

Paul Buta | Choiceplex
June 21, 2008

The Planet is Big The Energy You Need is Small

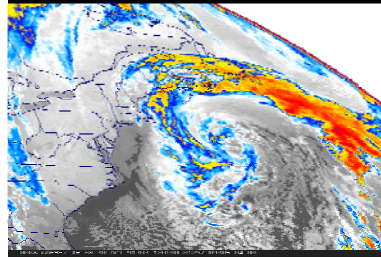
Take Fewer Notes!

- Questions?
 - paul.buta@choiceplex.com
- Copy of Presentation
 - www.energybazaar.com



The Perfect Storm

- October 30, 1991
- Three weather systems uniquely converge
- Coastal flooding from Puerto Rico to Canada
- A 25 foot waves on top of tide 4 feet above normal in Gloucester



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Energy's Perfect Storm

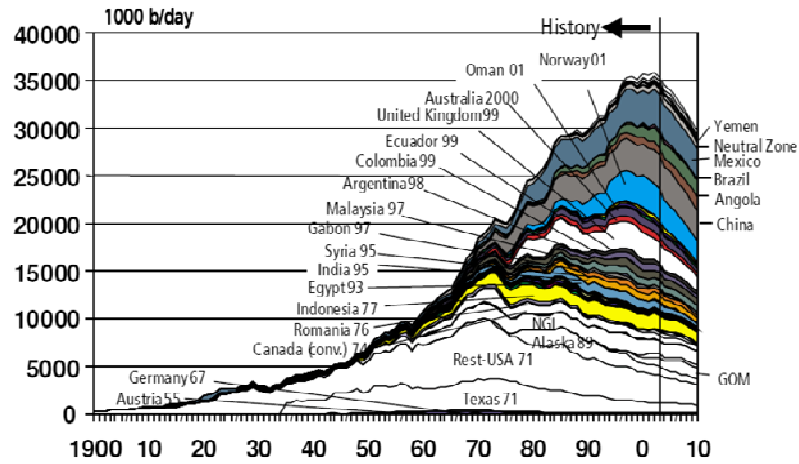
- 201X
- Three forces uniquely converge:
 - Finite resources: limited supplies of traditional energy sources such as oil, coal, uranium, etc.
 - Accelerating demand: more of the "developing world" is becoming "developed".
 - Misapplied energy technology hurts as much as it helps.

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Finite Resources



"Peak Oil" – One Projection



Source: Industry database, 2003 (IHS 2003)
OGJ, 9 Feb 2004 (Jan Nov 2003)

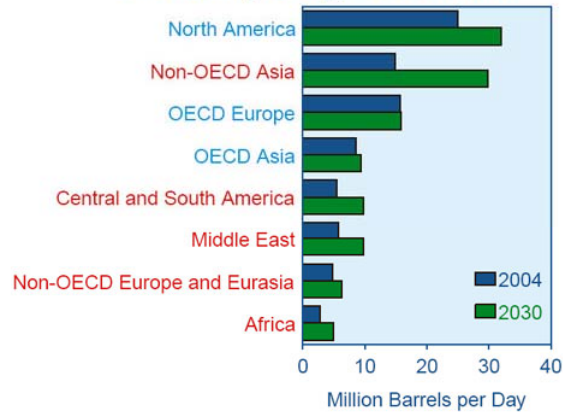
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Accelerating Demand

