next issue:
30 September 2007
Next issue: *October 2007*

The newsletter is published quarterly.

Feel free to use the information, but please state the source.

Annual subscription rate:
EUR 25/year.
The newsletter is free of charge for INFORSE members as long as possible.

Printer:
Fjerritslev Tryk, Denmark
2,000 copies

Sustainable Energy News has been supported by the European Commission DG Environment - Civil Society Support to INFORSE-Europe in 2004-07.
The articles reflect the views of the authors, and of INFORSE, not of the financial supporters.

Photo on the front page:
Exhibition in Romania.
See article on page # 5.
Photo by INFORSE.

Critical Mass Needed for Sustainable Energy

With the UN's Commission for Sustainable Development failing to agree on energy and the international climate negotiations struggling to reach meaningful agreement on actions to be taken after the fast-approaching 2012, it is more obvious than ever that the world needs a critical mass of countries to embark on a fast transition to sustainable energy.

This year's conclusions of the IPCC – the international panel on climate change - are clearer than before: we need to act fast to mitigate dangerous climate change, turning the current increases in global greenhouse-gas emissions into global reductions no later than 2015. This requires rapid reductions by many of the largest emitters, including a large majority of the industrialised countries.

This year or next year, China will become the largest emitter of greenhouse gases. It is necessary that China and other important emitters take an active part in emission reductions. If we want to persuade China and others to limit their emissions, we must show how to use the sustainable solutions at large scales in a number of countries. Thus, we need a critical mass of countries to lead the way. That requires ambitious local and national strategies as well as more efficient policies and actions. Beside that we need stronger development of sustainable energy solutions all over the world, if we are to succeed with a timely mitigation of climate change.

INFORSE has shown how it is possible to turn the current energy growth into reductions. For a growing number of countries, we have shown how it is possible to phase out fossil fuels as well as nuclear power by 2030 or 2050. In June, we presented a sustainable energy vision for Latvia, combining the current high economic growth with reductions in greenhouse-gas emissions and reductions of energy imports. This fall we will work on an improved sustainable energy vision for Romania and further develop the vision for EU. More and more NGOs are getting involved in sustainable energy visions and strategies. In this issue we present the "Zero Carbon Britain" scenario developed by the Centre for Alternative Technology in Wales; it describes the phase out of fossil fuels by 2027. In Spain another INFORSE member, the organisation GCTPFNN, has presented its vision for Catalonia for a future free of fossil fuels and of nuclear power.

It is very important to know the directions in which our energy systems can develop, as shown in the sustainable energy visions and strategies, but we need broad support to make the transition happen. It will benefit the majority of people, including stakeholders, so it should not be hard to get widespread support. Unfortunately a few powerful actors benefit more from the current wasteful energy systems or from solutions such as nuclear power that are so inflexible and expensive that they compromise sustainable energy development. We see that in Finland, in Lithuania, and unfortunately maybe also in the UK, where the government's positive attitude towards nuclear power coincides with considerations of how to get by with substantially smaller increases in renewable energy than the UK's proportional share of the EU 20% target for 2020. That, at least, was the message in an internal government document presented by the UK newspaper The Guardian on August 13 of this year.

Fortunately, some countries are ready to lead the way. The new German decision to cut emissions by some 36% by 2020 is an important step in the right direction. Of course the previously proposed 40% reduction would be better; but 36% is enough to lead the way. The Danish government's target of 30% renewable energy by 2025 is also a small step forward, but given the large potentials in Denmark, it is much too little. And Denmark is not the only country that must raise its ambitions if we are to muster a critical mass of countries that will lead the way to sustainable energy development.

This fall there will be critical discussions on how to distribute the EU targets of 20% renewable energy and 20-30% CO_2 reductions by 2020. It is crucial that the targets be transformed into national actions and that they not be deferred to market mechanisms allowing countries to replace actions at home with purchases of hot air from abroad. It is a discussion too serious to leave to the governments alone. Everybody concerned with our energy future and climate change should take part. And we should not leave it to the EU countries alone to lead the way. Other countries are equally needed to achieve sustainable energy's global critical mass.

Gunnar Boye Olesen
editor

Commission for Sustainable Development Failed on Energy

By Gunnar Boye Olesen, INFORSE Secretariat

By the end of its 15th session, May 11, 2007, after days of intensive negotiations, the U.N. Commission for Sustainable Development (CSD) failed to achieve consensus among the world's countries on a document addressing energy and climate. The countries remained divided on key points including the role of nuclear power and international cooperation as well as targets for renewable energy and for access of the poor to energy. At the end of the day, the chair of CSD-15 proposed a final text which was more or less patched together after removing the text in the square brackets, i.e., those passages on which the countries could not agree. The product of this operation was endorsed by the G77, USA, Mexico and Canada. The EU and Switzerland rejected the text because, as they said, it was not as forward-looking as older agreements such as the Johannesburg Plan of Implementation - JPoI - from 2002.

The document proposed by the CSD-15 Chairman was included in the Chairman's summary and can be read at http://www.un.org/esa/sustdev/csd/csd15/documents/chair_summary.pdf.

It repeats many agreements from the JPoI and CSD-9. These include calls for actions to phase out subsidies that inhibit sustainable development; to accelerate access for the poor to sustainable energy services; to promote national energy-efficiency policies and programmes; and to strengthen international as well as regional cooperation and partnerships in energy for sustainable development. A very few new issues were addressed, as in the call to strengthen "..international cooperation on bioenergy, including biofuels, with a view to ensure that bioenergy is produced and used sustainably, taking into account an adequate balance between food security and bioenergy production, as well as the sustainable use of natural resources..".

A few paragraphs in the document promote increased use of fossil fuels, e.g., in a call to encourage the development of carbon capture and storage as well as of enhanced oil-recovery technologies.

INFORSE Active at CSD

INFORSE was active in CSD-15, as an observer and via side-events. While we could not change the breakdown of the negotiations, we were able to raise awareness on sustainable energy solutions in North and South. At a side-event we presented many solutions, in particular solutions on sustainable energy for poverty reduction from South Asia, such as the successes in Bangladesh of the Grameen Shakti, as well as successful experiences from Nepal and India.

