

NGO PROPOSAL AND VISIONS FOR INTERNATIONAL COOPERATION FOR SUSTAINABLE ENRERGY

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Purpose

The purpose of this paper is to give an overview of NGO proposals that could be useful for successful outcomes of the ongoing international cooperation for renewable energy within the Johannesburg Renewable Energy Coalition (JREC) and in the preparations for the international renewable energy conference in Bonn in June 2004. NGOs have been involved in development and promotion of renewable energy long before it became a topic for top-level international cooperation. Thus they have valuable experience that could be used by the international community, if adequately communicated. The overview given in this paper should be seen as an entry point and road-map for the NGO-proposals that the authors find most important for this international cooperation.

Approach

Since the World Summit in Johannesburg, 'renewable energy' have stayed a popular catch word for world leaders. The move from word to action is always difficult, but the group of countries that declared the support for renewable energy and targets in Johannesburg seems willing to take the lead. With a large, international conference for renewable energy in Bonn, June 2004, and preparatory conferences in the world regions before that, the stage is set for progressive plans and actions.

NGOs from all parts of the world has been calling for progressive plans and actions for sustainable energy; leading to a shift from the current unsustainable energy structures to sustainable ones, based on renewable energy and a much more efficient use of energy. There is a need to set ambitious and yet realistic targets and timetables for renewable energy, leading this transition to sustainable energy systems.

The global success is dependant on successes on the national scenes. NGOs have been calling for national plans for renewable energy and energy efficiency with clear targets, developed in an open processes in dialogue with national stakeholders. The plans and targets should be both short-term and long-term. They must initiate a development immediately and must also go beyond the first few years. Targets and plans for 2010, 2015, and 2020 are all important to guide energy investments with lifetimes of 20-40 years.

On top of the national plans and targets, international cooperation is important, not only to address global problems, but also because concerted actions by many countries can lead the

technological development much beyond what is possible for a single country. With cooperation across borders, use of renewable energy and energy efficiency can reach levels that is not possible within any single country. Given the value of sharing experience and the economy of scale, also for many elements in the production of renewable energy and energy efficiency equipment, joint efforts will lead to more cost-effective solutions for all countries involved. It will also make the period shorter and each country's investment lower to reach a break-through for the new technologies.

It is of crucial importance for a quick, large-scale success for sustainable energy that international cooperation is started, also beyond the current cooperation within existing bodies such as in the EU. The possibilities to reach consensus for renewable energy cooperation within existing structures, such as the UN-system, are largely exhausted due to the resistance from several large countries. This is why many NGOs are focussing on new forms of cooperation, in particular the JREC. The JREC is outstanding because of its progressive ambitions and because of its high-level support from 80 countries. NGO-proposals for JREC include proposals for practical cooperation among the involved countries, a coordinated reallocation of resources for research, technical development, dissemination, and development assistance, as well as the creation of an international body for sustainable energy. In addition to this, the JREC countries also have the possibility to influence existing international institutions; which could be particularly important for the multilateral development banks such as the World Bank. Success also for the JREC must be measured in results on the ground. NGO proposals on the above issues aim at taking the international cooperation including JREC into practical levels of cooperation, in new fora as well as in existing fora such as the governing bodies of the multilateral development banks.

Scientific innovation and relevance

The paper will include new overview and analysis of practical and political proposals from a number of NGOs, from the North as well as from the South, from International Network for Sustainable Energy, as well as from other networks and organisations. Each of these proposals are based on a thorough analysis from the NGOs behind them. The overview given in this paper will be new in more than one way. It will include the latest proposals as well as long-lasting existing ideas from NGOs and independent researchers. It will also be new in the way it is linking NGO-proposals to international cooperation within the JREC, a cooperation that was not even under serious consideration just a few years ago.

The paper will be particularly relevant at the time of the RIO 3 conference in the midst of the preparations for the international renewable energy conference in Bonn in 2004, where the JREC is expected to go from preparatory phase to the implementation. The paper can give the negotiators an overview of and insight in the most relevant NGO proposals available at the time of the RIO 3 conference.

Results

The paper will give a valuable overview of NGO proposals for large-scale introduction of sustainable energy with proposals for national and international structures and regulatory framework of energy markets as inspiration for national actions and international cooperation.

