

Conference Programme



EUROPEAN CONFERENCE FOR RENEWABLE ENERGY 'INTELLIGENT POLICY OPTIONS'

BERLIN
19-21 JANUARY 2004

The Conference is under
the high patronage of

Loyola de Palacio

Vice-President of the
European Commission
Commissioner for Energy and Transport

Jürgen Trittin

Federal Minister for Environment
Nature Conservation and Nuclear Safety



European Commission



Directorate General for Energy and Transport



RENEWABLE ENERGY FOR EUROPE
Campaign for Take-Off

CONFERENCE PROGRAMME OVERVIEW

Monday 19 January 2004

Introduction

- 09.00 - 10.00 **Registration**
- 10.00 - 11.30 **Official opening of the conference**
- 11.30 - 12.30 **Renewable Energy Sources: Policy framework and progress in the EU up to now**
- 12.30 - 14.00 **Lunch**

Session 1:

14.00 - 18.00

The Campaign for Take-Off 1999-2003: Sharing skills and achievements to foster Renewable Energy development in Europe

- 14.00 - 15.00 **Panel 1a:** Experiences in the utilisation of Renewable Energy Sources in cities - How feasible is it to develop Renewable Energy generation in an urban environment?
- 15.00 - 16.00 **Panel 1b:** Renewable Energy Sources deployment at regional and local level - From dependency to security of supply: How far and fast can regions improve their energy mix?
- 16.00 - 16.30 **Coffee break**
- 16.30 - 17.30 **Panel 1c:** Paving the way towards 100 % Renewable Energy based communities & islands: utopia or ambitious reality?
- 17.30 - 18.00 **Conclusions and recommendations for the future action in Europe and at Community level**
- 19.00 **The 2003 Awards Ceremony of the Renewable Energy Campaign for Take-Off**

Tuesday 20 January 2004

Session 2:

09.00 - 18.00

Implementation of Renewable Energy Sources Policies in the European Markets

- 09:00 - 10.30 **Panel 2a:** Producing Renewable Electricity - What is being achieved and what are the best approaches for overcoming administrative and market barriers?
- 10.30 - 11.00 **Coffee break**
- 11.00 - 12.30 **Panel 2b:** Supporting Renewables Electricity in the Market - Which are the best support schemes for RES electricity applied in Europe?
- 12.30 - 14.00 **Lunch**
- 14.00 - 14.30 **Biofuels for the transport sector: the real start in Europe now?**
- 14.30 - 16.00 **Panel 2c:** Renewable Heating & Cooling - What are the common factors and barriers which influence the growth of European markets for solar, biomass and geothermal heating and cooling?
- 16.00 - 16.30 **Coffee break**
- 16.30 - 18.00 **Panel 2d:** Renewable Energy – How to create a level-playing field?
- 20.00 **Reception by the German Ministry for the Environment, Nature Conservation and Nuclear Safety**

Wednesday 21 January 2004

Session 3:

09.00 - 12.30

Looking forward: Horizon 2020

- 09.00 - 10.30 **Panel 3a:** Targets and Scenarios for the development of Renewable Energy Markets in Europe up to 2020
- 10.30 - 11.00 **Coffee break**
- 11.00 - 12.30 **Panel 3b:** From Rio to Kyoto and Johannesburg
The spotlight has turned towards Renewable Energy Sources.
- 12.30 - 13.30 **Conference closure - Conclusions and recommendations for the International Conference for Renewable Energy in June 2004 in Bonn**



Monday, 19th January 2004

CONFERENCE OPENING

- **Klaus Wowereit**, Mayor of Berlin
- **Mechtild Rothe**, Member of the European Parliament, President of EUFORES
- **Jürgen Trittin**, Federal Minister for Environment, Nature Conservation and Nuclear Safety of Germany
- **Loyola de Palacio**, Vice-President of the European Commission, Commissioner for Energy and Transport

RENEWABLE ENERGY SOURCES :

POLICY FRAMEWORK AND PROGRESS IN THE EU UP TO NOW

- **Günther Hanreich**, Director, European Commission, DG Energy & Transport
- **Arthouros Zervos**, President, EREC

Session 1: The Campaign for Take-Off 1999-2003

PANEL 1A: RES IN CITIES

Moderators: **Soeren Moeller**, Deputy Mayor of Odense, President, Energie-Cités - **Mariàngels Pérez Latorre**, Deputy Head of Unit, European Commission, DG Energy & Transport

Panellists: **Imma Mayol**, Vice-Mayor, Barcelona - **Bo Frank**, Vice-Mayor, Växjö - **Serge Godard**, Mayor, Clermont-Ferrand - **Joachim Lorenz**, Member of the City Council, Munich - **Zsolt Fábíán**, Head of the Economic Committee, Gödöllő

PANEL 1B: RES DEPLOYMENT AT REGIONAL AND LOCAL LEVEL

Moderators: **Michael Geissler**, Secretary General, FEDARENE - **Dominique Bidou**, Président, Association pour la Haute Qualité Environnementale

Panellists: **Gerhard Dell**, Energy Commissioner, Upper Austria - **José Javier Armendariz**, Regional Minister for Industry, Technology, Commerce and Labour, Navarra - **Tagh O'Donovan**, Mayor of Cork County - **Jean-Loup Fleuret**, Vice-President of the Regional Council, Rhône-Alpes - **Antonio di Nunzio**, President of Energy and Environment Commission, Province of Chieti

PANEL 1C: 100 % RES COMMUNITIES & ISLANDS

Moderators: **Cipriano Marin**, Vice Secretary General, INSULA - **Melim Mendes**, Regional Agency for Energy and Environment of the Autonomous Region of Madeira

Panellists: **Soeren Hermansen**, Manager, Energy and Environmental office, Island of Samsøe - **Javier Morales Febles**, Minister Canary Island Government - **Mick Bates**, Member of the Welsh National Assembly - **Olympia Stilianou**, Director, Ministry of Commerce, Industry and Tourism of Cyprus - **Dieter Aschbrenner**, Head of the District Authority, Lüchow-Dannenberg

Tuesday, 20th January 2004

Session 2: Implementation of RES Policies in Europe

PANEL 2A: RES ELECTRICITY - OVERCOMING ADMINISTRATIVE & MARKET BARRIERS

Moderators: **Rainer Hinrichs-Rahlwes**, Director General, Federal Ministry for Environment of Germany - **Luc Werring**, Head of Unit, European Commission, DG Energy & Transport

Panellists: **Matthias Eichelbröner**, Managing Director Renewable Energies, MW Energie AG - **Joan Fages**, President, EREF - **Antonio Sà da Costa**, ESHA - **Annemarie Goedmakers**, Director Renewable Electricity, NUON - **Eddie O'Connor**, CEO, Airtricity

PANEL 2B: SUPPORTING RES ELECTRICITY

Moderators: **Hermann Scheer**, President of EUROSOLAR, Member of the German Parliament - **Roberto Vigotti**, ENEL Green Power / Chairman of the Eurelectric working group on R&DG

Panellists: **Johannes Lackmann**, President, German Renewable Energy Association (BEE) - **Ernesto Macias**, President, EPIA - **Peter Niermeier**, General Secretary, Renewable Energy Certificate System - **Iain Todd**, Director, Department of Trade and Industry - **Poul Erik Morthorst**, Senior Scientist, Risoe National Laboratory

BIOFUELS

Hans-Josef Fell, Member of the German Parliament
Javier Salgado, CEO, Abengoa Bioenergía

PANEL 2C: RES HEATING & COOLING

Moderators: **David Taylor**, CEO, Sustainable Energy Ireland - **Karl Kellner**, Head of Unit, European Commission, DG Energy & Transport

Panellists: **Ole Pilgaard**, President, ESTIF - **Christian Boissavy**, President, EGECE - **Heinz Kopetz**, Vice-President, AEBIOM - **Radan Panacek**, Deputy Director, Technology Centre of Czech Republic - **Markus Kurdziel**, Head of Section, German Energy Agency (DENA)

PANEL 2D: HOW TO CREATE A LEVEL-PLAYING FIELD ?

Moderators: **Juan Fraga**, General Secretary, EUFORES - **William Gillett**, Deputy Head of Unit, European Commission, DG Energy & Transport

Panellists: **Claude Turmes**, Member of the European Parliament - **Nigel Hall**, Deputy Head of Division, European Investment Bank - **Shimon Awerbuch**, University of Sussex - **Klaus Rave**, Vice President, EWEA - **Olaf Hohmeyer**, University of Flensburg

Wednesday, 21st January 2004

Session 3: Looking forward: horizon 2020

PANEL 3A: TARGETS AND SCENARIOS UP TO 2020

Moderators: **Anders Wijkman**, Member of the European Parliament - **Corrado Clini**, Director General, Ministry for Environment of Italy

Panellists: **Eberhard Jochem**, Fraunhofer Institute ISI - **Fatih Birol**, Head of Economic Analysis Division, IEA - **Didier Mayer**, President, EUREC Agency - **Jennifer Morgan**, Director Climate Change Programme, WWF

PANEL 3B: FROM RIO TO KYOTO AND JOHANNESBURG

Moderators: **Klaus Töpfer**, Executive Director, UNEP - **Jos Delbeke**, Director, European Commission, DG Environment

Panellists: **Steve Sawyer**, Climate Policy Advisor, Greenpeace International - **Elfriede A. More**, Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management - **Rajendra K. Pachauri**, Chairman of Intergovernmental Panel on Climate Change / Director-General TERI - **Antonio García Frago**, Head of Unit, European Commission, DG Development

CONFERENCE CLOSURE

- **Jorgen Henningsen**, Principal Adviser, European Commission, DG Energy & Transport
- **Eryl McNally**, Member of the European Parliament
- **Heidemarie Wiczorek-Zeul**, Federal Minister for Economic co-operation and Development of Germany
- **A Representative of the Irish Presidency**
- **Margot Wallström**, Commissioner for Environment



EUROPEAN CONFERENCE FOR RENEWABLE ENERGY "INTELLIGENT POLICY OPTIONS"

WELCOME

SETTING THE CONTEXT

Europe is at the forefront of renewable energy development world-wide and has significant experience in the formulation of proactive policy measures in this area. Renewable Energy Sources make a major contribution to sustainable development and - through using locally available resources - to security of energy supply. Renewable Energy deployment is part of the solution to many economic and environmental problems by contributing to secure jobs and income, avoiding environmental damage and therefore providing for a valid means to fight against climate change. From the market point of view, the European renewable energy industry has a lead position in the world and is one of Europe's fastest growing sectors.

