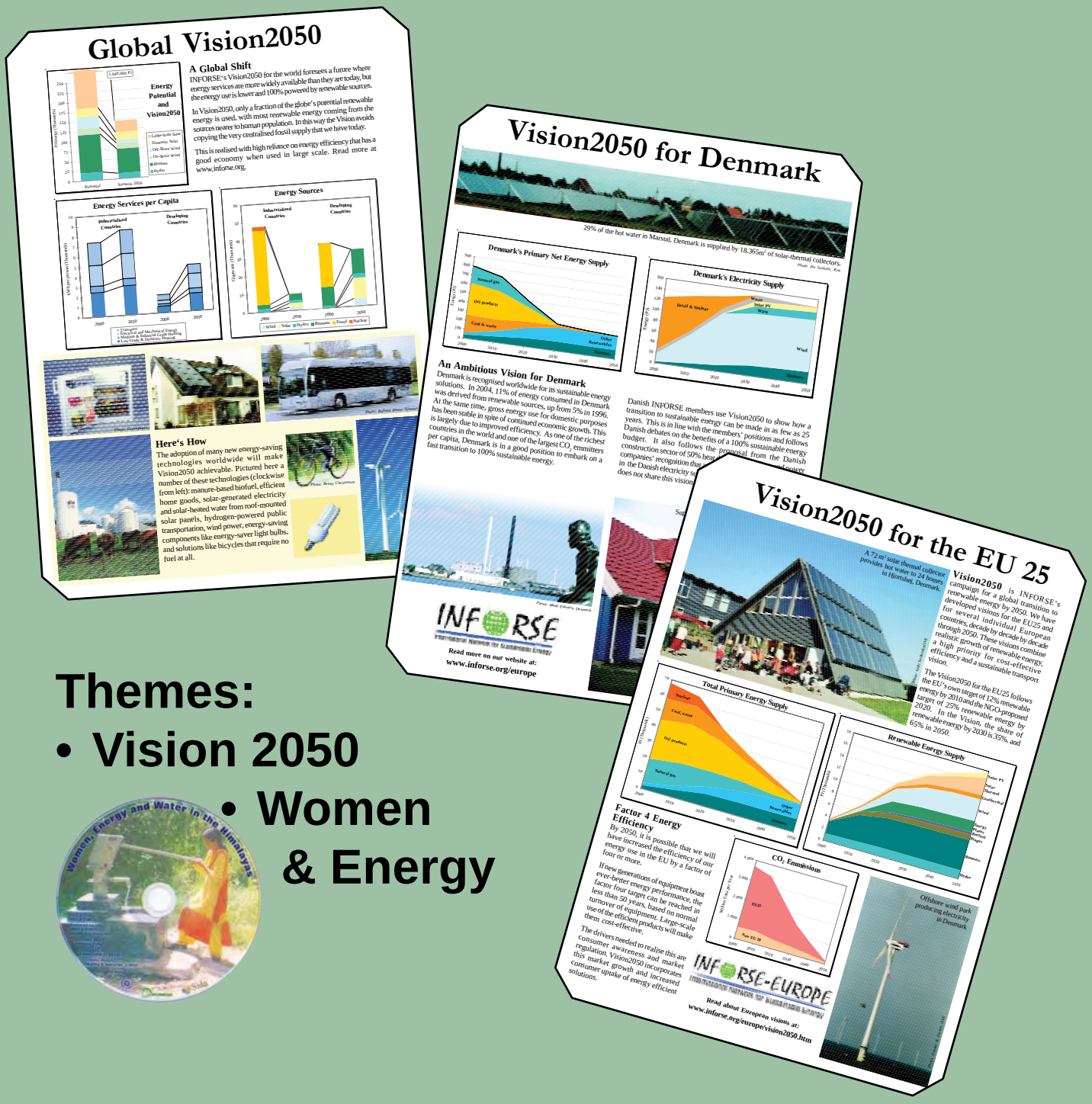
SUSTAINABLE ENERGY NEWS

Newsletter for INFORSE International Network for Sustainable Energy No. 55, December 2006



Themes:

- Vision 2050
- Women & Energy

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:
15 February 2006
Next issue: *March 2006*

The newsletter is published quarterly.

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

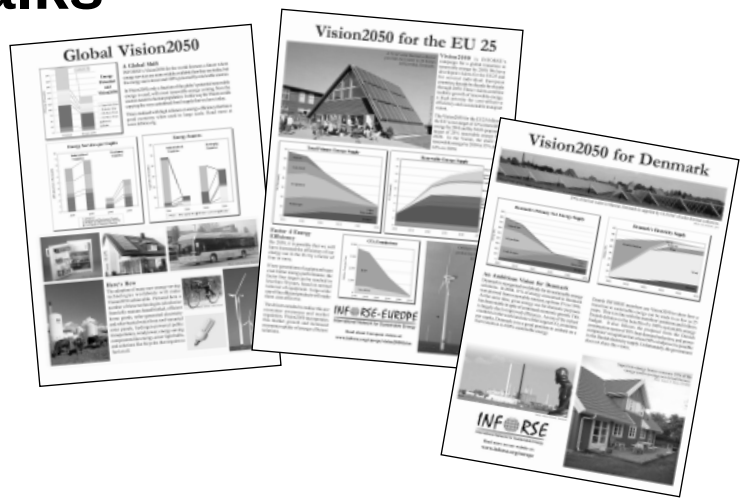
Annual subscription rate:
EUR 25/year.
The newsletter is free of charge for INFORSE members as long as possible.

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 2004-06.
The articles reflect the views of the authors, and of INFORSE, not of the financial supporters.

Photo on the front page:
Posters of INFORSE's Vision 2050. See article on page 4-6.

Global Talks and the Need for Action



The November, 2006 global climate conference in Nairobi, was a small step ahead, as we report in this newsletter. Unfortunately, what is needed to the reduce climate change is not a small step, but large steps. The conference once again showed that the climate negotiations are limited by their nature of global consensus. This does not mean that the global climate negotiations are useless; but we need a lot more than the current climate negotiations to avoid harmful climate change.

We need more regions, countries, companies, cities, and social forces to take the lead in reducing greenhouse-gas emissions. They have to take decisions that go against the few businesses that benefit from greenhouse-gas emissions; but, in so doing, they are benefitting many more, including the consumers that get a more secure energy supply as well as the people who get the increasing number of jobs in energy efficiency and renewable energy.

In addition, other global actors besides those involved in the climate negotiations must take responsibility for sustainable development in energy and climate. In 2007, the UN Commission for Sustainable Development has its policy session on energy and climate. If enough countries show leadership here, it can lead to new, valuable global cooperation for renewable energy and energy efficiency, widening and strengthening the actions of countries and regions, and setting necessary sustainability criteria in energy. CSD can also lead to nothing, or even to environmental degradation, if unsustainable proposals are followed blindly by the countries of the world.

We also need to make just transitions to sustainable energy, such that those who lose jobs in obsolete fossil and nuclear technologies are trained for other jobs, including those in renewable energy and in energy efficiency. As renewable energy and energy efficiency yield many more jobs than fossil-fuel extraction does, many more will benefit from the transition to sustainable energy than will lose.

