

Report

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on

Workshop & Panel Discussion
„Energy Shift in Japan and Germany -
Challenges, Opportunities, and Potential for German-Japanese Cooperation“
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1. Background

The nuclear disaster at Fukushima Daiichi caused by the Great Eastern Japan earthquake and tsunami of 11 March 2011 led to nation-wide discussions in Japan and Germany about future energy policies and the role of nuclear power.

In Japan, which until 2011 was the world's third largest user of nuclear energy, the disaster triggered a national debate about nuclear energy and public opinion significantly turned in favor of a staged phase-out. In fact, at present only 2 out of the nation's 54 nuclear reactors are running. However, the announced policy decision by the former Noda administration to phase-out nuclear energy by the 2030s was overturned by the new LDP-led administration under Shinzo Abe after their landslide victory in the general election of December 2012. While it is unlikely that Japan will return to its former policy of *expanding* nuclear energy to 50% of its energy supply, a new energy policy has not yet been formulated. The new Prime Minister has, however, announced the restart of nuclear reactors that meet newly adopted, stricter safety standards, and is actively promoting the export of Japan's nuclear technology to third countries. At the same time, the introduction of a feed-in-tariff-system (FIT) for renewable energy sources in July 2012 has caused a surge of private investment, particular into solar power, and the Japanese government is actively promoting renewable energy like solar, wind, biomass, water or geo-thermal power.

Germany has a long history of a strong anti-nuclear movement. In 2000, an agreement between the German (red-green) Government and the nuclear reactor operators was reached to phase out nuclear energy on the basis of a defined quantity of electricity. This agreement attained legal force after the Amendment to the Atomic Energy Act in 2002. In September 2010 the German Government adopted a new energy and climate strategy that called for an extension of the operating lifetime of nuclear power plants combined with a shift away from fossil-based energy sources towards the use of renewable energy to pursue the objective of a drastic reduction of greenhouse gas emissions. Only half a year later the Fukushima disaster led to strong public protests in Germany, which eventually forced the government to revise its nuclear policy and to declare a moratorium on nuclear energy. In June 2011 the German parliament decided to completely phase out nuclear power by 2022 and to further accelerate the shift to renewable energy sources. At present, renewable energy accounts for 23% of Germany's electricity supply and investments into renewable energy sources continue to grow rapidly. The success of this policy and the strong growth of renewables has, however, caused various side-effects such as rising energy costs, distortion of energy market prices, or strains on the energy system that have led to a renewed discussion about possible reforms of the feed-in-tariff-system and the required design of energy markets.

Before the background of these developments in Germany and Japan, the Workshop & Panel Discussion "Energy Shift in Japan and Germany - Challenges, Opportunities, and Potential for German-Japanese Cooperation" brought together leading experts and policy-makers occupied with energy policy in both countries to explore the challenges and opportunities of a fundamental shift in energy policy away from nuclear and fossil energy sources towards renewable energy.

2. Workshop results and impressions

After greetings by Torsten Schäfer-Gümbel (chairman of the Social Democratic Party of Germany in Hesse), Dr. Sven Saaler (representative of the FES in Tokyo) and Gerhard Wiesheu from the Japanese-German Business Association (DJW), an introductory session with presentations by Mika Ohbayashi (Japan Renewable Energy Foundation) and Hans-Joachim Ziesing (independent consultant on energy policies) outlined the current situation of energy policy in Germany and Japan. Then, in two panels, the shift towards renewable energies was discussed from various angles, addressing political,

social, technical and financial challenges. While trying to work out similarities and common ground between Japan and Germany, the most striking result of the discussions among the experts has been the vast gap between both countries in terms of the state, level and direction of the debate on energy *policy*. While the Japanese experts, all of them acknowledged pioneers and opinion leaders on climate policy and renewable energy issues, elaborated on the intellectual barriers in the Japanese discourse about a forward-looking energy policy, on historical trajectories and political-institutional limitations, the German experts highlighted practical challenges and specific issues of the energy shift and on political-institutional requirements to build on the achievements and to meet Germany's policy targets. Some examples:

- Political environment

Mrs. Mika Ohbayashi, Director of the Japan Renewable Energy Foundation (JREF), pointed to Japan's lack of progress in reducing CO₂ emissions, in particular in manufacturing, during the last two decades despite its sluggish growth performance. She argued that the Japan's strong policy focus on the promotion of nuclear energy prevented progress in energy savings and energy efficiency improvements, while creating the illusion of an ample, comparatively cheap energy supply. At the same time, using data on the long-term development of supply capacities, she demonstrated that Japan was disconnected from a global shift away from nuclear to renewable energy.

