



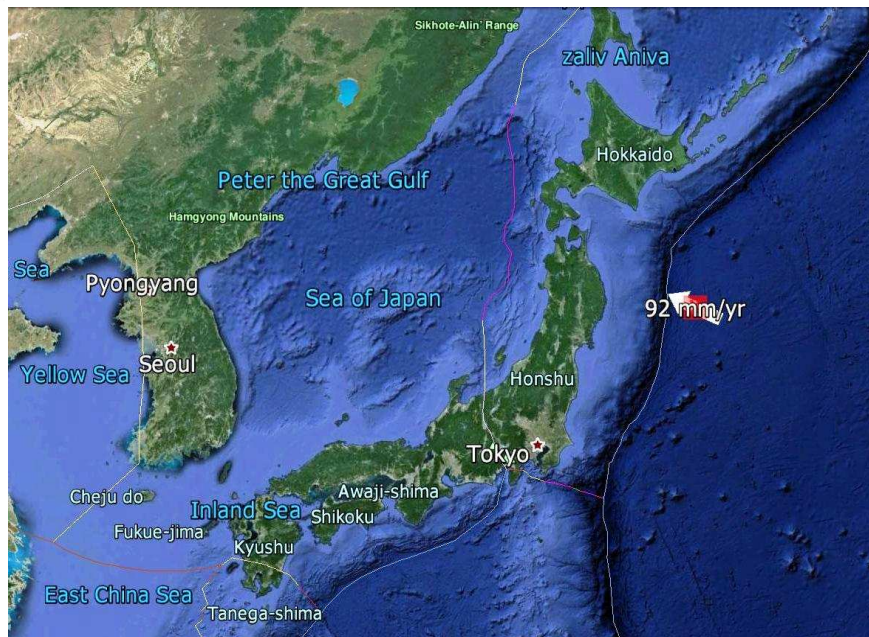
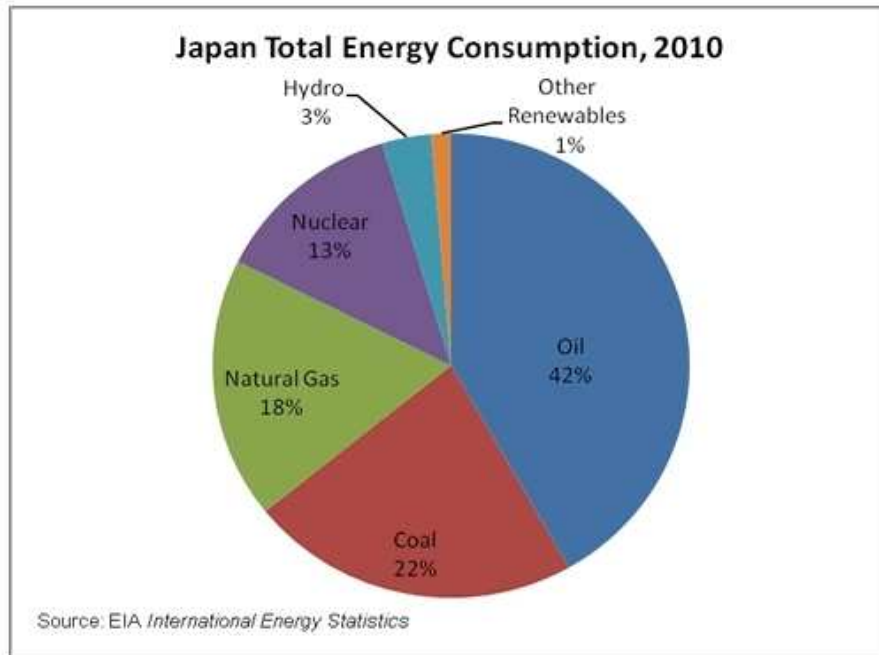
# Third Millennium Global Energy Solutions, LLC

新千纪全球能源优化公司

*Energy Solutions for the Third Millennium*

## Japan - Analysis

Japan has very limited domestic energy resources, information sources project it is only 16 percent energy self-sufficient. Japan is the third largest oil consumer in the world behind the United States and China and the third-largest net importer of crude oil. Presently Japan is the world's largest importer of liquefied natural gas (LNG) and second largest importer of coal globally.