It is important that the resources and investments be used for transitions to sustainable energy, and that they not be wasted on new nuclear power. The nuclear-power industry can drain societies of vast resources for investments as well as for cleaning up, security, etc., leaving far too little to support an effective transition to sustainable energy.

This newsletter describes INFORSE's Vision 2050 for transitions to sustainable energy. Many others have done similar work. If you take the time to study these visions, strategies and plans, you will have little doubt that they are not only possible, but also beneficial for the environment as well as for economic stability. With this, we hope that we can persuade more people to go from plans to actions for the necessary transitions to sustainable energy on local, national and regional levels, and of course in global negotiations.

Gunnar Boye Olesen and Judit Szoleczky
INFORSE and Sustainable Energy News

Energy Outlook: Vulnerable and Dirty

The IEA World Energy Outlook (WEO) 2006 leaves little doubt that the current energy path of the world is unsustainable. The WEO describes it as "vulnerable and dirty". Insofar as the IEA no longer disputes the worldwide scientific consensus that current energy practices must not continue, this is good news for all of us who are working for more sustainable energy systems. Unfortunately, though, the IEA has chosen to back major expansion of nuclear power in its preferred solution to the problem. In the alternative scenario put forward in the WEO, nuclear capacity expands from the current 368 GW (368,000 MW) to 519 GW by 2030, an increase of 41%.

A major claim of nuclear-power proponents is that it is cheaper than fossil fuels, or at least cheaper than gas-fired power stations, ostensibly producing electricity at a cost of less than 5 USD cent/kWh (3.8 EUR cent/kWh), with everything included. Experience has shown otherwise. The newer, fully realised nuclear power projects have incurred substantially higher real costs.

INFORSE-Europe issued a press release when the WEO was published, pointing out the flaws in the report and calling for inclusion of real sustainable energy scenarios in which money for sustainable development is not co-opted for new nuclear capacity.

Read the WEO online at www.iea.org/textbase/weo/ and the INFORSE-Europe press release at www.inforse.org/europe/ .

1 Million Europeans Against Nuclear Power. Sign the Petition Now www.million-against-nuclear.net

Climate Conference: a Small Step Forward

NGOs were concerned about the slow progress of the negotiations for new commitments to reduce greenhouse gas emissions after 2012. This logo was designed to show these concerns.

When the countries of the world met at the conference of the Climate Convention (UNFCCC) and the Kyoto Protocol in November in Nairobi, they made agreements that should lead to a continued international climate-conscious regimen after the first period of the Kyoto Protocol, 2008-2012. Actual progress at the conference was small, however.

Decisions made at the COP/MOP2 (Kyoto Protocol) and the UNFCCC parts of the conference numbered 10 and 11, respectively, and included the following items.

- There is to be a review of the Kyoto Protocol, to be finished in 2008, that will be the basis for negotiations on new commitments after 2012. The proposed commitments could then be finalised in 2009.
- Details were set for the creation of a fund under the Kyoto Protocol to help support climate-change adaptation in vulnerable, developing countries. Funds will come from a 2% charge on flexible-mechanism projects and will be governed by a board on which developing countries have a majority. It is expected to reach 200 mill. EUR for the period 2008-2012.
- A "Special Climate Change Fund" will be established under the Climate Convention to supplement the Global Environmental Facility. During the conference, countries pledged only 60 mill. USD to the fund, but additional pledges might yet be made.
- Guidelines were set for implementation of a number of decisions taken at the 2005 climate conference, along with further guidelines for CDM. Possibilities were discussed of allowing Carbon Capture and storage (CCS) in CDM. The decision was postponed, luckily, but might come back strongly.

Read more at unfccc.int/meetings/cop_12/items/3754.php and NGO positions at www.climatenetwork.org .

UN CSD

INFORSE and many other NGOs took part in the development of a NGO statement for UN's Commission for Sustainable Development (CSD). They called for a just transition from fossil fuels and nuclear energy towards accessible and affordable energy alternatives including energy efficiency and energy savings to achieve real sustainable development. INFORSE is following CSD as part of the NGO major group, in cooperation with the large network CURES (Citizens United for Renewable Energy and Sustainability).

The CSD process now continues with an "Intergovernmental Preparatory Meeting" (26 February - 2 March 2007), which INFORSE and other NGOs will attend as well. Then comes the CSD15, 30 April - 11 May 2007, at which the countries shall set policies on sustainable development in energy, climate, industrial development, and air pollution.

The gender-and-sustainable-energy network "Energia" is preparing a series of reports for CSD15. See page 10.

Read the NGO statement and follow the development at www.inforse.org and read about CSD at www.un.org/esa/sustdev/csd/policy.htm .

Depleting Uranium Reserves

The continued use of nuclear power raises the serious problem of supplying enough uranium fuel. According to a new study from the German Ludwig Bölkow Systemtechnik GmbH, the resources of uranium are so limited that the world will start to run out of them before 2030. Already, 90% of uranium reserves contain less than 0.06% uranium in the ores. Of the current use of nuclear fuel, more than 1/3 is supplied from limited stockpiles of uranium and nuclear weapons.

Read the summary of the study at at: www.hans-josef-fell.de/download.php?id=726&filename=REO- Uranium_summary.pdf

Global Sustainable Energy Vision 2050

The Global Vision

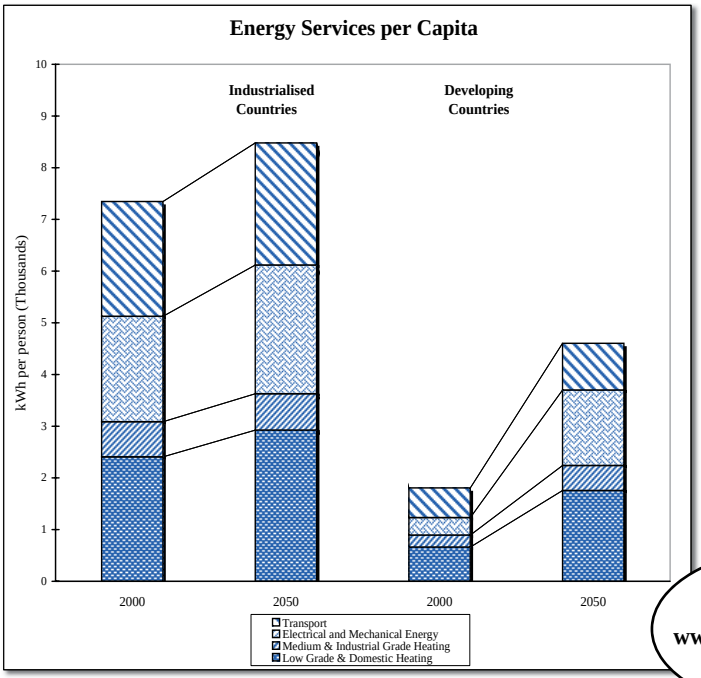
It is crucial that the world's energy systems be made environmentally benign and sufficient to meet everybody's energy needs within a few decades. This is the best answer to the need to reduce man-made climate change to acceptable levels and to solve the energy-supply crisis. We have better technologies than ever to realise such a vision by more energy efficiency and by sustainable use of renewable energy.

