EIB Sustainable Development and Environment Documents

European Investment Bank

Contents

Introduction from the President

Sustainable development is high on the European Union agenda and environmental issues in particular are of major public concern. This is reflected in the importance that the European Investment Bank - the Union's long-term lending institution - attaches to these issues.

EIB's operations are driven by EU policies and objectives, with the main focus on activities in its Member States and in the Accession Countries. One of its key operational aims is to finance projects directly promoting the Union's environmental policies. Indeed, protecting the environment and quality of life forms one of the five main priorities in the Bank's "Corporate Operational Plan" that sets out a three-year rolling programme with quantified objectives.

This collection of "EIB Sustainable Development and Environment Documents" brings together for the first time the main policy statements and guidelines that outline the Bank's approach to sustainable development and the environment. *The Environmental Statement* firmly places Bank policy within the EU mainstream, while the papers on *Sustainable Development, Climate Change* and *Renewable Energy* address issues of growing public concern and fast evolving Union initiatives. The *Environmental Procedures* describe the Bank's approach to the environmental assessment of projects.

The scale of EIB operations is significant: in the past five years it has provided over EUR 29 billion for environmental investment in the EU Member States, with a further EUR 2.1 billion in the Accession Countries and EUR 1.6 billion in Partner Countries elsewhere in the world. The Bank's target is to increase and maintain its lending under this heading to account for between a quarter to a third of total individual loans.

As well as financing projects that contribute directly to the EU's environmental objectives, the EIB assesses the environmental impact of any investment it considers for financing. The provision of a Bank loan is conditional on the project meeting national and EU standards within Europe; elsewhere EU standards are used as a benchmark for judging a project's environmental acceptability. As a long-term lender, the Bank takes an extended view of the environmental consequences of all projects it supports. As a self-financing banking institution operating in financial markets, verifying the environmental viability of projects is one way to ensure the quality of the Bank's loan portfolio.

To take account of the growing volume and changing nature of environmental business, the EIB has recently made a number of adjustments in its Projects Directorate for handling environmental issues, as outlined in the *Environmental Procedures*. The Directorate is made up of teams of highly qualified project engineers and economists, with expert knowledge of the full range of environmental issues of their specific industries and sectors. A new structure has been established to develop and monitor the Bank's environmental policies and procedures; to ensure quality and consistency in handling environmental issues; and, to provide high-level guidance to the Bank's decision-making bodies.

Philippe Maystadt
President of the EIB

Environmental Statement

The EIB and its Environment Objectives, Operations and Approach

Policy objectives

As the European Union's long-term lending institution, the European Investment Bank plays a major role in implementing the EU's environmental policy. This "Environmental Statement" highlights the importance that the EIB gives to the environment and outlines the Bank's approach to environmental issues when financing projects.

- Environmental protection and improvement feature in the EIB's top operational priorities, along with regional development, innovation, accession of candidate countries and development cooperation with third countries.

- The EIB determines that any project it finances is environmentally acceptable to the Bank. It also finances projects that directly protect or improve the environment.

- The EIB's target is to ensure that between a quarter and a third of individual loan operations in the European Union will support environmental projects, with a similar percentage in the EU Accession Countries[1].

- Where the environment is concerned, the EIB's objectives are to:

- Preserve, protect and improve the quality of the environment;
- Protect human health;
- Ensure the prudent and rational utilisation of natural resources;
- Promote measures at an international level to deal with regional or worldwide environmental problems.

- In financing any investment, the EIB applies the core environmental management principles of "prevention", "precaution" and "the polluter pays", as called for in EU policy.

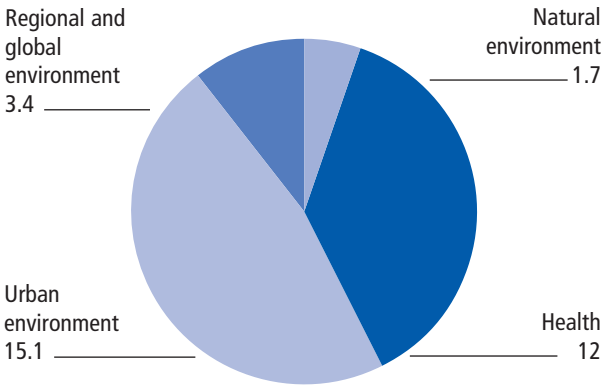
Financing projects that directly protect and improve the environment

The protection and improvement of the environment - including its effects on human health and the quality of life - are essential to the balanced and sustainable development of all the regions of operations of the EIB.

The EIB targets environmental projects in four main fields:

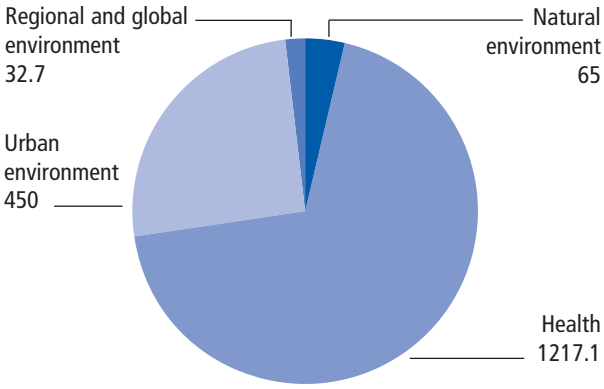
- The **natural environment and nature protection,** such as municipal and hazardous waste management and "eco-efficiency" in industrial processes and products (to conserve resources and minimise the generation of waste);

EIB Lending for the Environment in the European Union and Accession Countries
1997 - 2001 (EUR billion)



Total EUR 31 billion

EIB Lending for the Environment in Partner Countries
1997 - 2001 (EUR million)



Total EUR 1 655 million

**As certain financing operations meet several objectives, the amounts for the various headings cannot be meaning fully added together.*

(1) Bulgaria, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, and Turkey

- **Human health and the environment**, such as air pollution abatement and mitigation, the provision of safe drinking water and waste-water treatment;

- **The urban environment**, including urban renewal, urban transport and enhancement of the architectural and cultural heritage;

- The **environment on a regional and global scale**, including climate change-related issues and support for various regional sea and river basin environmental programmes.

More specifically, the environmental objectives of the EIB include the promotion of:

- The EU's **climate change policy**, especially the abatement and mitigation of emissions of greenhouse gases, notably improvements in energy efficiency and the introduction of less carbon-intensive sources of energy. In particular, the Bank will promote investment in renewable energy as well as promoting the research, development and manufacture of new renewable energy technology. It will at least double its loans (individual and dedicated global loans) for renewable energy over the next 5 years (2002-2007) as well as support emerging carbon markets;

- **New environmental technologies**, within the framework of the Bank's "Innovation 2000 Initiative" (i2i), established to support the EU's objective to develop a European knowledge-based economy, including, for instance, the development of new technologies in transport and energy production and the use of information and communications technology (ICT)[2].

Over the past five years, EIB loans for safeguarding and improving the natural and urban environment in the EU totalled about EUR 29 billion. In the same period, environmental projects were supported with EUR 2.1 billion in the Accession Countries and over EUR 1.6 billion in the European Union's Partner Countries.

