Building a Bridge to the Future: Efficiency Enabled

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National Environmental Balancing Bureau
Global issues

• Increasing demand for energy
• Increasing global warming probability
• Increasing national security concerns
• Increasing prices under any scenario
National Petroleum Council

• Letter of President Bush of October 5, 2005, to NPC
  – “What does the future hold for global oil and natural gas supply?”
  – “What…oil and gas…supply and/or demand side strategies does the council recommend…?”

• Answer of NPC in HARD TRUTHS: Facing the Hard Truths about Energy” July 18, 2007
  – Sorry, Mr. President, but “an understanding of all energy forms necessary to provide meaningful advice on oil and gas.” Thus the response can back about electricity production and fuels!
  – First “moderate demand by increasing energy efficiency
  – Then “Expand and diversify U.S. energy supply”
Climate change consensus

• Let us agree with UK’s Stern Review
  – Climate change can be considered as insurable risk
  – Payment of annual insurance premium is acceptable
  – Premium payment is in form of funding of research and programs
  – Select programs according to Terzic Classifications Order of Risk and Reward
Terzic classes of climate change action

• Class I: Practical, affordable solutions we can implement today;
• Class II: Less economical solutions with significant societal value that deserve consideration; and
• Class III: Difficult but impactful solutions without associated societal benefits.
Manufacturing energy balance

- **Petroleum** (Aviation, Diesel, Propane, Gasoline, Fuel Oil, Bunker)
- **Natural Gas** (Gas supply, Pipeline transportation, Distribution delivery, Bundled natural gas service)
- **Coal**
- **Renewable** (Biomass, Solar, Wind)
- **Electricity** (Supply, Distributed delivery, Bundled electricity service)

**Transportation** (Airplanes, Trucks, Cars)
**Buildings** (Office, Warehouse)
**Manufacturing** (Process equipment, Refrigerated storage)
**Co-Generation** (Electricity, Process steam)
**Electricity Stand-by Generation**

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The wise energy way

- Evaluate needs carefully
- Determine acceptable levels of risk
- Benchmark against peers
- Consider demand and supply options
- Check assumptions
- Build in flexibility
Policy recommendations

- Enable energy efficiency
- Get the pricing right
- Remove barriers
- Educate policymakers, the media and public
- Join the Climate Change/Energy Conversion debate
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