INFORSE was represented by the coordinators Timothy Byakola (SDI, Uganda), Raymond Myles (INSEDA, India), and Gunnar Boye Olesen (Secretariat and OVE, Denmark), and by the national focal point representatives Ganesh Ram Shrestha (CRT, Nepal), Abser Kamal (Grameen Shakti, Bangladesh) and Vadakemuriyil, (SDI, India).

Read more: www.inforse.org/europe/UN_CSD.htm

NGO representatives at the UN CSD 15 in New York.

New Global Initiatives Needed

With the breakdown of the CSD's energy negotiations in May, there is no active global framework for cooperation on energy. The climate negotiations cover important parts of energy uses, but cannot address issues that are not recognised as significant to climate change, such as access for the poor to energy. Numerous partnerships cover specific issues, but there is a lack of global initiatives to which a majority of countries could agree that address energy issues of global importance.

The fate of CSD-15 indicates that it would not make sense to start a new CSD-like structure, i.e., discussing all global energy issues at once. Instead, could be global cooperation on specific issues. A natural start would be to strengthen the climate negotiations. Other obvious global initiatives would be:

- An action plan on energy for poverty reduction. While all countries agree that this is an important issue, too little is happening. An obvious proposal would be a global action plan to end energy poverty, including a short-term target to reduce by half the number of people without access to energy for basic needs.
- A framework for sustainability of bioenergy. At CSD-15, there was a general agreement that bioenergy, including biofuels for transport, should be produced and used sustainably. There is no agreed definition of this, however, and no international framework that makes it happen. On the contrary, trade agreements might be used to push trade with unsustainable biofuels. An international framework for sustainable bioenergy is needed to avoid increasing environmental and social problems caused by biofuels.
- An international agreement on energy efficiency, to match the increasing international trade in energy-consuming products. The EU-led initiative must be improved and widened to gather support from countries around the world.
- Increased international cooperation on renewable energy, including strengthening of the REN21; the target-setting in the Johannesburg Renewable Energy Coalition; and new considerations of an international fund or agency for renewable energy.

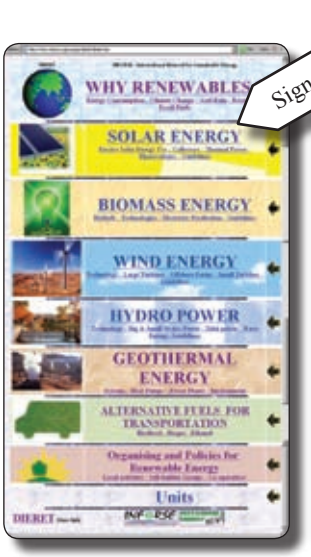
INFORSE-Europe News

INFORSE Adds Activities in 9 Countries

INFORSE-Europe is increasing its activities dramatically this year, with new efforts in nine countries adding to its ongoing works at the European and global levels. The new national activities are:

- **In Denmark and in France**, members will follow more closely EU policy formulation and its implementation in national policies.
- **In Macedonia,** Eco-sens will follow the effects of the Energy Community for South East Europe, in which Macedonia will implement some EU regulations. Eco-sens will organise a seminar to push for strong, environmentally sound implementation.
- **In Poland,** PKE will work on EU policies, including the use of EU structural funds, and will organise a seminar on the issues involved.
- **In Portugal,** Almargem will work on EU policy formulation and on the introduction of sustainable energy in education with the SPARE programme.
- **In Romania,** Prietenii Pamintului and others will work on EU policies, in particular on the use of structural funds at local levels, as well as on education and on a sustainable energy vision for Romania. Two seminars will be part of the activities.
- **In Russia,** Friends of the Baltic will coordinate a number of educational activities with the SPARE programme, in Russia as well as internationally.
- **In Slovakia,** the coordinator FAE will follow EU policies including use of structural funds and will organise a seminar about it. FAE will also work on a plan for a fast-response plan for a quick change away from fossil fuels.
- **In the candidate country Turkey,** Eurosolar Turkey will follow how EU policies are implemented and how improved implementation can benefit the environment, e.g. by reducing the sale of substandard, energy-inefficient products in Turkey. A seminar will be part of the activities.

Read more on www.inforse.org/europe about the activities as they develop.



New Round of Distance Education in English

A new round of the DIERET distance education course in renewable energy is beginning. Within a limit of 50 students, the free course is offered in English. The highest priority is given to people active in European NGOs, but everybody is welcome to apply. Each student who completes the course successfully receives a certificate.

To apply, send an email to fae@inforse.org.
Application form can be downloaded from here:
http://www.inforse.org/europe/educat.htm

INFORSE-Europe Presents Sustainable Energy Vision for Latvia

In cooperation with Latvian Green Movement and Green Liberty in Riga, INFORSE-Europe presented a sustainable energy vision and strategy at a seminar in Riga for about 25 government officials, NGOs, and other stakeholders.

The vision shows how Latvia could turn from gas and imported electricity to efficient use of renewable energy, in particular biomass supplemented by windpower, existing hydropower, and solar energy. While the existing biomass use and export would continue, additional biomass could come from biomass plantations on unused land, as well as from straw. Energy efficiency will play an important role in all sectors. In power production, biomass-based CHP plants for larger towns are crucial to realisation of the vision. The current growth of the economy is expected to continue; but policies to reduce growth in transport are needed, leading to a situation in which car use is equal to that in Western Europe and in which public transport is improved.

The vision was released in the middle of a national debate about future power supply to Latvia, which has the fastest growth in electricity consumption in Europe. The official alternatives are imported nuclear electricity from a new Ignalina nuclear power plant in Lithuania and a coal-fired power plant without CHP at the Latvian port of Ventspils. Neither of these alternatives would bring anything near the benefits that the visions would give to the environment as well as to Latvian development and to its rural economy. Unfortunately, the unsustainable alternatives are being promoted by the Latvian power company Latvenergo with unrealistically low cost estimates.

Read more about the Latvian vision at www.inforse.org/europe

DIERET in Russian

The NGOs Renewable Energy Agency in Kiev, Ukraine and Ecomuseum in Karaganda, Kazakhstan organised a course in renewable energy, to be taken via the Internet, using the Russian version of DIERET 2006-07. 80 participants successfully concluded the course and received certificates. They were from Kazakhstan, Kyrgyzstan, Ukraine, Russia, Uzbekistan, and Azerbaijan. Participants included NGO members and students as well as professors and directors.