(2) Venture capital resources through the EIB's risk capital arm, the European Investment Fund, are also used to support the development of environmentally friendly products or processes, including research and development.

Examples of EIB Financed Projects in 2001 for Protecting and Improving the Environment

The natural environment and nature protection
(e.g. municipal and hazardous waste management, eco-efficiency in industry)

- Construction of urban waste processing and recycling plant near Melun, Ile-de-France (France)
- Construction of an innovative steel waste treatment facility (Luxembourg)
- Upgrading of municipal solid waste processing and wastewater treatment infrastructure (Hungary)

Human health and the environment
(e.g. air quality, drinking water supply, wastewater treatment)

- Modernisation and extension of wastewater collection and treatment facilities in Flemish Region (Belgium)
- Upgrading and extension of sewerage and stormwater collection in the city of Trier (Germany)
- Water supply and wastewater treatment schemes in Andalucia and in the Valencia region (Spain)
- Modernisation and extension of water supply system in the southern part of the country (the Netherlands)
- Extension an upgrading of Vienna's main wastewater treatment plant (Austria)
- Upgrading of water supply and wastewater treatment infrastructure in the Midlands and Yorkshire (United Kingdom)
- Upgrading and extension of water supply and wastewater disposal networks (Slovenia)
- Improvement of drinking water supply in a number of towns (Morocco)
- Construction of drinking water supply network between Taksebt dam and Algiers (Algeria)

- Upgrading of drinking water supply to eastern coastal regions of Sahel and Sfax (Tunisia)
- Wastewater treatment and sewerage networks in the city of Mersin on Mediterranean coast (Turkey)
- Improvement of drinking water supply system and sewerage infrastructure for Dakaer region (Senegal)
- Extension of network for supplying drinking water to Ouagadougou from Ziga dam (Burkina Faso)
- Rehabilitation and extension of sewerage networks in Plaines Wilhems area (Mauritius)

The urban environment
(e.g. urban renewal, public transport, architectural and cultural heritage, natural disaster)

- Construction of light railway network in Copenhagen (Denmark)
- Construction of two tramlines in Athens (Greece)
- Construction of a new metro line in the south of Madrid metropolitan area (Spain
- Extension of the Toulouse metro (France)
- Urban renewal schemes in Salerno, Rimini, Reggio nell'Emilia and Lecce (Italy)
- Conversion of historic building into hotel, restoration of church and landscaping on San Clemente island, Venice (Italy)
- Construction of social housing and rehabilitation of old housing (Finland)
- Urban regeneration including rehabilitation and construction of social housing (United Kingdom)
- Emergency aid programme for reconstruction and repair of infrastructure following floods (Poland)
- Reconstruction of basic infrastructure damaged by Tisza floods (Hungary)
- Rehabilitation and reconstruction of industrial installations in earthquake-damaged regions (Turkey)

The environment on a regional and global scale
(e.g. climate change)

- Construction of hydro-power plant on river Guadiana, Alentejo (Portugal)
- Construction of a biomass-fuelled combined heat and power plant in Östersund (Sweden)
- Development of indigenous natural gas reserves with a view to thermal power generation (Tanzania)

In practice, much of the EIB's support for environmental projects in the **European Union** is focused on improvements in local and regional water resource management and air quality as well as the promotion of environmentally friendly industrial processes and products. The Bank also finances projects that aim to improve the quality of the urban environment, such as those to develop sustainable transport and to bring about urban renewal, including social housing in deprived areas.

In the **Accession Countries**, the environment is also a priority for the EIB, in view of the legacy of environmental damage inherited from the past but also their rich biodiversity. Nearly 20% of the Bank's lending in the Accession Countries in 2001 went for environmental projects in the water, waste disposal, urban renewal and industry sectors. The Bank's policy is to support the transfer, implementation and enforcement of EU environmental principles and standards, to pave the way for a smooth accession. The Bank cooperates with the European Commission to develop a high quality pipeline of priority environmental projects in the Central and Eastern European region.

The EIB also finances a wide range of environmental projects in similar fields in other regions of the world. In the **Mediterranean basin**, for instance, the Bank supports environmental projects to help protect the shared resources of the Mediterranean Sea (see "Economic and Financial Aspects").

To improve the financial viability of environmental projects in the Mediterranean region, EIB loans may be subsidised with funds provided from the EU budget. The Bank also offers financial support for feasibility studies of environmental projects in the Mediterranean region under the "Mediterranean Environmental Technical Assistance Programme" (METAP), launched jointly by the EIB and the World Bank in 1990 to improve natural resources management in the region.

A common environmental approach to all projects

Environmental Assessment

All projects financed by the EIB have to be economically, financially, and technically viable as well as acceptable to the Bank in environmental terms. When weighing up the environmental acceptability of a project for Bank-financing, the following considerations are taken into account:

- The environmental impact of the project after abatement, mitigation or compensation;
- The characteristics, size and location (especially with respect to sensitive areas) of the project;
- The presence/absence of any legal compliance issues;
- The quality of the Environmental Impact Assessment (EIA) where required - including the studies carried out and the nature/extent of public participation;
- The environmental management capability of the promoter, including the promoter's environmental awareness of, and capacity and willingness to act upon environmental issues;
- The presence/absence of any major environment-related project risks.

Relevant EU environment legislation, used as a reference for assessing the environmental acceptability of EIB-financed projects, includes that for EIA, integrated pollution prevention and control (IPPC), environmental management and audit systems (EMAS), large combustion plants, water, waste and the protection of birds and habitats.

In the EU, as well as in the Accession Countries, all projects financed by the EIB should comply with both national and EU environmental law, including the EIA Directive.

In all other regions, all projects should comply with national law; projects in other regions are also judged in the light of local circumstances according to the principles and standards of EU environmental law.

All projects should also comply with the obligations of multilateral environmental agreements to which the host country - and the EU in the case of a Member State - is a party.

The promoter is responsible for legal compliance, whereas regulatory and enforcement tasks lie with the competent authorities.

The EIB applies the same approach to global loan projects - broadly, lines of credit arranged with qualified financial institutions for financing smaller-scale investments - as to individual loans. Outside the EU, the Bank assists global loan intermediaries to follow specific procedures to support the capacity of the intermediary to finance environmentally acceptable investments.

Additional considerations

The EIB attempts to estimate, where practical, the economic value of any environmental external costs and benefits that are likely to have a major influence on the project financing decision.

The Bank may set specific environmental conditions on its financing to ensure the environmental acceptability of the project during implementation and operation. A loan is only disbursed once the Bank is satisfied that its requirements have been fully met.

Environmental information collected during the monitoring and evaluation phases of the project cycle may be used by the EIB to draw lessons to improve future projects as well as for assessing and reporting environmental performance.

