Japan is the third most economically developed country in the world and one of the most technologically advanced nations on the planet. Up until 2011, it was also among the world’s leaders in nuclear power. There were 54 nuclear power reactors operating throughout the country that generated 30% of the energy consumed by it. However in March 2011, one of the most powerful earthquakes in modern history of Japan struck the island nation causing severe damage to the Fukushima Daiichi nuclear power plant. As a result, part of the coastline on the island of Honshu was contaminated with radiation and so were the waters of the world’s oceans. In fact, fairly small amounts of substances originating at Fukushima were even detected off the shores of Canada. In addition, there were emergencies, at the time, that were not as serious in nature: at the Fukushima Daini and Onagawa nuclear power plants.

After the disaster, the Japanese society started to view the nuclear power industry in a negative light, and the then leadership announced that Japan would gradually stop using nuclear energy. However, the nation’s next government headed by current Prime Minister Shinzo Abe, who came to power in 2012, decided that it would be impossible for Japan to stop relying on its nuclear power industry and chose to rescue it by putting necessary safety measures in place, based on the experience gained from the Fukushima Daiichi nuclear disaster. Newer and far stricter standards to ensure nuclear energy could be generated safely were developed. They took into account not only the way nuclear power plants were built, but also seismology data concerning the regions where they were located as well as any anti-terrorist measures that needed to be introduced. But in order to ensure Japan’s nuclear power plants complied with the new standards, the nation was still forced to close practically all of them in order to conduct necessary inspections and to modernize them. If a plant could not be brought up to the required standards or if it...
was not viable to do so, a decision was made to close it forever. Out of the 48 nuclear reactors that remained in Japan after the Fukushima Daiichi disaster, more than 20 are probably slated to be decommissioned.

And by May 2012, there were no operational nuclear reactors in Japan. In July 2012, two reactors were allowed to begin operations, but in September 2013, they were shut down once again and the Japanese energy industry entered its nuclear-free period again.

In order to ensure Japan’s enormous energy needs were met, the nation was forced to quickly ramp up its capacity to generate energy via thermal power stations and increase its fossil fuel imports, as the country does not have its own reserves of hydrocarbons. In 2013, fossil fuels accounted for up to one third of all of Japan’s imports, and by the beginning of 2014, combustion of these hydrocarbons was generating approximately 90% of the energy consumed by the nation. Such a state of affairs placed a significant strain on the nation’s budget. Hence, despite Japan’s highly developed economy, coal accounted for a substantial amount of fossil fuels imported by this country. Coal is the cheapest but, at the same time, the most harmful hydrocarbon energy source for the environment.

Substantial costs of the fuel, the threat posed to the environment and dependence on foreign suppliers were the factors that prevented Shinzo Abe’s government from doing away with its nuclear power industry. Still, it was quite hard to revive this sector as, according to Japanese legislation, in order to bring a reactor (which had passed inspections and undergone modernization) online again, permission from local authorities, which were under enormous pressure from the Japanese society, was required. Most Japanese citizens still have a negative view of nuclear power.

As a result, the first reactor of Japan’s nuclear-free period came online as late as August 2015. And according to available data, by 2020 only six more reactors were launched. This was accomplished after much hard work, numerous discussions and court cases. And even once the reactors came online, opponents of nuclear power continued to demand that they be shut down again.

Views on the use of nuclear power vary even among Japan’s highest-ranking politicians. While Japanese Prime Minister Shinzo Abe supports the revival of the nuclear power industry, Shinjirō Koizumi, who had been appointed as the Minister of the Environment by the leadership in September 2019, stated that he was in favor of closing all the nuclear power plants in Japan, at the very first press-conference in his new post.

Representatives of Japan’s business circles, who face daily challenges because of the switch from fairly cheap energy generated by nuclear reactors to the more costly power produced by fossil fuel combustion, take a different view. In March 2019, Mr. Hiroaki Nakanishi, the Chairman of the Japan Business Federation (an organization, which includes thousands of companies, and which has been dubbed the “voice of Japanese businesses”), stated that there was no room for pointless opinions on this issue, and that the government along with the private sector needed to conduct more research in order to revive the nuclear energy sector and to ensure the Fukushima disaster did not happen again.

All in all, the current Japanese government is in favor of gradually increasing the use of nuclear energy to meet the nation’s needs. In any case, Japan’s leaders have tried to convey to their people and the international community that the issue of safety is of paramount importance in everything linked to the nuclear power industry. Currently, there is increased focus on radiation safety during the 2020 Summer Olympics, which are scheduled to be held in Tokyo. For instance, during the games repair work on the Kashiwazaki-Kariwa nuclear power plant and on dismantling Fukushima Daiichi Unit and Fukushima Daini NPPs will be halted.

In January 2020, media outlets reported that 2 units of the Takahama nuclear power plant, which, with difficulty, came online in 2017, would be shut down temporarily in order to enhance their capabilities to handle threats posed by terrorism.

Based on even the most optimistic forecasts, only by 2030 will Japan be able to increase the amount of power generated by nuclear reactors to 20-22% of all the energy produced by various other means. There have been no announcements thus far regarding timeframes to return to pre-Fukushima levels of nuclear power use. Until then, natural gas and coal will remain the main sources of energy for the nation. The land of the rising sun has a long road ahead of it with regards to its nuclear power sector, which for decades supplied the country with cheap energy and provided Japan with a competitive advantage over other nations. One can only hope that the land of the rising sun will fully take advantage of its experience with the Fukushima Daiichi nuclear disaster while reviving its nuclear power sector and make its nuclear power plants truly safe.
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