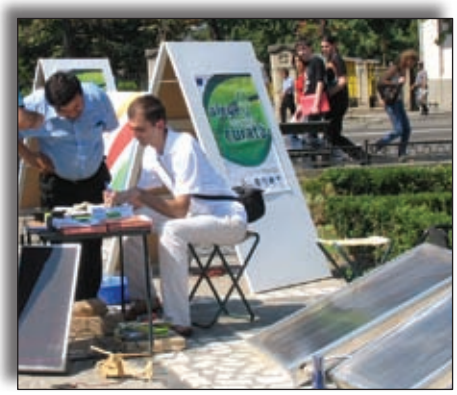
Portugal NGO Joins INFORSE Activities

The Portuguese INFORSE member Almargem will promote its work programme with INFORSE during the 2nd Exhibition of Clean Technologies and Sustainable Mobility in the Algarve in September 19-22, 2007.

Almargem will take the opportunity to introduce INFORSE to participants and to the local population. The sustainable-energy activities to be carried out in cooperation with the network will also be presented.

One main focus will be the integration of the SPARE project into regional schools. To complement the introduction of SPARE, the Portuguese association is organising educational activities with solar toys and windmills made from recycled material.

The exhibition will also host the *"Algarve Green Vehicle Challenge 2007"*, joining alternative vehicles in a race through the Algarve. Prizes will be distributed during a lunch cooked in solar ovens.
More at: www.algarverenovavel.com



Renewable Exhibition in 13 Romanian Towns

The INFORSE members Prietenii Pamantului (PP) and Terra Millenul III are currently carrying out an exhibition throughout Romania together with ARCE (Romanian Agency for Energy Conservation) within the project "Energy Resources for the Future". The tour is following in the footsteps of a tour organised by INFORSE members in 2003. Ion Zamfir from PP reports:

"The exhibitions have been great successes with many visitors. It was interesting that some journalists came to the exhibition just because they remembered the exhibitions in 2003, and a surprise for me to meet people who had also visited the exhibition in 2003. Compared with 2003, now the public approach is much more focussed on practical aspects of use. Many people are asking for help on how to make various improvements in their houses, and are trying to install renewable energy equipment, mainly in the area of rural tourism. It is a pleasure to run the exhibition even in very hot days (we had days with more than 41 degrees Centigrade). We hope to be able to continue in 2008, if funding permits it."

Pictures from the exhibition in Romania.

Zero Carbon Britain

On July 7, 2007, the Centre for Alternative Technology (CAT) launched 'zerocarbonbritain', a blueprint for Britain to reduce its energy-based CO_2 emissions to zero by 2027. It defines a global carbon budget and identifies an equitable portion for Britain. Using only existing and proven technologies, it maps a potential scenario with a dual process of 'powering down' energy demand, and 'powering up' renewable energy supplies.

Powering down: The strategy recommends that by 2027 Britain require half as much energy as at present. An important measure is a limiting number of tradeable energy quotas (TEQ), of which a part is distributed equally to citizens, and another part is auctioned to business. The heat demand for buildings is expected to decline by 50% and electricity demand by around 10%. New buildings will be effectively zero-carbon after 2012 and there will be a vigorous programme to refurbish older buildings. A strong emphasis on combined heat and power (CHP) will guide power-plant construction. Private vehicles will become more expensive to run, but this will be offset by hugely improved rail and bus services. Virtually all vehicles will be electrically powered, with the capacity to feed into the grid as well as draw from it. This will be an important component for balancing a renewables-based grid.

Domestic air travel may be limited to emergency use, while international flights will have to pay their full carbon costs.

The increasing costs of petroleum-based agrochemicals and of bulk transport are likely to lead to a much more local, organic food supply. It will also motivate a large reduction in livestock, probably by 60% or more, and a diet with less meat and fat. This will free up of large areas of land for forestry and biomass crops.

Power Up Renewables: Renewable electricity supply will be increased, requiring reinforcement of the National Grid and its development into a more sophisticated system for integration and balancing of supply. When renewables are generating more energy than is needed in a local area, energy can be stored in vehicle-to-grid systems, flow batteries, pumped storage, and geological hydrogen stores. When demand is high and production low, there will be shedding of demand on 'economy' tariffs. The scenario demonstrates that energy storage requirements are achievable. Wind will provide the greatest proportion of electricity, around 50% by 2027.

The report concludes that zerocarbonbritain is both scientifically necessary and technically possible. With TEQs it can be made socially acceptable. It may also deliver a higher quality of life.

What is needed now is to make a zero-carbon Britain politically thinkable. The authors are convinced that this can be achieved.

zerocarbonbritain
an alternative energy strategy

More information:
www.zerocarbonbritain.com

New Renewable-Energy Masters Programme at CAT in UK - Innovative Courses for a Zero-Carbon Future

The Centre for Alternative Technology (CAT) are launching a unique MSc in Renewable Energy and the Built Environment in September 2007. Half of the modules on the course focus on practical activities, making it the only masters course of this kind in the UK.

The course from CAT's Graduate School for the Environment is designed for people with a technical graduate background, including engineers, architects, system specifiers and planners. The new programme is taught in collaboration with the University of East London (UEL) and builds on the success of CAT's existing MSc programme "Architecture: Advanced Environmental and Energy Studies", which has grown exponentially from 30 students in 2000 to almost 400 today.

CAT is a world leader in sustainable education and a member of INFORSE-Europe.
Info: www.cat.org.uk/courses.

Centre for Alternative Technology

EU Policy Update

Edited by Gunnar Boye Olesen, INFORSE-Europe coordinator

Read more INFORSE-Europe's responses and news about EU sustainable energy policies at www.inforse.org/europe/eupolicy.htm

Sustainable Biofuel Framework

The EU Commission is preparing a framework within which to provide biofuels sustainably for use in transportation. As part of the process, INFORSE-Europe and many other stakeholders gave their opinion in a public consultation organised by the Commission in June. A proposal from the Commission is expected in the fall.

