

Sustainable energy for all

Artificial light, stoves, heating, mobile phones and computers – they all need energy. Energy supply does not just make everyday life easier, it is also essential for poverty reduction and is a powerful economic driving force.

Worldwide, though, 3 billion people lack access to clean, healthy, safe and affordable forms of energy. They have little prospect of a better life and that fate will be shared by even more people in the future, because, due to population growth and development, energy demand in the coming 20 years will rise by one third and petroleum, natural gas and coal are limited resources.

Solutions for the future are in demand. Austrian Development Cooperation is looking to the use of renewable energy and energy efficiency, taking into account the close connection between water, energy and food security (nexus approach), because only the prudent use of natural resources for the good of society as a whole will pave the way for sustainable development and bring stability and security.



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Energy boost for development

A third of the world's population uses wood, coal, animal dung and refuse for cooking and heating, with fatal consequences: 4 million people – above all women and children – die every year from smoke poisoning. Lung and eye diseases are widespread. Forests are depleted and there is not enough dung to fertilise the fields for a good harvest.

Austrian Development Cooperation thus supports programmes and projects that provide healthy, safe, affordable, reliable and renewable energy services in developing and emerging countries. With efficient cooking stoves, women and children, for example, can save hours spent searching for firewood, so that they have more time left for school or working at a skilled craft to improve income. Adequate lighting enables businesses and health facilities to stay open longer and raises the standard of living. Connection to the power grid makes communication easier via mobile phone or Internet.

Using alternative resources

Sunshine, wind, biomass, geothermal energy and water are amply available in many developing and emerging countries. When used in an ecological way, these renewable energies have hardly any adverse effects on climate and environment. They are sought-after alternatives to petroleum, natural gas and coal that presently still make up 81 per cent of the energy sources used worldwide.

To supply more people with sustainable renewable energy in future, we require the right mix of different energy forms. It is important for users to have a say in choosing and building facilities and to accept the application of new technologies. Minorities too need to be included in decision-making. Realistic business plans must be prepared and affordable energy tariffs offered.

Austria is a world leader in renewable energies, environmental technologies and energy efficiency. Experts for (small) hydropower, solar thermal energy and biomass have also been successfully engaged for many years in development cooperation.



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Austria is committed to renewables

Austrian Development Cooperation supports partner countries and regions in putting the available renewable energy potential to sustainable use – through know-how transfer, policy advice, training, awareness campaigns and pilot projects. The programmes are planned for the long term and harmonised with other donors.

Bhutan

A large part of the population in the Himalayan kingdom is already supplied with electric power. Since 1986, Austria has supported Bhutan in planning, financing and maintaining hydropower stations on its own. Four stations have now been set up. For the latest in Dagachhu, the country only needs two per cent in subsidies from Austria, the remainder is to be financed with own funds or loans. The local operators supply 15 per cent of the energy generated to the kingdom free of charge. This allows the financing of socially graduated electricity tariffs. Annual power exports also earn an income of about EUR 160 million for Bhutan. Proceeds are invested in programmes for education, health and rural electrification.



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Overcoming barriers

There are many obstacles to surmount on the way to sustainable renewable energy use. Developing and emerging countries often lack the policy framework, the necessary incentives and investors as well as technical and ecological know-how. Austria helps its partner countries to overcome these barriers.

West Africa
With the establishment of the Regional Centre for Renewable Energy and Energy Efficiency on Cape Verde, the Economic Community of West African States (ECOWAS) took major steps towards ensuring sustainable energy supply for its 15 member states. Policy advice, institution building, knowledge transfer, awareness campaigns and training pave the way for alternative solutions. With the ECOWAS energy ministries, the Centre has already framed a programme for promoting small hydropower, and a policy for greater energy efficiency. Austria was heavily involved in building the Centre and provided financial resources along with a seconded expert.

Southern and East Africa are following suit now and plan similar regional centres. Altogether 34 countries in Sub-Saharan Africa will then push a transition to renewable energy and highly energy efficient solutions.



With the warmth of the sun

Solar energy can be used to generate electricity but also for heating water. Many developing countries, however, still put solar thermal energy to little use. With projects in Southern Africa, Austrian Development Cooperation demonstrates the advantages of this environment-friendly technology.

Southern Africa
Despite having double the solar radiation at their disposal than Austria, by international standards countries such as Mozambique, Zimbabwe, Lesotho, Namibia and South Africa lag far behind in the use of solar-heated water. This is why the SOLTRAIN programme initiated by Austria has been supporting the development of competency centres for solar thermal energy since 2008. These provide further training and advice for technical experts, students and policymakers. The demonstration facilities in social institutions and small commercial enterprises show how solar thermal energy works. Shifting to this technology is well worth it: lower costs, more local value added and new jobs.

International engagement

As a member of the United Nations (UN) and the European Union (EU), Austria also contributes its know-how in the energy sector at an international level and participates in joint programmes. In cooperation with the UN Industrial Development Organisation (UNIDO), Austrian Development Cooperation also promotes the dissemination of renewable energy technologies in West Africa. For example, about 10,000 people in Senegal are now supplied with electricity via photovoltaic systems.

Since 2011, the UN has stepped up its energy engagement with the initiative Sustainable Energy for All (SE4ALL): Modern and clean energy services are to be made available to everyone by 2030 – also in developing and emerging countries. The aim is to double the use of renewable energies and energy efficiency worldwide. This programme will be implemented in the Decade of Sustainable Energy for All 2014–2024 with an engagement by the Austrian Development Cooperation.



70 per cent of Africans are not connected to a power grid. In 2002, the European Union launched the EU Energy Initiative and has provided substantial funds for sustainable energy technologies in rural areas. Austria also pays into this financing instrument. In Rwanda, for instance, modern cooking stoves have made everyday life much easier for 30,000 people.

Austrian Development Cooperation is also one of the driving forces in the EU-Africa Energy Partnership. This promotes the expansion of windpower and hydropower and aims to give 100 million Africans access to clean energy services by 2020. Civil society, businesses and scientific institutes of both continents are also involved in this energy programme. Austria supports the Ugandan Regulatory Authority, for example, in planning affordable and equitable electricity tariffs and approving renewable energy systems.



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