The Community and its Member States have laid down clear objectives for renewable energy by 2010 - a share of 12% of renewable energy in gross inland energy consumption, a share of 22% for green electricity and a share of 5.75% for biofuels. Legislation has been adopted in order to reach these objectives. Soon the enlarged Union will be a reality and a common Renewable Energy policy framework and objectives will be shared by 25 European countries while other European countries are

also committed in a similar process. Further, adding force to the international commitment, the European Union is at the heart of the Johannesburg Renewable Energy Coalition, grouping industrialised and developing countries which are determined to work together on the basis of clear, ambitious and time bound targets to substantially increase the global share of renewable energy sources.

AIMS OF THE CONFERENCE

Building on previous efforts and achievements, and in order to realise the mid-term targets, further analysis and concerted efforts on political, legislative, administrative, social, cultural, economic and marketing aspects are required in order to achieve a sound long-term development of renewable energy sources.

THE EUROPEAN CONFERENCE FOR RENEWABLE ENERGY 'INTELLIGENT POLICY OPTIONS' pursues a two-fold objective: Firstly, it will analyse the developments made to date presenting market evolution and sectoral progress whilst offering a showcase for lighthouse initiatives from the European Union's Campaign for Take-Off for Renewable Energies (1999-2003). Secondly, it will provide a discussion forum for market prospects, reinforced policies and new renewable energy targets towards a time horizon of 2020. The debate will conclude with concrete targets and proposals for initiatives aimed at increasing the uptake of renewable energies in an enlarged Union and beyond.

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Working towards the **INTERNATIONAL CONFERENCE FOR RENEWABLE ENERGY IN JUNE 2004 IN BONN**, the conference will tackle renewable energy strategies for Europe in a larger sense encompassing the Union, its Accession and Candidate Countries, Norway, Iceland, Liechtenstein, Switzerland and the Western Balkans, and is part of the Johannesburg Renewable Energy Coalition roadmap of regional initiatives. The conclusions of the debate will be delivered, together with those from regional conferences in Africa, Asia and Latin America, to the Bonn Conference.

PARTICIPANTS

The conference will bring together many key players from the public and private sector at national and international level, including representatives of European institutions, international, national, regional and local organisations, networks and associations, experts and decision makers from the energy industry, non-governmental organisations, consultants, project developers, universities and other research institutions, financing institutions as well as local, regional, national and international administrations.

STRUCTURE OF THE CONFERENCE

The Conference will open with the addresses of the Patrons, Loyola de Palacio, Vice-President of the European Commission, Commissioner for Energy and Transport and Jürgen Trittin, Federal Minister for Environment, Nature Conservation and Nuclear Safety. In addition, a number of leading personalities will outline the main challenges to Renewable Energy policy implementation and progress up to now, and will prepare the ground for the conference debates.

SESSIONS WILL THEN BE HELD ON THE FOLLOWING THEMES:

- The Campaign for Take-Off: Sharing skills and achievements to foster the development of Renewable Energy Sources in Europe
- Implementation of Policies for Renewable Energy Sources in European Markets
- Looking forward: Horizon 2020

Session 1 will review the Campaign for Take-Off for Renewable Energy (1999-2003), including challenges and driving forces and offer a showcase for key initiatives in cities, regions and islands in Europe in order to help other communities on their way towards developing their unexplored renewable energy potential.

Session 2 will focus on the different policies and legislation related to Renewable Energy in the Union and other European countries, focusing on three main fields: electricity, heating and cooling, and biofuels. Questions will be raised and answers will be given to topics such as barriers to market penetration, competitive pricing, financing and support schemes.

Session 3 will build upon the previous days' debates and come up with recommendations and targets for Europe for 2020. Once agreed, these will become Europe's contribution to the Johannesburg Renewable Energy Coalition and will be conveyed to the International Renewable Energy Conference in Bonn.

The debate on each theme will be led by two moderators who should ensure that the discussion (involving panelists and participants) as well as the outcome are both productive and well-balanced.

THE CONFERENCE ON LINE

The Conference will be transmitted live on the Internet, through the European Commission Managenergy web streaming services, which are devoted to the promotion of energy efficiency and renewable energy sources. Full video recordings will be made available on the Internet after the Conference. For one year, the Conference presentations and discussions as well as interviews with the honourable guests and main speakers will be available on www.managenergy.net.

INFORMATION SPACE

Information on Community programmes and stakeholders will be available during the conference. The European Commission, the European Renewable Energy Council (EREC) and its member associations, organisations and networks operating in the field of renewable energy as well as Partners in the Campaign for Take-Off invite the conference participants to discover their organisations, programmes and initiatives at the entrance area of the Conference room in the Berlin Conference Centre.

MONDAY, 19TH JANUARY 2004

Renewable Energy Sources: Policy framework and progress in the European Union up to now

The European Commission has deployed since 1993 substantial efforts to build up a common, stable policy framework in Europe to foster the market penetration of Renewable Energy Sources. Early in the nineties it became clear that, in addition to the efforts made for more than thirty years to develop Renewable Technologies through Community Research, Demonstration and Innovation programmes, a Policy framework which combines legislative and support measures was necessary to increase and foster Renewable market penetration.

COMMUNITY POLICY FRAMEWORK AND LEGISLATION: THE MAIN MILESTONES

- **1997 - White Paper:** Energy for the future: Renewable sources of energy
- **2000 - Green Paper:** Towards a European strategy for the security of energy supply
- **2001 - Directive** on the promotion of electricity produced from renewable energy sources in the internal electricity market
- **2002 - Directive** on the energy performance of buildings
- **2003 - Directive** on the promotion of the use of biofuels or other renewable fuels for transport
- **2003 - Directive** restructuring the community framework for the taxation of energy products and electricity

Policy framework

RES in the EU-15

TYPE OF ENERGY	1995 EUROSTAT	2001 EUROSTAT	WHITE PAPER PROJECTIONS 2010
1. Wind	2.5 GW	17.2 GW	40 GW
2. Hydro	92 GW	91.7 GW	105 GW
3. Photovoltaic	0.03 GWp	0.26 GWp	3 GWp
4. Biomass	44.8 Mtoe	56 Mtoe	135 Mtoe
5. Geothermal	2.5 Mtoe	3.43 Mtoe	5.2 Mtoe
6. Solar Thermal Collectors	6.5 Mio m ²	11.4 Mio m ²	100 Mio m ²

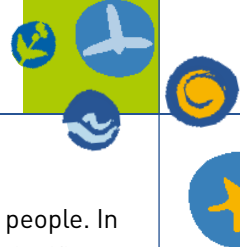
Support programmes

COMMUNITY SUPPORT PROGRAMMES

- RTD framework programmes since the early 1970's
- SAVE programme 1992-2002 → 100 M€
- ALTENER programme 1993-2002 → 120 M€
- Intelligent Energy - Europe programme 2003-2006 → 250 M€ (Continues the actions under SAVE and ALTENER)

The Community Policy framework establishes indicative mid-term targets for 2010 both at global and sectoral level. The first time that the Community proposed a target for Renewable Energy was in the ALTENER programme in 1993: the objective was to double the part of Renewable Energy in the gross domestic consumption from 4% in 1991 to 8% by 2005. In the White Paper of 1997 the objective was to achieve a share of 12% of total EU energy consumption by 2010. This objective was confirmed in 2000 in the Green Paper on the security of energy supply. Community support programmes have been oriented to help to reach this objective by promoting EU-wide measures and actions in favour of Renewable Energy at national, regional and local level.

By 2003, the main pillars of the legislative framework that will allow Renewable progress in the market had been established. The general objective is now supported by two Directives which contain sectoral and national objectives, one for electricity generated from Renewable Energy in the internal market, and the second for biofuels.



Community Directives aim at promoting electricity from renewable energy sources and biofuels for transport, establish a common framework and Community targets together with national targets agreed with Member States but not harmonised support schemes. The Commission is therefore mandated to monitor the progress achieved and to report on this with a view, if appropriate, to recommending EU wide harmonisation. The enlarged Community will be a reality in May 2004 and 25 countries will then be implementing the same policy in the field of Renewables with common objectives. The Community Policy Framework will apply to 25 countries and, in addition, most of the EEA countries have also agreed to apply it. As a result more than 30 countries in Europe will have a common policy frame-

work which will apply to more than 450 million people. In parallel to the policy framework as well as significant research and development support for renewable energy technologies, the market has developed and the European renewable industry is a leader in the world for most of the renewable technologies. These favourable conditions lead to increases in production capacities, and thereby to significant reductions of costs. For example, the production cost of a kilowatt-hour generated by wind power is one fifth of what it was 20 years ago. With this strong position on the home market, European companies also play an increasingly important role on the world market and dedicate more and more efforts to export. For the year 2010, a 17 billion euros annual export business is projected for the EU, creating as many as 350.000 additional jobs.