Projects considered for EIB financing are appraised by multidisciplinary teams made up of financial analysts, economists and engineers from among the staff of the Bank. The Projects Directorate (PJ) has lead responsibility for the environmental aspects of any project. One or more members of PJ, specialists in their sectors, are involved in all stages of the project cycle (see "Useful EIB publications"), taking into account at each stage the environmental considerations among other issues. The environmental knowledge and skills of the staff of PJ are refreshed and developed on a regular basis. Other staff of the Bank also receive special environmental training.

Environmental organization

Following an extensive period of review and consultation, with effect from the beginning of 2002, the

EIB introduced a number of new integrated organizational and staffing arrangements to strengthen the approach to environmental issues in its lending activities. Building on its already considerable environmental experience and expertise and arrangements already in existence, that have guaranteed the Bank's good environmental record of the past, the EIB management committee endorsed three major developments:

- The establishment of a high level, cross-Directorate environmental steering committee (ENSC), to provide guidance to the decision-making organs of the Bank on new key policy issues as they arise;

- The reinforcement of the environmental assessment capability of PJ, through the strengthening of existing environmental skills and experience in the form of an environmental assessment group (ENVAG);

- The creation of an environmental unit (ENVU), as a focal point for the development and dissemination of the environmental policies and procedures of the Bank and to develop existing and new external relations on the environment.

Cooperation

The EIB works closely with other institutions in the field of the environment:

- The main partners of the EIB are the other EU institutions, in particular the European Parliament, the Council of Ministers and the European Commission. The Bank collaborates with them on environmental policy development and to strengthen its role in support of EU policy implementation.

- Outside the EU, the EIB often co-finances a project with one or more multilateral financial institutions (MFIs). It also cooperates closely with other MFIs to harmonise the approach in the field of the environment, including conditions and reporting requirements, and with a view to economy of effort and maximum effectiveness.

- The EIB also maintains a dialogue with representatives of civil society (NGOs, industry and consumer organisations) on its approach to general environmental issues and addresses matters that they raise on individual projects as they arise.

Finding out more

Project-related information on the environment can be found on the EIB's website, where the Bank publishes details on projects once they have reached an advanced stage in discussions on possible EIB involvement (unless the Bank is prevented from doing so for confidentiality reasons). This includes an environmental summary. The Bank also provides more general information on its environmental activities, in the Annual Report, the annual Corporate Brochure, which reviews environmental lending in terms of objectives, the Corporate Operational Plan, the "EIB Information" topical bulletin and specialised reports.

Useful EIB publications

- EIB Group Financial Report & Projects Financed and Statistics
- EIB Group Activity Report
- EIB Corporate Operational Plan
- The EIB and its Contribution to Sustainable Development
- The Project Cycle at the EIB
- EIB Environmental Procedures
- EIB and Climate Change
- EIB Support for Renewable Energy
- Guide to Procurement for Contracts Financed by the EIB
- EIB Information Policy Statement
- Code of Good Administrative Behaviour for EIB Staff in its Relations with the Public.

See also the publication list of the EIB on its **website: www.eib.org.**

EIB Environmental Procedures

All projects are examined

The European Investment Bank's mission is to finance projects that further European Union priority policy objectives, as is reflected in EIB's Corporate Operational Plan.

While the Plan's priorities and targets include support for projects with direct environmental benefits - including the protection and improvement of the natural and urban environment - all projects selected by EIB have to be acceptable in environmental terms. In this respect, EU policies and law form the basis of EIB's environmental guidelines.

To determine whether a project is acceptable for financing by the Bank in environmental terms and under what, if any, specified conditions, EIB carries out an environmental assessment[1] of each investment, drawing on:

- its extensive in-house knowledge and expertise;
- information provided by the promoter; and,
- other evidence from, for example, informed opinion and affected parties.

Multi-disciplinary EIB teams assess each project from an economic, technical, financial, and environmental point of view. Generally, the team visits the site to consult the promoter and local interests and to review the physical circumstances of the project. An engineer and/or economist, with relevant, sector-specific skills and knowledge from the EIB Projects Directorate (PJ), carries out the environmental assessment. Specialised consultants are brought in if needed.

EIB's environmental structure

EIB's internal environmental work is structured as follows:

- each project's environmental impact is assessed by a technical expert in EIB's Project Directorate;

- an environmental unit (ENVU) is charged with the development and monitoring of the application of the Bank's environmental policies and procedures. The head of this unit also chairs the Environmental Assessment Group (ENVAG).

- ENVAG is a permanent expert group consisting of a network of environmental specialists drawn from PJ that assures the quality and consistency of the environmental assessment throughout the project cycle. An ENVAG member is assigned to every project that is appraised by the Bank, to support the environmental assessment carried out by the technical expert of the project team.

- an Environmental Steering Committee (ENVSC), made up of senior officials, is responsible for addressing strategic environmental issues, including types of project that may be particularly difficult and/or risky from an environmental point of view.

Planning and pre-appraisal

A "Preliminary Opinion for Appraisal Authorisation" for each project identifies potential environmental risks and specific issues to be assessed during appraisal. Environmental "screening" includes the likely degree of difficulty and/or risks, based on EU environmental legislation, especially the classifications and criteria laid down in the Environmental Impact Assessment (EIA) Directive 85/337/EEC, as amended by 97/11/EC[2].

The application and enforcement of the EIA process, including public information and consultation, is the responsibility of the promoter and the Competent Authority. The Bank will not finance projects where this has not been fully respected. EIB may advise on the need for and the content of an EIA. In certain circumstances it can help finance an EIA and other studies to develop and define the project.

Appraisal and approval

Each project is rated at appraisal according to its environmental acceptability in terms of:

- Its characteristics (including whether the new technology is appropriate), size and location (especially with respect to areas of nature conservation and cultural heritage sites) and relevant evidence from the site visit;

(1) EIB Environmental Policy (2001) and Project Cycle Brochure (2001) (www.eib.org).

(2) EIB Annual Report and the EIB Environmental Statement

- The presence/absence of any legal compliance issues;

- The quality of the EIA - including the environmental study and the nature/extent of public participation - where required, and the quality of any other related studies;

- The environmental management capability of the promoter, including the promoter's environmental awareness as well as the capacity and willingness to act on environmental issues;

- Expected environmental impact of the project - among other things, on land, air and water, on humans, flora and fauna and natural assets and its implications for cultural heritage;

- The appropriateness, including cost effectiveness, of the proposed mitigation and/or compensation measures - these may be based on recommendations by the EIB team - that are physically and financially integrated into the project design and financing;

- The presence/absence of any major environment-related project risks for the Bank;

- Any environmental issues that may arise during construction and operation of the project.

Following the appraisal, the Projects Directorate prepares a "Project Report" based on the team's findings and recommendations, including a chapter devoted to environmental issues.

Information on each project, according to EIB disclosure policy[3], is summarised at an early stage - and updated as necessary - on the Bank website.

All EIB projects are subject to a general environmental loan covenant to ensure appropriate legal compliance. In particular cases, specific environmental conditions for signature and/or disbursement are agreed between the Bank and the promoter.

Monitoring and evaluation

EIB monitoring of projects may include environmental issues as part of the general arrangements during construction and if necessary beyond.

