



## 2009 Energy Quiz!

How closely have you been reading energy headlines during the past year? This year's Energy Quiz will answer that question because all of the questions come from energy articles published in the *Wall Street Journal*, *New York Times*, *Time Magazine*, and *Newsweek*. Take the quiz below and test your energy knowledge. (Answers and sources are on the back – Don't peak!). Remember October is Energy Awareness Month!

- Exxon is now investing X dollars in which biofuel feedstock. a) \$600 million, algae; b) \$750 million, coal to liquids; c) \$250 million, ethanol; d) \$1 billion, hydrogen
- Smart grid technology development and deployment will change the power grid from a largely \_\_\_\_ system into a \_\_\_\_ system. a) Hydrothermal, computer-based; b) Electromechanical, digital network; c) Empirical, on-time demand; d) Computer-based system, web-based system
- After years of declining support for energy efficiency, the Stimulus Package put it back on the map. What areas of energy efficiency have the most significant amounts of funding? a) Buildings; b) Industrial; c) Energy efficient air craft; d) Weatherization; e) a and d
- Steven Chu is the first Nobel Prize winning scientist to be named Secretary of Energy? What did Dr. Chu win a Nobel Prize for?  
a) Physics for his work trapping atoms with lasers;  
b) Chemistry for developing a compound to trap CO<sub>2</sub> by photosynthesis;  
c) Physics for transmission of light in fibers for optical communication;  
d) Chemistry for the discovery and development of the green fluorescent protein, GFP
- China is outpacing the U.S. in constructing new cleaner coal-fired plants, How efficient are these newer, more efficient, less polluting coal-fired plants? a) 75%; b) 62%; c) 56%; d) 44%
- A Climate Bill that passed the U.S. House of Representatives in July, mandates that X% of energy be produced by renewable resources by Y year? a: 25% by 2015; b) 40% by 2025; c) 15% by 2020; d) 50% by 2050
- The Obama administration wants to restart which clean coal technology project that was shelved by the Bush administration? a) IGCC plant; b) FutureGen; c) Magneto hydrodynamics power generation; d) Coal-derived carbon and chemical products
- For various "reasons" some states and companies want to stretch the idea of a "renewable" energy resource. What are some questionable energy technologies being classified as "renewable"? a) Nuclear; b) Burning of garbage waste; c) Waste coal; d) Coal mine methane; e) Used tires; f) All of the above
- Our homes include an increasing number of electronic devices such as numerous TVs, video games, DVD players, computers, etc. What is the average number of plug-in devices in a U.S. household? a) 10; b) 12; c) 20; d) 26; e) 30
- Replacing outdated power generating devices with more efficient ones may hold the key to increasing efficiency. The United Nations says X percent of the world's power generating capacity has to be replaced in the next 5-10 years? a) 15%; b) 25%; c) 40%; d) 55%; e) 75%
- Many of the proposed solutions to the nation's energy problems, such as certain types of solar farms, biofuel refineries, and clean coal plants could consume billions of \_\_\_\_\_ per year. a) Tons of CO<sub>2</sub>; b) Gallons of Ethanol; c) Gallons of water; d) Tons of recycled plastics
- The demand for wood pellets in Europe is booming, making the U.S. an energy exporter – how much has the demand for pellets and other wood-based fuels risen in the European Union during the last year? a) 15%; b) 26%; c) 40%; d) 62%; e) 75%
- Which country recently surpassed Saudi Arabia as the leader in oil exports? a) Russia; b) Venezuela; c) Algeria; d) Kuwait; e) Brazil
- What four people have been called "Obama's Green Dream Team"?  
a) Larry Bird, Michael Jordan, Kobe Bryant, Shaquille O'Neal;  
b) Michelle Obama, Carl Pope, Amory Lovins, Robert Redford;  
c) Joe Biden, Hillary Client, Ken Salazar, Thomas J. Vilsack;  
d) Carol Browner, Lisa Jackson, Ken Salazar, Steven Chu
- World leaders met at the U.N. to talk climate change. What did China's president promise his country would do to combat climate change?  
a) Build only highly efficient coal burning power plants;  
b) Start an aggressive carbon capture campaign;  
c) Plant enough forests to cover an area the size of Norway and generate 15% of its energy needs from renewable sources within a decade;  
d) Require all industries to reduce their green house gas emissions by 50% by 2020

### EVENTS

**New Energy. New Jobs. New Opportunities for Appalachia** sponsored by the Appalachian Regional Commission will be held **October 26-28, 2009** at the John Calhoun Baker University Center at Ohio University, Athens, Ohio. For more information or to register visit: <http://www.arc.gov/index.jsp>.

**16th Annual West Virginia Economic Outlook Conference** sponsored by the West Virginia University College of Business and Economics will be held **November 11, 2009** at the Embassy Suites Hotel in Charleston, WV. This conference will cover the latest economic analysis and forecasts to help in business decision-making. For more information or to register, contact WVU College of Business and Economics at (304) 293-7831.

