The **36**th Policy Recommendations

# Japan's Energy Strategy in the Age of Globalization



June 2012

The Policy Council The Japan Forum on International Relations, Inc.

## Greeting

The Japan Forum on International Relations (JFIR) organized the Policy Council within itself immediately after it was founded in 1987, and has since publicly announced a series of policy recommendations approximately on a biannual basis (see Appendix at the end of this booklet). The Policy Recommendations on "Japan's Energy Strategy in the Age of Globalization," which we hereby present, is the 36th in such a series. As energy is the foundation of both state and society, it is indeed a critical concern for any nation to secure it stably. The serious accident of the March 11 Great East Japan Earthquake has prompted some to leap straight to a "denuclearization first" conclusion in Japan without calm discussion that faces up to the fact that Japan is resource-poor and has exceedingly low rate of energy self-sufficiency. We need to discuss strategically Japan's energy security in light of the perspective of "Japan in the world."

With this awareness in mind, the Policy Council of JFIR started deliberations in its first meeting on this theme on June 9, 2011 and adopted them in their final version of the draft at its fourth meeting on June 1, 2012. During this time, the discussion in the Policy Council zigzagged and the theme of this set of policy recommendations was renamed from the original theme of "Japan and the World in the post-3.11 Era" to that of "Japan's Energy Strategy after 3.11" first and then to that of "Japan's Energy Strategy in the Age of Globalization" as we see in the final version. The final version of the recommendations as approved by the fourth meeting of the Policy Council was sent to all the members of the Policy Council, of which 70 members agreed to its contents and signed the Policy Recommendations.

In line with the tradition, the full text of this set of Policy Recommendations, both in Japanese and in English, was submitted to the Prime Minister of Japan, released to the press, distributed to opinion leaders both at home and abroad, and made accessible at the website of JFIR, http://www.jfir.or.jp/e/. In addition, in view of the importance of the issues raised by this set of Policy Recommendations, we decided to appeal directly to the public at large by running an advertisement of the Policy Recommendations in the June 20

issue of; The Sankei Shimbun, The Asahi Shimbun, The Nikkei and The Japan Times.

The objective of JFIR is to encourage its members to discuss, study and propose ideas on matters of foreign policy, thereby enlightening the public in and out of Japan. In doing so, however, JFIR as an institution neither takes nor rejects any specific positions on matters of foreign policy. The responsibility for the contents of these Policy Recommendations lies solely with those Members of the Policy Council who signed them. JFIR as an institution, trustees, officers and members of JFIR as well as other parties to JFIR who did not sign them are exempted from any responsibility for the contents.

June 2012



ITO Kenichi

President of JFIR Chairman of JFIR Policy Council

## **Table of Contents**

Introduction1
Signatories4
Policy Recommendations7
Recommendation 1. Take Positive Action to Enhance the Global Energy Security
Environment7
Recommendation 2. Seek to Form an "East Asian Energy Cooperation System"
Recommendation 3. Ensure Stable Energy Supply through EPA and FTA
Recommendation 4. Pursue Further Proactive Energy Conservation Efforts and
Disseminate These Globally8
Recommendation 5. Take Advantage of the US-Originated "Shale Gas Revolution"
to Promote Internationalization of the Natural Gas Market
Recommendation 6. Effectively Utilize Nuclear Power Stations While Making Utmost
Efforts to Enhance Their Safety8
Recommendation 7. Make Continued Contributions to the International Community in
Pursuit of the Peaceful Use of Nuclear Energy by Enhancing and Maintaining the
Safety of Nuclear Power Stations9
Recommendation 8. Steadily Promote the Utilization of Renewable Energy9
Recommendation 9. Cooperate in the Peaceful Use of Nuclear Energy as a Means
of Reducing Greenhouse Gases10
Recommendation 10. Continue and Step Up Efforts to Develop Thermonuclear
<i>Fusion</i> 10
Appendix

## Introduction

As energy is the foundation of both state and society, it is indeed a critical concern for any nation to secure it stably. Therefore, energy issues must primarily be addressed from a strategic point of view. The serious accident at TEPCO's Fukushima Daiichi nuclear plant, hit by the giant tsunami caused by the March 11 Great East Japan Earthquake, however, has heightened negative reactions to nuclear power in Japan, prompting some to leap straight to a "denuclearization first" conclusion without calm discussion on energy security strategy.