Mr. Tetsunari Iida, Executive Director of the Institute for Sustainable Energy Policy (ISEP), described similarities and differences of both countries in terms of recent history, political institutions and social movements. In contrast to Germany's, with its federal structure and influential anti-nuclear movement, Japan's centralized political and bureaucratic system managed to curb public opinion and to promote nuclear energy in close cooperation with business and the nuclear industry lobby. Mr. Iida pointed to the detachment and intellectual isolation of Japan's nuclear-minded elite, and pointedly drew parallels to Japan's political elite in the final days of World War II, by comparing the current political and economic elite's attitude of clinging to nuclear power with the irrational hope of Japan's wartime leadership for final victory with the "magic weapon" of the giant battleship "Yamato," which, as a matter of fact, was already outdated at the time it entered service. To quote Iida: *"Just like the battleship Yamato, nuclear power is the wrong technology, feeds on a wrong myth – namely*

safety – and is highly emotionally charged – similar to Japan’s irrational determination to fight to the bitter end.”

Mr. Eisaku Satô, former governor of Fukushima prefecture, who lost his post due to his opposition to nuclear power, vividly described how Japan’s nuclear industry (often referred to as “the nuclear village”) exerts strong political power over parties, bureaucrats, academics and media. Quote: *“Japan has become a nuclear empire and is facing a crisis of democracy.”*

In contrast to these statements, the German experts focused on explaining the specific political, environmental and economic goals of German energy policy. Thorsten Schäfer-Gümbel, Chairman of the Social Democratic Party of the State of Hesse, summarized: *“The goal is to make Germany the most resource- and energy-efficient country in the world”*. Dr. Hans-Joachim Ziesing, member of the German government’s expert commission to monitor the energy shift (Energiewende) in Germany, pointed to the two key pillars of the energy shift policy: to increase the share of renewable energy sources to 80% of electricity consumption by 2050, and to increase energy efficiency by 2.1% p.a., which implies an energy-neutral housing stock by 2050. At the same time, he highlighted the fact that the present energy market design in Germany does not provide sufficient incentives for further investments due to a significant price distortion. Quote: *“There is no pure market-endogenous way to manage the energy shift.”*

Mrs. Regine Günther, Head of Climate and Energy Policy of the World Wildlife Fund Germany (WWF), stressed the fact that Germany’s decision to initiate the Energiewende was by no means spontaneous and chaotic, but has to be seen in the framework of a development with a long history. Due to this history, Germany’s energy shift is based on a strong and robust intellectual and academic foundation, enjoys broad public acceptance and, therefore, is manageable and economically viable. *“There are many obstacles and challenges, but so far there is no killing issue in sight”*, Günther summarized. She also discussed various specific issues that are presently debated in Germany, such as the cost of electricity. Showing data on long-term investment into energy infrastructure, she pointed to the huge backlog in required investment as a result of the longstanding underinvestment since the liberalization of energy markets in the mid 1990s. *“Due to the enormous investment requirements, there are strong upward pressures on energy prices, regardless of the*

energy shift.” At the same time, the rapid growth of renewable energy sources has put pressure on energy prices in particular during periods of peak demand.

- Economic and financial issues

Dr. Hiroshi Takahashi, research fellow at the Fujitsu Research Institute, elaborated on the economic-institutional differences between Germany and Japan, suggesting that Japan is facing a 10-years time gap to Germany. However, with the introduction of the feed-in-tariff-system (FIT) in July 2012, Japanese investment into renewable energy sources is growing fast, making Japan presently one of the world’s most interesting markets. The time lag also offers an opportunity for Japan to learn from Germany’s experiences and to catch up fast.

