

Planning for sustainable energy development

The challenge...

Energy is critical for social and economic development. Lack of energy contributes to poverty at all levels: individual, community, national and regional. Africa is richly endowed with energy and mineral resources. However, while these resources are adequate to support and promote sustainable socioeconomic development, Africa lags behind much of the world in terms of human development. This discrepancy between the region's abundance of resources and its low level of socioeconomic development has been linked to limited access to energy services – most inhabitants lack access to energy to meet basic human needs and enable participation in income generating activities.

Africa is experiencing rapid urbanization, and high rates of population and economic growth. In order to sustain gains in economic growth and to leapfrog along the socioeconomic development path, it is crucial for the region to be able to meet future energy and electricity demand adequately and sustainably. Many African countries face similar challenges: shortage of energy supply relative to demand, low access to modern energy services, obsolete and inadequate energy supply infrastructure, high electricity supply costs, and difficult financial situations for most national utility operators. These challenges are closely related to a shortage of human and technical capacities, a shortage of adequate tools for effective energy planning, and a lack of the policies needed to exploit existing energy resources. To attain energy security, ensure environmental protection and foster economic development, Africa needs to explore and utilize its abundant energy resources efficiently and effectively.



The project...

The objective of this IAEA technical cooperation project is to consolidate and further develop national and regional energy planning capabilities in AFRA Member States, enabling the elaboration of national and regional energy strategies for sustainable development: The project will:

- Help countries strengthen and sustain institutional capability for energy planning;
- Support the establishment and implementation of national human resource development programmes in the field of energy planning;
- Assist countries in conducting country specific studies on sustainable energy development;
- Facilitate comparative assessment studies of electricity supply options using interconnected grids and related sustainable energy strategies;
- Help countries strengthen integration at the national level among energy bodies and national development institutions;
- Enhance regional cooperation and networking for energy planning.

The project will facilitate and set up a model for future cooperation on the development of sub regional energy plans – for Western, Northern, Central, Eastern and Southern Africa. The project promotes the concept of developing sub regional energy pools and contributes to the creation of a data collection network inter linked with other regional programmes (African Energy Commission (AFREC), West African Power Pool (WAPP), Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA) and other organizations).

- The project foresees the establishment of regional designated centres for energy planning that will be able to provide Member States with capacity building in energy planning.
- Special importance is given to the establishment of a pool of regional experts capable of carrying out expert missions to AFRA countries to perform capacity building and energy assessments
- The project aims to build partnerships and cooperation with national and regional institutions and stakeholders in energy domains to ensure sustainable collaboration for project implementation.
- The Memorandum of Understanding signed in May 2011 between AFRA and AFREC provides a basis for collaboration in strengthening the energy sector in Africa.

The impact...

The results of previous projects to build energy planning capacity in AFRA States Parties showed that energy planning expertise in some AFRA countries has been significantly strengthened. In others, however, further assistance is required to develop expertise to a sustainable level.

Improved energy planning capabilities in Africa will help Member States to take an active role in implementation of the UN initiative Sustainable Energy for All (SE4ALL). Coordinated energy planning will help attain the SE4ALL objectives, identifying the most suitable and efficient paths to their realization.