In its response to the consultation, INFORSE-Europe stressed the following points:

- production must be environmentally as well as socially sustainable,
- biofuel production must not have negative effects on indigenous populations,
- the local population must be involved in decision-making,
- biofuel production based on harmful land-use change after 1/1-2005 must not be included,
- locally produced biofuel that is not treated chemically should be exempt from certification,
- biofuel must produce at least 25% fewer emissions than the fossil fuel that it replaces,
- biofuel and other biomass must be produced and used efficiently, using the best available technology,
- support should be based on the environmental effects of biofuels, and should include the most environmentally types such as biogas, and
- the appropriate target for transport is the use of renewable energy for the transport energy supply, not the use of biofuels in vehicle fuel.

European Sustainable Energy Week 2008 (EUSEW)

Following the success of this year, the second EUSEW will take place between 28 January and 1 February 2008.

The 2007 EUSEW brought together more than 5,000 experts and decision-makers who attended over 30 events in Brussels, Murcia, Grenoble and Wels. The 2008 EUSEW will combine a number of larger events with decentralised events throughout Europe.

The EUSEW is organised under the umbrella of the European Sustainable Energy Europe campaign, of which INFORSE-Europe is an associate.

Members of INFORSE-Europe are invited to organise their own events in various European cities during the week, using the framework and materials of the EUSEW, working together to undertake together a real European energy revolution for sustainable energy.

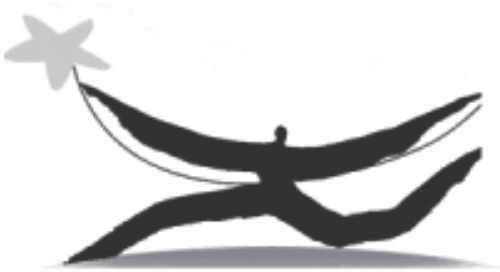
Ecodesign Implementation Speeding Up

The implementation of the EU ecodesign directive is speeding up as more of the 25 first expert reports on energy efficiency opportunities are being finalised and as the issues are being discussed in the Ecodesign Consultation Forum. INFORSE-Europe has a seat in this Forum together with other environmental NGOs, consumer organsations, industry organisations, and the EU countries. In June, the first meeting of the Consultation Forum discussed street lights, and in new meetings from October this year till July 2008 there will be discussion of the other product groups covered by ongoing studies. Probably the project groups to be discussed this fall are external power supplies, computers, TVs, stand-by for all products, and office lighting.

In this work, INFORSE-Europe and the other involved NGOs will promote:

- high energy-efficiency standards,
- progressive increase of standards in the future, and
- more levels of technical energy-efficiency standards, with one level being a required minimum, and with higher levels for information to progressive consumers with labels, etc.

INFORSE-Europe welcomes input from NGOs on the products discussed and is developing lists of NGOs interested in the different product groups.



EUSEW 2007 logo

Environmental State Aid

The EU Commission is revising its guidelines for state aid, guidelines that limit the support that EU countries can give to renewable energy, CHP, and other environmental investments. In some cases, the current guidelines have reduced national support for renewable energy, thereby slowing its development, e.g., in the UK. INFORSE-Europe pointed this out in its response to the Commission's public consultation on the guidelines in June. INFORSE-Europe proposes a "block exemption" for renewable energy and energy efficiency, such that the EU countries do not need to ask for state-aid approval before introducing support schemes. The network also proposes that state aid be allowed to cover as much as 100% of net extra costs (when they appear) for renewable energy and energy efficiency.

The new guidelines are slated to enter into force with the beginning of 2008.

EU Energy Package Coming Up

Following the energy and climate decisions of the EU prime ministers in March, the EU Commission is preparing a package of legal measures to help realise the targets of 20% renewable energy by 2020, 20-30% greenhouse gas reductions, etc. The package is expected to include a general directive for renewable energy, criteria for sustainable biofuels, and other EU-wide measures. The package is expected to published by the Commission in November or December.

Revision of EU Energy Markets

The third revision of the EU electricity and gas markets is on its way. Proposals from the EU Commission are expected in September, including stronger rules for separation of production and transmission of electricity as well as stronger national market regulators, eventually with an EU-wide coordination among regulators.

Serenade - Energy Advice

By *Catrin Maby, Severn Wye Energy Agency (SWEA), UK, INFORSE member*

What is SErENADE?
SErENADE is a partnership of energy experts in seven countries, coordinated by SWEA. Two INFORSE members are participating: SWEA in the UK, and CLER in France. The projects newsletter is published twice a year. It is available in Bulgarian, English, French, German, Italian, Slovenian and Swedish.

Energy advice is the 'soft stuff' that needs to be wrapped around all sustainable energy programmes to ensure their success.

Consumer access to advice and information is essential for them to take steps to a more sustainable use of energy, and advice is essential to most other policy tools to enable their effective implementation.

Examples of the significance of the role of energy advice are:

- Providing to consumers a clear pathway leading them from an awareness of serious environmental problems to focussed actions by which they can achieve positive results in their everyday lives
- Enabling consumers to assess the impact of their actions and choices, economically and environmentally.
- Catalysing constructive action by helping citizens to identify, prioritise, finance and practically implement relevant measures.
- Ensuring that potential savings from concrete measures are fully realised, e.g., by helping consumers to understand how to use a new heating system or to adapt to lower heat requirements after insulation work.
- Helping consumers to understand how to combine technologies, in a market where many companies promote single technologies only.
- Providing impartial help in a market that is very competitive.
- Helping consumers to take care of their homes, achieving the right temperature and humidity levels, avoiding damp and mould growth from condensation.
- Encouraging the creation of jobs in sustainable energy.

The SErENADE project was formed to review the state of the art of energy advice in the EU27, as well as to compile an online toolkit of methods and materials for energy advice.

The study found that there is a very wide range of services and resources applied to the energy advice sector in different countries, and a wide variation in the extent to which the need for advice is recognised. As a very broad perspective, around one third of countries have no or very little energy advice; around a third have fairly well developed services; and a third are somewhere in between, for example with services only in some areas or for some client groups, or oriented to generalized information and with limited scope for specific advice.

The relevance and impact of advice to the realisation of sustainable energy targets is not fully realised across the European Community. To motivate and enable action across the community requires a skilled and targeted approach. It will not be achievable through mainstream promotional campaigns alone.

There is clearly a great deal of potential for wider geographical availability of effective independent energy advice services, as it scarcely exists in much of Europe. There is also scope for further development of those services that already exist, in terms of breadth of subject matter, and effective outreach and communication to a wide audience. Much could be gained from learning from each other.