From independent researchers proposals exist for fast CO_2 reductions, based on use of existing technologies for energy efficiency and renewable energy. Based on such studies and proposals from the INFORSE network, INFORSE proposes a path to supply the world with 100% renewable energy by 2050, and accordingly, to 100% reduction of energy-related CO_2 emissions.

The massive introduction of new, efficient technologies will lead to huge reductions of costs for those new technologies as they become mass products. The investments necessary for the introduction of sustainable technologies will be paid back with the availability of a cheaper technologies in the future. Initially, there is an urgent need for large-scale shifts in energy investments towards production of renewable-energy and energy-efficiency equipment, including local production of simple renewable-energy equipment in developing countries.

A global shift towards a sustainable energy system is possible within a period of about 50 years. The changes will have a number of beneficial effects: e.g., they will yield a more stable energy supply and they are compatible with global equity. In addition, marginal costs to society will be small, and may even be negative, if the changes are well planned and phased in as part of the natural change of plants and equipment. These changes will require initial investments as well as long-term strategies. They will also require a major shift in energy supply systems along with optimisation of energy-consuming equipment. All of this requires political will.

INFORSE's vision 2050 is based on a global renewable-energy scenario that would satisfy the energy demands of more than 9 billion people with efficiently used renewable energy. For a number of European countries as well as for the EU, INFORSE and its members have developed visions with detailed descriptions of possible future energy balances decade by decade until 2050.

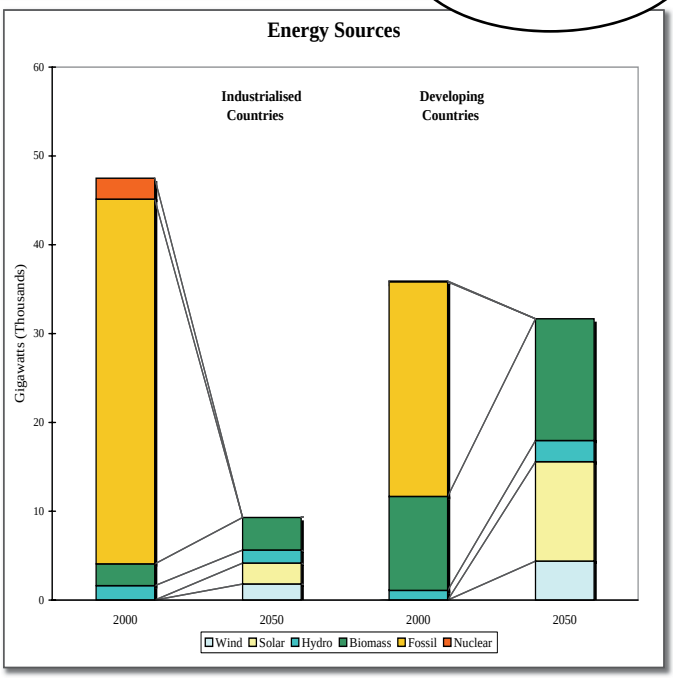


By Gunnar Boye Olesen, INFORSE/ OVE, Denmark

Readmore about the Vision at www.inforse.org/europe/Vision2050.htm

Graph (top): "Energy services", the benefits of energy use, will grow in both North and South according to the sustainable energy vision; but mostly in the South, where these services are expected to increase 2.5 times per capita as the number of people grows.

Graph (to the right): With the proposed strong increase in energy efficiency, primary energy consumption will decrease substantially, particularly in the North.



Phase out Nuclear Power

Nuclear power is marketed as clean, but it is not a sustainable form of energy. Pollution and contamination from uranium mining, along with safety problems, inherent problems of final waste transport and storage, and increased terrorism risks are just some of the problems that make nuclear power unsustainable. Further, the production of nuclear power does generate greenhouse-gas emissions. Properly managed mining and processing of fuel results in CO_2 emissions comparable to those of the best gas-fired power stations.

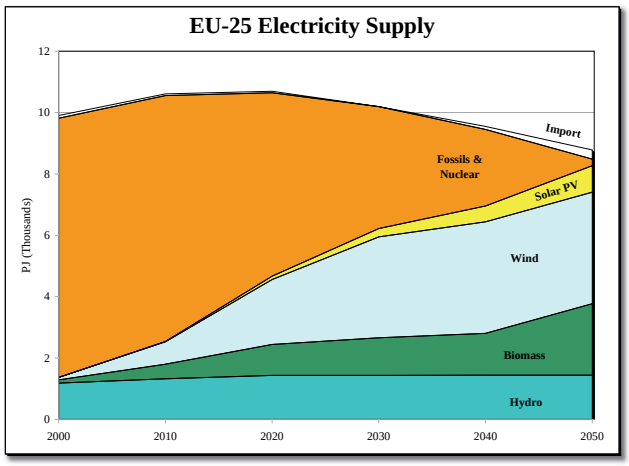
Nuclear fusion (hydrogen to helium) likewise is not sustainable It will not produce any practical amounts of energy before 2050, making it too late for the transition. The technology also has problems with radioactivity and waste.

The sustainable energy vision includes that nuclear power be phased out as soon as practical possible; that no new nuclear power plants be built; and that the existing ones have no lifetime extensions.

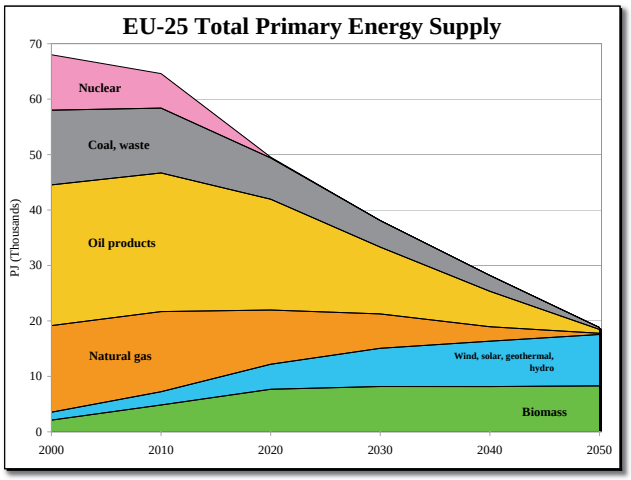
No Need for All Sources

The research that goes into INFORSE visions, along with a number of other strategies and studies, clearly shows that with sufficient use of energy efficiency, there will be no need to maintain unsustainable energy resources such as nuclear, coal or other fossil fuels. Similarly, there will be no need to develop polluting, unconventional fossil-fuel resources such as tar sands.

