

## Session 15: Issues and Challenges

**General Comments:** Like infrastructure, energy is fundamental in ensuring basic life and provides critical input to economic production. Issues and challenges of energy go way beyond the energy sector.

### Discuss Questions:

- Energy products are two-dimensional: they are commodities supplied by the market, but they also have public-goods characteristics. Give examples to illustrate this point.
- What does the two-dimensional characteristic of energy imply for investment in energy supply and regulations of the energy market? What roles can the public sector and private sector play?
- What is the “energy challenge”? Is it the same for people at different income levels and countries at different development stages? What is Holdren’s (2001) definition of the problem and what are his suggested solutions?
- Compared with Holdren (2001), how different is the UN’s (2005) focus on the energy issue, and what do they recommend to mitigate the problems? The UN further differentiates solutions suitable for rural areas and those for urban areas. What are the differences?
- Does the above help you understand how a common view on “energy policy” is difficult to shape? Think of the UNDP (2004) reading from last session, which describes the long process of raising awareness in the international community. How does this create difficulties for international coordination, which is greatly needed in this area?
- In addition to balancing supply and demand, another energy challenge is to cope with the negative impact it creates on the environment. The reading by the Congressional Budget Office (2003) speaks to that issue. When formulating climate policies, what costs and benefits need to be balanced, and how can they be distributed among people in an acceptable way? Discuss the trade-offs in each of the following pairs of policy alternatives:
  - prevention vs. adaptation
  - constraining current economic activities vs. constraining future economic growth
  - investment in research and development of environment technologies vs. investment in education and health
- When the government uses taxes and permits to contain carbon emission, what economic distortions are created? Who bears the costs of an increased price of energy products?
- How does energy affect our economy as a whole? (We will discuss this more next time.)

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