EU energy policy and the EIB
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The promotion of sustainable, competitive and secure sources of energy is a key policy objective of the European Union. For this reason, the European Investment Bank has also made lending to support Europe’s energy objectives a top priority.

The Bank’s policy for lending in the energy sector seeks to promote:

- **sustainability** by promoting renewable energy sources, to reduce both dependence on finite resources (such as oil, coal and gas) and the negative impacts of fossil fuels on the natural environment, particularly through CO$_2$ and other greenhouse gas emissions;

- **competitiveness** in energy supply – a key consideration for the economic development of the European Union given the central role played by energy in the modern economy;

- **security of supply** by promoting diversified sources of energy, reducing Europe’s dependence on external supplies and the impact of the many international risk factors that affect the energy market.

The EIB’s policy stance on energy therefore fully reflects the prominence of energy on the European Union’s policy agenda. The Commission’s Energy Green Paper¹ of March 2006 was followed in March 2007 by the adoption of an Action Plan². Within this framework the EU has pledged to achieve:

- 20% reduction of greenhouse gas emissions by 2020 compared to 1990;
- 20% share of renewable energies in the overall EU energy mix;
- 10% share of biofuels in petrol and diesel for transport;
- 20% reduction in energy consumption compared to baseline projections for 2020.

Meeting these targets will be an enormous challenge.

The EIB’s contribution concentrates on five priority areas:

- renewable energy;
- energy efficiency;
- research, development and innovation (RDI) in energy;
- security and diversification of internal supply (including trans-European energy networks);
- security of external supply and economic development (Neighbour and Partner Countries).

Within its Corporate Operational Plan (COP) the Bank has established challenging targets to direct, and underscore, its contribution to energy lending:

- in 2007, a global lending target of EUR 4bn for projects belonging to at least one of the five priority areas;
- also in 2007, a minimum lending target of EUR 800m for renewable energy.

These targets will be reviewed annually.

This brochure explains how the EIB is seeking to fulfil these commitments, as well as the Bank’s wider contribution to EU policy objectives in the field of energy and climate change.

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EIB support for energy investment

In the coming years, large-scale investment will be necessary in Europe’s energy market. First, there will be the need to replace a substantial number of existing power stations that will become obsolete in the period 2010-2030. Beyond this, in order to meet climate change commitments, the investment needed in renewables may be around EUR 600-700bn; the investment required in energy efficiency may well exceed this amount. In addition, there will be substantial investments in the gas sector and other energy sectors.

Against this backdrop, the EIB’s principal role will be as a provider of long-term finance for energy projects in the Bank’s five energy priority areas (for the Bank’s financial products, see box on loan formats on page 8).

Renewable energy

Renewable energy (RE) contributes to security of supply by reducing dependence on imports and exposure to the corresponding political and economic risks. It also helps to improve the natural environment, and in particular the global effort, led by the EU, to mitigate climate change. Investment in RE also strengthens Europe’s international competitiveness – the development of renewables puts EU industry at the forefront of the rapidly growing low-carbon technology sector.

Renewable energy projects fall into two groups, both of which are supported by the Bank:

- **mature technologies** are those that are already used commercially, such as onshore wind farms, hydropower, geothermal and solid biomass;
- **emerging technologies** are those in an early implementation phase, such as photovoltaics, solar thermal and second generation biofuel production technologies.

Investment in emerging RE technology has a dual purpose: to produce electricity and to contribute to the technology’s cost decline, notably through learning-by-doing, in the longer term. This second objective complements other EU and EIB priorities, particularly support for the implementation of the Lisbon Agenda, the objective of which is to establish a competitive, knowledge-based economy in Europe by investing in RDI.

The EIB is continuously developing the range of instruments it can deploy to finance both mature and emerging renewables technologies and projects. In particular, the Bank is actively deploying its Structured Finance Facility (SFF), which facilitates finance across the entire credit curve. The Bank has used the SFF to:

- participate in clean energy investment funds, which provide equity or quasi-equity for RE projects;
- take on direct project risk in ‘project finance’ RE structures;
- implement a framework loan structure for small-scale RE investments, streamlining its decisionmaking and providing for risk-sharing with intermediaries such as commercial banks and other investors.

