CLEAN ENERGY FOR DEVELOPMENT

1. INTRODUCTION AND BACKGROUND

There has been growing recognition in the international development debate that access to clean energy is of crucial importance in combating poverty, and an essential basis for economic growth. Greater access to energy is not a goal in itself, but a means of bringing about sustainable development. Stepping up Norway's efforts in the fields of clean energy and energy efficiency in our partner countries will be a key contribution to achieving this.

At present, more than 80% of world energy use is based on fossil energy sources. The use of fossil energy entails large greenhouse gas emissions. To mitigate climate change as a result of the enhanced greenhouse effect, the world's dependence on fossil energy must be reduced. The most recent report from the Intergovernmental Panel on Climate Change (IPCC) provides clear evidence that climate change is being caused by human activity and that action must be taken to reduce greenhouse gas emissions. The Stern review also demonstrates that it makes economic sense to take action now. The longer we wait to deal with climate change, the more the costs of adaptation and mitigation will rise. These two reports highlight the challenges we are up against and that the energy sector must address.

The Government has put energy and climate issues high on the agenda in both domestic and foreign policy. The Clean Energy for Development initiative, together with the Oil for Development initiative, will be an important element of Norway's overall energy policy.

At the Gleneagles summit in 2005, the G8 agreed on a plan of action for climate change, clean energy and sustainable development. In response, the World Bank is drawing up an Investment Framework for Clean Energy and Development with three main pillars: i) energy for development and access for the poor; ii) transition to a low-carbon economy; and iii) adaptation to climate change. The regional development banks are developing similar initiatives, and many donors are stepping up their funding for clean energy and climate measures.

The energy situation in Africa is particularly critical. More than 500 million people lack access to electricity, and high oil prices are having serious macroeconomic consequences. High oil prices, drought – which reduces production from hydropower plants – and poorly maintained transmission and distribution grids are typical of large parts of Africa. At the same time, there has been growing interest in the oil and gas deposits in certain African countries, particularly from China. The impacts of climate change in Africa are being reinforced by widespread poverty, rapid population growth and poor governance. The combination of these factors makes Africa the continent that is most vulnerable to climate change. However, many countries in Asia are facing similar problems as regards access to energy. Reducing greenhouse gas emissions from the most rapidly growing economies will be a key challenge here.

This document sets out our approach to clean energy in development cooperation for the period up to 2015. It is also intended as a means of achieving the goal of improving poor people's access to clean energy set out in the *Norwegian Action Plan for Environment in Development Cooperation*. A four-year implementation programme proposing specific projects and other measures will be drawn up and will be updated every year.

2. GUIDING PRINCIPLES

It will not be possible to achieve the Millennium Development Goals without improving access to energy in poor countries. Access to energy is a key factor in a country's investment climate, and essential for production and employment. Social and economic development depend on access to sustainable energy solutions. The development of modern energy supplies in a country requires long-term efforts and political priorities. Support for the use of clean energy will also be a key element in efforts to mitigate climate change. This will require stronger integration of environment and energy into development cooperation.

On the basis of its natural advantages, Norway has developed cutting-edge international expertise and industries in a number of relevant fields: management of energy resources, development and operation of hydropower installations, development and use of other clean energy sources, transmission and distribution of electricity (including electrification), regional cooperation in the power sector and research and higher education in the energy sector. Furthermore, Norway has expertise on integrated planning of the use and protection of water resources and on the links between energy and environment. Norway can make use of many years' experience of development cooperation in the energy sector to offer comprehensive support in the field of clean energy, adapted to the specific needs of each partner country.

In its policy platform, the current Government declared that its vision is for Norway to be an environmentally-friendly energy producer and a world leader in the development of green energy. Oil and energy is a priority area of Norwegian development cooperation. In view of its intention for Norway to play a leading role in integrating environmental issues into development cooperation, the Government presented the *Norwegian Action Plan for Environment in Development Cooperation* in June 2006. Climate change and access to clean energy is one of four thematic priorities in the plan.