Finally, the environmental aspects of some projects may be evaluated ex-post by EIB's independent Operations Evaluation Department[4].

The environmental procedures outlined above have evolved over time and reflect EIB's cooperation with others, in particular the European Commission. They are kept under regular review and are subject to change in the light of further experience and changes in circumstances.

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(3) EIB Information Policy
4 EIB Operations Evaluation Department's reports can be found on the Bank's website.

The EIB and its Contribution to Sustainable Development

Introduction

- The European Investment Bank, the European Union's long-term financing institution, has been established to finance investment projects in support of EU policies. This is reflected in the objectives and targets of its Corporate Operation Plan[1] and in its activities.

- The EIB co-operates closely with the European Council, the European Commission and the European Parliament in the development of EU policies that impact its activities, mainly in the EU Member States and in the Accession Countries. Outside Europe, the Bank operates according to the guidelines of mandates and protocols[2] developed by the EU and agreed by its Board of Governors.

- The evolving EU policy on sustainable development is based on three pillars, promoting an appropriate balance between economic growth, protecting the natural environment and fostering social well-being and cohesion.

Sustainable development within the EU and beyond

- The concept of sustainable development applies at a global, regional and national level. As an international financial institution with activities throughout the World, the EIB aims to promote sustainable development in all regions of operations.

- Within the EU, **"A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development"**, drawn up by the Commission, was broadly endorsed by the Gothenburg European Council in June 2001[3].

- Whilst referring to poverty and other social concerns, this document addresses climate change, public health, natural resource management and transport and land-use planning. It proposes policy changes in the regulatory framework, price reform, R & D and measures to encourage the business sector to take a more pro-active approach to sustainable development.

- More recently the EU has also developed a strategy for sustainable development outside Europe, based on the Commission document **"Towards a Global Partnership for Sustainable Development"**, endorsed by the Barcelona European Council in March 2002, and an essential contribution to the "World Summit on Sustainable Development" (WSSD), in Johannesburg towards the end of 2002.

- The EU approach to sustainable development outside Europe takes into account that:

  - A very large number of people are affected by absolute poverty, unemployment and exclusion;

  - These conditions are often associated with serious damage to the environment;

  - Market forces - using the private sector and underpinned by good governance - should be harnessed to maintain and increase growth and to create jobs;

  - At the same time, there is a need to preserve the environment for future generations and strengthen social cohesion.

- The EU has reaffirmed its commitment to the UN "Millennium Development Goals" of June 2000, especially improved access to health, water, sanitation and energy services as a means to reduce poverty.

EIB activities in support of sustainable development

Inside Europe

- EIB lending orientations in the EU and the Accession Countries match those of the EU sustainable development strategy, by focusing on three top priorities:

  - By giving a strong priority to projects in less-favoured areas, fostering balanced development throughout the EU;

(1) "EIB Corporate Operational Plan, 2002 - 2004".
(2) The most notable are those for the non-EU Mediterranean countries ("Euro-Mediterranean Partnership"), the ACP ("Cotonou Agreement", once in force) and in Asia and Latin America.
(3) At about the same time, the EIB issued its first public statement on sustainable development, "EIB Environmental Policy: Sustainable Development", in June 2001.

- Protecting and improving the natural and urban environment and improving the quality of life, according to the EU "Sixth Environmental Action Programme" (2000 - 10);

- Promoting the development of an innovation and a knowledge-based economy for growth and employment, the EIB "Innovation 2000 Initiative" (i2i), launched in the wake of the Lisbon European Council of March 2001.

- The EIB recognizes that there is scope within Europe for further promoting "A Sustainable Europe for a Better World" in the following specific areas:

- **Climate Change**[4]

  Measures to reduce "greenhouse gas" emissions need further support, such as the rational use of energy and the promotion of renewable energy, the creation of a European market in carbon and R & D into cleaner energy.

  The Bank aims to at least double its loans for renewable energy over the next five years, including finance for R & D and the manufacture of industrial equipment[5].

- **Natural Resource Management**

  The Bank is supporting the EU "Integrated Product Policy", working especially with the business sector to help de-link economic growth from resource use and waste generation.

- **Transport/Land Use**

  This includes financing investment in more sustainable forms of transport (rail, water and public passenger transport), including inter-modal transport systems; promotion of tele-working by accelerating the next generation of information and communications technology; balanced regional development; and, support for integrated urban regeneration and development.

More generally, the EIB recognizes the global and regional dimension of environmental issues, such as climate change, and the need to reduce the ecological impact of Europe on the rest of the world by promoting improved resource management and reduced pollution. In a framework of international cooperation, the Bank supports a number of regional environmental programmes, such as those in the Mediterranean Basin, the Baltic Sea and the Balkans.

Outside Europe

- The EIB makes a major contribution to sustainable development outside Europe through its own financing but also by attracting other sources of finance for viable projects in the EU Partner Countries. Through the strict application of its rigorous project selection criteria, the EIB aims to support the EU "Global Partnership for Sustainable Development" in the following ways:

  - To encourage its financial and commercial partners, including promoters from the European private sector that invest in countries outside Europe, to apply international good practice in the fields of environmental and social affairs ("responsible investment");

(4) "EIB and Climate Change".
(5) "EIB Support for Renewable Energy".

Recent Examples of EIB Activities in the Water Sector Outside Europe

Algeria	Construction of drinking water supply network linking the Taksebt Dam and Algiers
Burkina Faso	Extension of drinking water network in Ouagadougou
Mauritius	Rehabilitation and extension of sewerage networks in Plaines Wilhems area
Morocco	Improving drinking water supplies in a number of towns
Senegal	Drinking water supply improvements and sewerage infrastructure development in Dakar region
Tunisia	Upgrading of drinking water supplies to coastal regions of Sahel and Sfax

- To ensure that poor groups in society are at least no worse off after an EIB project than before;

- To promote efficient management of local natural resources, including those in the water, sanitation and energy sectors in line with the EU sector priorities for the WSSD;

- To be guided by EU principles and standards of environmental and social policy and law;

- To promote good governance, for example, improved accountability and participation, regional cooperation and other forms of partnership - including close cooperation with the Commission - and the implementation of national and international environmental and social legislation;

- To promote the transfer of new appropriate technologies and good management practices through financing direct foreign private investment by European companies.

- Just as EU policy on sustainable development is evolving, so are the EIB's approach to sustainable development and its practical relevance to Bank operations. This is reflected in its lending activities. Documents such as the present one are therefore subject to regular review and revision and should be read in conjunction with the other EIB public documents referred to above.

EIB and Climate Change

Introduction

- The European Investment Bank is committed to protecting and improving the environment. As the European Union's long-term financing institution, this forms one of its key institutional lending aims.

- As part of its general approach to the environment, EIB shares the widespread concern felt in Europe about the potential nature and consequences of climate change.

- EIB is working closely with other European Union institutions to implement the objectives and targets of the evolving EU approach to tackling climate change issues. It also recognises the need for a collaborative and cooperative approach to an issue of global significance.

