New Energy Indicators for Buildings and Appliances: The Way Forward

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- A Joint ETO/LTO Workshop in the Framework of the G8 Dialogue on Climate Change, Clean Energy and Sustainable Development

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At their 2005 Gleneagles Summit the G8 leaders asked the IEA to provide advice on a clean, clever and competitive energy future. As part of its response, the IEA is developing in-depth indicators to provide state-of-the-art data and analysis on energy use and efficiency developments, which can better inform policy-making. The new IEA publication, *Energy Use in the New Millennium: Trends in IEA countries* (http://www.iea.org/books) is a major output from this work. Using a suite of indicators the report examines how changes in energy efficiency, economic structure, income, prices and fuel mix have affected recent trends in energy use and CO_2 emissions. A key finding is that since 1990, the rate of energy efficiency improvement in IEA countries has been less than 1% per year – much lower than in previous decades and not nearly enough to stem the growth in CO_2 emissions.

Improving the energy efficiency of both buildings and appliances is a key challenge in moving towards a more sustainable energy future. Together the household and service sectors account for more than one-third of total final energy use in IEA countries and are largely responsible for the rapid growth in electricity demand. One of the major conclusions from the *Millennium* publication is the need for more consistent, comprehensive and detailed indicators and data to analyse trends in energy use and efficiency developments.

Developing the necessary indicators to support energy efficiency policy development and evaluation is not straightforward. Building energy use depends on the type, age and the use of the buildings, all of which vary widely both within and between countries. Appliance energy use can shift very quickly as a result of consumer purchases and policy decisions. In both cases, the variety of end-use applications means that aggregate indicators of energy consumption can mask very different trends for particular applications. More detailed indicators are therefore required to understand and analyse trends and the impacts of policies.

The purpose of this workshop is to share information about best practices relating to indicators development and use and to help guide the IEA's future energy indicators work, as it relates to buildings and appliances. The workshop will bring together

statisticians, analysts and policy-makers to discuss and share experiences on the following topics:

- How are indicators currently being used to support energy efficiency policy development and evaluation relating to buildings and appliances?
- What kinds of new indicators are needed to better understand the patterns and trends in energy use and efficiency in these areas?
- What data are needed to support the development of these indicators and what data are missing?
- What approaches can be used to fill these data gaps?
- What should be the priorities for the IEA's future indicators work relating to buildings and appliances and how can the IEA work together with governments, analysts and other experts in these activities?