Regional cooperation in the energy sector is needed to promote economic integration, the development of regional infrastructure and power trading. Regional institutions and organisations will therefore have an important role to play.

In recent years, there has been growing international interest in Norwegian experience and expertise in the field of natural resource management. The Norwegian approach is based on the premise that natural resources are common goods and that the state is responsible for ensuring that a reasonable proportion of the value created from these resources is used for the benefit of the whole population. The Norwegian state and local authorities therefore play a key role in the management of energy resources and the value created from these resources, through regulation of production and distribution. This has provided considerable revenues for the public sector at both local and national level: at the same time, local businesses have benefited from cheap energy and rural districts have been given access to energy on the same conditions as more central areas. In Norway, there is a combination of mostly public (state, county and municipal) and some private ownership of power sector enterprises, which have gradually become financially autonomous.

It has proved to be difficult to attract private-sector investment for clean energy projects in poor countries. This requires long-term investment at high risk, and any yield apart from socio-economic benefits is often uncertain. There is general agreement that it is not possible to mobilise sufficient capital for the investments that are needed in Africa without including private-sector capital. In order to increase production of clean energy in poor countries,

especially in Africa, it will therefore be necessary for public authorities and/or commercial investors with access to development funding to cover part of the development costs, and to develop a better framework for private-sector participation. Public-private partnerships and development funding can also be used to finance additional studies and other measures needed for projects to be bankable.

The public-sector contribution from Norway will be small relative to the overall need for investment in the energy sector. It will therefore be of key importance to use Norwegian funding catalytically, and to create synergies with other projects and programmes. In partner countries, it will also be of crucial importance to assist in the development of a sound, integrated energy and environmental policy that can provide the basis for long-term development of the energy sector.

Like all other development cooperation, the clean energy initiative must take into account the commitments laid down in the Paris Declaration on Aid Effectiveness. Central principles of development cooperation are ownership (partner country ownership of the development agenda), alignment (cooperation is based on national development strategies and budgets and makes the greatest possible use of partner country systems and procedures) and harmonisation (division of labour and coordination between donors).

The political goals of Norwegian development policy, together with multilateral declarations and recommendations for sustainable development,[1] will provide the basis for a joint international effort in the field of energy.

3. MAIN OBJECTIVE AND ORGANISATION OF THE INITIATIVE

3.1 Main objective

The main objective of the initiative is to increase access to clean energy at an affordable price based on the long-term management of natural resources and efficient energy use. It is also intended to contribute to sustainable economic and social development in selected partner countries and to international efforts to reduce greenhouse gas emissions.

3.2 Priority areas

The initiative will involve long-term efforts, both bilaterally and multilaterally. It will be linked to Norway's international efforts in the field of energy and climate, and will focus on the areas where Norway has special expertise, such as support for:

- The development of national frameworks (legislation, regulation, institutions, etc) that will encourage investment in the production of clean energy and energy efficiency;
- Regional and national energy planning, infrastructure development and trade;
- Investments in national and regional energy infrastructure (production, transmission and distribution) and power trading;
- Electrification in rural areas and small-scale energy production from various sources (hydropower, solar, biomass, wind);

[1] The following are particularly important in the context of energy: Agenda 21 (1992), ninth session of the Commission on Sustainable Development (CSD-9) (2001), World Summit on Sustainable Development in Johannesburg (2002), International Conference for Renewable Energies in Bonn (2004), Beijing International Renewable Energy Conference 2005, CSD-14 (2006) and CSD-15 (2007).

- Development of integrated solutions that will contribute to local industrial development;
- Development of knowledge, expertise and technology;
- Analyses of access to, control of, the need for, trade in and management of clean energy in developing countries.

It is often women and children who bear the largest burden of fuel collection and who are most exposed to pollution from traditional energy sources. Development cooperation on clean energy is intended to play a part in improving the situation of women, and their energy needs and assessments of their own situation should be taken into account in planning.

