

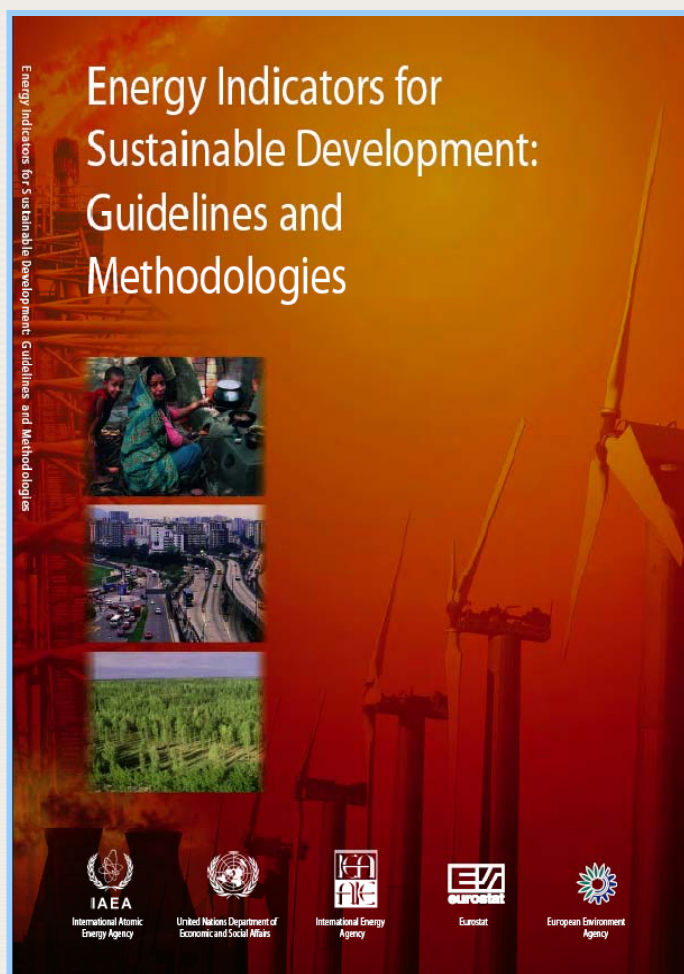
Indicators for Sustainable Energy Development

**International Workshop
on Energy Statistics
INEGI, Aguascalientes, México**

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Indicators for Sustainable Energy Development (ISED)



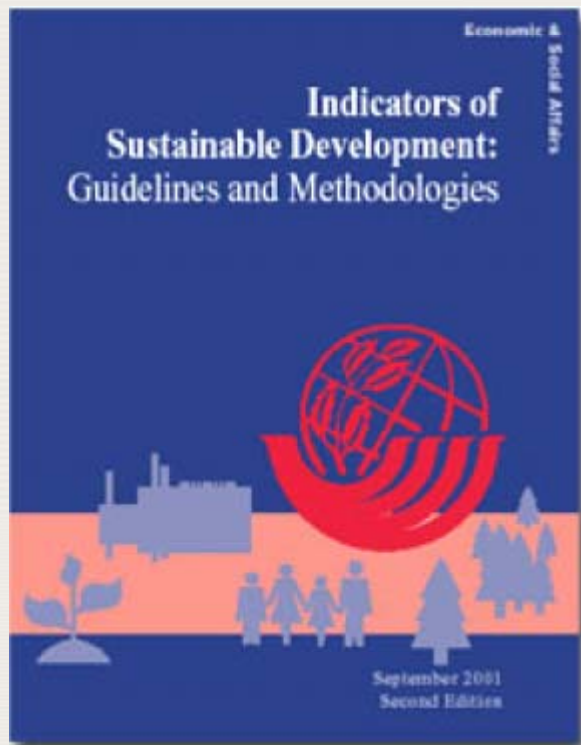
- Prepared by 5 agencies
- 30 Indicators
- 3 Dimensions of SD (economic, social, environment)
- Conceptual foundation and framework
- Guidelines and caveats
- Available in 3 languages

Energy and Sustainable Development

The UN Effort – Steps Taken

- 1997 UN General Assembly
- 2000 World Energy Assessment and the Millennium development Goals
- 2001, 9th Session of the Commission on Sustainable Development
- 2002, World Summit on Sustainable Development