Conclusions

The conclusion is that a number of NGOs have put forward important proposals for national and international level actions that can be important guidance and inspiration for a successful transition to energy systems relying on renewable energy rather on the current unsustainable forms of energy. The proposals go beyond simple suggestions of reallocation of resources and include proposals for market frameworks, development assistance, financing etc.

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INTRODUCTION

During the last decade or more, NGOs have increasingly been recognised as important players for sustainable development, in international negotiations as well as nationally, and locally. One of the reasons for this is that they often advocate for constructive proposals that can and do help societies to choose more sustainable paths of development.

Many NGOs have been active in the field of energy, often starting as protest movements against environmental problematic technologies, including nuclear power, coal power, mining of uranium, coal and lignite as well as oil and gas exploration. In recent years have been added protests against the increased emissions of greenhouse gases, in particular CO₂ from fossil fuel use (as well as from deforestation). Several NGOs are developing from protesters into promoters of solutions and technologies that can solve the severe problems of current energy use. Other NGOs that has started with a focus of poverty problems, also find energy solutions an important part of solutions to poverty problems, from the focus on "fuel poverty" in the UK, to problems with energy for the poor in developing countries. In both cases NGOs are pointing at local solutions to use energy more efficiently and to use renewable energy. The expertise in the NGOs from these activities can give a valuable input to the international negotiations for increased use of renewable energy, such as in the Johannesburg Renewable Energy Coalition of more than 80 countries for increased use of renewable energy and for the International Conference for Renewable Energy in Bonn, Germany in the first days of June 2004.

A SHORT HISTORY OF NGO PROPOSALS

When the UNESCO organised a conference for renewable energy in 1961, NGOs did not play a larger role. A decade later when the UN organised a conference on environmental problems – in 1972 in Stockholm – the picture was quite different. During this decade environmental organisations had become strong, fuelled by the many people concerned with the growing environmental problems, in particular in North America and Western Europe. Major concerns were smog and acidification caused by fossil fuel use. In addition to this, special concerns had emerged about nuclear energy. More and more people had realised that the ambitious "Atom

for Peace" programme in the USA and the EURATOM in Western Europe did not provide answers to crucial questions about the inherent risk of nuclear technologies and about the final disposal of the radioactive waste generated. In Stockholm in 1972 environmental NGOs from around the world were highlighting these problems and many others, and were calling for international regulation of the environment.

A year later, the 1973-oil crisis hit a large part of the world, and a new public concern emerged about the limitation to cheap resources, and the vulnerability of modern societies to changes in supply. While the official response was to combine energy conservation and efficiency with increased use of coal and nuclear power, NGOs were worried about the effect of large increases in use of coal and nuclear power. In addition to the increased environmental problems, many people also saw the change from oil to coal and nuclear power as replacing old dependencies of external forces with new ones. They highlighted the benefits of local solutions as a way to gain independence from long supply chains and fluctuating international markets, as well as a way to create jobs and increase local earnings. The solutions that fulfilled the environmental criteria and also promoted local development were more energy efficiency and renewable energy. In industrialised countries renewable energy technologies had not developed much since the UNESCO conference in 1961, probably with the only major exception being PV technology for space applications.

While NGOs protesting nuclear power and other large-scale energy supply grew big in the late 70's and started to gain influence, NGO proposals for alternatives became more elaborate. Plans for energy self-sufficient houses and settlements were developed as well as large-scale integration of renewable energy into national energy supply. From the mid-70's NGOs were formed with visions of complete transitions of energy supplies of industrialised countries to renewable energy. Plans were elaborated showing how energy efficiency and renewable energy could replace more than half of the fossil fuel supply of a number of countries and that nuclear power was unnecessary. Many of these plans were elaborated by scientists or in a cooperation between NGOs and scientists.

In the late 70's plans for renewable energy were taken up officially, though not with the vision of a full transition to renewable energy. This was followed by increased research for renewable energy and in several countries national support programs.