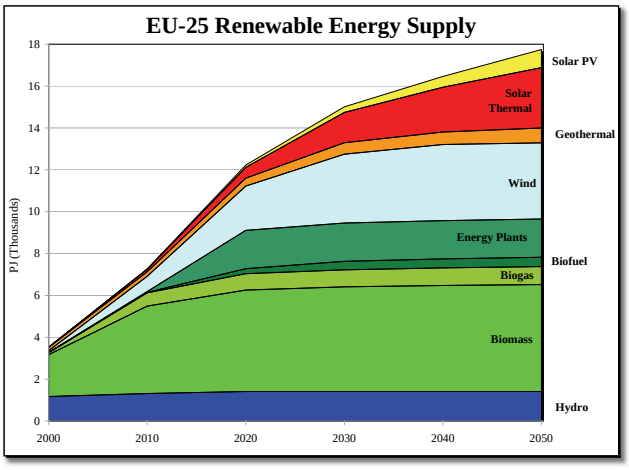
A Vision for EU - INFORSE's vision for the EU includes a transition of energy supply and demand for the 25 EU countries with phase-out of fossil and nuclear energy over a 50-year period. In line with the global vision, the European Vision is based on rapid growth of energy efficiency to reach an average level in 2050 similar to best available technologies today. Most energy-consuming equipment will be changed several times between now and 2050. If new generations of equipment are constructed for optimal energy performance, and if markets are compelled to promote the most efficient technology, it will not be a problem to reach the efficiency level of today's best available technology. Currently, that would yield efficiency gains of roughly 4 times, similar to an annual increase of efficiency of 3.3% per year in average from 2010. The "natural" technological development has managed efficiency increases of only about 1% per year. Realising this potentially very productive aspect of the vision will require more attention, political will, and concerted action from the stakeholders involved.



Graph: Development of EU-25 electricity production and sources, following Vision2050



Graph: EU-25 change of Energy Supply, following Vision2050



Graph: EU-25 Renewable Energy Growth, Following Vision2050

The Challenge of Reducing Heat Consumption

Most of the houses to be heated in 2050 are probably already built, and thus the increase in energy efficiency cannot be expected to be as fast as for equipment. For the 15 "old" EU countries, the target heat consumption is 60 kWh/m^2 in average. This will require about a 57% reduction compared with year 2000. This significant reduction is possible if energy-efficiency measures are included in adaptations and renovations, and if most new houses after 2015 are built as passive houses . The increase in efficiency is estimated to be 2%/year from 2010, but only 5% in total for 2000-2010. For the new EU countries, an increase in efficiency of 57% is also expected for space heating, though with a higher level of specific heat demand.

Efficient Transport

For transport, it is assumed that the conversion efficiency from fuel to transport-work is increased 2.5 times from the current 15- 20% in combustion-engine systems to 50% in fuel cell systems. Directly electrically driven vehicles have even higher efficiency. It is assumed as well that the vehicles will be equipped with recoverage of break-energy, reducing "end-use" of energy in transport to just the unavoidable friction losses in transport, except for aviation. Given these assumptions, total efficiency becomes about 4 times today's average. For rail and navigation, the vision assumes "only" efficiency gains of 40% and 25%, respectively.

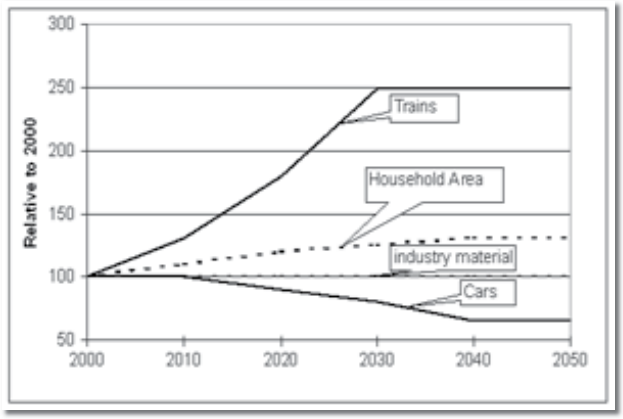
Decoupling Growth

The growth of energy services, i.e., of heated floor space, of transported goods and people, and of energy-consuming production, is expected to plateau during the 50-year period of the vision. This assumes that the average Western European has reached a sufficient level of material consumption to satisfy needs, and that material growth should ease out to leave environmental space for the poorer parts of the world. If such a change in consumer behaviour is to be realised, it will require that the growth of energy services be decoupled from economic growth. Economists typically use a normal economic growth rate of 2.5% for Western Europe. Given that assumption, the challenge for realisation of this vision is almost to triple the economic value expressed as GDP compared with energy services. It is important that economic growth be used to increase energy efficiency, to reduce structural transport, to increase local production, and to increase quality of products rather than quantity. For the transport sector, a modal shift from road to rail transport results in less road transport after 2030 than today in the "old" EU-15.

Renewable Energy

The vision supports the EU target of 12% renewable energy in 2010 as well as the target proposed by a large number of NGOs of 25% renewable energy in 2020. The vision projects shares of renewable energy in 2030 and 2050, respectively, of 40% and of more than 95%. The renewable energy proposal is divided into proposals that address individual renewable energy sources:

- *Windpower.* Strong development is projected, such that by 2020 the EU has 220,000 MW of windpower, compared with 40,000 MW at the beginning of 2006, and 340,000 MW projected for 2030.



Graph: Development of selected activities 2000 - 2050 for EU-15, Vision2050 Higher growth is expected of the 10 "new" EU countries than of the EU-15, mainly in the service sector and in road transport.

(Continued from page 5)

- *Solar energy:* Use is expected to grow to 1,6 m^2/person by 2020 and to 8 m2/person by 2050, with solar heating being the most important for the first decades and solar electricity, including PV, gradually taking over. This will require a strengthening of current development.
- *Solid biomass:* Use by the EU-15, apart from energy crops, is expected to grow to about 3,700 PJ by 2010. This represents 90% of the sustainable potential, a doubling from 2000. Current trends are well below that target; but are increasing. After 2010 it is expected than biomass use will grow to its sustainability limit, about 5,100 PJ for the entire EU.
- *Biogas:* The full potential, 850 PJ, should be reached by 2020.
- *Energy crops:* Energy forest is projected to expand to cover 7% of present agricultural land by 2020.
- *Other renewables*, such as small hydro-power, geothermal energy, and liquid biofuels also play increasing roles in the energy mix.

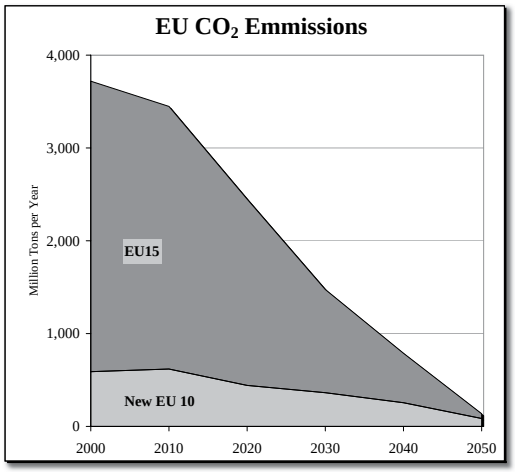
How Fast Can We Change?

Introduction of renewable energy can be very fast, as examples from a number of European countries show. In Denmark windpower covered less than 4% of electricity supply in 1996; but this rapidly changed in the next four years to cover more than 12% by 2000. In Germany, a country 16 times as large as Denmark, windpower increased its share of electricity supply from 1% in 1999 to about 4.5% in 2005. There are a number of other examples of fast increases in renewable-energy use, such as Swedish biomass electricity production, which grew from 1.5% to almost 4% of electricity production between 1995 and 2003; and the growth of geothermal electricity production in Iceland from 6% to 17% of electricity production during the period from 1990 to 1995. With successes like these replicated in other countries and in other sectors, the renewables part of the vision can be realised.