The significance and need for impartial energy advice is growing, with increasing relevance in areas such as:

- The aims of energy performance certification, as required in the Energy Performance of Buildings Directive, are unlikely to be realised without accompanying or subsequent advice on implementation.
- The information in metering and billing, required in the Energy End-Use and Energy Services Directive, has a 'customer feedback' objective to raise consumer awareness of their consumption, potentially raising the demand for impartial advice on how to reduce consumption.
- The liberalisation of fuel supply markets brings with it a new area in which consumer support is required, with regard to changing suppliers as well as understanding different tariff structures and energy taxes.
- The emphasis on technological innovation means a wider range of technologies with which consumers will need help. Examples are new types of heating, fuel, metering, and less environmentally damaging cars.
- Microgeneration and the issues around export of electricity are a growing area requiring customer support.
- The growth of consumer electronics and the range of domestic electrical appliances in general have brought with them a whole new range of energy-consuming equipment, along with the need for awareness of its efficient use and for understanding of how to purchase the most efficient appliances.
- As fuel prices rise, the issue of fuel poverty becomes more crucial, which brings another level of urgency to the need for effective advice, and for the wider skill sets required to reach and help the more vulnerable consumers.

More information: www.energy-advice.org www.swea.co.uk, E: catrin@swea.co.uk.

The SErENADE team: Catrin Maby (SWEA, UK), Raphael Claustre (CLER, France) Marjana S. Zavrl (BCEI Slovenia), Erika Brokvist, (EV Sweden), Christine Oehlinger, (ESV Austria), Loic Lepage (EE74, France), Ivanka Pandelieva (SEC, Bulgaria); Mauro Brolis (PE Italy) (not all are on the photo)

Increasing South Asian INFORSE Activities

Seminars in South Asia

Starting with a seminar in Nepal, April 19-20, 2007, INFORSE South Asia and its members are organising a series of national workshops on sustainable energy for poverty reduction, to increase NGO activities in the field as well as to raise awareness among decision-makers on the value of local, sustainable energy solutions. The seminar in Nepal was followed by a seminar in India, May 24-26, another seminar in Nepal, June 5-6, a seminar in Sri Lanka, July 17-20, and finally a seminar in Bangladesh in September. The seminars brought together more than 100 NGO representatives as well as government officials, donors, and members of the scientific community. INFORSE organisations presented the new manuals on sustainable energy solutions to reduce poverty and the participants discussed how to take up the best solutions in their work and how to increase activities.

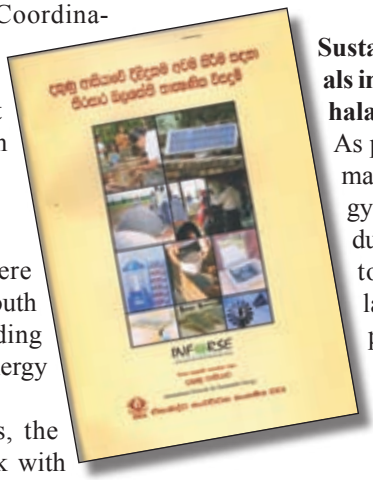
Following the Seminars

Following the workshops more than 25 NGOs have stated that they will increase their use of sustainable energy solutions in the their work on the ground in rural development. The seminars also led to increased communication between NGOs and government officials, discussing how to improve NGO involvement in government activities and how to improve governmental programs, e.g. subsidy programmes. Following the seminars, the organisers also had close contacts with the Asian Development Bank (ADB) and the World Bank, including participation in a regional ADB energy strategy consultation. Further, the activities also lead to cooperation with the private sector, including a meeting between INSEDA (INFORSE South Asia Coordinator) and consultants from the Confederation of Indian Industries that want to strengthen cooperation with NGOs.

INFORSE Project

All of these activities were parts of the INFORSE South Asia NGO capacity building project for sustainable energy 2005-07.

In the coming months, the project partners will work with NGOs and other stakeholders to strengthen activities for sustainable energy in order to reduce poverty. They will assist NGOs to take up new activities, disseminate manuals and other information about the best solutions, and strengthen cooperation among NGOs as well as between NGOs and other stakeholders. The project partners are the Centre for Rural Technology (CRT) in Nepal; INSEDA, All India Women's Conference, the Sustainable Development Agency (SDA) in India, IDEA in Sri Lanka, Grameen Shakti in Bangladesh, and OVE as well as DiB in Denmark.



Sustainable Energy Manuals in Hindi, Nepalese, Singhala, and Bengali

As part of the activities, the manual on renewable energy solutions for poverty reduction has been translated to four major regional languages and has been published respectively in India, Nepal, Sri Lanka and Bangladesh.

More information: www.inforse.org/asia.

Kazakhstan: Towards Green Energy

Andrey Konechenkov, Renewable Energy Agency/INFORSE-Europe

Unfortunately, it is still too early to speak about a real wide-scale implementation of renewable technologies in the economies of the former USSR countries. Low fossil-energy tariffs, as well as lack of reliable information on renewable energies among politicians, state officials and common people, prevent a process from developing. To change the current situation in favor of renewable energy sources, it's necessary to launch national promotion campaigns.

The project "Renewable Energy Sources for Distant Regions of Kazakhstan" realized with support of GEF's Small Grants Programme is a successful example of such a campaign. Experts from "Renewable Energy Agency", a Ukrainian NGO, jointly with their project partners from National Ecological Museum of Karaganda "EcoMuseum", organized and held several seminars in the cities of Karaganda and Alma-Ata to present successful renewable-energy projects realized in other countries, along with the roles of NGOs and public organizations in promoting ecologically sound energy technologies. Moreover, the internationally recognized educational course "DIERET" developed by INFORSE was also introduced to the seminars' participants. Within the framework of the project, a special issue of the Ukrainian magazine "Zelena Energetyka" (Green Energy) devoted to the development of renewable energies in the Middle Asian region was issued in the Russian language.

Kazakhstan could become the next country to pass legislation for renewable energy. In May 2007, at a seminar in the Ministry of Energy, chaired by Deputy Minister Almasadam Satkaliev, draft legislation to support renewable energy was approved. The drafts then went for governmental consultations and will later be sent to parliament. Ambitions for renewable energy in Kazakhstan remain fairly modest.

