11.165/11.477 Infrastructure and Energy Technology Challenges

# The Energy Chain and Market (Part 2)

(October 31 Session)

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## **ENERGY SYSTEM**

- What is an energy system?
- What are its components?
- What can be done at each step of the energy chain to reduce energy intensity?

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To view the figure, go to page 26 of
"World Energy Assessment: Overview: 2004 Update"
by United Nations Development Programme, United Nations Dept. of Economic and Social Affairs, and World Energy Council.

books.google.com/books?vid=ISBN9211261678

## **ENERGY INTENSITY**

- Energy intensity is defined as the energy consumption per dollar of real GDP
- Why does the Energy Information Administration predict a future decline in energy intensity in the United States?
- Do you agree with their reasoning? Why or why not?
- Are there any other energy trends in the report that you find interesting or surprising?

# **OIL PRICES**

Why does the price of oil exhibit such great volatility?

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To view the figure, go to page 54 of "Annual Energy Outlook 2010 with Projections to 2035" by the U.S. Energy Information Administration.

www.eia.gov/oiaf/archive/aeo10/index.html

## **ENERGY OUTLOOK ABROAD**

- Based on the reading and your own experience, how does the energy outlook for other countries compare to the United States?
- How was the international consensus gradually built regarding the importance of energy in sustainable development?
- What is the common perspective of the international community on the relationship among energy, climate change, human development, and poverty alleviation?
- The United Nations report concludes that the availability and use of energy around the world is extremely heterogeneous and inequitable. On what basis does the UN reach this conclusion? What implications does this conclusion have for the global energy market and global energy policy?



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