

From Johannesburg via Bonn to Beijing

Background information for the "Beijing International Renewable Energy Conference (BIREC 2005)"

At the 2002 World Summit on Sustainable Development in **Johannesburg** the international community acknowledged the significance of renewable energies for sustainable development – especially for combating poverty and for environmental and climate protection. The Johannesburg Implementation Plan calls for a **rapid substantial increase in the share of renewable energy sources in global energy supply**. At the same time the Implementation Plan calls on participants to regularly review the global expansion of renewable energies.¹

However, the text does not go into greater detail. In Johannesburg there was particular dispute regarding the call by the EU and other countries for specified global quantitative target values for the share of renewable energies in energy consumption. This failed especially because of opposition from the USA and the OPEC countries.

Against this background a group of interested countries formed the "Johannesburg Renewable Energy Coalition (JREC)", which now has 88 countries belonging to it². Federal Chancellor Schröder invited the international community to attend an international conference on renewable energies in Germany.

In Johannesburg some concrete activities at voluntary level were also launched. Of particular note is the "Renewable Energy and Energy Efficiency Partnership (REEEP)". This was established by the United Kingdom, has been supported by Germany since 2003 and has initiated and financed numerous specific projects in developing countries³.

From 1 to 4 June 2004 the International Conference for Renewable Energies – **renewables2004** – took place in Bonn. It was prepared and organised jointly by the Federal Environment Ministry and the Federal Ministry (BMU) for Economic Cooperation and Development (BMZ). Over

¹ Para. 20(e) of http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/PQIToc.htm

² cf http://www.europa.eu.int/comm/environment/jrec/index_en.htm

³ <http://www.reeep.org>

3000 participants from 154 countries, including many ministers, high-ranking representatives of international organisations, private industry and NGOs took part. As host, Germany did justice to its pioneering role in supporting renewable energies. The Conference gave new momentum to the global expansion of renewable energies. The unanimously adopted Political Declaration demonstrated the determination to achieve a "global transformation of energy systems" with a clear vision: **renewable energies will be a most important and widely available future source of energy**. At the same time two key political messages were conveyed:

- Renewable energies can play an important part in overcoming global **poverty**. In order to achieve the Millennium Goals by 2015 one billion people should be supplied with energy from renewable sources.
- Renewable energies – together with the improvement of energy efficiency – are indispensable for **climate protection** and facilitate a secure energy supply which is more independent from oil.

By focusing on renewable energies and with a skilful combination of jointly elaborated results and voluntarily contributions by individual players, the Bonn conference was able to achieve a clear majority in comparison to Johannesburg. At the heart of the conference success is the **International Action Programme** (IAP) containing binding agreed actions⁴.

The IAP contains concrete actions and commitments from governments, the United Nations and other international organisations as well as from representatives of civil society, trade and industry and other stakeholders. The final version of the Action Programme comprises a total of 197 actions from all over the world. Around 40% of the proposals come from Europe, 20% from Africa, 20% from Asia and Latin America and another 20% are transregional (e.g. the World Bank).

The contributions cover the entire spectrum of the conference topics: 39% of the actions deal with the political framework conditions for the expansion of renewable energies, 9% of the actions aim at strengthening private and public financing mechanisms, 42% of the actions are aimed at capacity building. In all, 29 countries set themselves expansion goals for renewable energies and incorporated these into the IAP: Argentina, Australia, Belgium, Brazil, China, Cyprus, Czech Republic, Denmark, Egypt, France, Germany, Iran, Italy, Japan, Jordan, Mexico, Morocco,

⁴ full conference documentation of renewables2004 at <http://www.renewables2004.de>

New Zealand, Norway, Pakistan, Philippines, Senegal, Spain, Switzerland, South Africa, Tunisia, Uganda, United Kingdom, and the European Commission.