3.3 Environmental mainstreaming

Environmental concerns must be taken into account in all development cooperation. Energy projects can have extensive impacts on the environment and on social conditions, and environmental impact assessments will be required for most projects. Environmental concerns must be included as an integrated part of project planning and assessment by the energy authorities, in accordance with national legislation and internationally recognised environmental and social safeguard policies. Energy technology should be chosen on the basis of the needs of poor countries, with a focus on cost effectiveness and energy efficiency, and should be based on integrated national energy plans. Impacts on natural resources and the environment and projected climate change should also be used as a basis for technology choices.

Non-renewable energy based on the use of fossil fuels will dominate energy use both globally and in developing countries for many years to come. Even though these energy sources will generate substantial greenhouse gas emissions and cause local pollution, they will be needed for developing countries to achieve economic and social development, and they may be essential in situations where there are acute energy shortages (e.g. Uganda). Development cooperation must therefore be used to reduce pollution and promote the most sustainable use possible of such energy sources.

The priorities for clean energy and climate in the *Norwegian Action Plan for Environment in Development Cooperation* will be followed up bilaterally by:

- Giving priority to support for integrated national energy planning and encouraging the inclusion of both renewable energy sources and opportunities for energy efficiency measures in such plans;
- Assessing energy needs, together with options for more efficient use of existing sources, and the use of renewable energy sources when technology choices are being made. Using these assessments as a basis, giving priority to the development and use of renewable sources, including hydropower, biomass, wind and solar power, in cases where this is economically viable. Before large- or small-scale hydropower developments are given support, they must be assessed in relation to the interests of other water users;
- Giving priority to projects that will reduce adverse effects on health of household use of biomass and to sustainable production of biomass.

Energy efficiency measures are to be given support in cooperation with multilateral organisations and through international partnerships, and the poorest countries are to be assisted to make use of the Clean Development Mechanism (CDM). More active use of the flexible mechanisms to meet Norway's commitment under the Kyoto Protocol is being reviewed. ODA funding can currently be used for project development, capacity-building in developing countries and other ways of facilitating CDM projects, but not to buy emission allowances.

Planning of energy infrastructure must take climate change into account through evaluation of the following:

- The effect of the project on greenhouse gas emissions;
- Whether the project will affect the vulnerability of the population or the environment to climate change;
- Whether the project is designed to be robust to climate change.

Development projects that receive Norwegian funding should be in accordance with Norway's targets as regards mitigation of global climate change and should as far as possible contribute to achieving these targets.

3.4 Private sector development

The purpose of energy-related development assistance is both to ensure energy supplies for national and local private sector development, and to improve the framework for private investment in the energy sector.

The large investment needs, low capacity and willingness to pay, difficulties in putting in place cost-reflective tariffs, and the generally unattractive investment climate mean that the supply of capital for investments in clean energy is inadequate. There is now a growing realisation that both public and private capital will be needed to meet investment requirements as well as the needs of the poorest people. The development of public-private partnerships (PPP) is one possible way of achieving this kind of cooperation. This approach can help to reach the return on investment required by different investors by spreading the risk. Any state subsidies must be clearly identified so that their effects can be evaluated.

The private sector has shown limited interest in investing in poor countries, especially in Africa, but considerably higher willingness to invest in the most rapidly growing economies in Asia. National authorities can therefore increasingly become purely responsible for the regulatory and investment frameworks rather than playing a role as active investors. This can ease the pressure on public finances and encourage competition and more efficient power sector enterprises.

Steps to facilitate possible investment projects, the establishment of national energy funds, active use of guarantee instruments and general strengthening of local capital markets will be needed to attract more investment from the private sector.

Development funds will only be a supplement to other funding in the energy sector, and must therefore be used strategically and catalytically in PPPs.

Infrastructure projects should be planned and carried out in such at way that they promote local private sector development through support for training of local labour and development

of local entrepreneurs and contractors. In addition, priority should be given to local or regional companies when contracts are awarded.

4. DEVELOPMENT TOOLS

4.1 Bilateral efforts – selectivity and focus

Bilateral efforts will focus on areas where Norway has special advantages and expertise. It will be important to obtain more analytical and research-based information on access to and control of energy supplies in developing countries, their energy needs, and energy trade and management of clean energy in these countries. The work is to be based on needs identified at regional and national level, and will involve cooperation between experts and development actors from Norway and other countries.

