



**Editorial**

# Future trends in world energy

## how well do you know the projections?

Successful planning for the future requires good knowledge of the present. Being aware of past and current trends is important for all of us. We absorb information, read the signs, distil the messages and draw conscious and subconscious conclusions on how we think the future will pan out. And we base much of our current activity on what we anticipate for the future.

The future of decentralized energy (DE) and cogeneration is no exception. Those of us working in these sectors need to know what, where and how the business opportunities will be.

So, how do you think the future will be? Here is a quiz. Not a quiz about cogeneration. Nor a difficult one, but one designed

to highlight some powerful and sometimes surprising trends in the world's energy sector and to give us some signals about impacts on the development of DE worldwide.

All the information is taken from the *World Energy Investment Outlook* of the International Energy Agency, published in 2003. All relate to the IEA's 'business as usual' view of the future. The answers are given at the foot of the page.

Michael Brown

1. What will be the OECD's (industrialized countries) share of global energy production, including oil/coal/gas production and power generation, in the period to 2030?  
a. 66.5%   b. 36.5%   c. 6.5%
2. What will be the electricity sector share of the total energy sector investment in the period to 2030?  
a. 71%   b. 51%   c. 31%
3. The world's oil reserve-production ratio (the length of time current levels of production could continue, based on current proven reserves) stood at 40 years in 2000. What will it be in 2030?  
a. 30 years  
b. 20 years  
c. 10 years
4. The world's LNG shipping fleet stood at 130 ships in 2001. What is the projection for new ship orders between now and 2030?  
a. 200   b. 400   c. 600
5. In the Chinese power generation sector, what must the price of coal do for it to be competitive with natural gas?  
a. Halve  
b. Stay the same  
c. Double
6. Natural gas imports to North America stood at 7 billion cubic metres (bcm) in 2001. What will they be in 2030?  
a. 28 bcm  
b. 228 bcm  
c. 428 bcm
7. What will be the transmission and distribution system share of total new investment required in the global electricity sector between 2000 and 2030?  
a. 14%   b. 34%   c. 54%
8. What is the right order of countries /regions, highest to lowest, in terms of their projected total electricity sector investment in the period to 2030?  
a. US/Canada; European Union; Asia (excluding China); China  
b. China; US/Canada; Asia (excluding China); European Union  
c. Asia (excluding China); European Union; China; US/Canada
9. In the IEA alternative scenario to 2030 (more cogeneration/renewables/efficiency), the investment requirement for power generation plant remained the same as for its base-case reference scenario. What was the impact of the alternative scenario on projected T&D investment?  
a. 37% increase  
b. No change  
c. 37% decrease
10. Carbon dioxide capture (from power plants) and storage is one potential option for responding to climate change. In 2010, what is the projected impact of incorporation of this technology on the capital cost of coal/steam generating plant?  
a. 3% increase  
b. 43% increase  
c. 73% increase

Answers: 1.c 2.a 3.b 4.b 5.c 6.b 7.c 8.b 9.c 10.c