In parallel to the development in industrialised countries, a number of developing countries developed renewable energy suited for their needs. India and China are two prominent examples with millions of family biogas plants, micro-hydropower, solar heating, solar cookers and others. The technologies were supported officially, but in particular in India NGOs provide important roles as

In 1987 support the "Brundtland Report" Our Common Future was the focus of a renewed interest in environmental problems, and in promotion of renewable energy. This time the issue of climate change came into focus, and the issue of global inequity became linked with the other global issues.

On the global level, environmental NGOs pushed for a focus on renewable energy in the negotiations up to the UN Conference on Environment & Development (UNCED) in Rio de Janeiro in 1992; but it did not get a major focus in the Agenda21 and only indirectly in the Climate Convention signed during UNCED. In spite of this, UNCED gave a push to renewable energy with the request for local and national plans for sustainable development – the Agenda 21 plans – and with the request to include NGOs in the development of these plans. Many of these plans include increased use of renewable energy, and as they are often based on local discussions they also act as awareness raising for environmental solutions including renewable energy.

In parallel to UNCED many NGOs met and organised future cooperation. One of the results of this was the International Network for Sustainable Energy (INFORSE) that was formed at the NGOs Global Forum in Rio de Janeiro in parallel to UNCED. The network was based on a common strategy for sustainable development with a vision of a world supplied by renewable energy and with adequate energy supply for all. In line with several other NGO proposals, the strategy included a global organisation for sustainable energy. The strategy was promoted by more than 100 NGOs, and within a year INFORSE had grown to above 130 members. INFORSE members are all NGOs, some specialised in renewable energy and energy efficiency, some more general organisations that has a focus on renewable energy.

After UNCED, INFORSE and other NGOs continued to lobby for sustainable energy (defined as renewable energy and energy efficiency solutions that are compatible with sustainable development). As a result of this and other factors, five years after UNCED, at the Commission for Sustainable Development's (CSD's) meeting in 1997, energy came on the CSD agenda, and the 2001 session (CSD9) had energy as a main topic. NGOs following the CSD process formed the NGO Energy Caucus that was very active during CSD9 and later at the World Summit for Sustainable Development (WSSD).

During the last 10 years, more and more NGOs have included promotion of renewable energy as part of their activities. This is new organisations as well as existing environment and development NGOs, including international environmental organisations as WWF and Greenpeace.

PROPOSALS FOR TRANSITION TO RENEWABLE ENERGY

A Global Renewable Energy Scenario

The INFORSE strategy presented at UNCED in 1992 had a vision of an energy supply for the world with the same energy services as today for the industrialised countries and with adequate energy services for people in developing countries to meet their basic need and to escape from poverty. While NGOs were promoting this vision researchers were analysing how such a vision could be turned into realities. One of these researchers were professor Bent Sørensen from the Roskilde University that developed "A Global Renewable Energy Scenario", showing how renewable energy in 2050 could supply a world with 9 billion people, using today's best available energy efficiency technologies, and a part of the global renewable energy potential. In effect the study included two different scenarios: a decentralised scenario with no use of new centralised renewable energy sources such as off-shore wind parks or central solar electricity plants, and a more centralised scenario where 33% of windpower and 60% of solar power will come from centralised supply. The conclusion was that both scenarios are possible; but that inclusion of centralised supply gives considerably more flexibility regarding choice of energy sources. Both scenarios included inter-regional energy trade, but only a fraction of today's international energy trade. The main importer would be South and South-East Asia including China, while in the decentralised scenario Western Europe would also be net importer. All other regions would be exporters. The main trade would be in biofuels, electricity and maybe hydrogen.

Vision 2050

Based on the Global Renewable Energy Scenario, INFORSE has developed "Vision 2050" with a target of 100% renewable energy by 2050. This is seen as an achievable yet ambitious global target that is in line with the demands for drastic reductions of emissions of CO₂ and

other greenhouse in order to stabilise the global climate. In addition to this, Vision2050 includes for proposals to address the special needs of the poor that lack access to basic energy services today, about 2 billion people, or 1/3 of the world's population. To cover these basic needs is only required a tiny fraction of the world energy supply, and it is not a problem that requires 50 years to solve. With Vision2050 INFORSE supports the proposal by Greenpeace and others to supply these basic needs with renewable energy within a period of just 12 years (Greenpeace & The Body Shop, 2001). It will require special efforts, in addition to the technology and market measures needed in the transition of the industrialised energy supply and consumption. There are no insurmountable technical, financial or institutional barriers to achieving the goal, but it will require commitment from the international community and radical changes in the way in which energy development is funded and subsidized.