An overall assessment of the use of development funding in the energy sector is to be made with a view to tailoring support to specific countries and regions. For partner countries where energy is a priority (e.g. Uganda, Mozambique and Nepal), cooperation will be based on the countries' own priorities and strategies. In these countries, Norway will, in addition to direct support for specific projects, take an active and constructive part in the dialogue on management and use of the countries' energy resources, and assist in the integration of energy into national development strategies, the development of sectoral programmes and harmonisation with other donors.

Bilateral efforts will also include specific projects in a number of other partner countries. These will be selected on the basis of the situation in each country, the countries' own priorities, Norwegian expertise and contributions from other actors.

Cooperation with regional institutions and support for the development of regional cooperation on energy sector development and joint energy markets will be an important and integral part of the initiative.

All countries on the DAC list of ODA recipients will be eligible for technical cooperation and transfer of Norwegian expertise in the field of clean energy, through exchanges of visits, seminars, courses and training programmes, support for university studies, research cooperation and limited institutional cooperation.

The Norwegian Investment Fund for Developing Countries, Norfund, is a key Norwegian investor in the energy sector in developing countries, partly through its cooperation with Statkraft in SN Power Invest (SNPI). SNPI is in a unique position internationally with its expertise in hydropower and its focus on investment in poor countries. Further efforts will be made to find possible new forms of cooperation to enable least developed countries (LDCs), particularly in Africa, to attract investments by NORFUND, SNPI and other Norwegian investors.

The initiative is also intended to encourage new models for private-public partnerships with a greater degree of public-sector participation and risk management, active mobilisation of the

financial mechanisms available, including the CDM, and use of the support schemes for private sector development administered by Norad to fund feasibility studies and training.

NGOs can play an important role as regards the production and distribution of clean energy at local level, for example electricity supplies operated by local communities, facilitation of the use of solar panels, bioenergy and improved fuelwood stoves. Norway will increase support to NGOs that are involved in promoting the use of new clean energy sources, and strengthen their position as a watchdog vis-à-vis the authorities.

The clean energy initiative will make it possible for Norway to provide effective support for partner countries in their efforts to implement their development strategies, combat poverty and achieve the Millennium Development Goals. Assuming that the partner countries are interested in this kind of cooperation with Norway, this will result in a marked increase in the demand for funding for clean energy.

4.2 Multilateral cooperation and partnerships

Energy development cooperation supported by Norway through multilateral channels will be based on the comparative advantages and expertise of different multilateral organisations, and will be designed to complement the bilateral efforts thematically and geographically. Norwegian support to multilateral organisations (the UN, the World Bank and the regional development banks) in the field of clean energy will be continued, and expansion of the portfolio will be considered, particularly in the following areas:

- Energy for development and access to clean energy, focusing mainly on Africa, and energy efficiency;
- Renewable energy and energy efficiency, and the transition to a low-carbon economy, focusing mainly on Asia;
- Measures to reduce the negative health effects, particularly for women and children, of household use of biomass;
- Support for project development and co-financing of priority investment projects.

Development of international partnerships and support through and participation in such partnerships will also be considered, with the focus on the areas listed above. The policy dialogue with multilateral organisations and partnerships will be strengthened and will be based to a larger degree on practical experience from bilateral cooperation. This will enable us to harmonise bilateral and multilateral efforts better at country level. Focusing more closely on results and improving the exchange of information will make it possible to develop a more experience-based policy dialogue at headquarter level.

5. COOPERATION PARTNERS

5.1 Norwegian expertise

Key cooperation partners for the transfer of Norwegian experience and expertise in the development of clean energy will include several ministries and directorates (Ministry of Petroleum and Energy, Norwegian Water Resources and Energy Directorate, Ministry of the Environment, the environmental directorates), companies involved in electricity production and supply (Statkraft, Statnett, Nordpool), research institutions (the SINTEF Group, Institute

for Energy Technology, Norwegian Defence Research Establishment), universities and other educational institutions (Norwegian University of Science and Technology, Norwegian University of Life Sciences, International Centre for Hydropower), representatives of various types of companies (consultancy firms, firms that supply the electricity industry and other energy industries, for example suppliers of solar power technology) and NGOs with networks and project experience in Norway's partner countries.