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The Japanese government is working on several fronts to enhance and insure energy security and reduce the country's reliance on oil from the Middle East.

This island nation is subject to seismic instabilities making continued nuclear facility operation a ticking time bomb. Japan lacks significant seismically stable areas to store spent nuclear waste materials.



Although Japan does not suffer air quality issues as severe as India and China it none the less suffers from poor air quality.

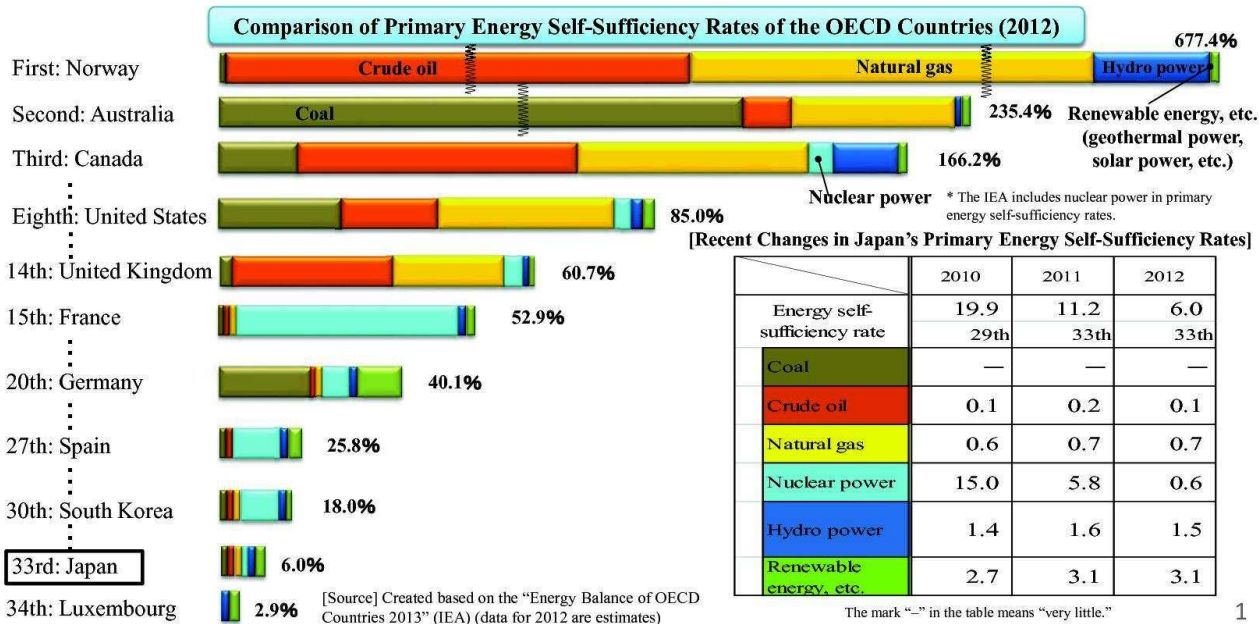


Tokyo - Smog



Section 1 Structural Issues Faced by Japan

(1) Fundamental vulnerability of the energy supply system due to high dependency on overseas energy resources  
 ○ Japan’s primary energy self-sufficiency rate has declined significantly compared to the level prior to the Great East Japan Earthquake (2010: 19.9%), and was as low as 6.0% in 2012. This is the second lowest level among the 34 OECD countries.



Summary

Japan’s energy supply structure is extremely vulnerable economically and logistically **perhaps the most precarious of any modern industrial nation.** Including nuclear power Japan imports an unprecedented 96% of its primary energy supply. Since the Fukushima Daiichi nuclear power plant disaster Japan has closed down other nuclear facilities to avoid and minimize future risks. These actions are consequently placing a tremendous strain on existing generation capacities as they are called to fill the power demand gap.

Japan is presently considering bringing back on-line a number of nuclear plants as well as constructing several new coal fired plants.

Solution

Planetary Power Generation has the greatest probability of offering Japan a low cost cure for their energy requirements now in the fall of 2015. Implementation costs for PPG in Japan are projected to be the lowest cost anywhere globally.