A UNDP project shows that 1,000 MW of small scale hydro power and 2,000 MW of wind power can be constructed by 2024 without significant effect on the consumer price of power in this country of 15 million people.

Because of the large use of coal, Kazakhstan has the largest per-capita emissions of greenhouse gases in Central Asia.

Source: REEEP, www.reeep.org.

More information on the project:
http://www.rea.org.ua/
http://www.ecomuseum.freenet.kz/

Record Uranium Price - What is Behind and What are the Consequences

By Gunnar Boye Olesen, INFORSE

The nuclear lobby envisions a bright new dawn for nuclear power based on increasing fossil fuel prices and, ironically, on increasing public concern for the security of energy supply. Much is written elsewhere addressing nuclear power plant design and security. In the present article, though, we take a look at cost and supply issues of the fuel itself, uranium.

Potential nuclear energy investors must look carefully. What, for instance, is the actual security of supply that they will get with nuclear power? On top of the well known problems with waste handling and the high safety demands that increase the risk of shutdowns in cases of smaller incidents, problems of nuclear fuel supply seems to emerge. The spot-market prices of uranium jumped to a historical height of 139 US$/pound of U_3O_8 during some weeks of June and July, 2007. This was the end of a continuous increase from 10 US$/pound at the end of 2002. From July to September the spot market price has decreased to below 100 $/pound.

Supply Covered by Stockpiles

The reason for the sharp price increase in uranium is a steady demand, combined with flooding of two uranium mines in, respectively, Canada and Australia. Such high price fluctuations show a market with a limited supply and with little price-elasticity. When expected supply ceases, the price jumps high. Of course these are spot market variations and many nuclear plants buy uranium on various kinds of long-term contracts. Eventually, though, most uranium users will be affected, as uranium is becoming a seller's market. Behind all this is a global uranium market where only about 63% of the supply comes from mines and 37% comes from uranium stockpiles. These stockpiles were mainly made for nuclear weapons; but are now used for civilian nuclear power. The largest of the conversion programs of weapons uranium ends in 2013: the *"Megatons to Megawatts"* program, converting Russian nuclear warheads to reactor uranium.

Note 1. This and other costs estimated with the Wise Uranium calculator with a burn-up of 42 GW-days/t U and 34% electric efficiency.

Sources: - www.wise-uranium.org/upeur.html
- www.uranium.info (spot prices)
- www.marketoracle.co.uk/Article1074.html
- www.energiekrise.de/uran/docs2006/REO-Uranium_5-12-2006.pdf.

Then uranium could be in short supply, leaving new reactors without fuels. 2013, however, might not be the crucial year, as there are other stockpiles that could be brought into the market, postponing the end of the "stockpile market" until about 2020.

Uranium Mining: Dirty and Unpredictable

The ordinary way of increasing supply of a metal is to increase mining. During the last few years, prospecting for uranium mines has been booming in many countries, including traditional producers as Canada, Australia, and Kazakhstan, as well as "new" countries such as Sweden and Finland. There is potential to mine more uranium; but uranium mines take time to establish and are very often dirty affairs.

Environmental NGOs are increasingly trying to stop uranium mining, and with some success, such as the *"Nej till Uranbrytning"* network in Sweden.

In that country uranium mines need a municipal permit, and if the local municipality prefers to keep their environment clean and to live from cleaner and often more income-intensive activities, they can simply say no. Experience from current mining developments also shows delays and cost-overruns in the construction of mines. A particular unlucky case (from the point of view of the investors) has been the largest mine under construction in the world today, the Cigar Lake mine in Canada, where the start of operations was postponed from 2005 to 2011 because of above-mentioned unexpected flooding.

Further High Costs & Effects

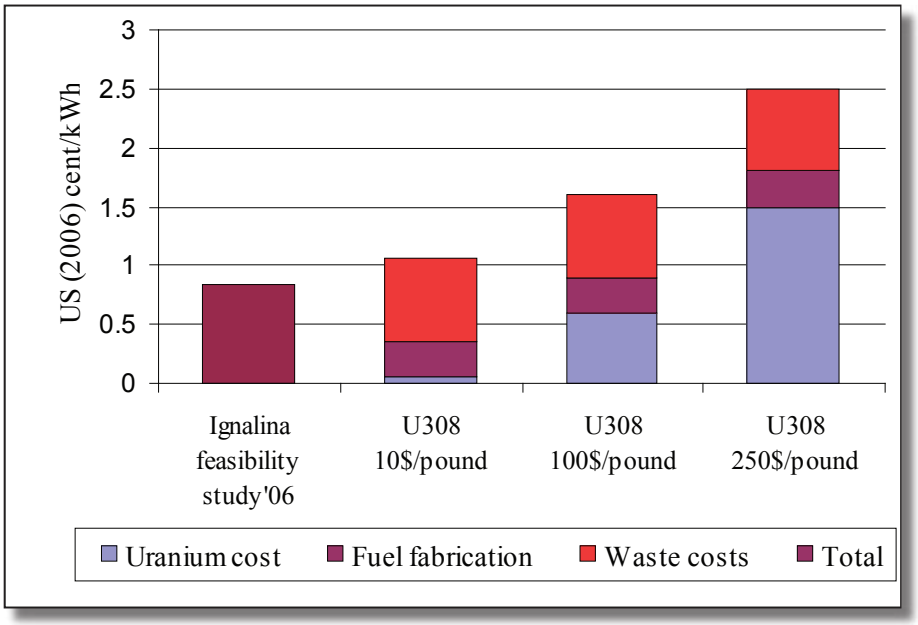
These are the main reasons why some analysts foresee higher uranium prices in the future, as high as 250 $/pound U_3O_8, at least for a period. While uranium costs of 10 $/pound only contributed to the nuclear electricity price with 0.06 US cent/kWh[1], uranium costs of 100$/pound contributes of 0.6 US c/kWh and 250 $/pound 1.5 c/kWh, making nuclear power less competitive.

The graph shows the effects of these higher costs on the electricity price. It provides a more comprehensive picture by showing fuel-fabrication and enrichment costs (0.3 c/kWh) as well as an assumption of waste management costs (0.7c/kWh). The results are compared with the total fuel cost estimate used in the 2006 feasibility study for a new Ignalina Nuclear Power plant in Lithuania , a study that is currently used as a basis for decisions about a new nuclear power-plant project.

