



COMMISSION OF THE EUROPEAN COMMUNITIES

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**SUMMARY OF THE IMPACT ASSESSMENT
OF MOBILISING PUBLIC AND PRIVATE FINANCE TOWARDS GLOBAL
ACCESS TO CLIMATE-FRIENDLY, AFFORDABLE AND SECURE ENERGY
SERVICES: THE GLOBAL ENERGY EFFICIENCY AND RENEWABLE ENERGY
FUND**

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If current trends would persist, according to the International Energy Agency (IEA), world energy demand will increase by more than 60 percent by 2030. However, at the same time, carbon dioxide emissions would rise by 62 % and an estimated 1.4 billion people would remain without access to modern energy services. Therefore, global leaders acknowledged that current trends are not sustainable. At the 2002 World Summit for Sustainable Development (WSSD), they agreed to urgently and significantly increase the global share of renewable energy whilst also halving the 1.6 billion people currently deprived from basic energy services. To make sure this would not remain an empty statement, the EU launched the Johannesburg Renewable Energy Coalition (JREC). Since it was established at the WSSD, more than 90 governments agreed to join. The Commission co-chairs the JREC and hosts the secretariat ensuring the necessary synergies with the EU Energy Initiative which maintains an important focus on renewable energy and energy efficiency. Furthermore, the G8 Gleneagles Action Plan on Climate Change, Clean Energy and Sustainable Development proposed to set up a specific investment framework for clean energy. The Commission's Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy" sets out an integrated approach to tackling climate change aiming, inter alia, at radically increasing energy efficiency through the demonstration and deployment of energy efficient technologies and increased demonstration and deployment of renewable energy technologies.

Renewable energy investments, and to a similar extent investments in energy efficiency, generate significant benefits with typical public goods characteristics. They produce substantial global benefits, such as zero or low greenhouse gas emissions, as well as local and regional benefits, such as no or low emissions of traditional air pollutants. They help improving energy security by exploiting locally available energy such as wind, solar, geothermal heat or biomass. They also promote local employment and income generation, including through the provision of energy for productive use. These 'public goods' benefits render renewable energy and energy efficiency projects often economically very attractive, particularly in developing countries where power production is on average much less efficient and more polluting compared to industrialised countries with advanced environmental legislation.

In addition, renewable energy and energy efficiency investments are ready to become an integral part of the core energy and development investment agenda. They can today contribute to delivering electric power and non-electric energy supplies for local business and transport in particular where grid connection is uneconomic. Off-grid and mini-grids can ensure adequate and economical energy supplies in remote areas. A full range of technological solutions to serve enterprise and household needs can be offered which is particularly relevant for developing countries.

However, in spite of increasing success stories and commitments made by the International Community, the IEA predicts that the share of renewable energy would remain more or less constant in 2030 if current trends would persist. Even if the policy frameworks become more and more conducive, financing energy efficiency and renewable energy investments is not automatically ensured. The problems underlying the financing gap are complex but mainly concentrated in the area of risk capital which provides important collateral for lenders. Mobilising private sector finance is essential in order to channel sufficient finance into sustainable energy investments. The high potential of renewables to generate a multitude of socio-economic and environmental public goods, both globally and locally, merits public support to solve this financing grid-lock and to provide public incentives to international and domestic private investors.

The Commission has already started to join hands with international finance institutions like the EIB, EBRD and the World Bank, private sector investors, and financial intermediaries, to set up a Global Energy Efficiency and Renewable Energy Fund (GEEREF) forming a global **Public-Private Partnership**. The objective is to mobilize public and private finance for scaling up pilot schemes that can help solving the financing grid-lock for economic renewable energy projects and businesses. The proposal draws on the Patient Capital Initiative launched by the European Commission in 2004 in the context of the JREC. It is based on a feasibility study for which the scoping and launching was guided by the debates at the 2002 WSSD and the first international high-level conference of the JREC held in Brussels (2-3 June 2003). The focus is particularly on developing countries and economies in transition.

The GEEREF will be set up as a global Public-Private Partnership that will offer suitable risk sharing and co-funding options for various commercial and non-commercial investors with a global investment mandate. It will allow engaging professional fund managers on a self-sustaining basis, acting in accordance with a specific mandate established by donors and investors. High-quality monitoring, reporting and control features will be provided through the structure.

The GEEREF will support renewable energy and energy efficiency projects below EURO 10 million as these are mostly ignored by commercial investors and IFIs. It will cover Sub-Saharan Africa, Caribbean and Pacific Island States, the countries of the European Neighbourhood (including North-Africa and non-EU Eastern Europe including Russia), Latin America, and Asia (including Central Asia and the Middle East).¹ Funding will be market-driven whilst priority will be given to investments in those countries, regions or municipalities with supportive renewable energy policies that are conducive to private sector engagement and that facilitate renewable energy investments. There will be a special emphasis on serving the needs of ACP countries. Both, actual provision of risk capital and technical assistance will make the fund a 'one stop shop' which will reduce transaction costs and improve overall performance of the fund.

The investment scope will include a broad mix of project types, energy efficiency and renewable energy technologies whilst emphasising technologies with a proven technical track record.

The funding target for the GEEREF is set at a minimum of EURO 100 million. This target is both necessary to have a meaningful impact at the global level and sufficient to establish a public-private partnership that will be self-sustaining over time.

GEEREF will actively engage in the creation and funding of regional sub-funds or scale up similar existing initiatives². This will allow to accommodate specificities of the regional markets and to bring in international financial institutions, local expertise and to leverage additional private sector funding.

