How to recognize first, second, third and fourthgenerationsnuclear power

At the beginning of 2009, the International Energy Agency(IEA) issued the "World Energy Outlook 2006" report, calling on the world to change their current energy policies to improve energy efficiency. At the same time, countries should focus on the development and promotion of nuclear energy technology applications, or elsehuman society will have to face soaring energy prices and frequent power outages (energy supply instability) crises in the not so distant future,.

The need for technological innovation breakthroughs

IEA said that investment decisions in the next 10 years will affect the future of engery in the next 60 years. If current trends continue, the world will have to rely on expensive, seriously polluting and unstable energy sources, and face back-to-back energy crises. Supply disruptions and environmental disasters are likely to occur. Such future for energy is not only unsustainable, but also doomed for failure.

Currently, the world is managing the energy crisis through related policy proposals including improve industrial efficiency, promote the use of reusable energy and bio-fuels, and reduce fuel consumption and emissions from motor vehicles and so on. However, even if governments actually implement all proposed containment measures, by 2030, energy imports and greenhouse gas emissions will still continue to rise; in order to control greenhouse gas emissions at current levels will requirestronger policy support. In fact, we need technological breakthroughs that can profoundly change the way we produce and consume energy. While environmental groups and the public still have reservations, some even skeptical, towards the use of nuclear technology, but the IEA said in the report that nuclear energy is one of the ways to solve the energy crisis.

There are two huge advantages of nuclear energy

This is the first time that the IEA has supported the promotion of nuclear energy use. The report stresses that for energy consuming countries, nuclear energy has great advantages. In theory, nuclear energy does not cause greenhouse gas emissions and only rely on naturally occurring uranium resources. The report also refers to these two advantages for nuclear energy to make it an attractive option for improving power supply stability. However, we must address public concerns regarding nuclear power plant safety, nuclear waste disposal, and nuclear proliferation risks.

About the International Energy Agency

The International Energy Agency was established in the early 1970's, and mainly focuses on providing research data and recommendations for on energy policies for the government of its 26 country members (including the United States, Japan and other Western European countries). In its almost 600 page "World Energy Outlook 2006" report, it conducted a comprehensive assessment of the trend inglobal energy demands up to 2030. The report notes that human society is facing a difficult conflict: on one hand, our demand for energy continues to grow, however on the other hand, we must take actions to curb the increase in greenhouse gas emissions as soon as possible, to prevent global warming and destroy our environment.