- What are the particularities of the European Union's common legislative framework compared to other regions in the world?
- Legislation is or will be translated into national laws. What is [early 2004] the state of art of national implementation of Community legislation?
- Regions and cities have also been very active in renewable energy development and will certainly play an important role in the future. What should be their role?
- Would the implementation of both Directives be affected by the liberalisation of the internal market?

Ceremony for the Campaign for Take-Off Awards 2003

For the 4th time, the European Commission will reward the foremost achievements in the field of renewable energies in Europe and beyond. You are welcome to attend the ceremony which will offer you a magnificent view of the renewable energy scenery!

The ceremony will take place on 19th January 2004 from 19h onwards in the Conference venue.
The Award Ceremony will be accompanied by a reception.

The Ceremony is under the high patronage of Loyola de Palacio, Vice-President of the European Commission.



The Campaign for Take-Off Awards Ceremony 2000 in Toulouse



The Campaign for Take-Off Awards Ceremony 2001 in Brussels



The Campaign for Take-Off Awards Ceremony 2002 in Salamanca

Session 1

THE CAMPAIGN FOR TAKE-OFF 1999-2003 SHARING SKILLS AND ACHIEVEMENTS TO FOSTER RENEWABLE ENERGY DEVELOPMENT IN EUROPE

The European Commission adopted in November 2000 the Green Paper 'Towards a European Strategy for the Security of Energy Supply' and in December 1997 a White Paper 'Energy for the Future: Renewable Sources of Energy'. From this background, the European Community intends to foster the market penetration of renewable energies by implementing regulatory measures and Community support and promotional programmes. A key initiative amongst the promotional measures is the Campaign for Take-Off (CTO) for Renewable Energies. Created in 1999 and running through until the end of 2003, it was designed to support the strategy for renewable energy as a whole.

Its aims were to provide quantitative targets for each of the 8 renewable energy sectors covered by the Campaign, to serve as benchmarks for decision makers and planners, to disseminate successful initiatives in Europe, to spread best-practice and to raise critical awareness of decision makers at local, regional, national and European level. A number of initiatives feeding into the Campaign's objectives were born out of this initiative under other relevant Community Support Programmes such as the ALTENER and 5th/6th RTD Framework Programmes.

The Campaign also provided for a number of promotional tools coordinated at European level such as the CTO Conferences, the successful Renewable Energy Partnership Scheme and the prestigious annual CTO Award Competition. These were created to reward the efforts and commitments made at local, regional and national level as well as to expose these efforts as showcases for the general public in Europe and beyond.

The Conference will serve to take stock of the Campaign for Take-Off in its different areas, provide a discussion forum on its pertinence and, finally, will set the direction and convey messages for a successor initiative at the European level. The debates will be complemented with the results of an Impact Assessment conducted during the last year of the Campaign, which will be made available to the participants as a reference document, and this will be enriched with the session's conclusions. From this starting point, the specific panels will present key success factors and ways to overcome barriers for initiatives pushed forward in cities, regions and islands. They will explore the driving forces behind the

initiatives, the challenges encountered, the replication potential and the relevance of policy frameworks. The successfully implemented examples should help other communities by showing the best ways of using the existing renewable energy potential, thereby not only contributing to local economic development and to the creation of jobs but also to environment protection and to social welfare. Finally, the conference will pave the way for the launching of an extended and broader successor initiative by the European Commission, the 'Campaign for an Energy Sustainable Europe, 2004-2007'.

THE FUTURE CAMPAIGN (2004-2007)

The Renewable Energy Campaign for Take-Off will evolve and pave the way for a new Campaign, the 'Public Awareness Campaign for an Energy Sustainable Europe'. Starting in 2004, the new campaign will embrace both energy efficiency and renewable energies and will allow Partners to join the common effort of implementing programmes and initiatives in Europe and beyond. Today's Renewable Energy Partners will naturally become Partners in the new Campaign.

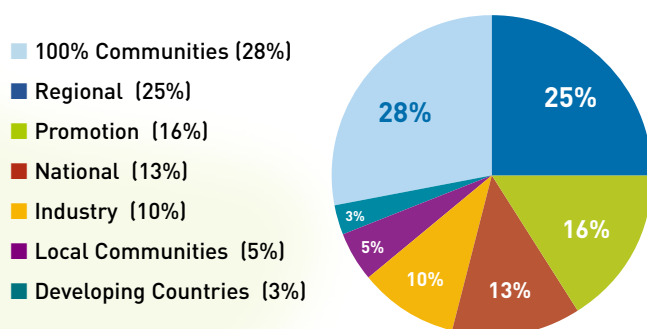
WHO ARE THE RENEWABLE ENERGY PARTNERS

125 renewable energy programmes and projects involving more than 700 partner organisations in the European Union – municipalities, agencies, technological institutes, regional authorities, national institutions, universities and enterprises - have joined the Campaign as Renewable Energy Partners in 2000-2003 and thereby expressed openly their willingness to contribute to its objectives. Organisations and authorities from the Accession Countries joined the Campaign at an early stage with successful initiatives at local level or through joint initiatives with other European Union organisations.

Campaign

Partners

Renewable Energy Partnerships in figures 2000-2003



Source : European Commission, 2003



Panel 1a:

EXPERIENCES IN THE UTILISATION OF RENEWABLE ENERGY SOURCES IN CITIES - HOW FEASIBLE IS IT TO DEVELOP THE POTENTIAL OF RENEWABLE ENERGY GENERATION IN AN URBAN ENVIRONMENT?

Nearly 80% of the European population live, work and use leisure facilities in cities, almost the half in cities with more than 50.000 inhabitants. Nearly 70% of the energy consumption occurs in cities. The development of sustainable energy strategies in urban areas is clearly a priority. It is not only the large numbers of energy consumers which is at stake, but also the quality of the urban environment which is of fundamental concern, and for which the implications go far beyond the local community. Apart from environmental considerations, a local sustainable energy policy can have major impacts on employment, social cohesion, participation of civil society, and economic development, as well as on urban governance. Examples have shown that proactive RES policies in cities can substantially increase the share of RES, thereby improving living conditions and contributing to reaching the objectives outlined by the United Nations in their AGENDA 21 initiative.

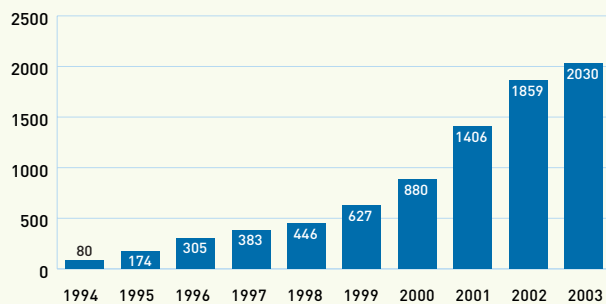
More recently, there have been clear signs of a political commitment towards more integrated policies and concepts aiming to convey sustainable energy strategies into city policies. Such commitments aim at demonstrating the benefits of a high degree of decentralised energy supply through recourse to new and renewable energy sources, in combination with a conscious application of leading energy efficiency measures in the various end-use sectors. Recent European legislation in the energy field, such as the Directive on the Energy Performance of Buildings, pushes forward this integrated approach, and should open the opportunity for more efficient consumption through ambitious urban rehabilitation.

Several large urban areas across Europe have demonstrated an outstanding level of excellence with regard to the integration of sustainable energy concepts, including renewable energies. In the North or in the South of Europe, numerous examples illustrate how far awareness of and commitment to renewable energy solutions can make cities improve in their energy planning and resource management. Politicians, planners, developers and citizens are all key stakeholders in this process, and can help to achieve a genuine change in the urban energy scene. This session will present examples of successful realisations of sustainable strategies, discuss barriers and challenges, assess the impact of policy frameworks and come up with future needs for public intervention on the level of municipal authorities, Member States frameworks and European intervention.

The **Aalborg Charter, the Charter of European Cities and Towns towards Sustainability** is a unique policy statement for local sustainable development world-wide. Born in 1994 and initially signed by 80 local authorities, it counts today more than 2000 signatories - metropolitan areas, cities, towns and counties. The Charter itself provides for a policy framework initiating processes to the creation of sustainable development plans at local level, initiated the *European Sustainable Cities & Towns Campaign* to support cities on their path towards sustainability and calls upon the local authorities to engage in the Local Agenda 21 Processes.

Cities

■ Signatories of the Aalborg Charter 1994 - 2003



Source : European Sustainable Cities & Towns Campaign

- How does the use of Renewable Energy Sources in cities lead to better standards of living and a reduced environmental impact?
- How relevant are policy frameworks to increased Renewable Energy penetration in urban areas?
- How to tackle the challenge of integrated concepts "high energy-efficiency / decentralised RES" in urban energy planning?

- What recommendations and hints for success can be derived from existing initiatives?
- What sort of Community intervention and promotion would be appropriate for the next 5 years in the form of a future "European Public Awareness Campaign"?
- What should be the role of the private sector in this context during next 5 years?

Panel 1b:

RENEWABLE ENERGY SOURCES DEPLOYMENT AT REGIONAL AND LOCAL LEVEL - FROM DEPENDENCY TO SECURITY OF SUPPLY: HOW FAR AND FAST CAN REGIONS IMPROVE THEIR ENERGY MIX?

Europe's regions and their local communities are closest to the final energy consumer. When it comes to renewable energy sources, the work of regional authorities and municipalities is therefore of outstanding importance. Due to their decentralised nature, many renewable energy technologies are closer to the end consumer than conventional energy technologies and can therefore be particularly well promoted on both regional and local levels. Furthermore, they represent an excellent opportunity for wealth creation in urban and remote areas through the creation of jobs and income for the local population.

