

Issues and Challenges **(November 2 Session)**

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ENERGY CHARACTERISTICS

- 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?

ENERGY AND THE ENVIRONMENT

- One energy challenge is to cope with the negative impact it creates on the environment. 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 does that create? Who bears the costs of an increased price of energy products?

THE ENERGY CHALLENGE

Holdren, J.P. 2001. Meeting the Energy Challenge. *Science*. 291(5506), 945.

- What is the energy challenge? What is Holdren's definition of the problem and what are his suggested solutions?
- Is the energy challenge the same for people at different income levels and for countries at different development stages?

ACCESS TO ELECTRICITY

What is the relationship among poverty and access to electricity ?

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To view the figure, go to page 4 of
“The Energy Challenge for Achieving the Millennium Development Goals”,
United Nations Energy Paper.

http://www.unep.org/training/programmes/Instructor%20Version/Part_2/Activities/Innovations_and_Technology/Energy/Core/The_Energy_Challenge.pdf

ENERGY AND THE MDGs

- How does energy relate to the Millennium Development Goals?
 1. Eradicate extreme poverty and hunger
 2. Achieve universal primary education
 3. Promote gender equality and empower women
 4. Reduce child mortality
 5. Improve maternal health
 6. Combat HIV/AIDS, malaria and other diseases
 7. Ensure environmental sustainability
 8. Develop a global partnership for sustainable development
- The United Nations report differentiates solutions suitable for rural areas and for urban areas. What are the differences?

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