Support involving the use of Norwegian expertise should as far as possible be granted in accordance with international obligations relating to aid effectiveness. In addition, Norwegian expertise will be important in providing advice for the Norwegian development cooperation administration.

5.2 The private sector and commercial investors

Promoting the active involvement of the Norwegian business sector, both suppliers and consultants, is a key element of the initiative. To make this possible, the existing support schemes for private sector development administered by Norad will be strengthened and made more flexible. Involvement of the Norwegian business sector will follow OECD-DAC guidelines on untying aid. Cooperation is planned with several power sector enterprises that have expressed an interest in investing in Norway's partner countries, and with other relevant hydropower and clean energy companies.

Active involvement of Norwegian contractors and investors in this initiative will make it necessary to increase the volume of political risk instruments from the Norwegian Guarantee Institute for Export Credits (GIEK) available to the least developed countries.

Furthermore, an evaluation is now under way of how more active use of the Kyoto mechanisms can be encouraged. When the results are available, they will be used in further development of the initiative.

6. ORGANISATION, QUALITY ASSURANCE AND PERFORMANCE MONITORING

6.1 Organisation

The administrative agencies that have budgetary responsibility for the clean energy for development initiative are also responsible for planning, administration and reporting on activities within the initiative. The embassies will play a key role in implementing the initiative. Norad has the main responsible for quality assurance and performance reporting.

Establishment of the following administrative structures is proposed to ensure strategic organisation, coordination and reporting on the initiative, and the involvement of and consultations with cooperation partners:

Project group. Should consist of representatives of all the sections in the Ministry of Foreign Affairs that have budgetary responsibility for the initiative, Norad and Norfund. The group should coordinate and set priorities for activities in the energy sector, report on the initiative, and consider policy and strategic issues. It should also be responsible for developing the

political profile of the development cooperation budget in the energy sector and provide input to the budget process.

The project group would be headed by a special adviser on energy issues in the Section for International Development Policy and would report to the Deputy Secretary General for Foreign Affairs. Norad would provide the secretariat for the project group.

Reference group: Should consist of representatives of the Ministry of Petroleum and Energy, the Ministry of the Environment, the Ministry of Trade and Industry, GIEK, SNPower, Innovation Norway and academia. It should also have representatives of relevant business sectors, such as producers and suppliers of electricity and consultants, and of Norwegian NGOs. The group would be responsible for information exchange and consultations between the actors, and would be a forum for discussion and review (possibly organised in smaller working groups established by the project group). All members of the project group would also be expected to take part in meetings of the reference group.

6.2 Quality assurance and performance monitoring

Like all development cooperation, the Clean Energy for Development initiative will be expected to satisfy high technical and administrative standards. The quality of Norwegian development cooperation in the energy field can be improved in various ways – documentation and reporting of results, learning from experience, and basing the dialogue with partner countries and other actors more on knowledge and experience from field work. Norad has the main responsibility for quality assurance and performance monitoring of the initiative as a whole.

The quality of the initiative will be improved by focusing more on analytical work and more active participation in a dialogue on policy formulation and strategies and country and regional level, in multilateral organisations and with other donor countries.

Energy-related development cooperation takes place in various arenas and makes a direct or indirect contribution to achieving several different development goals (poverty reduction, infrastructure development, investment and economic growth). Satisfactory performance monitoring requires that clear goals and indicators are set at strategic level, and that there are clear requirements for reporting in agreements on funding. Moreover, donors must allocate sufficient resources to documentation of results.

At the same time as the four-year implementation programme is drawn up, qualitative and/or quantitative targets will be developed as a basis for reporting. Annual reports on progress and results are to be provided in the budget proposals (Proposition No. 1 to the Storting).

A comprehensive evaluation of Norwegian power-related assistance has been started, and will provide input for further work on quality assurance and performance monitoring.