In order to further promote renewable energy sources and demand management, integrated energy planning at local and regional level, incorporating a mix of legal, regulatory, financial, communication and training measures are necessary. Many regions in Europe already apply such an integrated approach which contributes to increasing the security of supply and minimizes the external energy dependence. This is especially relevant in times of liberalization of energy markets, where the decentralized approach is gaining in importance. An increasing number of representative cases are emerging in Europe, leading to substantially high RES shares, even designed to reach 100% of local energy supply and, resulting from this, to the stimulation of the local/regional economy, while improving the environment. Cross-border cooperation between regions of different countries of the European Union and its Accession States has brought forward fruitful synergy effects, promoting best-practice and sharing lessons-learned towards a common objective.

In recent years, the European Commission has been placing an increased emphasis on capacity building at regional and local level, through the creation of regional and local energy agencies. The first agencies date back to the late 1980s and early 1990s. Nowadays, the Commission is working with around 250 local and regional energy agencies spread all over Europe, with the objective of developing and implementing a combined energy efficiency and renewable energy strategy for their respective fields of activity.

This session will illustrate the importance of actions at regional and local level for the development of renewable energy sources. It will give an overview of the key lessons learnt on the basis of examples collected from all over Europe. It will also address challenges, barriers and ways forward and, finally, it will discuss the impact of existing policy frameworks and put forward suggestions for future action at Community level.

- How does a high share of Renewable Energy Sources at regional and local level contribute to job creation and economic growth?
- Renewable Energy is an alternative economic activity in rural areas whose development is lagging behind and in declining industrial areas – what are the reasons for success?
- Which Renewable Energy technologies are most successful in these areas and which technologies are unexpectedly left behind?
- What are the main barriers / stimulating factors for RES development at regional and local level?
- What recommendations and hints for success can be derived from existing initiatives?
- What sort of Community intervention and promotion would be appropriate during the next 5 years as the basis for a future “European Public Awareness Campaign?”

REGIONAL ENERGY PLANS THE CASE OF NAVARRA (SPAIN)

The region of Navarra is located on the westernmost part of the Pyrenees, on the border with France. It has a population of 550,000 inhabitants, and is counted among the pioneers of Europe in wind energy development. The Navarra Energy Plan (1995-2000) paved the way to supplying 40% of the region's electricity needs in 2000 from wind energy –nearly double the original target. In 2002, installed renewable energy capacity produced 55% of the electricity consumed. This boost was achieved by the clear objectives of the regional Energy Plan, broad social acceptance of wind energy facilities, and private promoters.

The Navarra Energy Plan Targets for 2005 foresees yet again a doubling of RES electricity capacity, including the doubling of wind installed capacity and expansion in solar photovoltaic and solar thermal generation – aiming towards a 97% green electricity coverage by 2005.

Regions



Panel 1c:

PAVING THE WAY TOWARDS 100 % RE BASED COMMUNITIES & ISLANDS: UTOPIA OR AMBITIOUS REALITY?

Modern societies are seeking to implement integrated development models and infrastructure that will accommodate social and economic requirements and expectations, respect the environment and that will be sustainable. The integration of all these, sometimes conflicting, elements is a complex issue and calls for the guidance provided by successful examples of a manageable size, and that can point the way forward for larger units. Local energy communities can pioneer the application of the integrated measures which are required to attain our global commitments and, as a result, become excellence-models for the dissemination of such concepts around Europe. An increasing number of communities in Europe are committed to reach renewable energy shares which go far beyond the EU global objectives: they do not speak of 12% RES share, but are working to achieve 100% Renewable Energy supply.

Islands and isolated rural communities, particularly in the remote or outermost regions of Europe are at present highly challenging laboratories for the development of 100% RES solutions, due to their scale, highly costly or lack of conventional resources, abundance of renewable resources, need of future energy reliability and the environmental and economic impacts caused by importing conventional energy.

Communities and islands aiming towards 100% RES are today facing the double challenge of firstly having to consolidate their recently attained achievements, and secondly to demonstrate that they have the capacity to contribute to the large-scale deployment of renewables at a European level.

In Europe some pioneer Communities have shown the way and through the Campaign for Take-Off, a number of pilot communities - regions, cities and islands, which aim at 100% renewable energy supply, have become Partners with the European Commission. These should serve as credible pacemakers showing to other communities the right way to achieve large-scale development of 100% RES projects. Their initiatives and strategies represent in many respects the most successful future energy policies based on renewables. They serve as essential references in the search for solutions to the complex problems and challenges brought by technological innovation, favourable markets, appropriate regulations and social participation and facilitate the consolidation of renewables-based sce-

narios. This session will present the policies and experiences of rural and island communities in the EU from a wide range of different perspectives, and the discussions will focus on those aspects which could form the basis for future actions aimed at building on their successes. The aim will be to explore how best to use the existing actions and experiences in the future, and if necessary to adapt them in order to make them attractive to larger communities, particularly in urban areas.

RAISING AWARENESS AMONG LOCAL AUTHORITIES OF ISLANDS:

Starting from the 1st European Conference on Sustainable Island Development in 1997, a completely new approach was boosted to raise awareness of public authorities and citizens, promote active inter-island co-operation and reinforce exchange of islander experience in finding integrated concepts towards sustainable development. The specificity of island issues has been a constant element of reflection in most stakeholder meetings on European level and has been subject to inter-island agreements. The Declarations of Palma de Majorca (1999), Azores (2000), Cagliari (2001), Chania (2001) and Crete (2003) have illustrated the necessity of joint initiatives and action and have put a clear focus on sustainable island development, therein particularly reinforcing the importance of renewable energy development.

Islands

- What are the success factors to achieve 100% Renewable Energy supply?
- How to face intermittency in supply and how to face seasonal demand?
- How to reconcile energy supply with demand in a tourist oriented economy, or a farming based economy?
- What are the main barriers/stimulating factors for RES deployment on islands and remote communities?
- What recommendations and hints for success can be derived from existing initiatives?
- What is the role of the policy framework today and what needs arise for the future?

TUESDAY, 20TH JANUARY 2004

Session 2

IMPLEMENTATION OF RENEWABLE ENERGY SOURCES POLICIES IN THE EUROPEAN MARKETS

Panel 2a:

PRODUCING RENEWABLE ELECTRICITY FROM RENEWABLE ENERGY SOURCES - WHAT IS BEING ACHIEVED AND WHAT ARE THE BEST APPROACHES FOR OVERCOMING ADMINISTRATIVE AND MARKET BARRIERS?

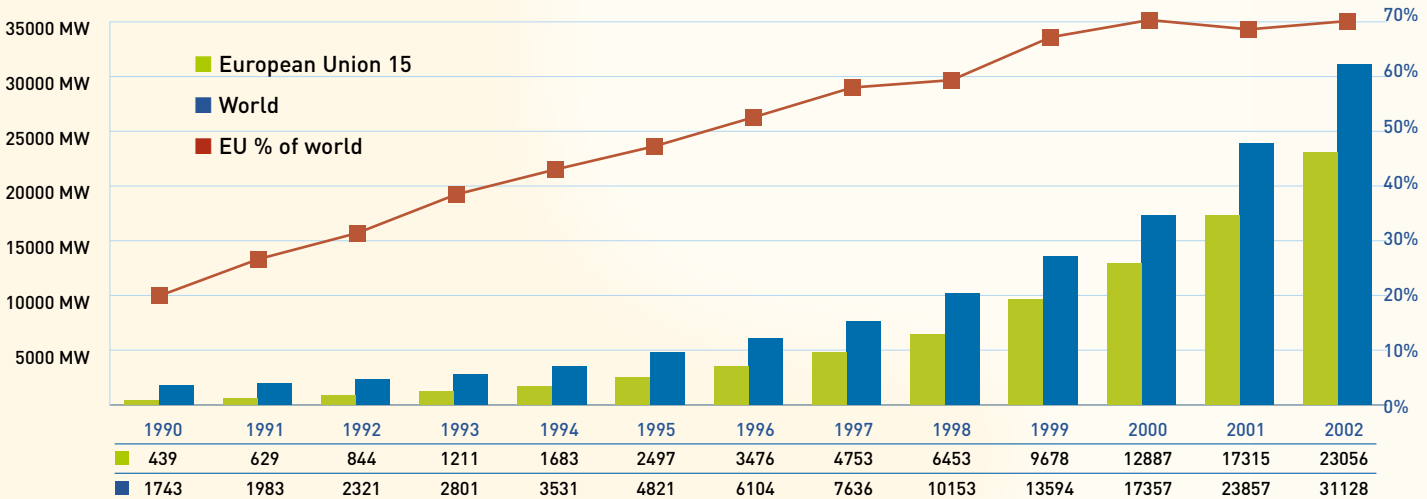
Electricity can be produced by each of the main renewable energy sources (wind, hydro, geothermal, biomass, and solar). During the last decade, despite economic downturns, there has been a steady growth in the market for renewable electricity worldwide, especially in Europe and some sectors, notably wind energy have grown remarkably with annual growth rates exceeding 35%. European companies are world leaders in supplying technologies for renewable electricity production, and have therefore benefited from this market growth, with an annual turnover of more than € 10 billion and an employment of more than 200,000 people.

Nevertheless, renewable electricity today accounts for less than 15,8% of Europe's electricity consumption, and policy makers recognise that much remains to be done before the benefits of renewable electricity, including improved security of supply, affordable energy prices and environ-

mental protection, can be fully realised for the majority of European citizens. This is why all of the EU Member States should ensure that all aspects of the EU Directive on electricity produced from renewable energy sources which was signed in September 2001 are implemented at national level. Five important barriers are identified in the Directive, and these are still slowing the growth of renewable electricity markets in most of the EU down Member States. In particular, favourable policies are needed at National and local levels to optimise application procedures for financial support, to simplify administrative procedures for planning and building approvals, to issue guarantees of origin, to ensure transparency of grid connection costs, and to facilitate access to electricity grids at each of the required voltage levels.