- Indeed, EIB is already contributing in a practical way to addressing problems associated with climate change. It is stepping up financing of investment to improve energy efficiency and the expansion of the renewable energy sector. The Bank is also prepared to support other actions that will help to abate, mitigate and adapt to climate change.

- This paper, **"EIB and climate change"**, provides a broad overview of actions the Bank is developing to tackle problems caused by the predicted changes in the earth's climate, in particular those of "global warming" associated with the "greenhouse effect". These actions are in line with evolving European Union policies and international initiatives to deal with the issues surrounding "climate change".

Background

Among other things, global warming is likely to give rise to an increase in sea level, changes in the volume and distribution of precipitation by region and season (droughts and floods) and other extreme weather events.

The mainstream scientific community now generally agrees that increased "global warming" is taking place due a complex ocean-land-air relationship driven by the emissions of greenhouse gases (GHGs) - especially carbon dioxide (CO2) - notably from the combustion of fossil fuels in the energy, transport, industrial and household sectors. The Inter-governmental Panel on Climate Change (IPCC) in its Third Assessment Report", May 2001, estimates that, under "business-as-usual", global mean temperature will increase in the range 1.5° to 6°C by 2100.

At the 1992 **"Earth Summit"** in Rio de Janeiro over 160 countries signed the United Nations Framework Convention on Climate Change (UNFCCC) to stabilise GHG emissions at 1990 levels.

This commitment was strengthened in 1997 with the signing of the **Kyoto Protocol**, according to which the main industrialised countries of the UNFCCC would limit their respective GHG emissions in the period 2008-12, by on average about 5% below those of 1990. Under this "burden-sharing" agreement the EU as a whole would reduce its emissions by 8%. Central to the Protocol are proposals to develop a market in "rights" to emit GHGs through project-based mechanisms.

Evolving European Union Policy Framework

Dealing with climate change issues has become one of the main objectives of EU environmental policy. The European Commission's general approach to climate change has been gradually to shape a policy framework to reinforce measures being taken at a national level to reverse the trend in the growth of greenhouse gas emissions[1]. A number of Member States have already published their own climate change policies and associated measures. The same is true of many large corporations and banks.

As part of its "common and co-ordinated policies" for climate change, the Commission has proposed:

- A planned directive on an energy product tax as well as measures to promote improvements in energy efficiency and renewable energy;

- Voluntary environmental agreements in specific industrial sectors, building on the experience in the automobile sector;

- An enhanced GHG monitoring and verification system;

(1) Communication from the Commission, "Towards a European Climate Change Programme (ECCP)", COM (2000) 88.

- Promotion of the "Flexible Mechanisms" of the Kyoto Protocol, for emissions trading and project-related emissions reductions, including:
  - International Emissions Trading (IET) - the trade of GHG emission rights among the signatory industrialised countries;
  - Joint Implementation (JI) - the transfer of credits earned by abatement projects in one industrialised signatory country to another; and
  - Clean Development Mechanism (CDM) - the transfer of credits earned by abatement projects in non-signatory countries to signatory countries.

The Commission is exploring the possibility of establishing a trading system within the European Union by 2005[2]. Some Member States and some private companies are already embarking upon pilot trading systems.

Through the two project-based mechanisms, JI and CDM, EU Member States would help to meet their national climate change commitments with investment in, and technology transfer to, transition and developing countries.

EU climate change concerns are also being integrated into other EU policy areas, for instance in the fields of:

- **energy,** through an emphasis on the rational use of energy and the promotion of renewable energy;

- **transport,** with policy measures to promote "sustainable mobility" - including modes of transport associated with relatively low rates of GHG emissions, such as rail - through pricing and more efficient technologies, including information and communications technology (ICT);

- **industry**, with both the "Environmental Management and Audit Scheme" (EMAS) and measures to promote "eco-efficiency", including energy saving.

EIB's approach

EIB is already making a contribution to greenhouse gas abatement and mitigation through its support of investment in renewable energy, energy efficiency, combined heat and power (CHP), industrial efficiency, waste management and public transport. The Bank is now implementing further inter-related measures to support EU climate change policies. These measures are grouped under three headings:

Policies and Procedures

Eligibility

Projects contributing to abate, mitigate, compensate and adapt to climate change issues are eligible for Bank finance, according to Articles 267 and 174 of the Treaty of Amsterdam. These Articles respectively cover the role of EIB and the objectives of EU environment policy.

Measures to address climate change are integrated into the main sectors of activity of the Bank, according to Article 6 of the Treaty of Amsterdam. The Bank has established an eligibility sub-category within the broader environment objective, making it easier to monitor and report its climate change activity.

Appraisal

In appropriate cases, EIB is beginning to quantify and value the impacts of GHG emissions in projects it appraises.

For some projects, this may influence the decision to finance (e.g. renewable energy production), depending on the weight of other considerations. With this approach there will be a gradual shift in the structure of EIB's lending portfolio in favour of more climate-friendly investments.

Risk Management

For technical and other reasons (e.g. a change in the regulatory framework), there are inherent uncertainties in evaluating the long-term impact of abatement and mitigation measures for GHG emissions, in terms of both quantity (t of CO2-equivalent) and market price (EUR per t of CO2-equivalent).

More generally, the uncertainties related to the physical effects of global warming and the behavioural responses these gives rise to will increasingly have to be taken into account.

Measurement and Reporting

EIB is developing methodologies for GHG emissions measurement and reporting. These will be tested on projects in the energy sector where emissions can be measured with some confidence.

(2) "Green Paper on Greenhouse Gas Emissions Trading within the European Union", COM (2000) 87.

Immediate action

EIB is stepping up its lending for:

- **Energy-saving**, i.e. reducing the energy intensity of production, transformation and use;

- **Energy-substitution**, i.e. promoting the transition to less carbon intensive fossil fuels and to renewable energy sources.

This "twin-track" approach is being applied in the main economic sectors of EIB lending – especially for energy, but also for transport and industry - through direct as well as indirect, global loan operations. For example:

- Energy efficiency projects - more fuel efficient cars; public transport systems; less energy intensive industrial production; and, increased use of cogeneration of heat and electricity for district heating and industrial purposes;

- Electricity and heat production - gas-fired power stations, industrial boilers and district heating systems and increased use of renewable energy (e.g. wind, solar, biomass and small-scale hydro).

Other projects, some relatively novel and often small-scale, are also being targeted, including:

- Investment to reduce the use of industrial GHGs (e.g. hydrofluorocarbons (HFCs), perfluorocarbons (PFCs);

- The capture and use of methane gas from landfills for CHP production;

- The sequestration of GHGs through sustainable forest development, especially outside the EU;

- Development of synergy between investment in the environment and innovation, employment and growth initiatives, including research and development, introduction and manufacture of climate-friendly processes and products (e.g. electrical appliances, engine technology, fuel cells, geological sequestration of CO2, photovoltaics, the storage of renewable energy and the application of ICT/intelligent systems in the transport sector);

- Coastal zone management, in anticipation of a rise in sea levels.