Based on the global Vision2050, national visions for transition to renewable energy within 50 years has been developed, or is under development for a number of countries including Denmark, Slovakia, Romania, and Ukraine.

Greenpeace's Industry Initiatives

Greenpeace cooperated with the INFORSE secretariat in 1998 and 1999 on a blueprint for large-scale use of windpower, Windforce10, aiming at 10% windpower in global electricity supply in 2020. Also the European Wind Energy Association (EWEA) participated in the proposal. In 2002 the proposal was updated to Windforce12, with plans for 12% windpower by 2020. Following the success with Windforce10, Greenpeace has cooperated with solar industrial associations. Together with the PV industry they proposed a continues development of solar PV electricity to cover 26% of electricity demand by 2040. They are planning to make similar proposals together with the industry for solar thermal electricity, the geothermal industry, industry for use of modern biomass, as well as promoters of wave power and other marine renewable energy sources.

Greenpeace usually compares the renewable energy potentials with forecasts for future energy consumption from International Energy Agency (IEA). Given the large increase in global energy consumption in the IEA business as usual forecasts, the large use of renewable energy will not solve global environmental problems. Greenpeace is well aware that the renewable energy has to be combined with energy efficiency to lead to a sustainable development and the organisation support the 80% reduction of CO₂ emissions until 2050 (see below).

Environmental NGOs' Targets

A number of NGOs in the Climate Action Network are supporting an 80% reduction of greenhouses gases until mid 21. century. If the global emissions are started before 20 years from today, this will probably limit the global temperature increase to less than 2°C. The easiest way to achieve this reduction will be to change 50% or more of the energy supply to renewable energies, and combine it with energy efficiency and a shift from coal to gas in the remaining fossil fuel use.

Targets and measures

A large number of shorter targets are supported by NGOs, including EU's target of 12% renewable energy by 2010 (a doubling from 1995) and the target of 15% renewable energy by

2012 that was discussed at the World Summit for Sustainable Development in 2002, but not agreed.

To achieve the targets, NGOs have been proposing and supporting a number of measures, mainly based on measures that has shown their value in practice. The most important proposals include:

- research and development funding should shift from nuclear and fossil fuels to renewable energy and energy efficiency
- subsidies to and preferential treatment of nuclear power and fossil fuels must be ended to create a level playing field
- funding, including international funding such as funding from multilateral development banks should give priority to renewable energy and energy efficiency.
- introduction of renewable energy should be supported by investment subsidies
- energy should have a fair price which should include environmental costs. This will raise costs of fossil fuels and nuclear power substantially.

-it must be possible to electricity from renewable energy to the grid, when it exists, and a fixed price should be offered that reflects the environmental benefits of the renewable energy – a feed-in tariff. A number of the organisations find that the highest feed-in tariff should be limited to the first 10-12 years of the installations lifetime, and that is should only be available to locally owned or managed installations.

PROPOSALS FOR INTERNATIONAL COOPERATION

For many years, NGOs have called for international organisations for sustainable energy. A number of NGO initiatives have put this on the agenda again, and it is increasingly also supported by governments. Many NGOs find that the existing units for sustainable energy in international organisations are not sufficient to support the worldwide transition to sustainable energy, thus an organisation is needed with a special focus on sustainable energy. In any case, it is increasingly difficult to explain why there is an organisation for atomic power (International Atomic Energy Agency -IAEA) and none for renewable energy or for energy efficiency.

One of the proposals is an International Sustainable Energy Fund (ISEF), which is supported by the by the NGO Energy & Climate Change Caucus and promoted at CSD9 in 2002 and WSSD in 2002. A Draft Model Statute is made by the Global Resource Action Center for the Environment (GRACE) for the Caucus. At meetings with NGOs, several developing countries has given their support to the proposal. The NGOs in the Energy & Climate Change Caucus are the main advocates for this proposal.