It goes without saying, of course, that best efforts should be made to improve the safety of nuclear power plants in the wake of this serious accident, and there are certainly grounds for discussing energy resources, including the pros and cons of nuclear plants, and the modalities of the power industry. Ensuring safety is vital. Yet such discussions should be accompanied by, and combined with, strategic deliberations on energy security. We need to be aware that energy resources are supplied via an increasingly integrated and unified global market, and our discussions should thus examine issues from the perspective of "Japan in the world." Given the rapid economic expansion of emerging and developing countries and the growth of the world population, expected to reach 9 billion in 2050, it is highly likely that energy supplies will become strained in the foreseeable future. We need to face up to the fact that Japan is particularly

resource-poor and has an exceedingly low rate of energy self-sufficiency.

Accordingly, a major goal of energy strategy should be procuring a reliable energy supply at feasible costs and risks. The world is highly dependent on oil and gas supplies from the Middle East for its energy resources. Hence instability in the Middle East that threatens oil producers' supply capacities, or at maritime choke points such as the Straits of Hormuz and Malacca on routes connecting oil producing to consuming countries, could directly cause disruptions in the world energy supply. Thus, it is important to secure peace and stability in the Middle East while trying to increase supplies of various kinds of energy from other regions. Regions outside the Middle East with vast energy resources include Russia, Australia, North America, Central Asia and Sub-Saharan Africa. However, careful handling is required here since, apart from Australia and North America, resource nationalism or the use of resources as a diplomatic card remains a risk. Russia, having not ratified a peace treaty with Japan yet, could hardly be said to be well-prepared for any full-scale cooperation with Japan.

Such geopolitical conditions pertinent to energy as described above might be altered substantially by the "shale gas revolution" originating from the US and spreading its repercussions globally. In the US and Canada, technological advances have rapidly made non-conventional gas and oil sources such as shale gas, shale oil and oil sands commercially viable. As a result, the US is even planning to export natural gas. This will not only evoke changes in Asian and European gas pricing, but may relativize the positions of Russia and the Middle East as energy suppliers. If the geopolitical center of energy were to shift to politically stable democratic countries such as the US and Canada, the global energy security landscape would improve significantly.

However, it is too optimistic to speculate that the "shale gas revolution" will immediately resolve global energy problems because many technological challenges have yet to be resolved. To avoid further dependence on fossil fuels, the use of which entails a large environmental load, there is no other choice from a short- and medium-term perspective but to construct a comprehensive energy security system based on the best mix of more economical renewable energy and safer nuclear energy. It must not be forgotten that our country must choose from among tightly limited options for its energy strategy.

It is worth noting that the mainstream of the world opinion – with the exception of Germany, Switzerland, Italy and other countries that are successfully collaborating internationally in power transmission and other regards - has not turned negative on the use of nuclear power even after the March 11 Fukushima disaster. With the lessons of the March 11 nuclear accident in mind, major Western countries such as the US, the UK and France continue to operate existing nuclear reactors or have given the green light for new reactor construction while improving the levels of reactor safety and protection. Japan's neighbors, China and South Korea, as well as many emerging economies, such as Vietnam, India and Turkey, remain committed to a policy of actively promoting the use of nuclear power to meet their rapidly growing energy demands. Even the United Arab Emirates (UAE) and other Middle Eastern oil producers have been deciding or planning to introduce nuclear power plants in view of the possibility of crude oil exhaustion in the future. Needless to say, these moves are also linked with global efforts to prevent global warming. Mindful of all of these points, we offer the following 10 policy recommendations on the energy strategy that Japan should adopt and implement.

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(In alphabetical order)

## **The Policy Recommendations**

### Recommendation 1. Take Positive Action to Enhance the Global Energy Security Environment

In an increasingly interdependent world, Japan should strengthen its commitment and contribution from the perspective of positive pacifism to maintaining peace and stability around the globe, especially in the Middle East, to ensure stable energy supply. While engaged in efforts to help stabilize the political situations in oil-producing countries and prevent their neighbors from collapsing, our country should be actively involved in international efforts to combat piracy and terrorist attacks against energy resource transport infrastructure and choke points.

## Recommendation 2. Seek to Form an "East Asian Energy Cooperation System"

The energy security structures of East Asian countries are vulnerable and their collapse would likely inflict serious damage on the Japanese economy as well. Our country should work on a grand design for building an "East Asian Energy Cooperation System" for the future, giving due consideration to the transfer of energy-saving technologies from Japan to other East Asian countries, accommodation and collaborative stockpiling systems for oil and natural gas, and the possibility of power accommodation with neighbors such as South Korea via collaborative electrical grid use.