The implementation of the internal electricity market and the need to maintain competitive electricity prices on one hand and the needs to reduce dependency on imported energy sources, and to respect international agreements on reducing emissions of greenhouse gases (Kyoto) are already leading to important changes in the electricity sector. These changes and, notably, higher penetration of smaller distributed electricity generators will require in future that EU electricity grids be managed using far more intelligent management systems, which can respond more easily to variable sources of electricity supply. They should therefore be able, more easily than before, to accept the introduction of new renewable electricity generators. However, it will be important to ensure over the next few years that new intelligent grid management systems are designed to be fully compatible with the needs of renewable electricity generators. In addition, there is still a need to raise the awareness of the general public and of high level decision makers in utilities and in local administrations concerning the potential benefits of renewable electricity.

■ Cumulative installed wind capacity



Source: EWEA, 2003

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Security of energy supply

This session should focus on existing experiences and on new proposals for national and local policies and actions, which could help to remove some of the barriers identified above. It should lead to recommendations for policies and programmes which can be implemented at EU, National and local levels to share experiences, and to encourage the relevant decision makers to tackle the administrative barriers which are slowing the growth of renewable electricity markets in the EU today.

“Community resources in conventional primary energy cannot, at their current stage of development, form the basis for European energy self-sufficiency. Only technology intensive renewable resources can help mitigate the present trend towards increasing energy dependence.”

“Towards a European strategy for the security of energy supply”, European Commission, 2000

- What are the most successful national policies and actions for addressing issues overcoming the five barriers which are identified in the EU Directive - such as application procedures for financial support, administrative procedures for planning and building approvals, guarantees of origin, transparency of grid connection costs, and access to electricity grids?
- What are the most effective ways to raise public awareness of the benefits of RES electricity?
- Are there other important barriers to the higher market penetration of RES electricity?
- Are there special barriers to be overcome, when connecting small generators (eg photovoltaic, biomass) to the grid?
- Will new barriers arise as the percentage of renewable electricity in the grid increases?
- What should be the policy of grid regulators concerning decentralised electricity supply the diversity of electricity supply, and the maximum percentage of renewable electricity on the grid?

Panel 2b:

SUPPORTING RENEWABLES ELECTRICITY IN THE MARKET - WHICH ARE THE BEST SUPPORT-SCHEMES FOR RES-ELECTRICITY APPLIED IN EUROPE?

Investment decisions depend both on the level of financial support and on the stability of promotion schemes, since investors require a return on their investment with an acceptable level of risk. This implies that support mechanisms should not be changed too frequently, and that they should be underwritten for an adequate period of time to secure the expected returns on investment, in order to encourage new investments in renewable electricity generation.

In the Union’s context, the environmental State Aid rules permit a relatively wide range of support schemes for promoting energy efficiency and renewables and the Renewable Energy Electricity Directive, while not providing for a harmonised support scheme, allows and encourages Member States to promote the production of electricity from renewables Five main types of financial support scheme are currently applied in Europe, namely feed-in tariffs, obligations with tradable certificates, tax relief, capital subsidies, and competitive tendering schemes.

The Renewable Electricity directive permits the member states to set up support schemes, while not providing for a harmonised support scheme. Until now, feed-in tariffs have shown themselves to be the most effective for promoting rapid growth in new renewable electricity markets. However, feed-in tariffs are criticised for not providing a sufficiently strong incentive for cost reduction. The challenge would be to find ways in which feed-in tariffs systems could evolve to remain an economically acceptable long-term solution for supplying markets with a substantial percentage of renewable electricity.

Tradable certificate schemes are expected to have a stronger impact on cost reduction, because they should encourage more competition in the market. However, certificate schemes are criticised for not providing a sufficiently low risk opportunity for investors, since the market for certificates is not yet fully developed. The market for certificates could of course mature in the future, and might offer other benefits, for example by facilitating international trading in renewable electricity, and monitoring guarantees of origin.

Tax relief schemes offer particular benefits for investments by householders in small scale renewable electricity generators, but have been found to discourage investments by developers who do not become the final owners of the renewable electricity generators, and therefore cannot claim the tax relief at the time of their investment.

Capital subsidies were the first form of public support for renewable electricity generation, but are no longer widely used because they tend to discourage cost reduction. Capital subsidies were replaced in some Member States by tendering schemes (NFFO in the United Kingdom and AER in Ireland) in order to introduce competition and encourage cost reduction. However, although these schemes led initially to an encouraging response from developers, many projects were subsequently abandoned and the final results in terms of delivered renewable electricity have been disappointing. Most Member States have therefore abolished them.

This session will discuss current trends based on the experience, which is available to date, with the different types of financial support scheme for renewable electricity, and attempt to draw conclusions concerning the different policy options and the best way forward at EU national and local levels.

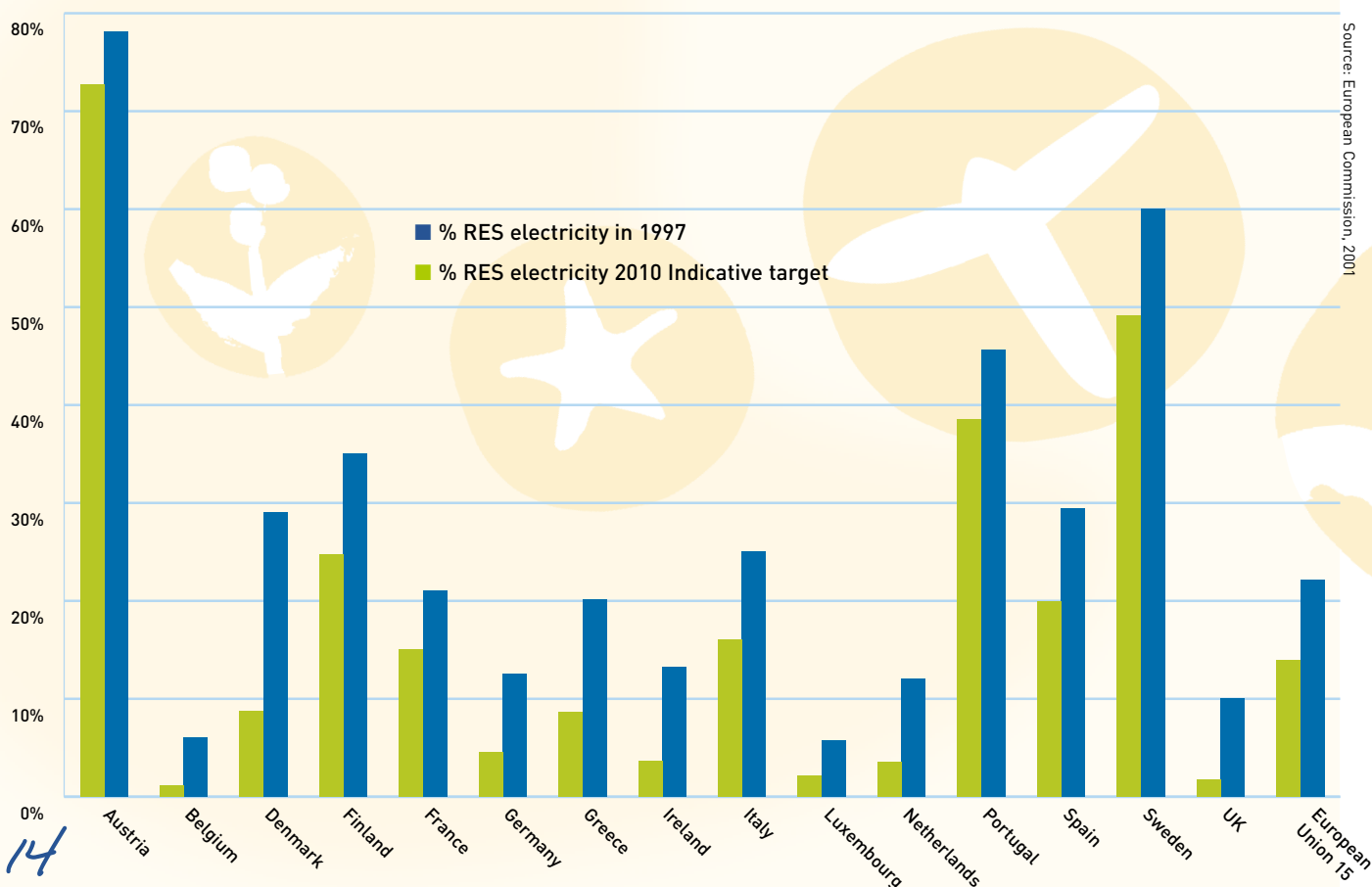
Feed-in laws

EXAMPLES IN EUROPE

Feed-in laws have been implemented for almost a decade in Denmark, Germany and Spain with different guaranteed tariffs for the various RES technologies and with different responses from the market. Other countries have recently introduced feed-in laws, for example in France. The most rapid growths in the renewable electricity market can be seen in these countries.

- What are the advantages and disadvantages of the different financial support schemes?
- Which form of support-scheme provides the best way to accelerate the penetration of renewable energies into EU markets?
- Do different renewable electricity technologies need different promotion mechanisms?
- What are the best long-term support schemes for renewable electricity?
- What would be the best option for an EU wide support scheme for renewable electricity?