More, More, More

Accelerating Demand

Figure 34. World Liquids Consumption by Region and Country Group, 2004 and 2030

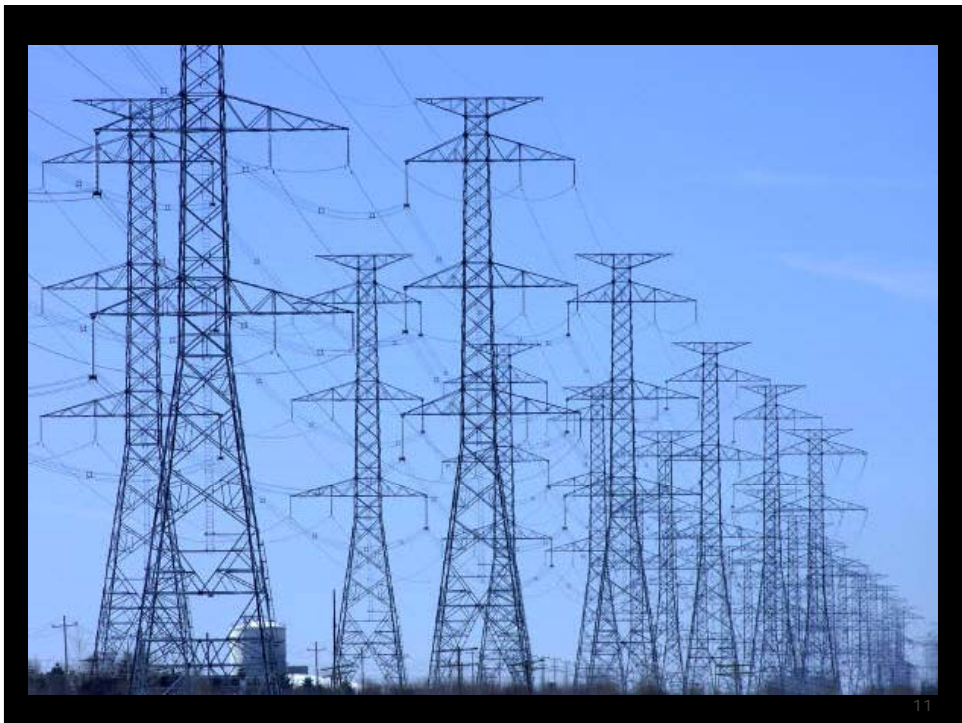


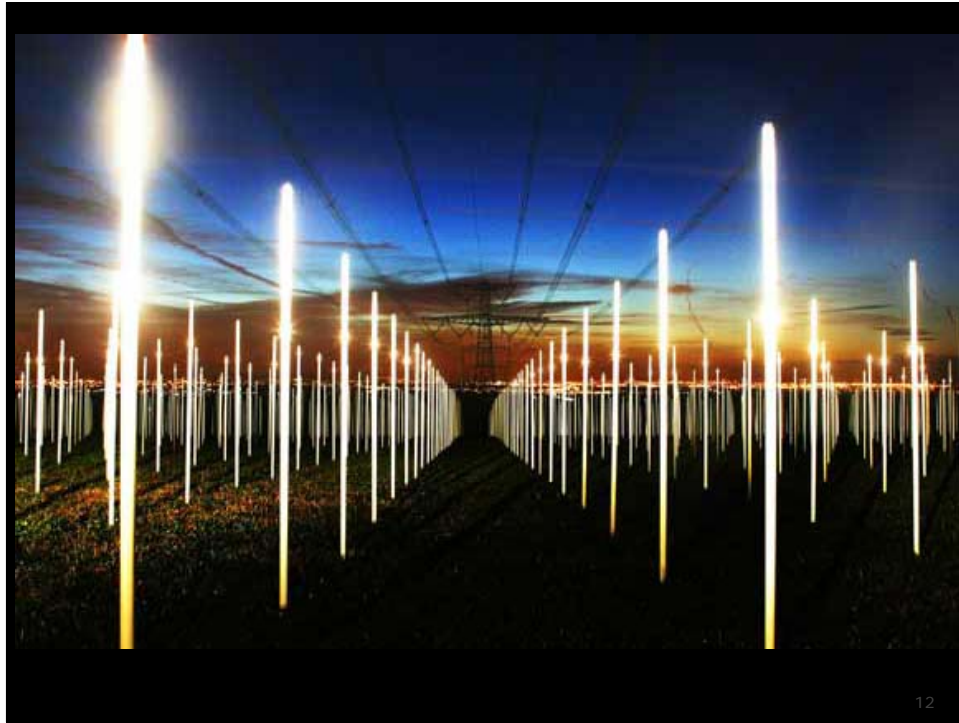
Source: US Government Energy Information Administration

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Misapplied Energy Technology

Making Less with More





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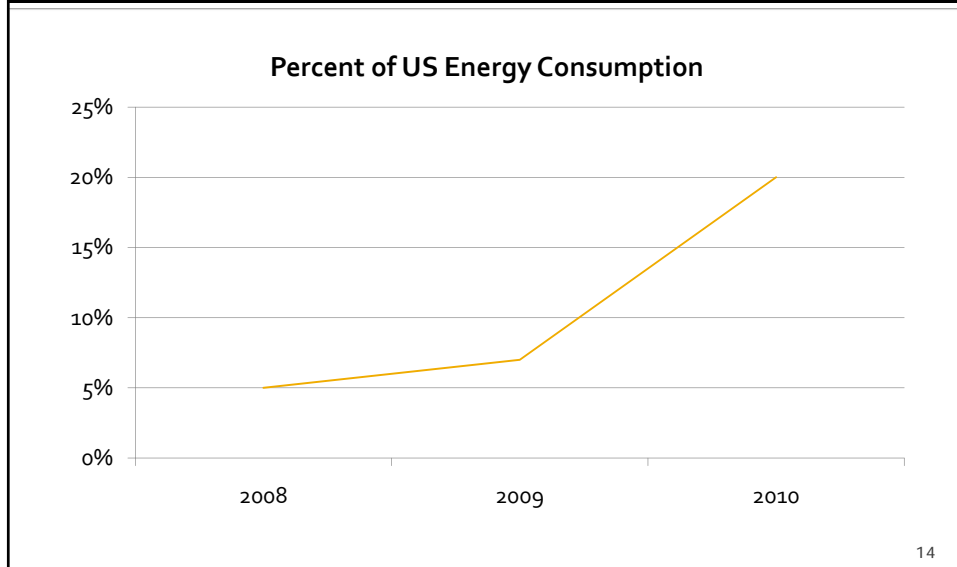
Preparing for the Storm