Ms Mariko Kawaguchi, Senior Researcher and Managing Director at the Daiwa Institute of Research, Ltd., confirmed the rapidly growing interest in renewable energy investment, also among institutional investors such as pension funds. Yet, while large-scale investments into mega solar power plants have taken off, there exists a substantial bottleneck in micro-based finance, namely regulation: *“Pension funds are very interested to set up solar funds, but face many administrative barriers.”*

Again, while the Japanese experts focused on institutional restrictions that confront Japan’s energy transition, the German experts pointed to specific economic benefits and highlighted various practical issues.

Dr. Fabio Longo, Lawyer and member of the Executive Board of Eurosolar’s German section, discussed legal issues related to possible reforms of Germany’s feed-in-tariff system. He also showed statistics on the economic benefits that resulted from the growth in renewable energy in Germany, such as the curb of energy imports, the creation of employment and economic value especially in structurally weak regions.

Mr. Werner Genter, Head of the Private Customer Banking Division at the KfW Banking Group, described the vital role of the KfW in providing finance for renewable energy projects to individuals and small- and medium-sized enterprises. The scale of funding (~€23 Bil.) made available for private investment into renewable energy, energy efficiency and energy-related housing reform, and the financial leverage generated through KfW loans stands in stark contrast to the financial limitations

faced by Japanese private investors. Mr. Genter drew the audience's attention to a rather less known, yet very important aspect of Germany's energy transition, by explaining the KfW's programs for increasing energy efficiency in housing.

The expert workshop addressed a broad range of issues related to the energy transition in both countries and highlighted the very different circumstances in Germany and Japan. While Germany is facing a range of complex challenges to further accelerate the energy transition, Japan stands at the beginning in formulating a consistent energy policy after Fukushima and building a new, suitable institutional framework. The closing remarks of Dr. Ziesing summarized the state of the debate in both countries adequately: *"Germany still has to do a lot to successfully manage the energy transition. Japan still has to do a lot to get on the way to an energy transition policy."*

3. Panel discussion

In the presence of Dr. Volker Stanzel, Ambassador of the Federal Republic of Germany in Japan, who gave an opening address, Mr. Tetsurô Fukuyama, Member of the House of Councilors and former Deputy Chief Cabinet Secretary under the Kan administration, Mr. Eisaku Satô, former governor of Fukushima prefecture, Dr. Hiroshi Takahashi, Research Fellow at the Fujitsu Research Institute, Mr. Thorsten Schäfer-Gümbel, Chairman of the Social Democratic Party of the State of Hesse, and Dr. Hans-Joachim Ziesing, member of the expert commission to monitor the energy shift, discussed "The nuclear phase-out in Japan and Germany: New Possibilities for Japanese-German Cooperation". In their opening statements, the panelists summarized the main points of discussion from the morning's expert workshop, and elaborated on similarities and differences between both countries in terms of their political institutions, history and economic-social structures.

When confronted with the question why Japan still seems to cling to nuclear energy despite the horrific experience in Fukushima, the discussion grew in intensity and gained flavor. Some Japanese panelists pointed to the strengths of the nuclear industry lobby in Japan and to the high economic dependency of the host communities of nuclear plants from the nuclear industry. In contrast to Germany's federalist structure and rather healthy regions, nuclear plants in Japan are located in structurally weak, isolated communities far away from economic centers. Furthermore, until recently Japan was

governed by one party, the LDP, which strongly promoted nuclear energy, while Germany has experienced several changes of governments. In addition, the European Commission and the liberalization and integration of energy market played an important role in the promotion of climate policy and the energy transition. The German side pointed to the strong role of NGOs and of citizen initiatives, the essential need for transparency and openness in the political discussion, and the surveillance function of the media.

At the same time, there are various signs of change in Japan, especially on regional level. The Chair of the panel, Mr. Tetsunari Iida, elaborated on the surge of community initiatives and citizens' projects all over Japan, and he invited several participants in the audience to introduce their projects.

The final round of discussion focused on opportunities for German-Japanese collaboration. All panelists acknowledged the leading role of Germany and Japan in environmental technologies and innovation, and called for Japanese-German cooperation in a wide range of fields, such as academic institutions, in the industry, on the level of communities and citizens' organizations as well as among the media.