## Recommendation 3. Ensure Stable Energy Supply through EPA and FTA

Complete liberalization of trade in energy resources would be ideal, but Article XI, Clause 2(a) of the current General Agreement on Tariffs and Trade (GATT) stipulates that "export prohibitions or restrictions can be temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party." The effect of this stipulation should be minimized by utilizing economic partnership agreements (EPA) or free trade agreements (FTA). This approach can also serve as a deterrent against resource nationalism.

### **Recommendation 4.** Pursue Further Proactive Energy Conservation Efforts and Disseminate These Globally

Japan has become one of the world's most energy-efficient countries since the oil crises of the 1970s. Nevertheless, there is still plenty of scope for improving urban design, transportation and other social systems, deepening a culture of energy efficiency by way of the visualization of energy usage by consumers, promoting greater efficiency in industrial activities, and using combined heat and power (CHP) through cogeneration. Japan should promote the establishment of multilateral schemes and bilateral cooperation with a view to disseminating its experiences and energy conservation technologies on a global scale.

## Recommendation 5. Take Advantage of the US-Originated "Shale Gas Revolution" to Promote Internationalization of the Natural Gas Market

Global proliferation of the benefits gained from the US-originated "shale gas revolution" would serve to change the current geopolitical situation in which world energy supplies are heavily reliant on Middle Eastern energy resources. This is highly significant in that it would not only help shrink the present huge gap in natural gas prices between Japan and the US/Europe, thereby mitigating electric rate hikes derived from Japan's ever-increasing reliance on natural gas, but would also advance equalization of the world market. In view of this, Japan should resolutely promote internationalization of the natural gas market. Development of methane hydrate in the seas off Japan should also be pursued from this standpoint.

## Recommendation 6. Effectively Utilize Nuclear Power Stations While Making Utmost Efforts to Enhance Their Safety

If we take into account the stringency of the global energy supply-demand balance, it is highly unlikely that nuclear energy could be completely superseded

by renewable energy either in quality or in quantity. Shutting down nuclear power plants and seeking to replace them with thermal power generation, as is now the case in Japan, would hollow out industry through electricity rate hikes, have seriously adverse impacts on the economy and employment, and eventually put household finances under heavy pressure. Those nuclear power stations now being shut down should resume operations as soon as possible, after their safety has been verified, their facilities structurally reinforced, and their operational management improved in line with the lessons learned from the accident at the Fukushima Daiichi nuclear power station.

## Recommendation 7. Make Continued Contributions to the International Community in Pursuit of the Peaceful Use of Nuclear Energy by Enhancing and Maintaining the Safety of Nuclear Power Stations

Japan's nuclear technology has enjoyed high international acclaim, as shown in reports from the International Atomic Energy Agency (IAEA). More than a few emerging and developing countries place high confidence in Japan's nuclear technology as well as its capabilities in nuclear power station construction, and aspire to introduce these to their own countries. It should be noted that Japan's human and technological assets in the field of nuclear energy have already become an international public good. In order to respond to the expectations of the international community, Japan should contribute to enhancing the safety of nuclear power stations around the world, applying the lessons learned from the last year's nuclear accident, through international information-sharing and cooperation. In order to do so, it is imperative that Japan continue to foster first-rate nuclear energy experts.

## Recommendation 8. Steadily Promote the Utilization of Renewable Energy

We cannot share the optimistic view of some that the introduction of renewable energy would serve as a quick remedy or substitute for nuclear power and instantly enable denuclearization. Accepting that the utilization of renewable energy would ultimately be conducive to heightening energy self-sufficiency, diversifying supply sources and reducing greenhouse gases, however, we should steadily promote such utilization from a long-term perspective, undertaking efforts to remove technical and economic bottlenecks.

## Recommendation 9. Cooperate in the Peaceful Use of Nuclear Energy as a Means of Reducing Greenhouse Gases

Although Japan decided at the December 2011 COP17 not to participate in a legally binding commitment to the Kyoto Protocol to reduce greenhouse gases starting from 2013, it is nevertheless evident that we should continuously contribute to the reduction of greenhouse gases. While it is imperative to engage not only the US but other major emitting countries such as China and India in an endeavor to reduce greenhouse gases, in order to do so, Japan's cooperation toward the peaceful use of nuclear energy by these countries is indispensable.

### Recommendation 10. Continue and Step Up Efforts to Develop Thermonuclear Fusion

Thermonuclear fusion, a promising energy resource of the future, is derived from deuterium tremendously abundant in sea water; it produces almost no high-level radioactive waste and, of course, it does not discharge greenhouse gases. It is in a sense "a dream energy." Having deeply committed itself to and taken the lead in the International Thermonuclear Experimental Reactor (ITER) together with the EU, the US, China, Russia, South Korea, and India, Japan should make continued and enhanced efforts in this enterprise.

