

Conclusion 3: Global Market--Separated

In the next five years, under the influence of decelerating growth of global energy demand and the shale gas revolution, the energy supply of the world as a whole will be separated; consequently, supply situations in three major energy markets in the world, conventionally referred as North America, Europe and the Asia-Pacific region, will be further separated. The new world energy order is being formed, will be featured by oversupply in North America, a near balance of supply and demand in Europe and undersupply in the Asia-Pacific region..



Conclusion 4: Oil Security---Shifting to Asia

Oil security remains the key to global energy security, and the key region regarding oil security will be shifted to the Asia-Pacific region, where prices of coal, oil and natural gas will far exceed those of North America for a long time in the foreseeable future as well as those of Europe. Therefore, oil and gas exporters from OPEC and non-OPEC will attach greater importance to the Asia-Pacific market.



Conclusion 5: Technology and Low-carbon Economy

Low-carbon economy is the ultimate goal for the development of energy technology. However, two major technologies of utmost significance in global energy security and climate change issues, namely the electric vehicle (substitute for oil) and CCS technology (intended for reducing greenhouse gas emissions) will hardly see further improvements due to the high cost and many other factors.



- For coal-fired power plants, application of CCS technology will add the cost by 40 to 80%.
- CCS installation in an IGCC power plant will add the cost by 40 to 60%.
- CCS installation in a conventional supercritical coal-fired power plant will add power generation cost by 60 to 80%.

Low Efficiency

CCS

High Energy Consumption

- CCS installation in a conventional power plant will reduce generating efficiency by 20 to 30%.

- Production of the same amount of power with CCS consumes 20 to 25% more energy.

High Cost