■ RES-e Directive targets - EU-15, from 14% in 1997 to 22% in 2010



Source: European Commission, 2001



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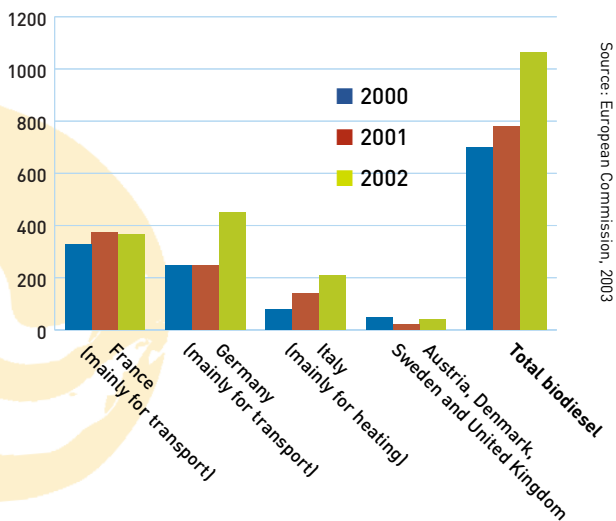
Biofuels for Transport: the real start in Europe now?

In the EU, the transport sector relies today for more than 90% of its energy on mineral oil, and a growing proportion of this will have to be imported in the future. This is unacceptable from the point of view of the future security of EU energy supply, as well as from an environmental perspective (emissions of greenhouse gases), and justifies serious efforts by all sectors of society. Moreover, global oil supplies are finite and the majority are located in regions of the world, which are distant from the EU. As a result, oil prices have already shown increasing volatility in recent years, and this volatility can only be expected to increase in the future.

In this context, the EU has implemented two new Directives, which are designed to promote significant increases - up to nearly 6% in 2010 compared with the current 0.6% - in the use of biofuels, such as biodiesel and bioethanol, for transport applications.

The keynote speeches will review the background to the two new EU Directives, European policy in biofuels and present active national policy options promoting and ensuring that there is a significant future growth in the use of biofuels for transport applications in the enlarged EU.

■ Biodiesel production in million of litres



In 2002, the total production of biodiesel and bioethanol was 1364 million litres which is equivalent to 1 Mtoe. The EU target for 2010 of 5.75% is equivalent to 18 Mtoe

DIRECTIVE ON THE PROMOTION OF BIOFUELS

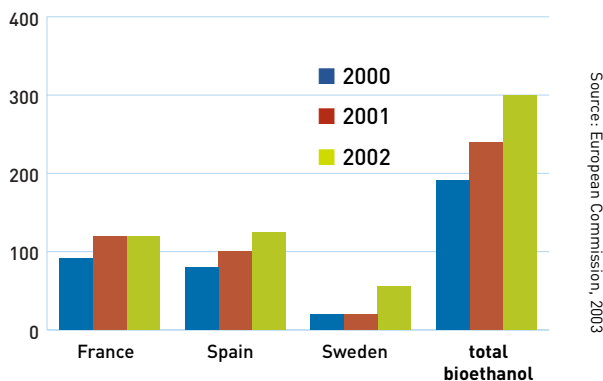
In May 2003, the European Parliament and the Council adopted the Directive on the promotion of biofuels for transport. This was the first Directive in this field, its main objective is to raise the part of biofuels used for transport purposes from the current 0.6% to 2% by 2005 and to 5.75 % by 2010. Biofuels, include, bioethanol, biodiesel and any fuel for transport produced from renewable energy sources. National governments should, according to the Directive introduce measures to promote the production and use of biofuels in their territory.

THE NEW FISCAL DIRECTIVE ON THE TAXATION OF ENERGY PRODUCTS

The Council Directive adopted in October 2003 widens the scope of the EU's minimum rate system, previously limited to mineral oils, to all energy products including coal, natural gas and electricity and updates the minimum rates for mineral oils which had remained unchanged since 1992. Energy products are taxed only when used as a fuel or for heating. Among other provisions the Directive allows Member States to exempt renewable energy sources, including biofuels, as well as energy used for carriage of goods and passengers by train, metro, tram or trolleybus. In addition, Member States can refund part of the taxes paid by firms investing in energy efficiency. According to the new Directive which restructures the Community framework for the taxation of energy products and electricity, Member States are allowed to apply fiscal advantages for encouraging the use of renewable energy and improving energy efficiency in their countries.

European Union legislation

■ Bioethanol production in million of litres



TUESDAY, 20TH JANUARY 2004

Panel 2c:**RENEWABLE HEATING & COOLING - WHAT ARE THE COMMON FACTORS AND BARRIERS WHICH INFLUENCE THE GROWTH OF EUROPEAN MARKETS FOR SOLAR, BIOMASS, AND GEOTHERMAL HEATING AND COOLING?**

Over 40% of the primary energy consumption in Europe is used for heating buildings, for domestic hot water production and for heating in industrial processes. Heat is the largest consumer of primary energy, being greater than electricity or transport. The markets for renewable heating sources (biomass, solar thermal, geothermal) therefore have a substantial potential for growth, and could replace substantial amounts of the fossil fuels and electricity, which are currently used for heating purposes.

However, both at EU level and in most Member States, renewable heating has so far received less political attention than renewable electricity, largely because renewable heating is not traded using European-wide networks. Another reason may be that renewable heating is sold mainly by SMEs, which do not yet have a strong identity in the EU energy markets, and which sell products (eg: solar water heaters or wood) rather than heating energy. The introduction of support schemes is more complicated for renewable heating than for renewable electricity, because there is not a single European market for renewable heating, the market is not regulated by a single regulator, and the monitoring of sales is not co-ordinated by a single entity.

Nevertheless, renewable heating was a key component of the 1997 White Paper on renewable energy sources, and should form a major part of any coherent strategy to develop renewable energy sources. EU targets already exist for the renewable heating sectors in the White Paper, and steps should now be taken to set specific targets for renewable heating and cooling, in the Member States.

A number of financial incentive schemes are beginning to emerge at a national or regional level in the EU. At local level new approaches are being developed such as the solar ordinances which have been approved by numerous Spanish municipalities, and these could for example be used as a model to be followed in other countries. However, solar energy is not progressing according to the estimated technical potential and dis-

parities between countries show the importance of promotional solar programmes. 83% of solar thermal installations (in square metres) are concentrated in Germany, Austria and Greece.

In Northern Europe, district heating fuelled with biomass usually operated by municipalities corresponds to a business involving all activities and actors from forest owners to final users. Manufactured products such as pellets, etc. are a growing market in some regions and countries while they are missing in others. Austria, Denmark, Sweden and Finland are leaders in the pellets production capacity. The production capacity in these four countries represented in 2001, 60% of Europe's capacity.

Geothermal of low enthalpy is one of the unavoidable components of renewable supply in cities and at small scale in houses. Italy, France and Austria represent about 80% of the low- temperature geothermal energy capacity of the EU.

Also, since the end user usually has a direct influence on the choice of energy sources for heating and cooling applications, it is important to allocate sufficient effort to awareness raising campaigns and to the integration of renewable technologies like solar heating and biomass into the mainstream heating and construction industry.

This session will focus on initiating a European debate on policies and new legislative options for promoting and providing financial support for the different renewable heating and cooling technologies.





THE CASE OF AUSTRIA

In Upper Austria, a region with 1.4 million inhabitants located in the northern part of Austria, renewable energy sources provide 30% of the primary energy consumption (16% of which is biomass). This high market penetration was achieved by a clear political commitment expressed in quantitative targets and the implementation of an energy action plan, dedicated to sustainable energy market development.

Biomass heating has seen a strong market development in the past decade in Upper Austria, both for biomass district heating systems (more than 200 are in operation) and for small-scale heating systems using logs, wood chips and wood pellets - in total more than 15,000. The fast growing pellets market in Upper Austria contributes to more than 30 % of biomass heating installations in new one family homes and increasing market shares in public and commercial buildings (at the same time, oil-heating systems for new homes decreased from over 40 % to 8 %).

- What are the key elements of those successful national policies which are already in place in the EU for promoting the use of renewable heating and cooling?
- What forms of legislation and promotional schemes might be introduced in order to accelerate the growth of renewable heating and cooling markets in the EU?
- What are the specific drivers and barriers to the growth of renewable heating/cooling?
- What are the specific challenges to policies which promote renewable heating?
- Which regulations, financial incentives and other market stimulation tools have been most successful in promoting renewable heating / cooling?
- How can renewables be used to meet the growing demand for cooling?
What specific policies could be conceived to stimulate RES-cooling?
- Which policies would be most useful at EU level?

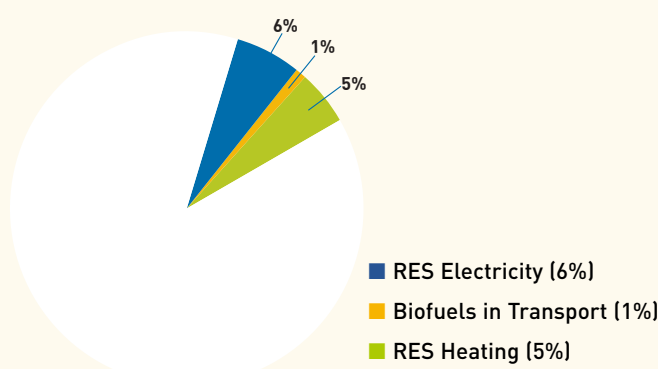
■ Heat production in EU-15 in Mtoe

Type of energy	1995 Eurostat	2000 Eurostat	Annual growth rate 1995-2000 %	White Paper projections 2010
1. Biomass	37	42,88	2,9	75
2. Geothermal	0,56	0,66	3,3	1
3. Solar Thermal Collectors	0,24	0,36	8,04	4
Total Renewable Energies	37,8	43,9	3,0	80

Source: Eurostat, 2003

The White Paper of 1997 set a target of 12 % RES contribution to the gross inland energy consumption in the EU, by 2010. The specific target for RES-electricity contained in the renewable electricity Directive of 2001 corresponds to roughly 6 % of the estimated energy consumption in 2010. The specific target contained in the Directive on biofuels for transport of 2003 corresponds to roughly 1 % of the estimated energy consumption in 2010. While no explicit targets are set for RES-Heating, at least part of the remaining 5 % of energy from RES should come from the heating sector. Action has to be taken to achieve this target.