## Appendix

#### Introduction to The Japan Forum on International Relations

The Forum conducts a variety of activities hosting conferences, organizing research programs, and publishing research reports and policy recommendations, etc.

#### [History]

The Japan Forum on International Relations, Inc. (JFIR or The Forum) was founded on March 12, 1987 in Tokyo on the private initiative of Dr. OKITA Saburo, Mr. HATTORI Ichiro, Prof. ITO Kenichi, and 60 other independent citizens from business, academic, political, and media circles of Japan, recognizing that a policy-oriented research institution in the field of international affairs independent from the government was most urgently needed in Japan. On April 1, 2011, JFIR was reincorporated as a "public interest foundation" with the authorization granted by the Prime Minister in recognition of its achievements.

#### [Purpose]

The Forum is a private, non-profit, independent, and non-partisan organization dedicated to improved understanding of Japanese foreign policy and international relations. The Forum takes no institutional position on issues of foreign policy, though its members are encouraged not only to analyze but to propose alternatives on matters of foreign policy. Though the Forum helps its members to formulate policy recommendations on matters of public policy, the views expressed in such recommendations represent in no way those of the Forum as an institution and the responsibility for the contents of the recommendations is that of those members of the Forum who sign them alone.

#### [Organization]

JFIR is a membership organization with four categories of membership, namely, (1) corporate, (2) associate corporate, (3) individual and (4) associate individual. As for the organizational structure of JFIR, the "Board of Trustees" is the highest decision making body, which is in charge of electing the "Directors" and of supervising overall activities of JFIR, while the "Board of Directors" is an executive body, which is in charge of the management of day-to-day operations of JFIR.

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#### [Activities]

In tandem with the core activities of the "Policy Council" in making policy important pillar of JFIR's activities the BBS recommendations, another is "Hvakka-Seiho" which "Hundred Flowers in Full Bloom" means (http://www.jfir.or.jp/cgi/m-bbs/). The BBS, which started on April 12, 2006, is open to the public, functioning as an interactive forum for discussions on foreign policy and international affairs. All articles posted on the BBS are sent through the bimonthly e-mail magazine "Meru-maga Nihon Kokusai Foramu" in Japanese to about 10,000 readers in Japan. Furthermore, articles worth attention for foreigners are translated into English and posted on the English website of JFIR (http://www.jfir.or.jp/e/index.htm) as "JFIR Commentary." They are also introduced in the e-mail magazine "JFIR E-Letter" in English. "JFIR E-Letter" is delivered bimonthly to about 10,000 readers worldwide.



The JFIR's sister organizations of The Global Forum of Japan (GFJ) and The Council on East Asian Community (CEAC) have their own BBS of "Giron-Hyakushutsu" and "Hyakka-Somei." Each of the troika BBS is visited by about 10,000 visitors daily. It means that the troika system of BBS is visited by about 10 million visitors annually even though many of them are repeaters.

#### The List of Policy Recommendations

The most significant activity of JFIR is carried out by its Policy Council, which is engaged in policy research and helps its members to produce policy recommendations. The 36 sets of "Policy Recommendations," which have so far been deliberated by the Policy Council, are shown below. Out of these 36 sets of "Policy Recommendations," the 7th and the 34th failed to be adopted by the Policy Council due to lack of consensus in the Council.