Increases in energy efficiency can be fast as well, although they tend to be less visible than renewable-energy successes. During the 1990's, white goods in Danish households increased efficiency by 3%/year. Improvements like this will realise the vision's "factor four" increase in energy efficiency by 2050.

In short, there is good empirical evidence that the increases in energy efficiency and renewable energy needed for the visions are possible, having been achieved already in some sectors of some countries.

More information on the visions can be found at http://www.inforse.org/europe/Vision2050.htm, where visitors can also download or order the series of posters about them.



Graph: EU-25 phase out of CO_2 emissions
The reduction of CO_2 from energy use is expected to follow the 8% reduction target for 2010, followed by a 35% reduction by 2020, 50% reduction by 2030, and more than 95% by 2050.

Nuclear and Fossil Energy

Nuclear energy is expected to be phased out as the current nuclear reactors are stopped because of age, safety problems, etc. This is expected to be complete by 2020. For fossil fuels, expectations are a gradual phase-out of coal use, a slow but increasing phase-out of oil use until 2050, and growing gas consumption until 2010, followed by phase-out until 2050.

Nuclear or Sustainable Energy – Outlooks for Lithuania

While the Lithuanian power company promotes new nuclear power, INFORSE-Europe is developing a vision for a fossil- and nuclear free Lithuania. Lithuania relies on gas imports, and the closure of the Ignalina nuclear power plant will increase this dependency. Lithuania has increased its energy independence somewhat, however, with a transition to biomass heating, in particular in district heating. The new vision proposes that this development continue, with biomass-based combined heat and power plants (CHP) for larger towns in Lithuania. To provide enough biomass, it is proposed that 7% of agricultural land be dedicated to energy plantations. The vision also includes leveling off of the current very strong increase in road transport and concurrent strong growth in rail transport. Even with this reduced growth, however, in 2030, road- and freight car transport will be 3.1 times and twice, respectively, of the year-2000 levels. Other trends in the vision for Lithuania follow the vision for the EU, including strong development of windpower 2010 - 2020.

The Lithuanian vision results in a gradual reduction of fossil-fuel imports starting in 2010. Thus, 2020 imports are reduced to 60% of the 2000 level, while the CO_2 emissions are gradually reduced to zero by 2050.

Fast Transition Proposed for Denmark

Danish INFORSE members favour a fast transition to sustainable energy, resulting in an almost full transition to renewable energy within 25 years, i.e., by 2030. Thus, INFORSE-Europe has developed a vision for a transition to sustainable energy by 2030. The energy-efficiency scenario includes the vision made by the Danish construction sector of a 20-year 50% reduction in building-energy use. The component addressing renewable energy combines strong development of windpower with the trends from INFORSE-Europe's vision for EU, and with a small share of electricity covered by wave-power in 2030. The vision also includes a transition to sustainable transport and development of a flexible energy system with storage capabilities for heat and electricity from 2020 onward.

EU/Europe News

Continued Support for Sustainable Energy

In October the European energy ministers approved a continuation of the Intelligent Energy for Europe (IEE) programme in support of sustainable energy for the period 2007-2013. It includes the old SAVE and ALTENER programmes for non-technical support for energy efficiency and renewable energy, and is itself part of the new large "Competitiveness and Innovation Framework Programme" (CIP). The annual budget for the new IEE programme averages 91 mill. € for each of the seven years during which it will run. This is substantially more than the 50 mill €/year that the previous IEE program had for 2003-2006.

The 7th framework programme for research and development was finally approved by the EU Parliament on November 30 and by the EU countries on December 5. It includes substantial funding for research in renewable energy and energy efficiency. An analysis of the new funding is available at www.inforse.org.

European Sustainable Energy Seminar

March 20, 2007

Again in 2007, INFORSE-Europe is organising a sustainable-energy seminar in Brussels, in cooperation with European Renewable Energy Federation (EREF) and with EUFORES. This time, the new EU energy policy will be high on the agenda; that will also include new renewable-energy and energy-efficiency developments. Read more: www.inforse.org/europe.

INFORSE-Europe team at the RENEXPO in September 28-October 1, 2006, Augsburg, Germany. From left to right: Ursel Beckmann, (chair), Judit Szoleczky (secretariat, editor), Cristina Hidalgo Romero, (trainee).

New EU Energy Policy

The first months of 2007 will be busy days for European Energy policies. Already, the EU Commission plans to launch its Strategic EU Energy Review on January 10th, to be followed by a public consultation. Parallel to this, it will publish a Renewable Energy Roadmap. On February 15th the energy ministers will discuss future EU energy policies, and on March 8-9 the EU heads will meet to decide the main lines of future EU energy policy.

In the meantime, the EU Commission is busy discussing its proposal for the new EU energy policy. In a letter leaked to the UK newspaper "The Independent" that was written by the EU's industry commissioner, Mr. Verheugen, to the president of the EU Commission, Verheugen proposed that the EU sets its own climate target for 2020, even if other countries will not join. He proposed a meagre 10-15% reduction below 1990 levels by 2020; but he also proposed that EU countries should make deeper cuts, if others countries will join. Unfortunately, Verheugen wants to promote the development of "low carbon options" rather than of renewable energy, which reflects his support for nuclear power.

EU Energy-Efficiency Strategy

On October 19, 2006 the EU Commission launched an action plan for energy efficiency entitled, "Realising the potential". It is meant to be a cornerstone in EU's policy for energy efficiency. It calls for a 20% increase in energy efficiency by 2020 and will lead to a number of new directives and activities.

INFORSE-Europe and a number of other NGOs commented that larger increases in energy efficiency than the proposed 20% are feasible. INFORSE-Europe called for stronger actions on standards and labelling, energy taxations, and consumer information, financed with a levy on energy use.

The most important points in the new action plan are:

- Updated and dynamic labelling, along with minimum energy performance standards, for appliances and other energy-using equipment. The Commission will work with 14 priority groups of products to have them approved by the end of 2008. It will also revise the "SAVE" directive on standards and labelling. The existing labels system will be upgraded.
- Building performance requirements and very-low-energy buildings ("passive houses"). The Commission will propose to amend the Energy Performance of Buildings Directive substantially in 2009, propose minimum performance requirements for new and renovated buildings, and promote passive-house design so that this type of house will be used widely in new constructions by 2015.
- Standards to make power generation, heating, and cooling more efficient in installations below 20 MW, along with guidelines for operation and regulation of the sectors.
- Legislation to be proposed by the Commission in 2007 to ensure that the 120g CO_2/km target for cars is achieved by 2012, unless the current voluntary agreement on fuel efficiency can realise the target without legislation.
- Facilitation of appropriate financing for energy-efficiency investments by small and medium-size enterprises and by energy service companies.
- Action by the Commission encouraging European Regional Policy to deploy its programmes (including structural funds) to promote more strongly investment in improved energy efficiency, including efforts in the multi-family and social housing sectors.
- A Green Paper to be issued by the Commission on indirect taxation in 2007, along with a review of the Energy Tax Directive in 2008 for a more targeted and coherent use of energy taxation, integrating energy efficiency and environmental aspects.
- Raising energy-efficiency awareness via, e.g., education in schools and training of professionals.
- Actions to foster energy efficiency worldwide. The Commission will take the initiative in 2007 to reach an international agreement focussing on improving energy efficiency in end-use sectors and in energy transformation.

