

Capacity Building for Sustainable Energy Development at the IAEA

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The Planning and Economic Studies Section is located in the Department of Nuclear Energy of the International Atomic Energy Agency.

Its main mandate includes providing capacity building for sustainable energy development and conducting studies on selected topics in the energy-economy-environment domain, including energy security.

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Our capacity building activities provide comprehensive energy analysis and related economic and environmental assessments to our Member States in order to help them:

- making informed policy decisions for sustainable energy development,
- evaluating the potential role of nuclear power in the national energy supply system,
- assessing local (air pollution, smog) and regional (acid deposition) environmental issues as well as global environmental problems like climate change and their relationships to energy production and use.

In order to reach these objectives, we are developing and transferring models of energy demand, supply, electricity sector, and environmental impacts. We are also providing training courses and technical advice on using these models. These activities are complemented by data bank development and information dissemination.

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The central theme in the domain of the energy-economy-environment (3E) analysis is sustainable energy development. Together with other UN (e.g. DESA) and non-UN organizations (e.g., European Environmental Agency), we developed and published a set of indicators for Sustainable Energy Development. The related criteria are organized in three main domains: social, economic and environmental, and cover a diverse set of criteria against which countries can measure their current status and future paths towards energy sustainability.

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Also as part of the 3E analysis, the Agency is participating in the network of about a dozen UN organizations with interest in energy, the so-called UN Energy. This group prepared a special report for the UN CSD about the importance of energy for SD. Although the Millennium Development goals do not include explicit energy targets and indicators, there are diverse linkages from energy services to achieving many of the Goals.

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In many developing countries and emerging market economies of Eastern Europe and the Former Soviet Union, available tools and national expertise are often insufficient to cope with the multiple challenges related to developing a national energy strategy. The models and the training activities in using these models cover both the demand and supply side of the energy system. The supply model can be used in a national context or for exploring the costs and benefits of regional cooperation, especially for countries with relatively small electric grids. In addition to seeking a cost-effective energy plan and resource portfolio, the models can also help assess supply security risks and strategies to manage them as well as the financing and environmental aspects.

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