Kyoto's Flexible Mechanisms

The Bank intends to participate, in close co-ordination with the European Commission, in the development and implementation of the two project-based flexible mechanisms of the Kyoto Protocol. Pilot JI and CDM projects will be promoted to test the modalities, regulations and practices that are gradually being firmed-up. Such JI and CDM projects would generate tradable carbon emission credits that could be offset against the commitments of the industrialised signatory countries and their "emitting entities".

For instance, an EU oil company might find it cost effective to meet its GHG emission cap by sponsoring an energy efficiency project in Central and Eastern Europe, or a forest management project in Latin America (a case of JI and CDM, respectively).

The Bank has had a number of informal approaches from both Member States and companies seeking co-operation in this field.

Instruments

EIB is exploring ways of introducing financial incentives for certain priority climate change investment due to the uncertain institutional and policy framework, potentially complex project design, long gestation period, etc.

Co-operation

EIB is already conducting discussions on climate change issues with several institutions, including:

- The European Commission – DGs Environment, Enlargement and Development on the flexible mechanisms and exploring synergies between Community and Bank finance, as well as DG Research to cooperate in the promotion of new, climate-friendly technologies;

- Member States to review national legal and fiscal frameworks to support country-specific climate change programmes;

- Large European corporations to investigate measures to meet their voluntary and likely future legislated GHG commitments and to identify climate-related research and development activities

- European venture capital firms;

- Other banks and financial institutions to develop climate change-related lending programmes, especially to small and medium-sized enterprises, both inside the outside the EU;

- Other Multilateral Financing Institutions on climate change projects outside the EU.

EIB commitment

In summary, responding to the "climate change" challenge, the approach of the European Investment Bank is to:

- Emphasise the environment in general and climate change in particular as top priority areas of future activity of EIB;

- Focus on the environmental dimension in the energy sector by increasing lending in support of the rational use of energy and the promotion of renewable energy, which the Bank aims to increase as a proportion of its total energy investment;

- Maintain lending for sustainable transport (public transport systems, rail, etc.);

- Develop lending for investment to abate and/or mitigate the emission of greenhouse gases, such as for sustainable forestry, R&D and innovation;

- Explore lending opportunities under the project-based "Flexible Mechanisms" of the Kyoto Protocol, including possibly the establishment of a dedicated climate change venture capital fund;

- Strengthen further internal economic valuation techniques, risk management practices and recording methods, and to introduce a climate change eligibility sub-category;

- Continue co-operation with the European Commission, Member States, European corporations and other agents interested in working with EIB on the issue of climate change.

EIB Support to Renewable Energies

Introduction

The depletion of fossil fuels and the adverse effect of their use on the environment, coupled with the need for energy security, are issues of growing concern. In this context, the development of renewable energy[1] sources is increasingly being seen as a viable means of reducing the consumption of fossil fuels.

Although overall investment in renewable energy is growing worldwide, it is important, however, not to exaggerate the contribution that such sources can potentially make to meeting the world's overall energy requirements. The important contribution that the rational use of energy in power generation, heating, manufacturing, and transportation can make to reducing overall energy consumption should not be overlooked.

Historically, the Bank's support of renewable energy investment has been modest. In recent years, although the volume of lending in this sector has not increased, the portfolio of projects has reached a broader spread in terms of technologies and applications.

Box 1 – Current Projects

Projects currently under appraisal by the Bank's services include: -

EUR 590m investment programme in the UK for the construction of seven new wind farms (total capacity of 320 MWe) and the refurbishment of 24 hydroelectric power stations (221 MWe combined capacity);

EUR 60m investment programme at two existing hydroelectric stations in Italy, involving the installation of an additional generating unit at each station of 80 MWe and 107 MWe capacity, respectively;

175 MWth biomass-fired combined heat and power (CHP) plant at a paper mill in Poland involving an investment of EUR 45m;

EUR 500m wind energy programme in Spain, comprising 560 MWe of new capacity;

Two offshore wind farms in Denmark, involving 320 MWe of new capacity and a total investment of EUR 440m;

108 MWe offshore wind farm in the UK, involving an investment of EUR 175m.

EU policy context

The promotion of renewable energy has become a European Union priority policy objective, with the following ambitious targets:

- The share of renewable energy in gross domestic energy consumption in the EU should be doubled (from the present 6% to 12%) by 2010[2].
- Electricity produced from renewable energy sources should represent 22% of electricity consumption by 2010[3] (in 1997, it represented 14% of electricity consumption).
- Overall emissions of greenhouse gases should be reduced by at least 5% below 1990 levels in the period 2008 to 2012[4].

The Göteborg European Council confirmed the EU consumption target of 22% and also invited "the EIB to promote the Sustainable Development Strategy and to cooperate with the Commission in implementing the EU policy on climate change." The promotion of renewable energy is a major feature of the European Climate Change Programme.[5]

(1) Energy from renewable non-fossil sources (wind, solar, geothermal, hydropower, biomass)
(2) European Commission White Paper on Renewable Energies COM (97) 599 and Council Resolution of 08/06/1998 on Renewable Sources of Energy
(3) Directive 2001/77/EC of the European Parliament and the Council on the promotion of electricity from renewable energy sources in the internal electricity market (September 2001)
(4) Proposal for a Council Decision concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder (November 2001)
(5) "European Climate Change Programme" (ECCP), Commission, June 2001

Renewable energy in perspective

While renewable energy production is important, it is, nevertheless, only one of several investment options for reducing the consumption of fossil fuels, with the associated benefits of reduced import dependency, and emissions of greenhouse gases. Broad efforts to increase the rational use of energy and energy savings, particularly in the Accession Countries, may be even more important.[6]

Outside the OECD countries, renewable energy is seen as helping to address development goals in the energy and transport sectors (i.e. access to readily available, cheap, efficient and environmentally friendly power) without compromising greenhouse gas emission objectives.

EIB support of renewable energy investment

The Bank has been involved in the financing of renewable energy schemes since the 1970s, mainly in the field of medium and large-scale hydroelectric plants. Due in part to the lack of suitable new sites for such projects and their often adverse impact on the local environment, the Bank's renewable energy focus has shifted to smaller-scale schemes employing an increasing number of energy sources.

Recent EIB financing of renewable energy projects is summarised in Annex 1 (Update of Renewable Energy Review – Period 1993-2001). The Bank's activity in support of renewable energy is modest in both absolute and relative terms – average lending over the past 9 years has been around EUR 220m per annum. This figure represents 6.5% of its total energy sector direct lending in 2000. As pointed out in a recent study by the EIB's Operations Evaluation Department[7], the Bank has financed only a small share of the increase in renewable energy investments in the EU during the second half of the 1990s. In the last few years, the share of renewable energy in its total investment in the energy sector has even decreased.