Probably the most advanced of the proposals is the International Renewable Energy Agency (IRENA) that was adopted by the more than 400 participants of the “Berlin Conference on the Technology Transfer for Renewable Energies” organised by EUROSOLAR, June 2001. During the same conference, the World Renewable Energy Council (WREC) was formed. It is the main forum advocating the proposal. WREC has five chairpersons, one from each continent, including Herman Scheer, president of EUROSOLAR.

Common Elements of the Two Pro-posals. The Agency/Fund shall:

- support countries' development of policies and programmes to introduce renewable energy
- support development of global norms for renewable energy
- promote exchange of information on renewable energy and energy efficiency
- assist in technology transfer
- support research and development
- assist in organising financing of renewable energy
- assist in education and training
- make statistics/indicators for national progress in development of sustainable energy
- Core activities of the Agency shall be covered by member-countries' contributions, as it is done for the UN and for other international organisations.

In addition, the ISEA proposal includes:

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

It is proposed that projects of the Fund can be financed via non-traditional sources of funding, such as re-direction of governments' subsidies away from unsustainable forms of energy. The IRENA is now supported by the German government, and many observers expect that it will be proposed for the International Renewable Energy Conference in Bonn in 2004.

NGO Proposals for Bonn 2004

October 5-8 this year about 50 representatives from the most involved international NGOs in the field of development and environment held a workshop in Bad Honnef near Bonn in Germany in order to prepare common positions and strategies for the official conference to be held in Bonn from June 2-4, 2004.

With this conference the NGO community now wants to take an initiative for Bonn 2004. The preparatory workshop, organised by the German Foundation of Environment and Development and the Heinrich-Boell Foundation, brought together specialists from organisations such as Greenpeace and Worldwide Fund for Nature, Development Alternatives India and Greenhouse Project South Africa. For the presentation of the many small NGOs active in this field also the INFORSE was asked to participate. Several INFORSE-Network members from East Africa, South America and Japan joined the workshop as speakers of organisations.

In a very intensive and productive process positions including environmental as well as economical and social issues were compiled in a joint declaration which is now forwarded to

other NGOs and regional preparatory conferences as CURES: Citizens United for Renewable Energy and Sustainability.

The document underlines the importance of clear on-grid regulations and support for ambitious goals for increasing amounts of renewable energies. However, CURES stress the need to equally define targets for and include off-grid energy options mainly for urban marginalised and the rural population. Lacking or unaffordable household energy for about 2 billion people worldwide means electricity but often also energy for cooking. Therefore much emphasis was put on the position that all eventual funding schemes via the international financing instruments equally should include south-to-south technology and management transfer on developing and demonstrating successful non-electrical and regionally produces technology for Northern industrialised countries being installed in grid-connected regions with higher financial and pay back potential. The experience with a number of top-down-projects has shown that non-governmental organisations with their specific knowledge of local conditions and social expertise as well as their approach to adjust technology to the needs of people today and tomorrow is needed more than ever – in order to avoid mistakes of the past and to critically accompany governments and industries on their way towards a sustainable future.

The NGOs see a special role for the countries in the Johannesburg Renewable Energy Coalition, and propose that they come forth with their national targets during the Bonn Conference, demonstrating their leadership and fulfilling the promise they made at the end of the WSSD for ambitious targets for renewable energy. The NGOs are calling upon all countries as well as on business, NGOs and other stakeholders to take actions in a number of ways for renewable energy as an important factor for sustainable development.

Many NGOs expect that the countries use the Bonn conference to set targets at least for 2020, and for 2010 for those countries that do not have target for that year yet. In particular this is expected for the JREC countries.

NGOs definition of renewable energy from CURES declaration

“renewable sources” include modern biomass, World Commission on Dams (WCD) compliant small (up to 10 MW) hydro (mechanical as well as electric), geothermal, wind, all solar, tidal, wave and other marine energy. Modern biomass includes improved use of agricultural biomass such as ‘smokeless’ efficient cookstoves as well as electricity generation, gas production and liquid fuels from carbon neutral and low input, sustainable sources of biomass.

Energy efficiency refers to all dynamically improved energy efficiency and energy conservation measures on the demand/end use side such as appliances, motor drives, housing and services including transport.