The UN Effort on Overall Indicators of Sustainable Development



- 58 Overall Indicators of Sustainable Development defined in 2001
- 15 themes (Equity, Health, Atmosphere, Trade, etc.)
- 38 Sub-themes (Poverty, literacy, deforestation, energy, etc)
- 3 *Energy* indicators only (consumption, intensities and renewables)

The need for ISED

- The CSD Working list of ISD does not explicitly or comprehensively cover energy issues.
- The CSD Work Programme expects additions in its core set.
- The environmental indicators developed by OECD and EC also included some energy related indicators

ISED – A Joint Collaborative Effort

- International Atomic Energy Agency (IAEA), Vienna
- International Energy Agency (IEA/OECD), Paris
- UN–Dept. Economics & Social Affairs (UN-DESA), New York
- Eurostat, Luxembourg
- European Environment Agency (EEA)
- Member States

Objectives

- To complement the UNCCSD indicators effort
- To define a set of energy indicators and corresponding methodologies and guidelines
- To test and implement the indicators in a number of countries
- To assist countries in energy and statistics capacity building

ISED – Creating a Framework

- Identify main issues and parameters to address sustainable energy development
- Derive a major set of energy indicators to measure and monitor these issues
- Design a conceptual framework

ISED – Application

- Demonstrate practical applicability as a policy tool
- Modifying relevant IAEA analytical tools to better respond to sustainable energy development issues
- Provide assistance in the use of ISED in formulating strategies for sustainable energy development

Some selected sub-themes of ISED

SOCIAL- Equity

- Accessibility
- Affordability
- Disparities

ECONOMIC- Energy use and production pattern

- Overall use
- Supply efficiency

ENVIRONMENT- Atmosphere

- Air quality
- Climate change

Deriving indicators - only a beginning

A starting point:

- to present the current status of the energy sector on different policy issues,
- to measure trends and pace of progress in the past,
- to evaluate the strategies and policies for future development, and
- to do the comparison across sub-regions or inter-region

Reality Check on Policies

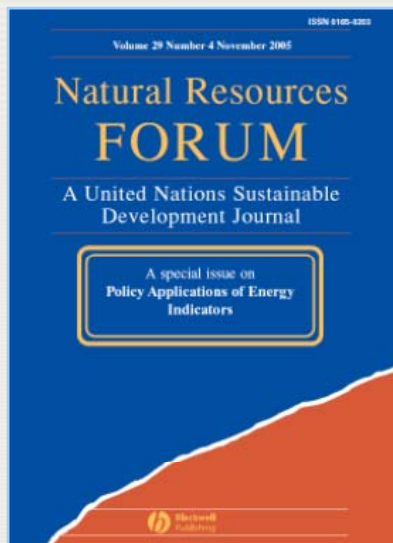
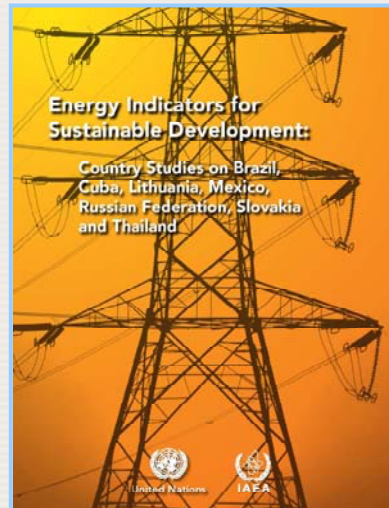
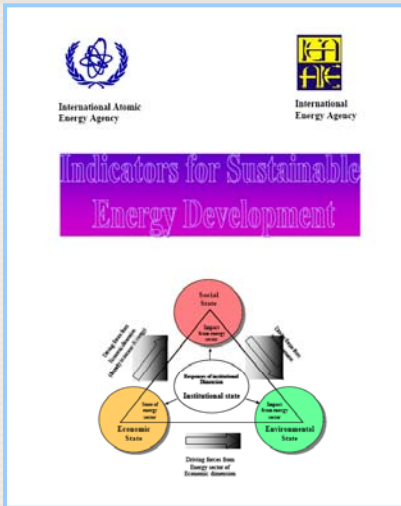
If the government has chosen its goals and strategies, how do these match with reality?

- Do they imply a quantum leap from all past trends?
- Do they exceed resources of the country?
- Are they contradictory?
- Are assumptions realistic ?