Under its Climate Change Financing Facility (CCFF) the Bank is also able to finance up to 75% of the investment costs for renewable energy and other climate change mitigating projects. (Outside these areas, the Bank is normally limited to financing not more than half of project costs).
Renewable energy sector

Situation at 31/08/2007

* The Structured Financing Facility makes it possible to support sub-investment grade priority projects and programmes through provisioning for the higher associated credit risks by setting aside part of the Bank's surplus.
Energy efficiency

Increasing energy efficiency (EE) is the best way to tackle the key energy objectives of the EU. Increased EE also reduces greenhouse gas emissions and import dependence, and it enhances the competitiveness of Europe’s industry by bringing down production costs. Effective EE policies are therefore a top priority in Europe.

The largest EE potential is in residential and commercial buildings, transport, electricity production (mainly combined heat and power – CHP) and distribution, as well as industry. For residential buildings, thermal insulation offers the greatest area of opportunity, while in commercial buildings improved energy management systems are very important. For transport, a significant part of the EE potential entails shifting to more energy-efficient modes of traffic. In addition, there is still significant potential to increase EE in the electricity sector, particularly in the new Member States. The investment requirements will be substantial – probably even greater than those for renewable energy – because EE improvements are often capital-intensive (for example in transport, combined heat and power, and buildings). Much of this investment, though profitable at current energy prices, is not carried out, largely because of factors such as high transaction costs and low awareness. To be effective the Bank will have to play its part in addressing these obstacles.

Most industrial projects financed by the EIB result in an increase in EE, in the sense that new investments normally use the most modern technologies available, which as a rule are more energy-efficient than older ones. The Bank already checks that projects submitted for financing meet this requirement, but in the context of its new energy policy the Bank is taking this one step further. In all future project operations, the Bank will make energy efficiency considerations more explicit, with the aim of promoting the adoption of the most energy-efficient solutions. Realisation of the EE potential of selected projects will be supported through energy audits. Where the EE gain is significant, the Bank will be willing (under the CCFF) to finance up to 75% of the investment costs of the project.

Energy efficiency investments are often individually small, and to finance such investment the EIB will work through appropriate financial intermediaries, whether in the banking sector or through specialised energy agencies and energy service companies. The Bank is also developing specific financing instruments to better support EE projects, including risk-sharing instruments, blending loans with grants and the provision of technical support, such as energy audits, to the financial intermediary or the final beneficiaries. This normally involves developing partnerships with the European Commission or national authorities, particularly concerning grants or information provision (energy agencies for instance).

Finally, the Bank supports the upstream development of energy efficiency markets and projects, by exploiting synergies with the different advisory services available, notably JASPERS, JEREMIE and JESSICA.

1 JASPERS provide technical assistance to Member States for the use of structural funds in large-scale projects. JEREMIE provides new financial products to SMEs. JESSICA supports urban renewal schemes.
Research, development and innovation in energy

Energy research and development contributes significantly to meeting the long-term objectives of the EU’s energy policy, including those related to climate change, and also plays a role in implementation of the Lisbon Agenda to create a competitive knowledge-based European economy. The EIB is already focusing heavily on renewable energy and energy efficiency in its lending for RDI; recent examples include Europe’s first thermal solar plants (in Spain) and R&D programmes oriented towards fuel economy for the automotive industry. The EIB is working with industry and the Commission on the financial support that will be necessary for the carbon capture and storage (CCS) demonstration plants planned by the Commission and carbon emitters in Europe, notably in the energy industry.

A number of forward-looking initiatives in the energy field are being developed by, or with the assistance of, the Commission. These are the subject of Framework Programme grants, of Euratom programmes, and of other initiatives such as the European Technology Platforms (ETPs) and research infrastructures.

ETPs are forums of stakeholders to map the future in specific sectors/areas and to coordinate research. They are organised bottom-up and led by industry, but with strong Commission involvement. The Bank is closely monitoring these initiatives, especially the ETPs devoted to hydrogen and fuel cells, photovoltaics, wind, zero-emission fossil-fuelled power plants (CCS) and thermal solar energy.

A further area for EIB contribution is in research infrastructures. One such research infrastructure involving the Bank is ITER, a joint international research and development project, which aims to demonstrate the scientific and technical feasibility of fusion power.

Financial instruments developed by the Bank in support of investment underpinning the Lisbon Agenda have a key role to play in RDI finance. The Risk Sharing Finance Facility (RSFF), set up jointly by the EIB and the Commission, is particularly relevant here. The RSFF is built on the principle of credit risk sharing between the Commission and the Bank and extends the Bank’s ability to provide loans or guarantees to projects or promoters with a low or sub-investment grade risk profile. This involves taking financial risks beyond those normally accepted by investors. The scheme provides a wealth of opportunities for new and innovative financing solutions for the private sector and the research community.

