Water, Energy, Transport

Renewable energy

The challenge

The International Energy Agency forecasts that the world's energy needs will increase by 55 per cent by 2030; more than 70 per cent of this increase will occur in developing countries and emerging economies. Because of the implications for the climate, this increase cannot be met by oil, gas and coal alone and for safety reasons nuclear energy cannot be relied on.

Volatility and price increases on the mineral oil markets affect not only the home markets; developing countries and emerging economies feel the effects particularly keenly.

As a political response to this situation, 66 states – including 23 developing countries and emerging economies – have drawn up targets for renewable energy use or developed a promotion policy for renewables.

The expansion of renewables opens up new national and regional growth potential for developing countries and emerging economies through technology transfer, employment creation and regional value chains. In order to achieve this expansion, the majority of these regions still need to bridge the gap between target-setting at policy level and expansion planning and market development for renewables on the ground.

Our approach

National targets, if they are to be achievable, must be based on an integrated strategy that links all aspects of sustainable development and creates incentives for the state, for businesses and for individuals. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH supports partner countries in creating conditions that promote the swifter dissemination of renewable energies. We adapt our approach to the situation in the energy sector in our partner countries and to the relevant economic and development goals. We identify approaches to project and market development that are compatible with existing local structures. We also work with our partners to create a basis for independent market development and raise the awareness of the national media in order to promote acceptance of the measures being implemented.

Our services

We support the introduction of renewable energies (e.g. wind energy, bioenergy, solar energy, hydropower) in the partner regions through methodological, technical and financial competence and enable partner organisations to move towards a sustainable energy supply through the use of their own potentials. Our services cover the following areas, among others:

- Providing policy advice on mechanisms to promote renewable energies
- Strengthening and developing local competences (capacity development for institutions, official bodies and the private sector)
- Supporting national expansion plans and scenarios for renewable energies
- Providing specialist advice to our partners
- Delivering initial and advanced training, running training courses and seminars on particular topics of interest
- Implementing model projects (carrying out pilot studies, feasibility studies, assistance with planning etc.)
- Initiating projects involving cooperation between the public sector and private businesses (PPP projects)
- Organising technology cooperation programmes (e.g. network development and fact-finding visits)
- Developing training programmes to create a professional basis for project implementation.

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Many of these measures relate to power generation in medium-sized and large facilities (>300 kW) integrated into the electricity grid; larger projects involving the generation of gas, heat or cold from renewable energies are also a part of our service.

The benefits

The use of renewable energies and the development of long-term supply security reduce dependence on energy imports from abroad and thus help stabilise energy prices in the long term. In addition, renewable energy use creates employment regionally and locally, adds value regionally and helps to reduce emissions that are harmful to the climate.

An example from the field

For many years Chile was able to buy low-cost natural gas from Argentina. Because of the worldwide rise in energy prices and a temporary delivery stop, Chile began in 2003 to consider the domestic potential for renewable energies.

Since 2004 GIZ, acting on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) until 2012 and since 2008 on behalf of the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB), has been advising the Chilean Government on the creation of political and legal conditions required for the accelerated development of renewable energies. Advice focuses in particular on improving the investment climate through promotion instruments and information services and through capacity building in the public and private sectors.

Potential analyses and feasibility studies for interested investors have been funded and special credit lines for investment in renewable energies have been set up. On the statutory side, laws have been passed that improve the competitiveness of renewable energies and regulate feed-in of the resulting electricity to the grid. There are tax concessions for the use of solar-powered domestic water heating systems.

As a result of this package of measures, as of 2013 there are more than 1.000 MW of wind, hydropower, bioenergy and solar energy installed and another 13.000 MW are being evaluated in the environmental assessment. Based on these results the Chilean Government has passed its targets for integrating renewable energies into the electricity grid and even raised the legal quota from 10 percent of renewable electricity in 2024 to 20 percent in 2025.

Contact

Dishna Schwarz
E dishna.schwarz@giz.de
T +49 6196 79-4214
I www.giz.de

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Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T +49 61 96 79-0
F +49 61 96 79-11 15
E info@giz.de
I www.giz.de