■ Projected share of RES in the gross inland consumption in the EU-15, White Paper 2010 Targets



Source: European Commission, 1997

TUESDAY, 20TH JANUARY 2004

Panel 2d:**RENEWABLE ENERGY:
HOW TO CREATE A LEVEL-PLAYING FIELD?**

There is a common understanding that the use of renewable energy generates benefits in terms of avoiding GHGs emissions, reducing energy imports, creating jobs, however, when discussing the best ways of promoting the market for renewables, the question is frequently raised as to whether there is fair competition in the energy market. Fair competition in energy markets is a complex issue, because it needs to take into account a number of different but inter-related issues, including the provision of direct and indirect public support, and the internalisation of a wide range of external costs.

The discussion about internalisation of external costs has been promoted for many years. However, it is both scientifically difficult to determine the full socio-economic and environmental costs of the various forms of energy generation and distribution, and politically difficult to reach agreement on how to integrate such costs into energy prices.

In Europe, nevertheless, there is a growing political will for an open debate about the true costs of energy supply and the integration of the "polluter-pays" principle. Moreover, whilst on one hand, precise national data on the external costs created in each country by the use of conventional energy sources may be difficult to determine, on the other hand, it is becoming increasingly clear that most of those external costs which are created by conventional energy sources are not created by renewable energy sources. Such an understanding, even without precise scientific data, can permit politicians to introduce measures which begin to level the playing field for renewable energies, and this has already been done in some EU Member States, for example the climate change levy in the United Kingdom and the carbon tax in Sweden.

This session should review how public support for renewables can be justified in the long term, in order to reflect the benefits of renewable energy in terms of sustainable development at global and local levels. It should consider the relationships between support for renewable energies and other measures to address carbon emissions, such as taxation, and should include a discussion of the best forms of financing scheme from an industry perspective, since

such major long term policies must involve important commitments from the private sector.

In addition, a number of innovative financing schemes have been developed by the private sector in recent years to address the growing need for capital investments in renewable electricity generating plant. The most successful approaches should be reviewed in this session, including the use of local co-operatives, which have the added benefit of stimulating local commitment to the renewable generating plants concerned, and third party financing schemes via local Energy Services Companies (ESCO's) and independent developers. Nevertheless, there is still a need to motivate local Banks and venture capitalists to take a greater interest in the future investment opportunities offered by the renewable energy sector. In relation to the promotion of export markets, the potential roles of the International Financing Institutions, including the EIB and regional investment banks, and for public-private partnerships should be discussed.

This session should review how public support for renewables can be justified in the long term, in order to reflect the benefits of renewable energy in terms of sustainable development at global and local levels. It should consider the relationships between support for renewable energies and other measures to address carbon emissions and should include a discussion of the best forms of financing scheme from an industry perspective, since such major long term policies must involve important commitments from the private sector.

As announced by the German Chancellor Gerhard Schröder at the World Summit for Sustainable Development in Johannesburg in 2002, the German Government will hold an

International Conference for Renewable Energies - Renewables2004 -

from 1.-4. June 2004 in Bonn, Germany.

The conference will address the lead question: how can we substantially increase the proportion of modern renewable energies in industrialised and developing countries?

For more information, contact the Federal Ministry for Economic Cooperation or visit www.renewables2004.de

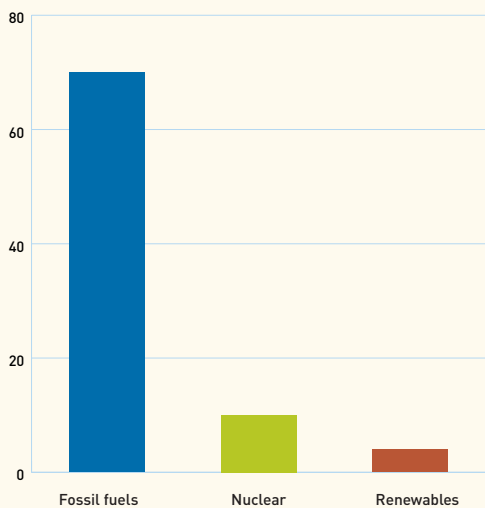


Innovative financing

THE CASE OF EEKLO

In the small Belgium City of Eeklo a wind power project with an innovative financing scheme is running very successfully. Close community involvement was a main aim of this project, which supplies approximately 4 MW to the Belgian electricity grid. The success of this project lies in achieving local support by delivering direct benefits to the residents of Eeklo through selling them shares at 250 Euro each, with 6% annual dividends. All shareholders have an equal influence on the project regardless of the amount of shares that they possess.

■ Tentative estimates of subsidies and other kinds of support in the EU in billion of Euros per year



Source: European Parliament - STDA, 2001

SUPPORT FOR CONVENTIONAL ENERGY

Public support

Traditionally, emerging energy technologies have always been supported and the value of public support can last for many years, so that even in countries where the government does not provide direct financial support for conventional energy sources today, it is frequently the case that public support which was made available some years ago is still of benefit in today's markets.

Many of the investment costs of the older power generating plants and distribution networks have now been written off in the accounts of their owners, and therefore such plants can be more profitable than new ones. Further, many of the traditional energy supply industries benefit from indirect public support during their decommissioning phases.

- What are the best examples of schemes for internalising the external costs of energy in Europe today?
- Transparency in energy costs: would this favour or discourage Renewable Energy investments in the long term?
- What are the long term added values of renewable energy compared with conventional energy?
- To what extent is it helpful to link financial instruments and measures for promoting renewable energies with those for promoting reductions in greenhouse gas emissions?
- Should the profits generated by the conventional energy industry contribute to the financing of renewable energy?
- How would the internalisation of the external costs of energy affect the competitiveness of the leading European industries in global markets?
- Is there a problem today in raising finance for renewable energy projects?
- Would innovative financing schemes be needed on a level playing field?

The main thematic focus will be:

- Advantages, benefits and potential of renewable energies
- Strengthening financing for renewable energies from all sources
- Creating a more effective governance and policy environment
- Building capacity, knowledge and institutions

The expected outcomes of the conference will include:

- An international action plan with actions and commitments
- National and regional targets and timetables for renewables, set on a voluntary basis
- Guidance for good policy
- A follow-up process

WEDNESDAY, 21ST JANUARY 2004

Session 3

LOOKING FORWARD: HORIZON 2020

Panel 3a:

TARGETS AND SCENARIOS FOR THE DEVELOPMENT OF RENEWABLE ENERGY MARKETS IN EUROPE UP TO 2020

The European Union began to set targets for renewable energies in 1997, in its White Paper on renewable energy sources. An overall target of doubling the contribution from renewable energy in the final EU energy consumption was set with a target date of 2010, together with projections for each of the renewable energy technologies. Since that time, new legislative frameworks (Directives) have been put in place at an EU level with a view to ensuring that these targets will be achieved in both the renewable electricity and bio-fuels sectors. The relevant Directives include targets for each EU Member State and more recently for each of the Accession States.

The progress which is being achieved towards these 2010 targets is being monitored by the Commission, by the Member States and industries concerned. Until now, the most successful renewable energy technology sector has clearly been wind, which has far exceeded its targets, and it is still expected that the overall targets for renewable electricity and biofuels will be achieved by 2010. However, not all of the renewable energy technology sectors have demonstrated the same rates of market growth, and further efforts by the Commission and by the EU Member States are likely to be needed in order to accelerate the growth of the markets for those renewable energy sectors which are lagging behind, notably the renewable heating technologies.

Planning for the future, a number of studies have been carried out, looking at the potential contributions which could be made by renewable energy sources in the medium to long term. Such studies have been based on various policy assumption scenarios, and the work carried out to date clearly shows that, with an appropriate set of strong long term policies, renewable energy sources could make a substantially greater contribution

to EU final energy consumption in the future. In order to establish the policies which will give a stable and adequate context for achieving greater contributions from renewable energies, one of the first steps is to develop a new set of more ambitious targets for 2020.

Targets represent a first step in policy making but not the only one. Other associated policies are needed. For example, to facilitate the raising of financing for investment, to introduce transitional support schemes to guarantee a stability of the market, to focus research and development actions aimed at reducing the technology costs and at bringing forward new renewable energy technologies. A lesson already learnt is that developments in renewable energies are minimised if they are not accompanied by improvements in the efficiency of energy use.

This session will discuss the results of recent studies which present future scenarios for the potential contribution of renewable energy sources, and seek to identify the best ways of move forward in the medium term, towards 2020. Possible new EU targets for the deployment of renewable energies in the period up to 2020 will be reviewed, as well as the new policies which would be needed to ensure that such targets are achieved.

- What could be the feasible share of Renewable Energy Sources in the year 2020?
- What policy measures and legislation would be needed to reach the new targets?
- What new technologies and cost reductions would be needed to achieve new targets?
- What will be the new priorities for RTD?

Panel 3b:

FROM RIO TO KYOTO AND JOHANNESBURG: THE SPOTLIGHT HAS TURNED TOWARDS RENEWABLE ENERGY SOURCES

The focus of international attention in Rio and later in Kyoto was on the need to tackle the emissions of greenhouse gases in order to combat climate change, and this led to the development of new mechanisms



Kyoto protocol

aimed particularly at reducing the emissions of CO₂. More recently, in Johannesburg, the focus of attention has moved to address in more detail the mix of instruments which are needed to tackle climate change. As a result, it is now widely acknowledged that renewable energies have a crucial and worldwide role to play in sustainable development and in poverty alleviation.