Security and diversification of internal supply

Financing large-scale energy projects (such as large power stations, national and international energy grids, major energy importing facilities or the development of large domestic energy resources) is a core part of EIB lending to the energy sector. These projects – which represent the largest single contribution to the volume of EIB lending in energy – help to enhance security of energy supply, including diversification of imports, and contribute to the creation of the internal energy market.
The development of trans-European energy networks, or TEN-Es, remains a particular priority for the EU and the Bank. Projects financed by the Bank include LNG terminals, oil and gas storage projects and interconnectors. All these developments will help to increase competition in the EU energy market.

Whilst European energy security could be enhanced by greater use of coal and lignite, the EU’s greenhouse gas reduction commitments are incompatible with a shift towards more carbon-intensive electricity generation. The Bank has therefore recently adopted a more selective approach to financing electricity generation based on fossil fuel. Pending the development of national energy plans to be endorsed at EU level, the Bank will only finance commercial coal/lignite power stations that use the best available technology and are carbon capture ready. New plants should replace existing power stations while reducing carbon intensity by at least 20%. Retrofitting projects for existing coal/lignite power stations must be relatively small investments, and not delay plant replacement in the medium term; in the meantime, they should substantially reduce pollution, including via increased energy efficiency.

Nuclear power could be a further means for Europe to reduce its dependence on energy imports and reduce CO₂ emissions. The Bank recently published a briefing note on its nuclear financing; this note is posted on the Bank’s website (www.eib.org/energy). Should the Bank be requested to finance a nuclear power plant, particular attention would be paid to safety and security, including nuclear waste disposal and plant decommissioning.

**External energy security and economic development**

The Bank pursues two main energy objectives in its lending outside the European Union:

- In the **Neighbouring Countries** to the South and to the East, the aim is to extend the benefits of the EU’s internal market by creating a pan-European energy community and to facilitate energy imports into the EU originating in or transiting through these countries. Particular attention is given to projects outside the Union that enhance security of supply to the EU, such as the construction of pipelines and LNG terminals to transport energy to Europe.

- In **developing countries** in general, the EIB promotes access to modern sources of energy and the development of sustainable energy solutions. The aim is to contribute to the partner countries’ social and economic development, and to reduce the environmental impact of energy activities (where the use of some traditional energy sources is creating severe health and environmental problems). In support, the Bank is also developing a pipeline of climate change projects outside the European Union.

In June 2007 the EIB’s Board of Governors endorsed a new multiannual EUR 3bn facility for lending from own resources for energy sustainability and security of supply in Neighbourhood Countries to the South and to the East, the ACP countries, South Africa, and Asia and Latin America. The projects financed under this arrangement may be located in Candidate Countries, the Mediterranean as well as investment grade countries in other regions. The energy facility complements the EIB lending that is already planned under the external mandates given to the Bank from the EU for the various regions.
The EIB and climate change

In addition to its direct lending activities, the EIB is also playing an expanding role in a number of initiatives to combat climate change – itself a key objective of Europe’s sustainable energy policy.

In particular, the Bank is contributing to the development of carbon markets, notably the EU’s Emissions Trading Scheme (ETS). The Bank is encouraging the use of Kyoto-compliant carbon project credits as a project finance instrument, thus helping private and public entities to meet their carbon compliance obligations. In this respect, the EIB has already established three carbon funds, with the EBRD, the World Bank and KfW. In addition, it is championing the establishment of a fourth fund to promote the long-term carbon market post-2012, after the expiry of the Kyoto Protocol (see also box on carbon funds).

In addition to these important innovations, the EIB has developed technical assistance facilities to support upstream activities and project preparation related to the carbon market. These can help promoters to identify and develop opportunities for investment in projects that will deliver credits that will be tradable under the EU’s ETS. The sale of such credits provides a valuable source of income for the promoter, encouraging investment in projects that reduce emissions of CO₂ (and other greenhouse gases).

EIB carbon funds

Under the EU’s Emissions Trading Scheme, about 12 000 industrial plants located in the European Union are subject to caps on their carbon dioxide emissions and are able to buy and sell permits to meet their legal obligations in this respect. The EIB takes an active role in the development of the carbon market. It has set up and co-manages three carbon funds, one with the EBRD, one with the World Bank, and one with Kreditanstalt für Wiederaufbau (KfW).

The EBRD-EIB Multilateral Carbon Credit Fund (MCCF), with EUR 165m pledged by six Member States and six energy companies, should significantly increase the generation of carbon credits across countries from Central Europe to Central Asia. This region has huge potential for cost-effective reduction of greenhouse gas emissions through energy efficiency improvement, which both the EIB and EBRD are willing to finance. The by-product of such investment is tradable carbon credits and by joining MCCF, countries – which must be shareholders of the EBRD or EIB – and companies can buy carbon credits generated by projects financed by either institution.

