



Water, Energy, Transport

Basic energy supplies

The challenge

Some 2.5 billion people in developing countries lack access to adequate energy for essential everyday purposes such as cooking, lighting, electric household appliances or heating. Because of insufficient basic energy supplies, people are denied educational opportunities and are unable to participate in economic and political processes; access to modern means of communication and information exchange is restricted. Where there is no electricity, money must be spent on batteries, kerosene and candles – and often these are very expensive means of energy supply. Inefficient combustion of biomass such as wood and charcoal poses major health risks, especially to women and children, and is harmful to the environment. It is not only poor families who are affected; energy shortages also impact on the work of schools and health facilities and hinder the development of small business that needs energy to manufacture and process their products.

Our approach

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH offers a wide range of solutions which are adapted to the prevailing situation in the partner country. We advise on strategies for sustainable energy supply and efficient energy use as well as on the equally important aspect of financing mechanisms for poor population groups. Technical measures include the development of mini-grids, for example powered by small-scale hydropower or solar photovoltaics; extension and densification of existing electricity grids are additional options in rural and peri-urban energy supply. In addition, off-grid technologies such as solar home systems, energy-saving stoves and small biogas systems can meet the basic energy needs of private households, institutions and small businesses.

Our services

GIZ offers the following services:

- We promote the use of renewable energy and the further development of efficient energy technologies in private households, public institutions and SMEs.
- Methodologically, technically and financially we help to develop the competence and capability of key players in the energy sector.
- We organise and run training courses for producers, traders and service providers, to develop both their technical skills and their business capabilities.
- We support our partners in raising awareness among the population.
- Together with our partners we undertake systematic monitoring and evaluate ongoing processes.
- We support our partner countries with advice and expert inputs for policy-making ventures.
- We feed our project experience into international processes and supporting mechanisms.

The benefits

People with access to modern energy services save money, enjoy better health and have more opportunities for education and self-development. The productive use of energy enables small businesses to be set up and creates employment.

GIZ has been involved with energy issues all over the world for more than 20 years and has accumulated extensive practical experience in renewable energies, energy efficiency, household energy and policy advice.



The competence of our advice and the quality of our services are underpinned by regular exchange in the expert community and many years' experience in working with partners and target groups. We engage continuously in extensive dialogue with other international organisations, NGOs and specialist associations. A further strength of our work lies in our successful cooperation with various donors. Our partners benefit from our expertise in the provision of basic energy supplies and from our many contacts.

An example from the field

When darkness falls in Bolivia between six and seven o'clock in the evening, there are many villages in which no electric lights come on. Instead, occasional candles or kerosene lamps emit faint light, and the evening meal is prepared on smoky open fires. In these villages light is a luxury. Torch batteries or candles cost more than electricity from the grid, but many poor households cannot afford the cost of connection. And energy is not used only for lighting and cooking: people also need energy for heating, cooling, washing and heating water.

Acting on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Government of the Netherlands, GIZ is therefore promoting a project to develop access to modern and affordable energy services. This project follows a special approach as it has set itself the goal to reach the greatest number of people possible. In order to achieve this goal, the project follows an outcome-orientated approach, cooperating closely with the Bolivian Government, a number of NGOs and the local population, supporting the most promising projects.

The project involves connecting private households and villages to existing electricity grids and installing photovoltaic systems and small-scale hydropower units for electricity generation. Public institutions are being connected to the gas grid, and the distribution of efficient, low-smoke cooking stoves is also being promoted. In addition, family businesses and small enterprises benefit from improved basic energy provision – for example, for drying and grinding maize and chillies.

'Life has improved greatly since we've had electricity', enthuses 75-year-old farmer Pedro Huayllas. His hut has only recently been connected to the electricity grid. He and his wife Simona now have light to read by in the evenings. They used to have to read by a sooty kerosene lamp that gave out little light. On their meagre pension they could not often afford torch batteries. Now they are actually saving money, because the electricity is cheaper than the kerosene. A small part of the cost of connecting their hut to the electricity supply was subsidised by a private Bolivian energy utility and GIZ; Pedro and Simona can pay off the rest in instalments.

Over the last four years GIZ has successfully provided more than 400,000 people in Bolivia and over 5,000,000 people all over the world with modern energy.

Contact

Dr. Jörg Michael Bauer
E Joerg.Baur@giz.de
T +49 6196 7980 2820
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