**Mid-Atlantic SBIR/STTR Conference** will be held November 30-December 2, 2009 at the Waterfront Place Hotel Morgantown, WV. For more information, visit <http://www.midatlanticsbir.com>.

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# The IOF-WV Monthly Update

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1. A, "Exxon to Invest Millions to make Biofuels from Algae", *New York Times*, July 14, 2009
2. B, "Stimulus Funds Speed Transformation Toward 'Smart Grid'", *Wall Street Journal*, Sept. 28, 2009
3. E, "Obama Signs Stimulus Packed with Clean Energy Provisions", *New York Times*, February 17, 2009
4. A, "Energy Secretary: Steven Chu", *Time*, December 18, 2008
5. D, "China Outpaces U.S. in Cleaner Coal-Fired Plants", *New York Times*, May 11, 2009
6. C, "With Something for Everyone, Climate Bill Passed", *The New York Times*, July 1, 2009
7. B, "U.S.-Private Bid to Trap Carbon Emissions is Revived", *The New York Times*, June 13, 2009
8. F, "With Billions at Stake, Trying to Expand the Meaning of 'Renewable Energy'", *The New York Times*, May 25, 2009
9. D, "America's Untapped Energy Resource Boosting Efficiency", *Time*, December 31, 2008
10. C, "Slump May Limit Moves on Clean Energy", *The New York Times*, November 25, 2008
11. C, "Alternative Energy Projects Stumble on a Need for Water", *The New York Times*, September 30, 2009
12. D, "Wood Pellets Catch Fire as Renewable Energy Source", *The Wall Street Journal*, July 7, 2009
13. A, "Russia Ramps Up Oil Exports as OPEC Cuts Back", *The New York Times*, September 9, 2009
14. D, "Obama's Green Dream Team", *Newsweek*, August 27, 2009
15. C, "China, not U.S., stars at Climate Summit", *MSNBC.com*, Sept. 22, 2009

## Quiz Answers

### Comment by Stephen Faehner on Biomass article in Last Month's UpDate

The U.S. wood pellet market has been much larger than 900,000 tons for many years. When you combine Canada for 2008 it was about 5 times that amount. Roughly 33% is exported, dominated until recently by British Columbia. Though Green Circle is going strong, Dixie Pellet just closed down citing issues with finances, quality, & their contract to sell pellets to Europe.

The USDA Forest Products Laboratory in Madison, WI published Henry Spelter's *North American Pellets Study*, which gives a total wood pellet capacity of 6.1 million tons in North America in 2009. The U.S. production for 2009 is approximately 3.6-4.5 million tons. About 80% of Canadian production (1.1 million tons) and 20% of U.S. production (0.500 million tons) was exported to Europe. The vast majority of the remainder was used in North America, with a small amount going to commercial (poultry) or residential users.

### Co-Funding Opportunities for IOF-WV Research Teams

Announcement	Due Dates	Funding
<b>NSF Small Business Technology Transfer Program Phase I Solicitation FY 2010</b> <a href="http://www.nsf.gov/pubs/2009/nsf09605/nsf09605.pdf">http://www.nsf.gov/pubs/2009/nsf09605/nsf09605.pdf</a> <b>Topic:</b> Multi-FunctionalMaterials (MM)	<b>Request for Proposals:</b> Now Open <b>Proposals:</b> November 17, 2009	Estimated funding up to \$150,000 per award. <b>Subtopics:</b> Bio-inspired Materials and Systems (BMS), Materials for Energy Generation and Storage (ME), Materials for Sustainability (MS), Nanostructured Materials (NM), and Smart Materials and Structures (SMS)
<b>U.S. DOE Annual Phase I Small Business Innovation Research Small Business Technology Transfer</b> <a href="http://www.fedconnect.net">www.fedconnect.net</a> FOA No. DE-FOA-0000161	<b>Request for Proposals:</b> Now Open <b>Proposals:</b> November 20, 2009	\$36 million in total funding is expected to be available. Award ceiling is \$100,000 - DOE anticipates making 360 awards
<b>U.S. DOE Recovery Act – Workforce Training for the Electric Power Sector</b> <a href="http://www.fedconnect.net">www.fedconnect.net</a> FOA No. DE-FOA-0000152	<b>Request for Proposals:</b> Now Open <b>Proposals:</b> November 30, 2009	Approximately \$100,000,000 is expected to be available for new awards under this announcement.
<b>NSF Small Business Innovation Research Program Phase I Solicitation(2) FY-2010</b> <a href="http://www.nsf.gov/pubs/2009/nsf09609/nsf09609.pdf">http://www.nsf.gov/pubs/2009/nsf09609/nsf09609.pdf</a>	<b>Request for Proposals:</b> Now Open <b>Proposals:</b> December 3, 2009	<b>Estimated funding:</b> \$45,000,000 <b>Topics:</b> Biotech and Chemical Technologies (BC), Education Applications (EA), Information and Communication Technologies (IC), Nanotechnology, Advanced Materials, and Manufacturing (NM)



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