

Workshop “The Systemic Impact of the Twin Digital and Green Tech Revolutions in the Indo-Pacific: Toward a New Industrial Policy Race?”

Convened by:

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Panel I: Green industrial Revolution

Green technology revolution: Is it happening in Japan?

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1. Background

Since the adoption of the Paris Agreement, there has been an increased global movement to curb global warming. COP26 has successfully accelerated climate mitigation efforts of all parties in the hopes of preventing global warming from increasing above 1.5°C. All parties are required to make the transition to a decarbonized society including national and local governments, the private sector, and civil society. However, in Japan, such a transformation is not really felt. Is it happening out of sight, or is it not actually happening in Japan? As a long-time resident of Japan, who has not gone abroad for more than seven years, I would like to share a short essay on how I see Japan from the perspective of climate change mitigation policy implementation, post-2020.

2. Japan's Climate Change Policy after 2020

Historically, Japan has not been enthusiastic about greenhouse gas emission reductions. Its nationally determined contribution (NDC) for 2030 was initially “26% reduction from 2013 levels”—the emission reduction rate appears large, as Japanese emissions peaked in 2013. After the IPCC released its 1.5 degree special report in 2018, many countries and municipalities began announcing net-zero targets for 2050 or earlier. Observing these developments, in October 2020, then-Japanese Prime Minister Suga announced that Japan would aim for net-zero emissions by 2050. This was the starting point for Japan's efforts toward its net-zero goal.

In April 2021, Japan's NDC was revised to a 46% reduction from 2013 levels by 2030 to be consistent with the 2050 decarbonization target. This revision was due to pressure from the new Biden administration. In May 2023, the GX (a term coined by the Japanese government to stand

for Green Transformation) Promotion Law was adopted by the Diet.

However, the GX Promotion Law is primarily based on the government's intention to support the development of energy-related technologies such as hydrogen and ammonia. Nuclear power is expected to regain its market share, which was once lost after the Fukushima Daiichi nuclear power accident in 2011. While there is brief mention of carbon pricing, it is only being considered in later years.

Japan hosted the G7 meeting in Spring 2023, and the G7 Climate, Energy, and Environment Ministerial Communiqué reaffirms member countries' commitment to scale up urgent, ambitious, and comprehensive action to significantly reduce emissions over this decade to keep the 1.5°C temperature rise limit within reach. The Japanese government, on the other hand, was reluctant to state specific actions— such as phasing out coal power plants and promoting electric vehicles—to realize its commitments. It is unclear how Japan will achieve its 2030 and 2050 emission reduction targets.

3. Why the green revolution in Japan is insufficient

Japanese industry is highly motivated to develop new technologies to reduce greenhouse gas emissions. However, this is primarily due to subsidies from the Japanese government and pressure from abroad. There is little visible demand from the Japanese public to transform Japan into a carbon-free nation. Since 2015, public opinion polls, comparing the reactions of different countries, showed that the Japanese public is less aware of the urgency of climate change mitigation. There is little domestic demand for renewable energy, despite the high energy prices that have resulted from the Russian-Ukrainian war. Most newly sold cars are still gasoline engine vehicles. Even if they succeed in developing innovative technologies, they will not feel the need for the technology if there is no sympathetic pressure from their own citizens.

4. Conclusion

I argue that the technological revolution cannot be achieved solely through government support, mainly subsidies for technological development. In order to motivate the private sector to invest in green technology, citizens must also recognize its importance and applaud companies that succeed in marketing new, lower-carbon products. To achieve the ambitious 1.5°C goal, all citizens must be smart consumers and choose products that contribute to emissions reductions. Those seeking employment should look for companies that are leaders in reducing emissions. For a true revolution, personal awareness is paramount.