

Plenary Session A:
Opening Ministerial Segment
Thursday, 3 June, 9.00 – 12.00 h
Venue: Plenary Hall IKBB

Internationale Konferenz
für Erneuerbare Energien, Bonn
International Conference
for Renewable Energies, Bonn



KEYNOTE ADDRESS

Klaus Töpfer

United Nations Under-Secretary General

Executive Director, United Nations Environment Programme

**Opportunity, Leadership and Commitment:
Keys to a Sustainable Energy Future**

Chancellor Schroeder, honorable ministers, colleagues, ladies and gentlemen,

I am pleased to extend the Secretary-General's wishes for a successful outcome to this International Conference on Renewable Energies. The United Nations believes that this conference is an important step in adding to the commitments voiced by governments at the World Summit on Sustainable Development in Johannesburg two years ago.

We have over the course of these four days an excellent opportunity to learn about rapidly evolving technologies, to exchange ideas, and, most importantly, to discover new opportunities.

Yes, Opportunities.

I refer of course to the opportunity for products and services based on cleaner and renewable forms of energy to compete in the market.

From the UNEP perspective, renewable energy resources can be a major tool to build economic and social development while protecting the environmental values on which that development depends.

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But it is only part of what we need.

Poverty and Sustainable Energy

Energy systems based on renewable energy and continuously improving energy efficiency - a combination commonly called 'sustainable energy' – are the “multi-purpose” tool that can best help all countries develop sustainably.

Put another way: Development needs energy, Sustainable Development needs *sustainable* energy.

This is, by design, a broad definition because we cannot ignore any opportunity to deliver meaningful improvements to the lives of our two billion fellow citizens who live on less than two US dollars a day, and who survive burning dung or wood for fuel.

In Kenya, where the headquarters of the UNEP is located, I have an opportunity daily to see the consequences of such energy poverty.

It is clear to me that unless we can overcome the energy poverty facing Africa and many parts of the developing world, we will never overcome the poverty that is so closely linked to environmental degradation.

Nearly 1.6 billion people - one quarter of the world's population – do not have access to electricity. In Kenya, it is over 90 per cent.

To create the economic development necessary to escape the poverty trap, these families need better and sustainable forms of energy.

Sometimes, this means helping small companies develop cookstoves that use charcoal more efficiently or burn cleaner fuels such as Liquid Petroleum Gas, which by the way UNEP has been doing successfully under the Rural Energy Enterprise Development or “REED” initiative in Africa, Brazil and soon in China.

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Such simple improvements can reduce the unsustainable collection of firewood and the *indoor* air pollution that rivals outside air pollution in many large cities and burdens poor families, mostly women and children, with a number of respiratory diseases.

What are the needs?

Sometimes sustainable energy means increasing the *system* efficiency of using a fossil energy resource such as coal – squeezing the most efficiency of both the supply and demand sides while reducing the emissions of pollutants such as carbon dioxide, nitrous oxide and particulate matter.

Sometimes it means a small solar electric panel, a battery, a radio and an efficient light.

Sometimes it means a dam that can provide water and power while protecting river habitats.

And sometimes it means a 100-megawatt wind farm feeding clean electricity into a state power grid and creating a new industry with local jobs.

All of these options must be explored if we are to travel further down the path to sustainable development.

The Global Network on Energy for Sustainable Development (GNESD), launched by UNEP at the WSSD, can be very useful in analyzing and providing advice on the best paths for each region. The 20 member Centres of Excellence – located in all parts of the world – together make a unique resource.

GNESD has the potential to become the global knowledge and advisory body on sustainable energy, similar to the role the CGIAR has had for agricultural development and food security. Serving this function it complements initiatives such as the Global Village Energy Partnership and the Renewable Energy and Energy Efficiency Partnership (REEEP).

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Having good advice and the correct information on which to base policies advice will be crucial as the world is facing an enormous challenge, requiring enormous investments.

Yet, with a business as usual energy investment of US\$ 8 trillion in developing countries over the next 25 years, 1.4 billion people will *still* lack access to modern lighting and power—a reduction of only 200 million people relative to today. In 2030, more than 2.6 billion people in developing countries will continue to rely on traditional biomass for cooking and heating – a figure even higher than today.

Much has been said about the possibility – even need – for developing countries to “leapfrog” over existing fossil fuel energy options to ensure that we do not repeat the dirty pattern of electricity generation that occurred during the industrialization of the North. Yet, developing countries are, naturally, suspicious of moves to what they perceive as untried and untested technology.

Not that such leaps cannot be made. They can, and they also have a compelling foundation.

Witness the explosion of mobile phones in countries with few and expensive fixed phone lines. The difference, compared to renewable energy, is that developing countries are getting – and using – technology that is widely used and accepted in developed countries. In this context, renewable energy seems too often to be a case of ‘do what we say, not what we do’.

