

Sustainable Best-mixed Outlook of Japanese Primary Energy Supply and Demand after The 3.11 Eastern Japan Earthquake to establish Environment-friendly Low-carbon Society

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Overview

When we predict a long-term forecast of Japanese primary energy supply and demand, we can not ignore the global warming effects by green house gases as well as the environmental protection issues. In addition, Japan, who must import most of the required primary energy resources, would be seriously affected by the great fluctuations of the crude oil prices although its effects on Japanese economy were softened by the depreciation of the dollar.

In fact, in early 21st. century crude oil prices started with sharply increasing trend since 2003, then on the 3rd of July in 2008 the future prices of West Texas Intermediate crude oil in the New York market had recorded highest price of US\$ 145.29/barrel in the world history. Subsequently Leman Shock arouse on the 9th of September to result in doubt on the US financial speculation, which later transformed to the world financial crisis and the economic depression. For instance, Japanese stock market was also affected seriously to cause NIKKEI average stock price to suddenly drop down to 7,700yen/ a stock on 10th of October in 2008 After then NIKKEI average stock price to come back to around 10,000yen, and Oil price to come back to US\$90~100/barrel too.

It is noted that on 11th March in 2011, the Great Eastern Japan Earthquake happened and led to a subsequent serious accident of nuclear power plants in Fukushima. An element of Japanese energy consumption units will be demand to change for this accident. Especially the future share of nuclear energy would be reduced to a great degree and substituting energy sources should be investigated.

It should be very interesting to investigate how these situations influence world energy consumption and the energy development. It is necessary to analyze historical behavior of the major energy consuming countries in the world about their primary energy sources constituents for the supply and demand scheme. After these analyses our suitable national strategy for establishing sustainable economic growth under the best-mixed scheme of Japanese primary energy supply and demand will be emerged.

Methods

In this study the top ten countries of the world primary energy consumption in 2009 were picked up on the basis of BP Statistical Review of World Energy June 2010. Then we made trajectory analysis on those countries by tracking historical change in their share of the primary energy supply. Finally optimum Japanese primary energy outlook was predicted so as to satisfying with the implemented CO₂ constraints according to the current global environment protection. .

Results

- 1) According to the data of the world primary energy consumption, BRIC's primary energy consumption was increase since economic crisis in 2008.
- 2) Especially in China and India Coal consumption was increase.
- 3) Many developed country 's primary energy consumption was decrease scincer economic crisis.
- 4) Chinese primary energy consumption was exceed USA's in 2009. Indian primary energy consumption was Japanese , too.
- 5) Of course CO₂ emission either
- 6) .BP annual data will be update this June. I'll be update these figure after this.

Conclusions

Up to present, the Japanese energy policy was pushed forward with nuclear energy. This will be greatly influenced by the accident of nuclear power plant in FukushimaNo.1 Station. This accident become aware that nuclear energy is very dangerous for Japanese people. And the energy spend much cost to stop this, too. Japanese government seems to make decision-making to convert from the nuclear energy to the renewable energy. However some Japanese energy experts did not agree with such an easy decision-making.

References

[1] BP Statistical_Review_of_World_Energy_2010 and back numbers.

[2]Energy Economic Statistics Summary of EDMC in 2011 (THE ENERGY DATA MODELLING CENTER in Japan)