(6) Examples include increased use of public transport, fuel-efficient engine technology, fuel cells, energy optimisation of manufacturing processes, strengthening of energy (electricity and natural gas) transmission and distribution networks and the use of modern dispatch systems (loss reduction and more efficient dispatch), combined heat and power generation and replacement of conventional thermal power stations by modern combined cycle plants (both of which substantially reduce primary energy inputs)
(7) Evaluation of EIB Financing of Energy Projects in the EU and in the Accession Countries, October 2001

EIB loans provided for renewable energy projects have, in the past, been concentrated on the more commercially and technically developed sectors (hydroelectric, wind power and some geothermal). Biomass lending has increased in recent years, amounting to EUR 61m and EUR 53m in 2000 and 2001, respectively. This is significant, given that these projects are primarily restricted to heavily forested regions in Northern Europe. Wind energy development is quite mature in countries such as Denmark, the Netherlands, Spain and Germany, with the focus now shifting from smaller to larger-scale applications and from onshore to offshore in North West Europe (see Box 2, below).

Box 2 – Offshore Wind

Advantages (compared with onshore wind farms):

Availability of large, continuous areas, suitable for major projects;

Remote from public/third parties (noise, visual pollution), allowing the use of larger machines (up to 2 MWe or greater);

Higher wind speed, which generally increases with distance from the coast;

More stable wind conditions.

Disadvantages:

Additional costs (more expensive marine foundations, high specification equipment designed for marine conditions, sub sea electrical interconnection, reinforcement of weak coastal grids);

Difficult and costly installation procedures due to harsh offshore environment, potential for delay;

Restricted access for operation and maintenance due to adverse sea/weather conditions;

Navigational hazard to shipping and fishing.

Box 3 – Fuel Cells

Fuel cells are electrochemical devices that convert a fuel's energy directly to electrical energy.

Fuel cells operate much like continuous batteries when supplied with fuel (hydrogen) to the anode and oxidant (e.g. air) to the cathode.

Fuel cells forego the traditional extraction of energy in the form of combustion heat, conversion of heat energy to mechanical energy (as with a turbine), and finally turning mechanical energy into electricity (e.g. using a generator).

Instead, fuel cells chemically combine the molecules of a fuel and oxidiser without burning, dispensing with the inefficiencies and pollution of traditional combustion processes.

Hydrogen can be produced by electrolysis using power generated from renewable resources, or by reforming hydrogen-rich fuels such as oil or natural gas. In the latter case, the reforming process emits a relatively small quantity of CO2, but avoids the emission of other pollutants produced by burning fossil fuels.

The technology is at a relatively early stage of development and is not yet competitive in cost terms with conventional power sources; potential future uses for fuel cells are, however, widespread and include transportation (private vehicles, public transport), domestic and industrial power demand.

Constraints faced by the Bank

In the past, apart from large hydroelectric, biomass and wind energy projects, the sector has not been particularly well suited for large-scale intervention by the Bank:

- The small size of many individual schemes and a high degree of geographical dispersion often makes them unsuitable for direct loan operations, while their frequently technically complex and innovative nature, coupled with the requirement to assess sensitive environmental issues (e.g. use of natural resources, environmental impact, valuation of external benefits linked to avoidance of CO2 emissions, etc.) generally precludes them from indirect support through its global loan schemes, unless handled by specialised, technically competent intermediaries, few of which exist.

- Renewable energy project promoters often have a relatively weak credit profile (small players or special-purpose vehicles in structured deals).

- Renewable energy projects often use technology that is still in the early stages of development, is more technically risky, and has a relatively high specific investment cost. Although investment costs in some sectors are falling steadily as the market grows (particularly in the wind power sector where prices per kilowatt installed have fallen by around two-thirds over the last 15 years), many projects still rely for their financial viability on heavily subsidised "green" tariff structures and other financial incentives, not all of which can be shown to be economically justified, even when fairly generous values for external environmental benefits are assumed. As a result, a significant proportion of the projects submitted to the Bank cannot be pursued. Furthermore, in some countries potential loan financing by the Bank (and others) is sometimes displaced by capital grants.

- In addition, ex-ante analysis of the long-term production potential (in the case of hydro, wind, solar, etc.) is often weak, thus leaving, for certain technologies or projects, a high degree of uncertainty concerning the future utilisation of plants and their expected lifespan.

Policy and institutional frameworks are evolving, however, and technology is progressing to the advantage of renewable energy. As this process continues, it is likely that overall investment in the renewable energy sector will increase (it is already increasing in the case of wind energy), both inside and outside the EU. In this context, the Bank, in line with EU policy,

will have the opportunity to increase its support for the sector, in spite of the substantial difficulties described above.

Objectives and outline strategy for the future

The Bank assigns a very high priority to the expansion of its lending for renewable energy projects. Within existing rules, it is working to overcome the constraints for lending in this area, for example by a flexible application of the minimum project size criterion.

To underline its support for the EU's policy, the Bank is to at least double its loan volume (individual and dedicated global loans) for renewable energy over the next five years. This objective will take into account lending both inside and outside the EU and will be measured as a proportion of the Bank's lending in the energy sector as a whole, using its lending in the period 1997-2001 as a base. Individual loans for renewable energy in the period 1997-2001 amounted to 7.4% of lending in the energy sector.

This objective supports the EU's target of doubling (from the present 6% to 12%) the share of renewable energy in gross domestic energy consumption in the EU. While an increase in renewable energy consumption is not linearly related to the amount of investment committed, the target, nevertheless, serves as a benchmark for the Bank.

As an indication of the potential for lending in this sector, the Bank's actual pipeline of renewable energy projects includes about 35 projects or programmes.

In addition to increased direct lending (including continued support for large hydroelectric, wind energy and biomass projects), the Bank is to explore the potential for lending to specialist intermediaries with adequate resources to assess and manage smaller-scale renewable energy promoters and schemes.

A. Selection criteria

Renewable energy technologies vary in terms of efficiency and environmental acceptability. Each individual project design should, therefore, be screened against the alternatives (including renewable energy ones) on the basis of defined criteria, to identify the most suitable technology for each specific application. The principal and widely recognised selection criteria – without being exhaustive – to be applied to individual projects but also programmes are:

- Quality and reliability of the primary energy source;
- Compatibility with existing generation and transmission systems;
- Promising potential for demonstration effects and future developments;
- Attractive lifecycle energy balance;
- Environmental acceptability, including public participation in the decision-making process;
- Sound financial and economic returns, taking account of the external benefits of renewable energy whenever it makes sense.

EIB short to medium term action to increase its support of renewable energy can include:

Box 4 – Climate Change

To the extent that this is feasible, the Bank endeavours to make an assessment of the significant external costs and benefits of all projects submitted for financing, notably with respect to their effect on pollution and climate change.

An expert study has recently been commissioned into the quantitative assessment of climate change issues, based on the latest research and a review of best practice in the economic valuation of greenhouse gas emissions.

This follows on from previous research carried out into the application of findings from the European Commission's "ExternE" programme into global warming damages.

The results will be used to further develop the Bank's capacity to assess and support projects that contribute to EU policy in this sector, including the Kyoto Protocol and subsequent climate change agreements.

B. Use of the Accelerated Finance Initiative (AFI)

Following the Ghent European Council, a set of measures – including contributing to the promotion of environmental protection investment - has been approved by the Bank's Board of Directors which allows it to raise its financing proportion to up to 75% of project cost in suitable cases. This higher ceiling could apply to both existing and new renewable energy projects (including dedicated renewable energy global loans), subject to fulfilling the condition of a "genuine acceleration effect" for ongoing projects, and approval by the Board of Directors.