The EU energy ministers welcomed the proposals at their meeting on November 23rd but, unfortunately, they did not support binding national targets for increases in energy efficiency. They also did not support the proposal to widen the scope of the directive on energy efficiency in buildings, at least not for the time being.

Lithuanian Sustainable Energy or Ignalina3 ?

In October the Lithuanian state-owned power company "Lieteuvos Energija" claimed that a new nuclear power reactor at the site of the Ignalina nuclear power plant would be a cost-effective solution. This is one step in the direction of a new nuclear power plant that the Lithuanian power company will build in cooperation with the power companies of Estonia and Latvia. Earlier this year, the governments of the three Baltic countries supported the idea. The company claims that the new nuclear power plant will be the least-cost option, but this is highly disputable. A number of NGOs, including Friends of the Earth Europe and INFORSE-Europe, are criticising the claim. It is based on calculations that are not publicly available, that seem very optimistic for nuclear power, that clearly do not include system-wide analysis, and that exclude comparisons to a number of possible alternatives such as decentralised, biomass-fuelled CHP plants in Lithuanian cities. Biomass CHP seems to be the most environmental and economic alternative.

INFORSE-Europe is working on a sustainable energy vision for Lithuania. It combines windpower, biomass-based power and heating, energy efficiency, and other renewables,; but no new nuclear power. (See page #6) The vision will be presented in Vilnius on December 19, 2006.

Mediterranean and South East European Cooperation

The Mediterranean countries have met and discussed cooperation on energy with EU high-level representatives. This took place on September 21 in Brussels at the Euro-Mediterrenean Energy Forum, a continuation of the ongoing Euro-Mediterranean energy cooperation.

The first ministerial meeting in the European Energy Community Treaty took place on October 17 in Skopje, Macedonia. The treaty entered into force on July 1, 2006 and covers South East Europe and EU. At the meeting, it was formalised that Turkey is an observer (together with Norway, Moldova and Ukraine), but not a member.

SPARE National Competition

The deadline for the national SPARE competitions is February 1, 2007. SPARE is an NGO school project running in 14 countries in Eastern Europe, Central Asia and Caucasus.

More information on SPARE at: www.spareworld.org

Black Sea and Caspian Sea Countries' Cooperation

On November 30, 2006, in Astana, Kazakhstan, the energy ministers of countries around the Black and Caspian Seas, along with ministers of other Central Asian countries and Belarus, met with high-level representatives of the EU.

The countries agreed on a roadmap that features four main elements: converging regulation of national energy markets based on EU energy-market principles, cooperating on energy supply, supporting sustainable energy development including energy efficiency and renewable energy, and attracting investments to energy projects of common interest.

In the roadmap are plans for campaigns, agencies and investments in energy efficiency and renewable energy, in addition to plans for new oil and gas infrastructures.

The INOGATE secretariat in Kiev will play a key role in the implementation, together with four inter-governmental working groups. In addition, each country will develop energy action plans, including plans for energy efficiency and renewable energy. The ministers will meet again in 2008.

More information: www.inforse.org/europe/eupolicy.htm

Sustainable Development Solidarity in EU

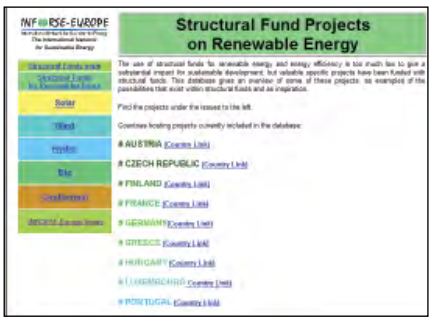
By Emil Bedi, INFORSE-Europe

On November 23-24, 2006, INFORSE-Europe took part in the International Symposium "Building the Governance of Sustainable Development - European Solidarities for the New Member States" in Annemasse, France, near Geneva. The meeting brought together 150 delegates from Europe. Among these were local stakeholders (assembly members, NGOs) and representatives from local networks, together with government and EU officials, experts, and industry and business representatives from 10 EU countries as well as from Bulgaria, Romania and Switzerland.

Energy issues were chosen as one of four topics important in building a sustainable society. Despite the fact that there was no specific outcome of this discussion, it was clear that the EU faces a huge challenge in the energy sector. Lack of power capacity in the near future, rising energy prices, insecurity of supply, slow development of renewables, and low penetration of energy-efficiency measures in many countries are issues which need to be addressed now. It has been stressed that public-private partnerships (including strong NGO involvement) have a critical role to play in the process of sustainable development. The best practice in this area must be identified, advertised and held as an example to be replicated across Europe. It was also recommended that a dedicated cooperation fund be set up for those NGOs operating in new member states, following the British and German examples. This is an idea for which the association Vraiment Durable, organiser of the seminar, will advocate with French and EU authorities.

Read more at: www.vraiment-durable.org/vraiment-durable-en.php .

Structural Funds Overview



INFORSE-Europe made an overview of the EU structural funds' projects on renewable energy. As most material are available on national languages, this English overview is very useful for those interested. New updates are available in Slovakia, Czech Republic, Spain, Hungary, and Wales. Inputs are welcome for projects from other countries.

See the projects at www.inforse.org/europe/Structuralfunds/

What is Striking is....

that a few simple technologies and methods can have substantial impact ....
In this issue's theme on "Women and Energy" we review two recent publication series, which we believe are important milestone of the area.

Compiled by Cristina Hidalgo Romero (left) (trainee at INFORSE-Europe), and Judit Szoleczky, editor.

Women, Energy and Water in the Himalayas - DVD and 3 Books

Across the Himalayan region, rural women face a daily struggle to collect enough firewood and water to meet the basic needs of their families. Women – and their children – walk for hours to collect wood from diminishing forests, and haul water from drying springs. There are many simple technologies available that would help women collect and use fuel and water more efficiently. For real impact, women and their needs must play a major role in policy and decision-making. Women must be empowered to choose and adapt the technologies they need, and women must benefit through savings in effort and time, through better health, and through opportunities to earn income – and thus improve their status in society.

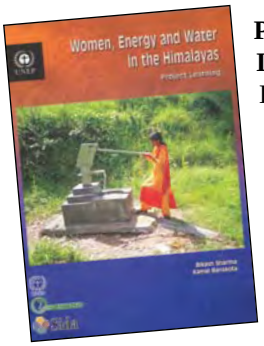
What is striking is that a few simple technologies and methods can have substantial impact on the lives of women even within the short time frame of the project. A woman-centric approach can make a difference in reducing poverty by integrating women into the decision-making and into the management of their household's energy and water initiatives.

The film tells the story of a two-year project designed to enable women to do just this in Nepal, India and Bhutan. The three reports summarise the outcome of the project. The project focused on building women's capacity to organise themselves, to identify and prioritise needs, to introduce technologies that save time and effort, to improve health and education of children, and to use the time saved for income-generating activities.