- Avoid waste in the wrong technologies.
- Monitor global economic growth.
- Seek energy from less-scarce sources.



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“Wall Warts” and “Energy Vampires”



Google

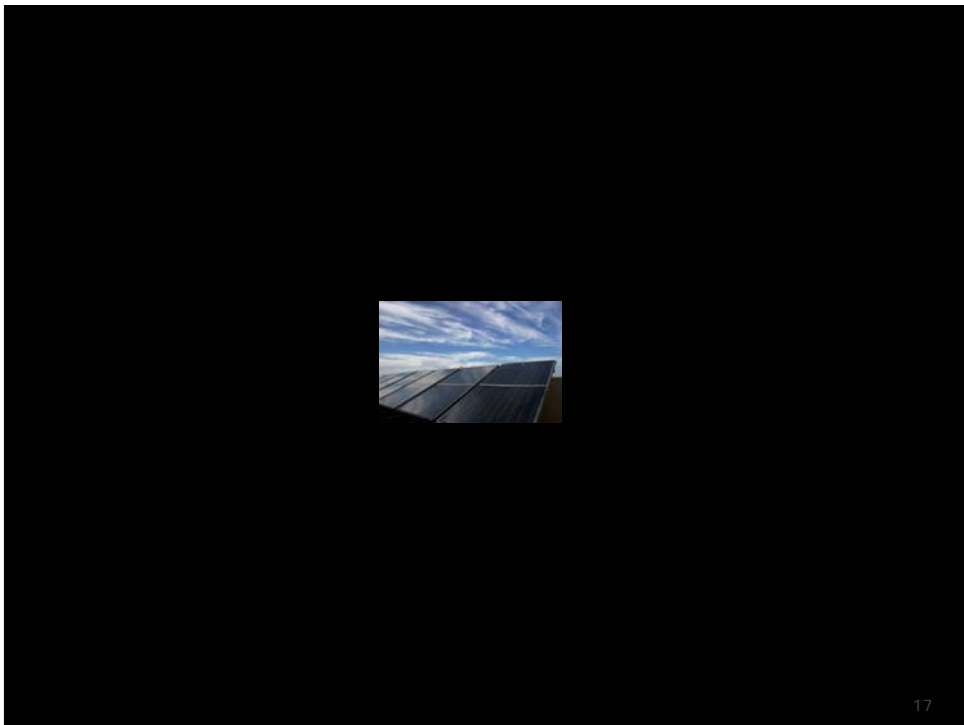
- Proposed a new standard for "high efficiency power supplies for home computers and servers based on 12 volts only.
- Estimated savings: 40 billion kwh over three years, worth \$5 Billion.

Source: New York Times, September 26, 2006

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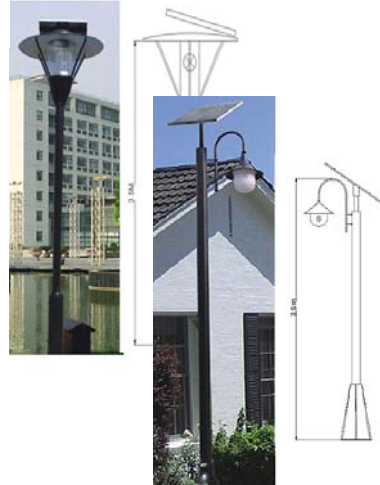


Subdivision Sign Lights

- Old Way:
 - \$250 for two sign light fixtures
 - \$1,200 to dig a trench for electrical connection
 - \$200 to connect lights
 - \$32/year for electricity charges
 - Total: \$1,680 for the first year
- New Way (Solar Sign Lights):
 - \$800 for two solar-powered sign light fixtures
 - \$200 for installation
 - Total: \$1,000 for the first year

Other Opportunities

- Solar street lights and park walkway lights
- Renewable energy DC power systems for sheds, barns and other outbuildings
- Take more home and office power applications off the grid
- Track the evolution of technology



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