In the same vein, the World Bank and the EIB have established the Carbon Fund for Europe (CFE) as a vehicle for EU Member States and companies to acquire carbon credits and as a carbon credit sales outlet for projects in developing countries that have been financed by the World Bank or the EIB. The CFE was launched with a first tranche of EUR 50m, pledged by four governments and one company.

The EIB-KfW Carbon Programme is a carbon credit purchasing programme for up to EUR 100m. The purpose is to facilitate and simplify the purchase of carbon credits by smaller companies in the EU which need to meet compliance obligations but have no direct access to project promoters in developing, transition and industrialising countries that offer credits for sale.

Finally, the Post-2012 Carbon Fund, which will be around EUR100m, is being prepared in collaboration with a number of international and national financing institutions. It will underpin the market value of carbon credits generated after the expiry of the current Kyoto Protocol in 2012.

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1 For more information on the EIB and climate change, go to www.eib.org/projects/topics/environment/climate-change.
2 The Climate Change Technical Assistance Facility and other facilities dedicated to the MED and ACP countries.
EIB loan formats

The European Investment Bank offers various loan formats in support of energy investment, depending on project size and category:

- **individual or framework loans**: aimed at projects or programmes with investment costs of at least EUR 25 million, undertaken by both (semi-)public and private sector borrowers. The maximum loan amount is in general up to 50% of the total project cost. The appropriate loan/security structure is defined on a case-by-case basis;

- **credit lines**: aimed at investments of up to EUR 25 million, credit lines are arranged with other banks or financial institutions to support – at their own credit risk – smaller projects, typically undertaken by SMEs with fewer than 250 employees or local authorities. In the case of energy RDI, promoters of any size and ownership are eligible for allocations from credit lines. The maximum amount for allocations is generally up to 50% of the investment cost, but for energy RDI and investment in emissions reduction the maximum is 75%;

- **mid-cap loans**: aimed at investments of up to EUR 50 million. Mid-cap loans are lines of credit in support of projects undertaken by intermediate-sized companies with fewer than 3,000 employees (“mid-caps”). The maximum amount for sub-loans under mid-cap loans is generally up to 50% of the investment cost;

- **finally**, to meet the requirements of projects or promoters with a high-risk profile, the EIB and the Commission have jointly established a Risk Sharing Finance Facility (RSFF). RSFF provides for credit risk sharing between the Commission and the EIB and enables the Bank to provide loans or guarantees with a low and sub-investment grade risk profile. Direct RSFF loans start at EUR 7.5m.

The EIB offers loans with a **fixed, variable or revisable** interest rate. The loans can be denominated in euros, the currencies of the EU Member States not in the eurozone, or other currencies such as the US dollar, yen, Swiss franc or a Central or Eastern European currency. An advantage of EIB finance is the extended maturities of the loans – in the industrial sector up to 12 years and for energy infrastructure up to 20 years and longer. Borrowers may further benefit from appropriate grace periods, which in the case of RDI projects accommodate the generally longer time span between the start-up, market launch and payback stages. The EIB adopts a flexible approach and tailors its financing instruments to the specific financing needs of the borrower, always in line with sound banking practice and procedures.
The European Investment Bank

The role of the European Investment Bank (EIB), an autonomous EU institution, is to finance investment projects contributing to the balanced development of the Union. Set up in 1958 under the Treaty of Rome establishing the European Community, the EIB operates as a bank and raises on the capital markets the bulk of the resources that it deploys to finance projects meeting the Union’s broad objectives.

The EIB’s shareholders are the Member States of the European Union, which have all subscribed to its capital. As a major international borrower that is consistently awarded a first-class credit rating (AAA) by the main rating agencies, the Bank mobilises large volumes of capital on highly favourable terms and subsequently advances loans at interest rates that reflect its borrowing costs. The EIB is financially autonomous and does not come under the EU budget.

The constantly growing volume of EIB operations currently makes the Bank one of the world’s largest multilateral financing institutions.

EIB lending mainly targets the EU Member States. Outside the Union, the Bank contributes to the implementation of EU development aid and cooperation policies by granting loans in some 150 countries, notably the Candidate Countries, Neighbour Countries to the South and to the East, Asia and Latin America, the African, Caribbean and Pacific States (ACP and OCT), and the Republic of South Africa.
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