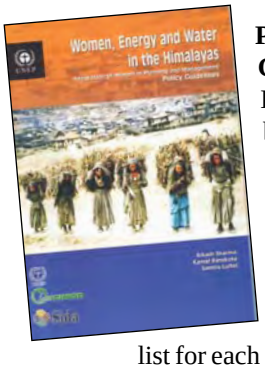
The Project "*Capacity Building of Women for Energy and Water Management in the Rural Areas of the Himalayas"* was carried out in 2002-2004 through the International Centre for Integrated Mountain Development (ICIMOD) and its national partners: the Royal Society for Protection of Nature (RSPN) in Bhutan, the Energy and Resources Institute (TERI) in India, and the Centre for Rural Technology (CRT/N) (member of INFORSE) in Nepal.

The project was supported by the United Nations Environment Programme (UNEP) and Swedish International Development Co-operation Agency (SIDA).

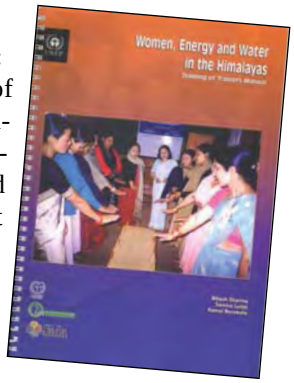
Published by ICIMOD, and UNEP, 2005. Edited by Bikash Sharma, Kamal Banskota and Samira Luitel
More information: ICIMOD in Nepal:
T: +977 1 5525313, F: +977 1 5524509
W: www.icimod.org
E: distri@icimod.org .



Project Learning: Description of the process involved in the implementation of the project, along with the response and the impact on the communities selected. It highlights the training provided to the women's groups formed, including training in energy-related technologies such as improved cooking stoves, solar lanterns or solar driers. It also describes their involvement in creating and managing a zero-interest loan system of revolving funds. It gives examples of proven methods to soften patriarchal attitudes and initial resistance from men, e.g., by demonstrating the benefits with door-to-door visits, and community meetings, showing the income-generating possibility, and convincing the men who are the leaders of the community. The effective ways to diffuse the necessary knowledge are to train women as trainers and to show successes to the community. (*113 pages)*



Policy Guidelines: Describes the background, framework and steps towards the introduction of gender-sensitive policies. Includes a useful list for each country on policy gaps and issues such as lack of critical mass of women in policy/decision making and lack of serious attention to integrating women's active participation on different levels. Details lessons that emerged from the project experiences, e.g., that more resources are needed to increase the skills and confidence of women, and that full participation of local people is needed; also covers suggested policy and procedures; for instance, documentation of project development and of good practices is essential for future planning and policy formulation; and video documentation is a very good visual aid. (*64 pages)*



Training of Trainers Manual: A compendium of the training activities and materials that were used during the project implementation, including useful worksheets and handouts with mapping resources, analysing matrices, indicators, planning flowcharts, and evaluation form. Learning tools for carrying out planning, gender analysis, mobilising communities, and identifying prioritised needs and solutions, as well as for designing and using gender-sensitive participatory action-planning. (*107 pages)*

DVD Film

The film provides a clear view of how women benefit from working in groups, bringing new hope to women in mountain communities. The film includes interviews with some of the participants. (*Duration: 18 min.)*

Regional Reports on Women and Energy - ENERGIA's Input to UN CSD-15

As one of the organizing partners of the Women's Major Group, and responsible for facilitating the input of Women into UN CSD-14 & 15 (see page 3), International Network on Gender and Sustainable Energy (ENERGIA) (member of INFORSE) has published national reports accompanied by regional reports which compile a broader geographical view on the situation of women and energy.

For CSD-15, ENERGIA has prepared a regional document for Africa entitled *"Gender and Energy in Africa: Regional Initiatives and Challenges in promoting Gender and Energy"*, which focuses on the interrelationships between energy and gender, with specific reference to the African context. This paper reviews policies and actions, then makes recommendations for ensuring that gender concerns play a greater role in energy and environmental decision-making. Its aim is to enhance discussions on sustainable energy at CSD-15 and to ensure that policy documents developed at CSD-15 include concrete commitments as well as actions to incorporate gender and energy considerations into decision-making in Africa. (Edited by ABANTU for Development, Ghana, 15 pages, August, 2006).

On the same topic, in October, 2006, ENERGIA also published new national reports for the following countries:

Lesotho: *Mainstreaming Gender and Energy in Lesotho* (11 pages). The paper is based on a consultative process in connection with CSD preparations among members of the Gender and Energy Network of Lesotho (GENOL), a national affiliate of ENERGIA, which includes representatives from the government's Departments of Energy and Gender, National Environment Secretariat, and Ministry of Finance and Development Planning, as well as NGOs, academics and energy experts.

Nigeria: *Engendering Nigerian Energy Policy* (9 pages). Written by Friends of the Environment, the report is based on an examination of Nigeria's sustainable development reports to the UN and its National Energy Policy of 2006, with inputs from government officials, energy experts, development planners, women's groups and NGOs.

Senegal: *Gender and Energy in Senegal*: the paths to sustainable development. (10 pages) Prepared in September 2006 by ENDA Tiers Monde, Energy, Environment and Development Programme.

South Africa: *Gender and Energy in South Africa* (8 pages). The paper, prepared by the Centre for Innovation and Development (NovAfrica), is the product of a gender- and energy-stakeholder consultation process in South Africa hosted by NovAfrica. Participants included representatives from government, energy organizations, research institutes, human rights groups, and the New Partnership for Africa's Development (NEPAD).

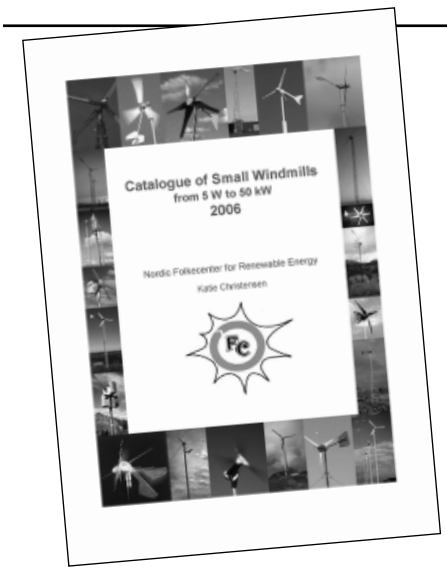
Vietnam: *Gender and Energy in Vietnam* (8 pages). The report was written by the Vietnam Women's Union, and reviews achievements and challenges related to mainstreaming of gender into energy policies and discussions in Vietnam. It incorporates the views and ideas of many different stakeholders, including government bodies, non-government organizations, civil society groups and energy agencies.

Previously, for CSD-14 (1-12 May, 2006), ENERGIA finished eight of the national papers: Ghana, India, Lao PDR, Nepal, Pakistan, Sri Lanka, Swaziland, Zimbabwe, as well as regional reports for Asia, Pacific and Latin America.

All of these reports include Case Studies and Conclusions, and have something in common: gender inequalities result from culturally established differences in the roles and status of men and women in these countries.

Thus, as the main actors in the energy economies of rural areas, women, and their energy needs, will have to be addressed specifically if energy and chronic poverty are to be reduced. By incorporating a gender perspective into energy policies and programmes, planners can ensure that women's concerns and experiences, as well as men's, will be addressed adequately.