COMMITMENT TO REDUCE GREENHOUSE GAS EMISSIONS

Some years after the Kyoto Protocol was signed by the EU and many other parties, the first objective of a rapid entry into force has not been reached. Concerning its main objective, in the year 2003, CO₂ emissions in the EU are still roughly the same as they were in 1990. To curb the trend of ever increasing greenhouse gas emissions, action is therefore necessary in the policy area.

In Europe, a reinforcement of policies and of measures is needed at national and local levels in order to create a downward trend in emissions, and to deliver the commitment made at Kyoto to an overall 8% reduction of greenhouse gas emissions compared to 1990 levels by the year 2012.

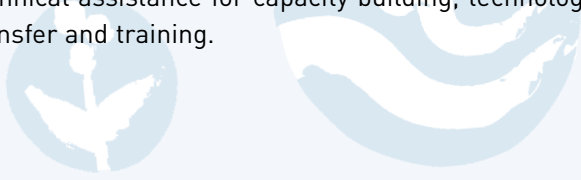
In Johannesburg, the EU committed itself to taking an important lead both through the EU Energy Initiative for Poverty Reduction and Sustainable Development (EUEI) and through the Johannesburg Renewable Energy Coalition (JREC), to which more than 82 countries have now signed up. These commitments have two important components, firstly to work to develop new renewable energy policies and more cost competitive renewable energy technologies for use inside the EU, and secondly to develop and transfer to developing countries those mature renewable energy technologies, which are cost competitive and suited for use in the developing world.

It follows that renewable energies will be used in particular in developing countries only where they offer the most cost effective option, or where suitable forms of international support are available to cover any additional costs involved. However, even in cases where renewable energy sources offer the most economic option, it is often still the case that the available financ-

ing mechanisms are not adapted to decentralised energy systems, such as those needed for the majority of renewable energy sources.

More concrete actions and long term financial commitments targeted on the deployment of renewable energies in developing countries are therefore needed, since it is now crucial that both the EUEI and the JREC should move forward on a firmer financial basis. In terms of international support, the Clean Development Mechanism (CDM), foreseen in the Kyoto protocol, may have a growing role to play in the future for fostering the deployment of renewable energy sources in developing countries, but the extent to which this will stimulate new renewable energy projects and investments is not yet clear.

Since this conference aims to give the European input to the Bonn Conference in June 2004, this session should focus on the policies and measures which should be adopted in Europe, in order to increase the share of RES and to make available to the developing countries a portfolio of mature, cost competitive renewable energy technologies. In addition, it should address the related issues of helping the developing countries to establish their own renewable energy policies, sustainable financing, and the provision of technical assistance for capacity building, technology transfer and training.



- What role could Europe play at international level to increase the share of RES ?
- What should Europe do to support the development of Renewable Energy Sources for use in the developing world?
- How will renewable energy contribute to poverty eradication and sustainable development in developing countries?
- What additional policy measures are necessary to finance the EU initiatives launched in Johannesburg?
- What possibilities are offered by the Clean Development Mechanism (CDM) and Joint Implementation (JI) to renewable energy sources deployment?

PRACTICAL INFORMATION - DATE & VENUE

Start of the Conference: 19 January 2004 - 9:30 - Closing of the Conference: 21 January 2004 - 13:30

Berliner Congress Center - Alexanderplatz 3 - 10178 Berlin, Germany - www.bcc-berlin.de

WELCOME & REGISTRATION DESK

- A **welcome desk** to hand out conference documents and general information will be available to participants in the conference venue at all times during the conference.
- A **registration desk** will be open on:
Sunday, 18th January 16:00 - 18:00
Monday, 19th January starting from 8:30.

CAMPAIGN FOR TAKE-OFF AWARDS CEREMONY 2003 - In the evening, the Campaign for Take-off Awards Ceremony will be held Monday, 19th January at the Berliner Congress Center.

CONFERENCE DINNER - The conference dinner will take place on Tuesday evening.

SITE-VISIT - A site-visit will be organised to the Reichstag in the afternoon of Wednesday 21st January.

SIMULTANEOUS INTERPRETATION - German, English and French

REGISTRATION

FOR ELECTRONIC ON-LINE REGISTRATION PLEASE VISIT THE CONFERENCE WEB SITE AT

<http://www.erec-renewables.org/Berlin2004.htm>

REGISTRATION

FEE 150 Euros

The Delegate fee includes participation in the conference, conference documentation, all coffee breaks, reception, conference dinner and the site-visit (Prices are per person and VAT is already included).

No registration fee will be required from public authorities or public administration representatives.

PAYMENT

The conference fee is payable upon receipt of an invoice. Please proceed with your payment by bank transfer as soon as possible, as the number of places at the conference are limited and places will be allocated on a first-paid first-served basis.

Payments must be made before 5 January 2004.

CANCELLATION POLICY

Total refund of fees will be made excluding an administration charge of 15% of the total amount, provided that advanced **written notification** is submitted **14 days** prior to the meeting. No refunds will be made for cancellations **after 5 January 2004.**

ACCOMMODATION - LIST OF HOTELS

Please contact the following hotels with the conference code "Berlin RES2004"

Category stars	Name	Price in Euro (Single room)	Address
5	The Westin Grand Berlin	109	Friedrich strasse 158-164 - Berlin 10117 Tel.: (+49) 30 20270 - Fax: (+49) 30 2027 3362 www.westin-grand.com
4+	Crown Plaza Berlin City Centre	119 129 (double)	Nürnberg Str. 65 - Berlin 10787 Tel.: + 49 30 21 007 0 - Fax: + 49 30 21 32 009 www.cp-berlin.com/index1.htm
4	Inn Side Residence Hotel Berlin	95 125 (double)	Lange Straße 31 - Berlin 10243 Phone:(+49) 30/29 30 3-0 - Fax: (+49) 30 29 30 - 199 www.innside.de/
4 3+	Park Inn Hotel	99 (Superior) 89	Alexanderplatz 8 - Berlin 10178 T (+49) 30 2389 0 - F (+49) 30 2389 4305 www.rezidorparkinn.com/
3	Hotel Unter den Linden	77	Unter den Linden 14 - Berlin 10117 Tel.: (+49) 30 23811-0 - Fax: (+49) 30 23811-100/400 www.hotel-unter-den-linden.de/en/index.html
2	Ibis Berlin Ostbahnhof	53	An der Schillingbrücke 2 - BERLIN 10243 Tel.: (+49) 30/257600 - Fax: (+49) 30/25760333 www.ibishotel.com/ibis/fichehotel/de/ibi/3108/fiche_hotel.shtml

Hotel allocation will be made on a first come first served basis. The options in the hotels (list above) are valid **early December**
All rates quoted on the accommodation form are per room, per night in Euro and include breakfast and VAT



REGISTRATION FORM - EUROPEAN CONFERENCE FOR RENEWABLE ENERGY

"Intelligent policy options"

19-21 January 2004, Berlin

Prof: Dr: Mr: Ms:

Last Name: First Name: Title:
 Company:
 Street:
 Postal Code: City Country:
 Phone: Fax:
 E-mail:

PARTICIPATION

I will attend the following events:

- "Intelligent policy options" (19-21 January 2004)
- CTO Awards Ceremony (Monday 19 January, evening)

SIDE EVENT PARTICIPATION

I will attend the following side-events:

- Conference dinner (Tuesday 20 January 2004, evening)
- Reichstag visit (Wednesday 21 January 2004, afternoon)

PLEASE FAX BACK TO + 32 (2) 546 19 34

HOW TO GET TO THE BERLINER CONGRESS CENTER

Alexanderplatz 3 - 10178 Berlin

Public Transport in Alexanderplatz:

(http://www.bvg.de/e_index.html for information on schedules):

- **Municipal Train (S-Bahn):** S3, S5, S7, S75, S9
- **Bus :** Bus 100, Bus 142, Bus 143, Bus 148, Bus 200, Bus 348, TXL
- **Tramway (Tram, Straßenbahn):** Tram 2, Tram 3, Tram 4, Tram 5, Tram 6
- **Tube Number (U-Bahn):** U2, U5, U8

By Plane:

In Berlin, there are three airports
<http://www.berlin-airport.de/PubEnglish/index.html>.

- **Tegel (North-West of Berlin)**
 - **Public Transport:** e.g. direct bus TXL ca. (45 minutes)
- **Schönefeld (South-East of Berlin)**
 - **Public Transport:** e.g. direct Municipal train S9 (40 minutes)

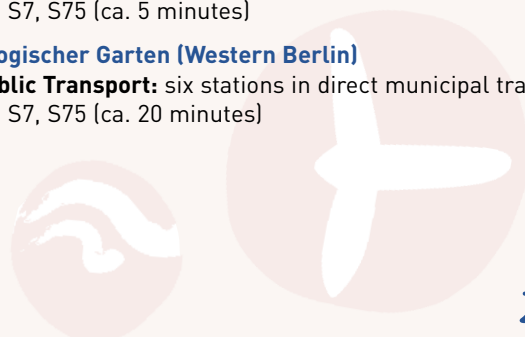
Tempelhof (in Northern-Central Berlin)

- **Public Transport:** e.g. U6 change at station "Stadtmitte" to U2 (15 minutes)

By Train:

Berlin has three main train stations:

- **Hauptbahnhof/Lehrter Bahnhof (Central Berlin)**
 - **Public Transport:** three station in direct municipal trains S5, S7, S75 (ca. 10 minutes)
- **Ostbahnhof (Eastern Berlin)**
 - **Public Transport:** two stations in direct municipal trains S5, S7, S75 (ca. 5 minutes)
- **Zoologischer Garten (Western Berlin)**
 - **Public Transport:** six stations in direct municipal trains S5, S7, S75 (ca. 20 minutes)



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and



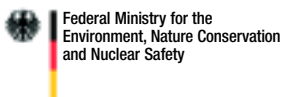
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