An evaluation of the Action Programme found the following:

- Implementation of the actions and commitments will create an additional electrical capacity of at least a 163 GWel through renewable energies by 2015. This will trigger investments totalling at least 326 billion US dollars.
- In 2015 an estimated saving of 1.2 billion tonnes CO₂/year is anticipated. This would be equivalent to around 5% of global CO₂ emissions. The most significant effects in this regard come from the contributions of China (approximately 68% of the expected CO₂ emissions effects), Mexico, Germany (EEG), the European Investment Bank, USA and Brazil.
- The actions and commitments contained in the IAP facilitate access to a modern and clean energy supply from renewable energies for an estimated 300 million people.

The **follow-up to renewables2004** is based on two approaches which were agreed in principle in Bonn:

- Firstly, a Global Policy Network in which governments, international organisations, private industry and NGOs cooperate on an equal footing in order to maintain and strengthen the momentum of the renewables expansion at international level⁵.
- Secondly the outcomes of the conference should be incorporated at ministerial level into the deliberations of the UN Commission on Sustainable Development (CSD), which will deal with the topic of energy in 2006 and 2007. The aim is that in future the CSD will regularly consider the progress of the global expansion of renewables and review its implementation. This review will also cover other measures for the substantial expansion of renewable energies arising from the Johannesburg Implementation Plan and will extend beyond the 2006/2007 CSD meeting⁶. This is one of the key tasks of the pending "Beijing International Renewable Energy Conference 2005"

⁵ cf <http://www.ren21.net>

⁶ see <http://www.un.org.esa.sustdev/csd/scd.htm>

(BIREC-2005)⁷. In consultation with the United Nations, the German Environment Ministry proposed the organisation of this conference to the Chinese Government, which gave its consent on the occasion of Minister Trittin's visit to Beijing in November 2004.

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The conference will be hosted and organised by the National Development and Reform Commission (NDRC) of the Chinese Government, a high level commission corresponding to a ministry and competent in all important economic areas (such as industry, transport and energy). The European Commission, the United Nations Department of Economic and Social Affairs (i.a. the Secretariat of the CSD) and the German Government (BMU and BMZ) are substantially supporting the Conference.

In the conference discussions will first focus on the expansion of renewables since Bonn, supported by a global overview elaborated by the REN21 network. Scientific and technical progress and successful policies will be demonstrated. The question as to **how the implementation of the numerous voluntary commitments can be reviewed in a targeted and effective way** is a further key topic. Finally the Conference will intensively discuss the potential for greater cooperation in the expansion of renewables – with particular focus on developing countries. Questions of financing, capacity building and technology transfer are again on the agenda. The Chinese Government intends to conclude the conference with a political declaration which should be unanimously adopted.

In addition to the main programme **four parallel fora** will take place, concerning investment and finance (here with substantial participation of private finance industry), renewable energy industrialists and entrepreneurs, renewable energy technology and South-South cooperation (organised by the environmental association WWF). There will also be 4 panels with leading representatives of trade and industry (dealing with the topics of wind power, project development, solar thermal energy and photovoltaics).

Side events and an exhibition will further enrich the Conference, which offers diverse opportunities for exchange between governments and representatives of different interest groups. EU Environment

⁷ for detailed information see <http://www.birec2005.cn>

Commissioner Dimas, the British Minister for Environment, Food and Rural Affairs Margaret Beckett as EU Council Presidency, Canada's Minister for the Environment Stephane Dion as host of the approaching Climate Change Conference in Montreal and other ministers have confirmed their participation. One week before the start of the conference, around 1000 participants have registered, 300 of these from China. The venue is the Great Hall of the People on Tiananmen Square.

Germany's interest is in particular to build on the momentum gained in Bonn and to launch a consistent implementation and review of the global expansion of renewable energies. In the opinion of the Federal Government, during the CSD consultations the United Nations should in particular give the expansion of renewables an efficient multilateral framework. This is not least also an essential prerequisite for successful international climate protection. In the German delegation Federal Minister Trittin will be accompanied by a number of representatives from trade and industry and executing agencies for development cooperation.

Germany is supported in its efforts by the EU. For example, in its meeting of 17 October 2005 in Luxembourg, the Council of Environment Ministers called this conference an opportunity to canvass for understanding especially among developing countries with regard to **how we can achieve a switch to a climate-friendly economy with already existing technology**. This aspect is highly relevant in the run up to the next International Conference on Climate Change at the end November/ beginning December in Montreal, which aims to initiate a process for the further development of the international climate regime (Framework Convention on Climate Change and the Kyoto Protocol).