As was made clear by the G8 Renewable Energy Task Force in its report three years ago, we need to prove to developing countries, that renewable energy resources and resource efficient technologies are first rate.

To do this, we need leadership from developed countries.

Yes, leadership.

It is often easy to forget that today’s energy systems are the result of past government leadership, policies and financial support. Hundreds of billions of dollars have been invested

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over many decades to develop the mature fossil fuel and nuclear technologies we have today.

Status of Renewable Energies

So where *are* we today?

The bad news is that in 2001, the most recent year for which data is available, the share of renewable energy in total primary energy supply of International Energy Agency (IEA) member countries was just 5.5%. The share of oil was 41%, gas 21%, coal 20% and nuclear about 12%. Of course, in many developing countries, the share of renewable energy can be a majority of total supply, but this is mostly in the form of biomass burned for heating and cooking.

The share of renewable energy in IEA member countries did increase from 4.6% in 1970 to 5.5% in 2001. However, over the last three decades, the annual growth rate of renewable energy supply slowed from 2.8% in the 70s and 80s to 1.2% from 1990 to 2001, lower than the growth rate for the total primary energy supply.

Further, more mature renewable energy options, such as hydro, geothermal power and biomass, did not expand, and even declined, in many IEA countries during the 1990s.

And the share of electricity from renewable energy sources fell from 24% of total electricity production in 1970 to 15% in 2001.

At a time when there are so many global environmental concerns about the use of fossil fuels, the combined share of all energy-related research and development (R&D) funding for renewable energy in IEA countries is less than 8% of the total and *shrinking* as a share of overall R&D funding.

These are gloomy statistics, but there are rays of hope.

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Solar and wind markets expanded by an average of almost 18% per year from 1970 to 2001. And with just 1% of total R&D funding - but with leadership and vision - wind energy has grown from nothing to a multibillion-dollar industry employing nearly one million people and generating more than 30,000 megawatts of truly sustainable energy at a cost that has dropped 90% to as low as 3 cents a kilowatt hour.

Now, *this* is efficiency!

This begs a most interesting question: What would happen if the majority of R&D funding went to sustainable energy?

Of course, in an ideal world there would be no subsidies to mature technologies and all environmental, security and other external social costs would be included in the price of energy. In the real world, as you know, there remain huge subsidies for conventional technologies, few subsidies for renewable energy, and hardly any social or environmental costs included in our energy prices.

This must change.

But change will only come from a strong and unwavering commitment.

Yes, Commitment.

Investment

Ladies and gentlemen, it is time to get down to business. Sustainable energy is needed for sustainable development, but *investment* is needed for sustainable energy. This investment must be made not just in technology, but also in people and skills who can use this technology for sustainable development.

Let's be very clear: the many different forms of renewable energy will not enter the mainstream without substantially more support for R&D, better incentives, and changed markets where energy prices include environmental and social costs.

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In our energy policies, we need to understand that strength, clarity and stability are the characteristics that attract capital from the private sector.

Many have criticised such policies and commitments as being too costly, or too damaging to our economies. But this doesn't have to be so.

In the IEA's *2003 World Energy Investment Outlook*, the Alternative Scenario shows a surprising result: the overall investment in energy infrastructure in the next three decades using accelerated policies and investments in OECD countries for energy efficiency, distributed generation and renewable energy is 20% less than in the Reference 'Business-as-usual' Scenario. In other words, if you invest in enough efficiency and reduce the need for transmission investments, you have enough savings to pay for a lot of renewable energy, and still save overall.

This should be all the motivation we need to make firm and ambitious commitments here in Bonn. Such commitments are not just in the interest of everyone here, they are our common *responsibility*. But they are a differentiated responsibility as well. In developing technologies, building markets, and financing investments developed countries must take the lead.

A commitment to renewable energy can be the first element of an ecological stability pact among like minded nations, something like the stability pact that underlies the EU's monetary union. What makes the stability pact strong is its monitoring and reporting requirements. Countries that find themselves in danger of not meeting agreed targets are required to report on the remedial actions they intend to take. Such monitoring and reporting would be critical for the credibility of an ecological stability pact.

UNEP Sustainable Energy Finance Initiative

The private sector has an equally important investment role to play and I am pleased that UNEP can help in this effort. Many of you may have already participated in the Sustainable

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Energy Finance event, organised under UNEP's Sustainable Energy Finance Initiative that promotes greater investment in sustainable energy through innovative partnerships.

A communiqué from this event has proposed a number of concrete actions for both government and the finance sector to move sustainable energy from the margins of energy supply to the mainstream.

For example, governments can make special provisions to encourage renewable energy under the OECD arrangement on export credits. Banks too can build sustainable energy loan portfolios using new approaches and partnerships that share and manage risks.