GEEREF participation could range between 25 to 50% for medium to high risk sub-funds and 15 to 20% for low risk sub-funds.

¹ As regards countries covered by the Pre-Accession Instrument, supplementary funding from other Instruments should be secured.

² Examples of existing pilot projects similar to what is envisaged and that could be scaled-up are provided in Annex of SEC(2006) 1224.

Assuming that a first financial close in the order of EURO 100 million is feasible, up to EURO 1 billion additional capital could be mobilised. Hence, the leverage factor would range around 10, which is considerably higher than for conventional grant-based support schemes that ask for co-funding in the range of 50 – 70%.

Considering the risks involved, the European Commission acknowledges that a significant contribution from the Community budget is essential to kick-start the initiative and trigger substantial private co-funding. The European Commission proposes to contribute up to EUR 80 million covering the period 2007-2010 to the GEEREF within the context of the Thematic Programme on the Environment and the Management of Natural Resources, including Energy.. A first contribution of EUR 15 million is proposed be made early 2007. The necessary human resources needed to manage this initiative will be covered using existing resources within the managing services, where necessary through internal deployment.

The (annual) Financing Decision covering the spending under the annual ENRTP programme will also provide the basis for allocating Community funds to the GEEREF (possibly through the European Investment Fund as in the case of the European Fund for South East Europe). Decision-making will take account of relevant provisions foreseen in the legal basis.

This proposal involves co-financing from a wide range of public and private bodies, including international finance institutions, private investors and companies, and foundations. EU and EEA Member States may contribute on a voluntary basis. An estimate of the level of this co-financing is indicated in the table below:

Co-financing body	EUR million (to 3 decimal places)						
	Year 2007	2008	2009	2010	2011	2012 and later	Total
Non EC Co-financing 1 st tier	10,000	10,000					20,000
Non EC Co-financing 2 nd tier	15,000	30,000	50,000	109,000			204,000
Non EC Co-financing 3 rd tier	10,000	50,000	100,000	300,000	331,000		791,000
Total Non EC Co-financing	35,000	90,000	150,000	409,000	331,000	0,000	1015,000

It is envisaged that up to €50 million Euro co-financing may be obtained from the Investment Facility under the 9th European Development Fund managed by the EIB to develop activities in ACP regions.

This novel instrument could serve as a positive example that could be replicated by other public and private investors and presents an important scaling-up instrument towards securing the overall financing need of EURO 241 billion until 2010.

Once fully invested, the GEEREF could bring almost 1 Gigawatt of clean energy capacity to developing country markets. This could serve 1-3 million people with clean energy services, substituting 1-2 million tonnes of CO₂ per year (worth almost EURO 5 million at current prices).

- **Greenhouse gas emissions:** More than 1.1 million tonnes of CO₂ will be saved per year leading to long lasting effects for decades. This figure represents an estimate based on the

assumption that the newly installed capacity financed through the GEEREF would replace the currently “average” fossil based electricity and combined heat and power plants in developing countries. In the optimistic case, if only coal based heat and power generation were to be replaced, annual CO₂ savings per year would reach almost 3 million tonnes. The pessimistic case, which assumes replacing gas-fired power and heat plants is considered highly unlikely; most energy investment in developing countries continues the expansion of energy supply capacity rather on the basis of cheap coal than on much more expensive gas. This could lead to cumulative savings of CO₂ between 10 and 30 million tons over a 10 year lifetime of the Global Fund, with lasting impacts for at least another 10 years. In any case, the final outcome will depend on the ultimate technology and geographical mix.

- **Energy security:** Roughly between 500 and 1500 MW of newly installed clean and indigenous renewable energy capacity or avoided capacity extensions due to energy efficiency investments are expected to be brought on-stream.
- **Access to energy:** Between 0.5 and 3.5 million people living in developing countries will be served with modern clean energy services. Beneficiaries are likely to include SMEs, thus increasing options for remote developing country regions to develop economic activities that would otherwise have not been possible. Moreover, it is expected to include the provision of modern cooking fuels and hot water to almost 500,000 houses.
- **Other:** More positive impacts are expected for which no quantifications were made. These include:
 - reduced emissions of traditional air pollutants including SO_x, NO_x, PM, and CO contributing to the improvement of local air quality reducing health problems including those caused by indoor cooking;
 - reduced pressure from expensive fossil fuel imports by exploiting renewable energy such as wind, solar, geothermal heat or locally available biomass;
 - local employment and income generation, including through the provision of energy for productive use, in particular in remote areas for which grid extensions are not economically attractive;
 - increased options for the development, transfer, and deployment of advanced technologies, including through new options for promoting the creation of joint ventures between European and developing country entrepreneurs thus transferring technological and management know-how.

The proposed Global Energy Efficiency and Renewable Energy Fund as outlined in this Communication will complement the range of financing instruments available at the level of the European Community. It is specifically designed to boost the Communities' capability to support the implementation of its partner countries sustainable development and poverty eradication programs, and accelerate the transfer, development and deployment of environmentally sound technologies. It will facilitate efficient co-operation amongst donors, attract strong interest from commercial investors, including international finance institutions, and ultimately accelerate the global market uptake of sustainable, secure, and affordable energy technologies and the services they deliver.

With gaining further experience, this novel approach of a concrete public private partnership could be expanded to other key areas for investment into clean, affordable and secure energy sector (e.g. in carbon capture and geological storage).