The graph clearly shows the very inaccurate economy created by this too-low cost estimate and, further, by under estimating major expenses such as waste handling and disposal. Future electricity users will have to pay the difference.

With the uranium cost of 100 $/pound, the total cost of nuclear fuel becomes equal to the cost of biomass used in efficient CHP plants in places like the Baltic countries that have large supplies of biomass.

Efficient biomass CHPs are often considerably less costly investments than nuclear power plants. They are also more flexible in their fuel needs, and, of course, they are immeasurably safer.



Graph: Nuclear Fuel Cost Comparison per kWh electricity

Can Sustainable Bioenergies Bring New Opportunities to Chinese Farmers?

By Lin Gan, Senior Research Fellow at CICERO, Norway

China is in a rapid transition towards industrialization and integration into the world economy. However, this development has come at a high price, particularly in terms of the environment, putting heavy pressure on local energy resources and eco-systems. In addition, the gaps between the respective income and living standards of urban and rural areas as well as of the eastern and western regions of China has widened. The unemployment rate is increasing.

Agriculture in China has developed at a much slower pace than has industry over the last two decades, which has led to increasing disparity between rural and urban residents. In particular, major challenges to sustainable rural development occur in the western regions where severe problems co-exist: farmers lag behind in income compared to those in the coastal regions; eco-systems are vulnerable; poverty is still a social problem; the majority of farmers still rely on traditional use of agriculture residues or forest biomass or coal-burning for cooking and space heating, which cause severe indoor air pollution and health damages. Traditional use of biomass (and coal) also wastes a lot of energy because it uses family stoves whose efficiency rates are only at 5-8%. For example, one rural family in the remote Northwestern Yunnan Province uses 14-16 tons of firewood per year on average, thus causing major damage to natural forests. Modern biomass stoves can achieve 30-40% efficiency rates.

The Chinese government has realized that it must search urgently for alternative solutions. Under the banner of the so-called "harmonious society", the government is looking into new options, namely sustainable rural development, achieved by utilizing resources more efficiently as well as by prioritizing new and renewable energy sources with wider market applications.

China has large stocks of biomass resources from agriculture and forest residues and large areas of wastelands that potentially could be used to produce all kinds of bioenergy.

Bioenergy development has become a top priority in the government agenda as the Renewable Energy Law started its implementation in January 2006. The current focus is on electricity generation from surplus agricultural residues, which were estimated at 200 million tons yearly. The government has set up the long-term target of 30 GW of electricity generated from biomass by 2020. There is a growing interest in biofuels development as well, e.g. biodiesel and ethanol. That's why, to most people's surprise, the Chinese government has announced that it will import one million tons of ethanol each year from Brazil.

But this strategy is being defined too narrowly, with the missing part being the fulfillment of the needs of the poor and disadvantaged social groups. The current plan for biomass power plants with dozens of demonstration plants is mainly for economically developed regions, such as in Jiangsu and Shandong Provinces.

The key point is that rural residents could only benefit from bioenergy development if it takes place where they live and takes their daily needs into account.

Technology Option	**Modern biomass stove & pellet machines: 256 million household stoves ($ 37.5/stove)**	**Biomass power plants: 15 GW (25 MW x 600 units), electricity production: 75 TWh/y** [1]
Investment costs	$ 9.6 billion (stoves) + $ 9.6 billion (pellet ma.)	$ 19.2 billion ($ 1,280/kW)
Coal saving potential/y[2]	384-640 Mtce	24.8 Mtce
Environmental benefits (some avoided emissions from coal use)		
Sulphur-dioxide ($S0_2$)[3]	8.5-14.8 Mt	0.627 Mt
CO_2 (2.6 t/tce)	998-1664 Mt	64.5 Mt
Social benefits		
Job creation (person)[4]	3.8-7 million	0.7 million
Income generation[5]	$ 19.6-32.8 billion	$0.6 billion

China needs to make a massive transition from traditional to modern uses of biomass. This leap forward requires innovative policy support from the government. Most of the agricultural residues today are being burnt in fields, which pollutes the air and wastes energy. With the same amount of investment, household-based biomass utilization, compared with biomass power plants development, could generate 5-10 times more in local jobs and 5-9 times more income for rural residents and small companies, in addition to other environmental and social benefits (see Table).

So far the Chinese government has not paid adequate attention to these issues, especially how to utilize biomass resources more efficiently and related sustainability issues.

With implementation of policies to support household-based biomass use, pressures on rapid urban development could ease. Internationally, bioenergy has become a dynamic driving force with many committed players – governments, industries, aid agencies and, increasingly, private investors – wanting to get involved in China's land of opportunities that will spring from this transition. In the end, it will bring a new perspective to integrate greenhouse gas emissions reduction with sustainable rural energy development in China.

More information:
CICERO, Center for International Climate and Environmental Research – Oslo
http//:www.cicero.uio.no

CICERO is an independent research center associated with the University of Oslo. The center was established by the Norwegian government in 1990. CICERO has a national mandate to make information about climate research and climate policy.

[1] 1 MW of installed capacity generates 5 GWh of electricity per year; 1 GWh = 0.33 Mtce.
[2] Household use of coal: 1.5-2.5 tons per stove/y.
[3] We assume 20.2 kg/tce for SO_2 in household coal use; 25.3 kg/tce in coal-fired power plants. In this figure, we did not take into consideration the TSP emissions from biomass power plants.
[4] Including biomass resource cost and collection, pellet production, transportation, stove production, services, etc. $ 770/y for rural labor; $ 3077/y for power plant worker.
[5] Biomass resource cost: $ 51.2 per ton.

Carbon - Minus Tokyo

In June the Tokyo Metropolitan Government (TMG) announced its new Climate Change Strategy with a "10 Year Project for a Carbon-Minus Tokyo". Tokyo has formulated this strategy in order to initiate leading measures instead of the national government which is not able to take the lead in climate-change action in Japan.

TMG will have active discussions about the climate mitigation measures by holding stakeholder meetings with residents, NGOs and companies. It will promote the measures by means of collaboration and agreement with various people and organizations and by constitution of ordinances.

Two main points of the Climate Change Strategy are to focus on the first 3-4 years as the period of transition, and to create a system through which each sector such as households and companies of all sizes reduces CO_2 emissions commensurate with the role and responsibility of each.