UNEP currently promotes this approach in India, Tunisia and Morocco. For example, as a result of an innovative partnership between UNEP, the United Nations Foundation (UNF) and two of India's leading banks, 23,000 more Indian families will gain access to the benefits of solar energy in the next two years while creating a commercial market for sustainable energy finance.

Such creative public/private partnerships can make it possible for the private sector to invest, and allow governments to harness the best knowledge, technology, and organizational resources of the private sector.

UNEP Solar and Wind Energy Mapping Project

One partnership that UNEP has launched with the Global Environment Facility is a solar and wind energy mapping project for 13 developing countries called SWERA. The resource maps will help investors develop renewable energy sources in these countries by helping them to find the best and most profitable sites.

Also with the GEF and various German partners here in Bonn I have had the pleasure to participate in The "*Day of Geothermal Power*". Geothermal energy has a largely unexploited potential for sustainable and reliable energy production in many countries, worldwide. It was a particular honor for me to sign an agreement with the German government last night that will help bring geothermal energy technologies to the Great Rift Valley of East Africa.

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Chancellor Schroeder, ministers and colleagues,

Climate Change

Now, you may have noticed that I have not said anything yet about global climate change. This was intentional. Simply, there are enough compelling reasons to progress sustainable energy *without* stating what many – including myself – consider the greatest threat to humanity – global climate change.

Adding climate change just makes the case irrefutable!

Clearly, instead of climate change, we need to create the climate **for** change.

In this light, the recent news from Moscow that Russia is moving towards ratification of the Kyoto Protocol is a very positive signal. It is vital that the Kyoto Protocol enters into force as the first step towards stabilising the global climate. Ratification by Russia is the last crucial step.

Outlook

In closing, it is clear that the path to sustainable energy is a huge challenge, but nothing less will be required if there is to be any chance of meeting the 2015 objectives for the Millennium Development Goals. For every objective, whether it is halving the number of people who live on less than one US dollar a day, or ensuring that children everywhere will be able to complete a full course of primary schooling, sustainable energy is a fundamental must and a basic human right.

The good news is that the “window” to a sustainable energy future is still open.

But it is closing fast and we know that unless we act decisively, today’s prosperity for the few will continue to float on a sea of environmental debt and postponed obligations.

As Thomas Edison once observed: “the best way to predict the future is to invent it.”

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Maybe the future is a hydrogen economy with fuel cells powered by hydrogen split from water by the electricity of wind turbines or rooftop solar cells, or even hydrogen generated by algae growing in ponds on our increasing amount of salt-affected land.

Or perhaps it is something still gestating in the imagination. This conference is helping us all explore such possibilities and I congratulate everyone who is here today for their efforts to think creatively.

How *do* we move forward from here? What can be the measure of our success at this Conference with over 2000 participants from around the world?

Ecologists know that in natural systems, diversity creates strength. When I look out here at such breadth of experience, skill and perspective, I can see at once that success comes from the strength of our diversity and the passion of our commitment.

The sum is truly greater than the parts.

If we do anything, it must be to leave here ensuring that this sum continues to grow. This may mean finding ways for countries or groups to meet new commitments to develop renewable energy resources, or finding new mechanisms for cooperation where none has existed in the past.

The political declaration of this Conference acknowledges the need to create some sort of global public policy network that brings together a broad group of stakeholders. In reflecting on the discussions here, I believe such a network could pull together the different elements that we need to move forward. First, it could help both governments and the private sector put in place the policies that help renewable energy. We have been reminded here in Bonn that only when the policies are right can the other elements fall into place.

The global public policy network could also help direct financing to renewable energy projects, particularly development assistance funds that can pave the way for larger private

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sector financing of projects. And it could address issues of technology assessment and capacity building, which are essential parts of the overall equation.

Monitoring and reporting on implementation of Bonn outcomes is critical, as is measuring global progress in increasing the share of renewable energy. One of UNEP's core functions is monitoring global environmental indicators, and I commit to supporting such an effort, which I believe must be done with partners such as the International Energy Agency.

Finally, I recognize the need to strengthen UNEP's ability to help others make wise decisions concerning renewable energy. We will reinforce our energy team, which consists of a main unit in Paris and two groups that support its efforts, UNEP's International Environmental Technology Centre in Osaka and the UNEP Risø Centre on Energy, Climate and Sustainable Development in Denmark. This will give UNEP more capability to provide fast, targeted advice on renewable energy policies and investments. Such advice would be available to governments, local authorities, and the private sector. Our experience has shown that sometimes only a little bit of help is required to make things happen, but that help must come at the correct time, come quickly when it is needed, and fit the exact needs of the person who requested it.

Let us diverge – *now* - from 'business as usual' to create a clean and secure energy supply, a healthy environment and a world increasingly free from poverty.

Thank you.