Benefits to Countries

- ✓ Improvement of energy statistics capability
- ✓ Assessments of status of energy sector
- ✓ Evaluation of impacts of current energy policies
- ✓ Formulation of future energy policies
- ✓ Monitoring progress towards a more sustainable energy future

ISED development and application



- 2000-01: Developed and presented at the CSD in 2001
- 2002-05: Applied in selected 7 countries
- 2005-06: Applied in 9 country case studies carried out under the TC-project in MSs from Asia and Pacific region



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» NE Programmes

Nuclear Energy

Nuclear Power

Fuel Cycle & Waste

INIS & NKM

» PESS Topics

Building Capacity

3-E Analysis

Information

References

Climate Change &
Sustainable
Development

Publications

Building Capacity
for Energy and
Electricity Planning
for Sustainable
Development

Department of Nuclear Energy

Planning & Economic Studies Section (PESS): Analysis for Sustainable Energy Development

Programme Objective

To enhance the capacity of Member States to perform their own analyses regarding electricity and energy system development, energy investment planning and energy-environment policy formulation, and to help keep the nuclear option open for Member States who wish to retain it.

Activities

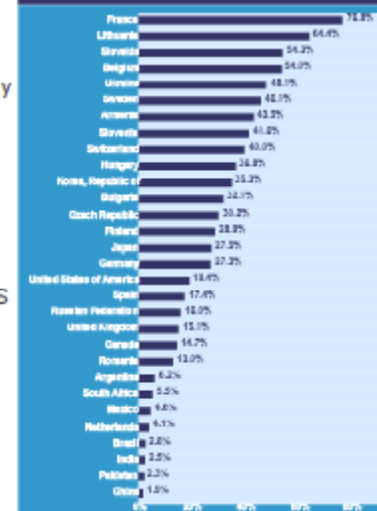
Through training, technical assistance and information exchange, PESS helps Member States **build capacity** for analysing different energy options.

PESS conducts **3-E (energy, economic and environmental) analysis** of nuclear technologies and their competitors, focusing on competitive energy markets, environmental impacts and sustainable energy development.

PESS maintains **information references** of energy and economic data for all IAEA Member States, plus nuclear power projections through 2030. A project on **Indicators for Sustainable Energy Development (ISED)** is in progress. To see IAEA energy and electricity projections, including animated charts, please [click here](#).

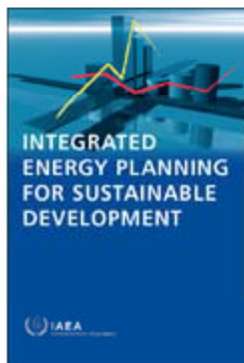
As the expert UN agency on nuclear energy, the IAEA conducts research and provides input for international negotiations on **climate change and sustainable development**.

NUCLEAR SHARE OF TOTAL ELECTRICITY GENERATION IN



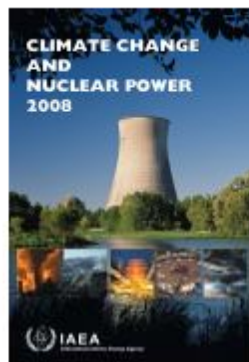


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international negotiations on [Climate Change and Sustainable Development](#).



NEW ! Climate Change and Nuclear Power 2008. This booklet summarizes nuclear power's potential role in mitigating global climate change and its contribution to other development and environment challenges, as well as its current status, including the issues of cost, safety, waste management and non-proliferation. To read the booklet please [click here](#).



NEW ! Cuba: A Country Profile on Sustainable Energy Development. The report presents a comprehensive assessment of the Cuban energy system performed within a sustainable development framework. The study is one of a series of national studies being conducted by the IAEA in cooperation with a number of national and international organizations under a unique "Partnership" initiative officially registered with the UN Commission on Sustainable Development. To read the report please [click here](#).



Energy Indicators for Sustainable Development: Guidelines and Methodologies. This publication presents a set of energy indicators for sustainable development and is a versatile analytical tool for countries to track their progress on energy for sustainable development. This publication has now been translated into Spanish and French and is available as [Spanish version](#) and [French version](#). **NEW !** To read the [English version](#) please [click here](#).

NEW ! Energy, Electricity and Nuclear Power Estimates for the Period 2000 to 2010

IAEA



...atoms for peace.