All the papers can be downloaded in PDF format from ENERGIA's website: www.energia.org/csd14_pubs.html .



Catalogue of Small Windmills from 5 W to 50 kW, 2006

This catalogue contains descriptions and data sheets for 216 windmills produced by 88 producers in 27 countries all over the world, giving details such as technical parameters, price and contacts. It represents the first attempt to gather knowledge about small windmills from all over the world.

Published by Nordic Folkecenter for Renewable Energy (INFORSE member).
Compiled by Katie Christensen in 2006. 105 pages
Price: 36 EUR + sending if you want a paper edition.
27 EUR for a PDF edition.

For further information: Jane Kruse, T: +45 9795 6600
http://www.folkecenter.net, E-mail: info@folkecenter.dk.

Ashden Award Given to Three INFORSE Member Organisations in 2006

TO: Grameen Shakti for promoting and microfinancing solar home systems for rural households in Bangladesh

65,000 Systems have been sold and installed. The aim is to install 100,000 systems by 2006, and there is enough potential to support the installation of one million systems by 2015. Grameen Shakti (GS) emphasises the importance of technicians who know local customs working through local branches, and has trained 2,000 (mainly female) technicians. GS started a network of technology centres throughout the country to manage the installation and maintenance of SHS locally.

Nearly 70% of households in Bangladesh are not connected to the electricity grid and depend on kerosene for lighting. This includes most rural areas and extends as far as the fringes of Dhaka. There are plans to extend the grid, but there is little prospect of substantial change in the near foreseeable future. By selling SHS, Grameen Shakti has provided lighting, communications (especially mobile-phone charging) and TV, and has increased employment opportunities.

TO: A Groupe Energies Renouvelables, Environnement et Solidarités (GERES) for commercialisation of efficient charcoal stoves in Cambodia.

GERES set up a fuel-wood-saving project that has developed a cheap charcoal stove, the 'New Lao' stove. This uses at least 22% less charcoal than the 'Traditional Lao' stoves that are commonly used in Cambodia. More than 130,000 New Lao stoves have been produced and sold over the past three years. 14 producers work to strict quality standards and are currently producing about 7,000 stoves per month. Although a New Lao stove costs about three times as much as a traditional stove, users are willing to pay for one because they recoup the difference in price within two months through savings on the purchase of charcoal. A network of distributors and retailers has been established and a trade organisation set up that oversees pricing and quality.

Nobel Price for Grameen Bank

The 2006 Nobel Peace Price goes to the Grameen Bank in Bangladesh and its founder Mohammad Yunus.

Grameen Shakti is part of the Grameen Bank Group.

Congratulations !

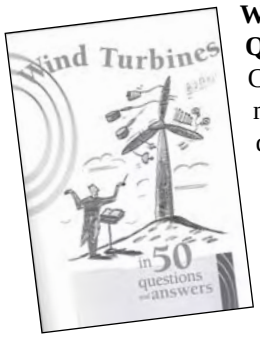
TO: Severn Wye Energy Agency (SWEA) for a project, "Warm and Well", which has enabled people who are most at risk from cold and damp to get improved energy efficiency and heating in their private houses in Gloucestershire, UK.

Within the first five years of operation it brought improvements to nearly 9,000 properties, (3.6% of homes in Gloucestershire). It has advised more than 16,000 householders. This has included insulating cavity walls in more than 4,000 properties and in 5,700 lofts, as well as supplying 10,000 energy saving light bulbs. The scheme also offers energy efficiency advice via telephone, written reports, information leaflets and home visits.

More information:
- Article on SWEA in the previous issue of Sustainable Energy News No 54.
- Article on Grameen Shakti in issue No. 48, and INFORSE project at www.inforse.org/asia
SWEA: www.swea.co.uk
GERES: geres.free.fr, www.cfsp.org.kh
Grameen: www.gshakti.org,
Ashden: www.ashdenawards.org

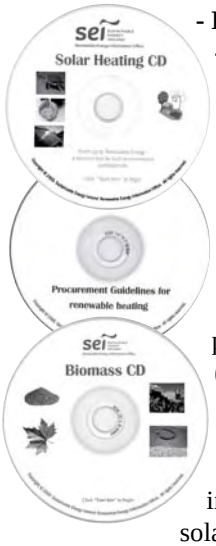
SEI Publications

The publications are the result of a number of years' information and training events, publications and CDs produced by Sustainable Energy Ireland (SEI) Renewable Energy Information Office (REIO):



Wind Turbines in 50 Questions & Answers
Compilation of the 50 most frequently asked questions addressed to REIO.
Edited by Civel, O'Donnel & Kellett
ISBN: 2-913620205,
28 pages, 2003

CDs:



- Biomass
- Solar Heating
- Wind Energy
- Procurement Guidelines for Renewable Heating
DVD:
- Home Energy
3 sections:
Home: focusing on passive solar housing (6 min.);
Wood and the pellet industry (6 min.)
Solar technology in Ireland. Austrian solar development as an educational example. (7 min).

PDF
Publications on Renewable Energy
Series of Publications: "Your Home", "Your Building", "Buyers Guide", and Fact Sheets, etc…

Contact: REIO Shinagh House, Bandon, Co. Cork, Ireland. T: +353 23 42193, F: +3532329154, W: www.sei.ie/reio.htm renewables@reio.ie
All free, except the Procurement Guideline CD, which costs 10 EUR.

Sustainable Energy Ireland is funded by the Irish Government under the National Development Plan, 2000-2006, with programmes partly financed by the European Union.

Contents

Sustainable Energy for Poverty Reduction Manual

www.inforse.org/asia

INFORSE-South ASIA
International Network for Sustainable Energy

Sustainable Energy Europe 2005-2008

January 29 - February 2, 2007
EU Sustainable Energy Week (EUSEW), Brussels (Belgium) Grenoble (France) and Murcia (Spain) Part of Sustainable Energy Europe Campaign.
INFORSE-Europe is campaign associate of this initiative.
More info: www.eusew.eu

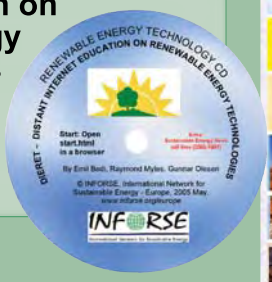
March 20, 2007
INFORSE-Europe, EREF, EUFORES European Sustainable Energy Seminar, Brussels
More info: www.inforse.org/europe/seminar.htm

April 19-21, 2007
RENEXPO® Central and South-East Europe Trade Fair and Congress for Renewable Energy and Energy Efficient Construction and Renovation, Hungexpo Fair Center, Budapest, Hungary
12 halls and 37,000 m^2 of exhibition space
More info: www.renexpo-budapest.com

26 February - 2 March and April 30 - May 11, 2007
CSD 15 - Intergovernmental Preparatory Meeting and the 15th session of the CSD (Commission for Sustainable Development), UN Headquarters in New York.
More info: www.un.org/esa/sustdev/csd/policy.htm

DIERET - Distant Internet Education on Renewable Energy Technologies

CD available, 15€
www.inforse.org/europe/educat.htm



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