Among the policy measures are:

- Introduce a cap-and-trading scheme targeting large-scale CO_2 emitters.
- Promote energy conservation measures by medium and small companies.
- Request financial institutions to expand environmental investments and loans and to announce the performances of the investments.
- Wipe out the use of incandescent lamps in households.
- Increase the spread of photovoltaic generation and of high-efficiency energy-saving equipment; revitalize the solar thermal market.
- Apply world-leading energy-efficient building design specifications to all city-owned buildings.
- Oblige large-scale buildings to meet certain energy-efficiency performance criteria.
- Create fuel-efficiency rules for cars in order to expand the use of hybrid cars.
- Examine the introduction of Tokyo's own "Energy Efficiency Promotion Tax System."

Information:
Environmental Policy Division,
Bureau of Environment,
Tokyo Metropolitan Government,
E: S0000721@section.metro.tokyo.jp.

Climate Change? Not with *My* Money!

That investment banks fund climate change is well known; but the scale is still surprising:

Investments by Dutch banks cause more than three times the CO_2 emissions that the Netherlands emits annually.

This is one of the conclusions of a report from the Dutch organisation Milieudefensie.

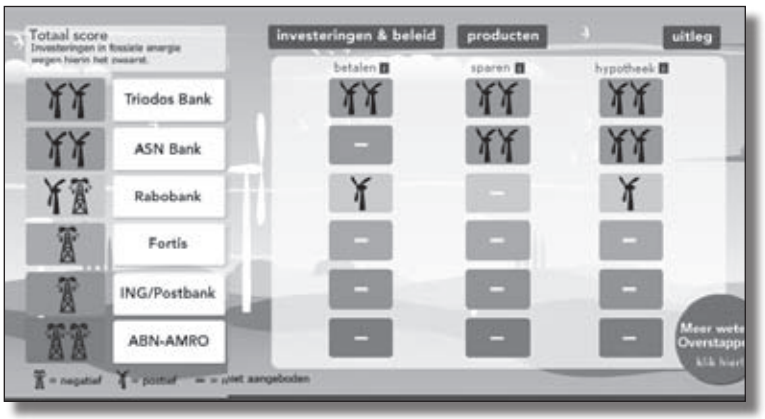
The organisation is running a campaign called,

"Climate Change? Not with My Money!"

to draw attention to this problem.

As one of the results of the campaign, over 11,000 customers of the four largest Dutch banks have asked their bank to take climate action.

Information: http://www.milieudefensie.nl/english/climate,
The campaign's website (in Dutch) http://www.nietmetmijngeld.nl/

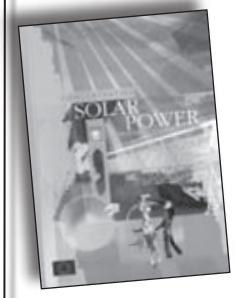


Dutch Banks compared. Dutch customers start moving to climate-conscious banks

Publications

National Allocation Plans in the EU Emissions Trading Scheme
Lessons and Implications for Phase II.

Edited by Michael Grubb, Regina Betz and Karsten Neuhoff
2007, 501 pp., ISSN: 1469-3062
Published by Earthscan, Climate Policy Volume 6, Issue 4, 2006
Info: www.earthscan.co.uk, www.climatepolicy.com



Concentrating Solar Power (CSP) from Research to Implementation

Description of EU-funded CSP Projects of the 5th and 6th EU Research Framework Programs. (FP5 and FP6). Projects backed up by about 10 million Euro in EU funding.
2007, 40 pp., Published by European Communities, Luxembourg
ISBN 978-92-7905355-9
Info: http://publications.europa.eu
Fax: +352 29 29-42758.

A Preliminary Assessment of Energy and Ecosystem Resilience in Ten African Countries. Burkina Faso; Cameroon; Democratic Republic of Congo; Kenya; Mali; Nigeria; South Africa; Senegal; Tanzania; and, Uganda.
2007, 24 pp.
Published by HELIO International
The assessment report is available in English (2.36 MB, pdf) or in French (2.38 MB, pdf).
Full country reports are also available for consultation in English and French.
W: www.helio-international.org/energywatch/2007.cfm

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Events

September 19-22, 2007.
Algarve Green Vehicle Challenge 2007, **Exhibition of Clean Technologies & Sustainable Mobility, Algarve, Portugal**
W: www.algarverenovavel.com
See article on page # 4.

September 27-30, 2007
RENEXPO 2007, Augsburg, Germany
W: www.renexpo.de

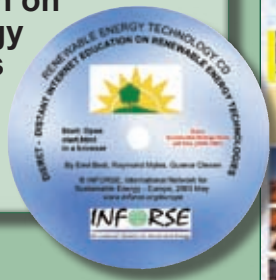
October 1-5, 2007
European Sustainable Energy NGO Seminar, Energy Academy, Samsø Island, Denmark
Organised by INFORSE-Europe
W: www.inforse.org/europe
W: www.energiakademiet.dk
E: ove@inforse.org
See article in issue 56 on page # 5.

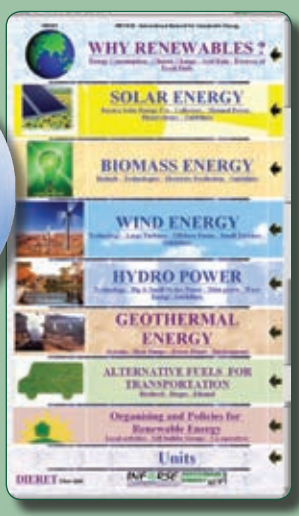
October 10-12, 2007
Pan-European Environment Ministerial Conference "Environment for Europe", Belgrade, Serbia
INFORSE-Europe will participate and exhibit
W: www.unece.org/env/efe/wgso/Belgrade
W: www.eco-forum.org
W: www.efe-belgrade2007.org/
W: www.inforse.org/europe/ecoforum.htm

December 8, 2007
Global Day of Climate Action
W: www.globalclimatecampaign.org

January 28 - February 1, 2008.
EU Sustainable Energy Week EUSEW, Brussels, Belgium
W: www.eusew.eu
See article on page # 6.

DIERET - Distant Internet Education on Renewable Energy Technologies
CD available, 15€
www.inforse.org/europe/educat.htm





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