China ratified the Kyoto Protocol as early as 2002 and is currently actively endeavouring to apply the Clean Development Mechanism anchored in the Protocol (CDM). This mechanism gives industrialised countries the opportunity to purchase emissions credits if they fund projects in developing countries which achieve an emissions reduction compared to the status quo. Projects in the field of renewable energies are also of particular interest here - especially regarding utilisation of biomass. Germany is currently negotiating with China on a Memorandum of Understanding in this area.

Renewable energies in China⁸

For the past 10 years, China's economic growth has amounted on average to 8 to 9 per cent a year. This also entails a strong increase in energy consumption. In 2004 China became the second largest energy consumer and also the second largest CO₂ emitter (after the USA). China, however, is already successful in decoupling energy consumption from economic growth. In future energy consumption should grow at most half as fast as the gross national product. Modern coal power plants, greater energy efficiency, large hydropower plants AND renewable energies will contribute to this.

China aims

- to provide from renewables 10 percent of electricity generation and 5 percent of primary energy consumption by 2010 and
- 12.5 percent of electricity generation and 10 percent of primary energy consumption by 2020; an electrical capacity of 2 GW photovoltaics, 20 GW biomass, 20 GW wind power, 60 GW small-scale hydropower will be installed. In the dynamic sector of wind power in particular, up to 30 GW is considered possible by 2020.

Implementation is being undertaken very consistently. Firstly, the electricity sector is being reformed and also decentralised. Instead of one centralised institution, there are now 5 major electricity generators, 2 grid operators and around 40 smaller electricity generators. Secondly, on 28 February 2005 **the People's Congress adopted the Law on Renewable Sources**, taking on essential ideas from Germany's EEG.

The Law emphasises in Article 1 the benefit of renewable energies for the improvement and diversification of energy supply, supply security, environmental protection and sustainable development. The Law guarantees the connection and purchase of electricity generated from renewable energies as well as the feed-in of biogas to the gas grid (on condition of appropriate quality) and biofuel admixture. The use of renewable energies in the heating (and cooling) sectors is facilitated.

The Law allows the introduction of **feed-in regulations** and tenders. The higher than average prices will (following state authorisation) be transferred to the sale price. Independent companies have the fundamental right to develop and operate renewable energy projects. The

⁸ On the topic of renewable energies in China, see also the GTZ report "Energy-policy framework conditions for electricity markets and renewable energies in the PR of China", updated version, Eschborn/Peking, September 2005

state will set up a fund for renewable energies which will be used to support increased R&D, studies on available renewable energy resources, projects in remote areas and the development of a local industry.

This nevertheless only sets out a framework for the support and utilisation of renewables in China. Concrete objectives, tariffs and levels of support are lacking. The Law transfers decisions on this to the State Council offices responsible for energy policy and to regional and local authorities. At present, specific tariffs are being discussed with the aim of enabling the Law to enter into force as planned as of 1 January 2006.

In 2004, **764 MW wind power** were installed in China; it is expected that the 1000 MW mark will be surpassed this year. China has large, easily tapped wind potential especially in the provinces Hebei (including Beijing), Jiangsu (north of Shanghai) and Inner Mongolia. By 2004 60 MW photovoltaic capacity were installed – especially in areas far from the grid. The "Township and Village Electrification Programme" aims to provide **23 million Chinese people with electricity through photovoltaics and small-scale hydropower plants** by 2010.

In the field of solar thermal energy (warm water and heating from renewable energies), China is world market leader. 60 percent of global solar collector capacity is located in China. China has a strong domestic industry for this. Production in the wind power and photovoltaics sectors is rapidly developing. Without doubt, China will soon have gained access to the global market.

Germany's renewables branch is now deeply engaged in China. In the field of wind power for instance joint ventures and licensing agreements were concluded (i.a. by RePower and Fuhrländer). In the field of solar energy, the company Paradigma is among those active.