C. Use of EIF venture capital

Increased use of EIF venture capital, particularly in the form of participation in sustainable energy funds.

D. Financing research and development

To promote the development and application of renewable energy technology, the Bank will consider financing upstream research and development in this sector, including the manufacturing of industrial equipment as well as renewable energy generation itself. Hydrogen fuel cell technology (see Box 3, below), thermal solar power and low enthalpy geothermal energy research and development are examples. Such financing ties in with the Bank's i2i (Innovation 2000 Initiative) financing.

E. Financing the manufacture of industrial equipment

The Bank is to analyse the market potential in the EU, for upstream financing of the manufacture of industrial equipment for renewable energy projects.

F. Supporting the emerging market in carbon credits

The Bank will continue to investigate the potential for supporting – where appropriate – the developing market in carbon credits, in accordance with the Bank's Climate Change Policy (see Box 4, below). Carbon credits (including green certificates) are expected to represent a significant source of cash for renewable energy projects. The Bank's strategy will take into account carbon values (and assimilated instruments).

G. Lending in the Accession Countries

In the Candidate Countries, although the main focus of Bank lending in the energy sector is on increasing the rational use of clean energy (modernisation of power generation capacity, loss reduction, etc.), there is considerable scope for financing the rehabilitation, modernisation and expansion of existing hydropower installations, and also the development of biomass production and utilisation as an energy source.

H. Coordination with EU policies for the promotion of renewable energy

The EIB will coordinate its support for renewable energy investment with the activities – and grants (and possibly interest subsidies) - of the Commission in the same field, notably in the Partner Countries. Among other things, this will involve working with DGTREN to strengthen cooperation and synergy between the two institutions.

Summary of EIB Lending in the Renewable Energy Sector, 1993-2001

A. Individual loans signed during period 1993-2001

		Hydroelectric			Wind			Alternative (a)			Total renewable	
		No.	M EUR		No.	M EUR		No.	M EUR		No.	M EUR
EU	1993	1	3					1	27	(f)	2	31
	1994	2	76								2	76
	1995	4	256		1	11	(b)				5	268
	1996	2	36	(e)				1	37	(e)	2	72
	1997	1	171		1	42					2	213
	1998	2	138		1	17					3	154
	1999	2	167								2	167
	2000							3	66	(i)	3	66
	2001	3	75	(h)	1	6	(h)	2	49		5	130
	Subtotal	**16**	**922**		**4**	**76**		**7**	**179**		**26**	**1177**
non-EU	1993	2	59								2	59
	1994	2	43								2	43
	1995	3	62								3	62
	1996	2	9								2	9
	1997	1	55								1	55
	1998	5	128		1	20		2	42	(g)	8	190
	1999							1	41	(f)	1	41
	2000											
	2001	1	90								1	90
	Subtotal	**16**	**446**		**1**	**20**		**3**	**83**		**20**	**549**
All	1993	3	62					1	27		4	90
	1994	4	119								4	119
	1995	7	318		1	11					8	330
	1996	4	45					1	37		4	82
	1997	2	226		1	42					3	268
	1998	7	266		2	37		1	42		11	344
	1999	2	167					1	41		3	208
	2000							3	66		3	66
	2001	4	165		1	6		2	49		6	220
	Total	**32**	**1368**		**5**	**96**		**10**	**262**		**46**	**1726**

B. Global loans signed during period 1993-2001

		Hydroelectric			Wind			Alternative (a)			Total renewable	
		No.	M EUR		No.	M EUR		No.	M EUR		No.	M EUR
EU	1993	1	1					1	27	(f)	1	1
	1994	10	11		2	0					12	11
	1995	11	24		2	0					13	24
	1996	8	9		29	18		2	8	(c)	39	35
	1997	12	20		38	24		1	1	(d)	51	44
	1998				13	40		1	1		14	41
	1999	3	15		11	42					14	57
	2000	2	5		2	3		3	16		7	25
	2001	3	3		2	6		2	5		7	14
	Subtotal	**50**	**88**		**99**	**132**		**9**	**32**		**158**	**252**
non-EU	1993											
	1994											
	1995	1	1								1	1
	1996											
	1997											
	1998											
	1999											
	2000											
	2001											
	Subtotal	**1**	**1**								**1**	**1**
All	1993	1	1								1	1
	1994	10	11		2	0					12	11
	1995	12	26		2	0					14	26
	1996	8	9		29	18		2	8		39	35
	1997	12	20		38	24		1	1		51	44
	1998				13	40		1	1		14	41
	1999	3	15		11	42					14	57
	2000	2	5		2	3		3	16		7	25
	2001	3	3		2	6		2	5		7	14
	Total	**51**	**89**		**99**	**132**		**9**	**32**		**159**	**253**

C. Total loans signed during period 1993-2001

		Hydroelectric		Wind		Alternative (a)		Total renewable	
		No.	M EUR	No.	M EUR	No.	M EUR	No.	M EUR
EU	1993	1	5			1	27	3	32
	1994	12	87	2	0			14	87
	1995	15	280	3	12			18	292
	1996	9	44	29	18	3	45	41	107
	1997	13	191	39	66	1	1	53	257
	1998	2	138	14	56	1	1	17	195
	1999	5	182	11	42			16	224
	2000	2	5	2	3	6	82	10	91
	2001	6	79	33	11	4	54	13	144
	Subtotal	**66**	**1010**	**103**	**207**	**16**	**212**	**185**	**1429**
non-EU	1993	2	59					2	59
	1994	2	43					2	43
	1995	4	63					4	63
	1996	2	9					2	9
	1997	1	55					1	55
	1998	5	128	1	20	2	42	8	190
	1999					1	41	1	41
	2000								
	2001	1	90					1	90
	Subtotal	**17**	**448**	**1**	**20**	**3**	**83**	**21**	**551**
All	1993	4	64			1	27	5	91
	1994	14	130	2	0			16	130
	1995	19	344	3	12			22	355
	1996	11	53	29	18	3	45	43	116
	1997	14	246	39	66	1	1	54	312
	1998	7	266	15	76	3	43	25	385
	1999	5	182	11	42	1	41	17	265
	2000	2	5	2	3	6	82	10	91
	2001	7	169	3	11	4	54	14	234
	Total	**83**	**1458**	**104**	**227**	**19**	**295**	**206**	**1980**

Notes:
(a) Includes biomass, charcoal, wood, solar and geothermal
(b) Includes 1 multi-part project - 57% of investment in small hydro plants, 43% in wind energy
(c) Biomass-fired power plant
(d) Wood-fired power plant
(e) Includes 1 multi-part project, 80% of investment in wood-fired power plant and pellet plant, 20% in small hydro plants
(f) Geothermal power plant
(g) 32 MEUR geothermal, 10 MEUR biomass
(h) Multi-scheme project, 60% wind and 40% hydro
(i) Includes biomass component of one larger CHP scheme

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