- 1. "*The Structural Adjustment of Economies of Japan, U.S. and Asian NICs*" by the Task Force headed by Prof. WATANABE Toshio (March 3, 1988)
- 2. "Long-term Political Vision for Stabilization and Cooperation in Northeast Asia" by the Task Force headed by Prof. KAMIYA Fuji (March 15, 1989)
- 3. "How to Best Utilize Economic Resources of Japan for Development of World Economy" by the Task Force headed by Mr. KANAMORI Hisao (July 25, 1989)
- 4. "Japan, the United States and Global Responsibilities" by the Task Force headed by Prof. INOGUCHI Takashi (April 5, 1990)
- 5. "Stabilization of the International Monetary and Trade Systems" by the Task Force headed by Mr. MANO Teruhiko (August 14, 1990)
- 6. *"Japan's Response to the Changing Soviet Union*" by the Task Force headed by Prof. TAKUBO Tadae (April 10, 1991)
- 7. "For a More Open Market in Japan" by the Task Force headed by Mr. TAKENAKA Kazuo (failing to be adopted by the Policy Council on February 27, 1992)
- 8. "*The Strengthening of the U.N. Peace Function and Japan's Role*" by the Task Force headed by Prof. SATO Seizaburo (October 7, 1992)
- 9. *"Japan's Response to the Transformation of Socialist Economies in Asia*" by the Task Force headed by Prof. SATO Tsuneaki (June 8, 1993)
- "Political Cooperation with Europe: Japan's Agenda for 21<sup>st</sup> Century" by the Task Force headed by Prof. NAKANISHI Terumasa (November 16, 1993)
- 11. "*The Future of Regionalism and Japan*" by the Task Force headed by Mr. KOBAYASHI Minoru (June 17, 1994)
- 12. "The Future of China in the Context of Asian Security" by the Task Force headed by Prof. KOJIMA Tomoyuki (January 25, 1995)
- 13. "*The Essence of U.S.-Japan Economic Conflicts and Japan's Response*" by the Task Force headed by Prof. SHIMADA Haruo (August 3, 1995)
- 14. "*The Perspective of Security Regimes in Asia-Pacific Region*" by the Task Force headed by Prof. WATANABE Akio (June 5, 1996)
- 15. "*The WTO System and Japan*" by the Task Force headed by Prof. SAKAMOTO Masahiro (November 27, 1997)
- "Japan's ODA in the 21<sup>st</sup> Century" by the Task Force headed by Prof. KUSANO Atsushi (March 5, 1998)
- 17. "Japan and International Society in the Age of Information Revolution" by the Task Force headed by Prof. KUMON Shunpei (August 24, 1998)
- 18. "Japan's Initiatives towards US, China and Russia" by the Task Force headed by Prof. ITO Kenichi

(April 19, 1999)

- 19. "*Economic Globalization and Options for Asia*" by the Task Force headed by Prof. TRAN Van Tho (May 27, 2000)
- 20. "Towards Collective Human Security: A New Internationalism and Japan" by the Task Force headed by Prof. INOGUCHI Kuniko (July 6, 2001)
- 21. "Japan's New Initiative for Global Environment" by the Task Force headed by Prof. YAMAMOTO Ryoichi (October 24, 2001)
- 22. "Building a System of Security and Cooperation in East Asia" by the Task Force headed by Prof. TANAKA Akihiko (December 18, 2002)
- 23. "Japan's Initiative for Economic Community in East Asia" by the Task Force headed by Mr. YOSHIDA Haruki (June 20, 2003)
- 24. "New World Order of No-War Community and Future of Japan-U.S. Alliance" by the Task Force headed by Prof. ITO Kenichi (April 28, 2004)
- 25. "Japan's Place in the World: The Strategic Value of Culture and Education" by the Task Force headed by Prof. HAKAMADA Shigeki (December 13, 2004)
- 26. "*Emerging New Threats and Japan's National Security*" by the Task Force headed by Prof. SASE Masamori (August 10, 2005)
- 27. "The Establishment of an International Energy Security System" by the Task Force headed by Mr. NAITO Masahisa (May 18, 2006)
- 28. "Japan and China in the Changing Asia" by the Task Force headed by Prof. KOJIMA Tomoyuki (October 30, 2006)
- 29. "India's Leap Forward and Japan" by the Task Force headed by Prof. SAKAKIBARA Eisuke (September 5, 2007)
- 30. "*Nature of Russian State and Japan's Strategy towards Russia*" by the Task Force headed by Prof. HAKAMADA Shigeki (February 20, 2008)
- 31. "Japan's Strategy for its Agriculture in the Globalized World" by the Task Force headed by Prof. HONMA Masayoshi (January 14, 2009)
- 32. "Positive Pacifism and the Future of the Japan-U.S. Alliance" by the Task Force headed by Prof. ITO Kenichi (October 22, 2009)
- 33. "Prospects and Challenges for the Acceptance of Foreign Migrants to Japan" by Amb. HIRABAYASHI Hiroshi and Prof. IGUCHI Yasushi, Drafters (November 24, 2010)
- 34. "Japan's Response to Global Terrorism" by Prof. YAMAUCHI Masayuki, Drafter (failing to be adopted by the Policy Council on January 7, 2011)
- 35. "Expansion of China and Japan's Response" by Hon. Dr. & Prof. Emeritus ITO Kenichi, Drafter (January 20, 2012)
- "Japan's Energy Strategy in the Age of Globalization" drafted by Hon. Dr. & Prof. Emeritus ITO Kenichi, Chairman of the Policy Council of JFIR (June 18, 2012)

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