

## **Japan's "GX: Green Transformation Policy" is a Missed Opportunity to Respond to the Current Climate and Energy Crises**

### **Why Does the Government Cling to Nuclear Power and Continue to Rely on Fossil Fuels?**

The climate and energy crises that Japan faces could jeopardize the country's future if not addressed properly. However, Japan's Kishida administration seems not to be responding to the climate and energy crises as an issue of such importance that the future of Japan is at stake.

At the 5th Green Transformation (GX) Implementation Council held on 22 December, the Japanese Government adopted a document entitled 'Basic Policy for the Realization of GX', which sets out its response to the two crises facing Japan. The GX Executive Implementation Council, with leading members, are representatives from economic organizations and existing energy industries, apart from the Prime Minister and relevant ministers. It has been held since July but has consistently been closed to the public, and only the meeting documents have been published afterwards. The current GX Basic Policy was abruptly presented after the decision was made at the meeting, without the draft text being made public in advance. The opacity of the policy-making process is remarkable compared to formulating basic energy strategies, which were criticized for insufficient public participation in discussions.

### **The Policy's Primary Aim is 'Restoring Nuclear Power'**

The main aim of formulating this Basic Policy in such a short period was undoubtedly to abandon the principle of 'reducing dependence on nuclear power as much as possible', which Japan has maintained since the TEPCO's Fukushima Daiichi Nuclear Power Accident, and to pave the way for new reactor construction while prolonging the lifetime of existing nuclear power reactors. The GX Basic Policy states that nuclear power plays a vital role in achieving a stable energy supply and carbon neutrality, but this perception is different from the reality of what is happening in the world and Japan today.

Without careful consideration of safety assurance, the Policy waived the operating period rule of '40 years in principle, 60 years maximum' and allowed operation for more than 60 years, excluding the shutdown period. No reactor in the world has been in commercial operation for more than 60 years, and the average operating period of closed reactors is 28 years.

The 'next generation innovative reactors' that the Government plans to develop and construct are not innovative in any way, as construction has already started in France, the UK, and other countries. In France, the reactor construction began in 2007 and was supposed to be operational in 2012, it has been delayed by more than ten years and is still not operational, while construction in the UK has also been delayed. The new build-out is not at all in time for the current energy or climate crisis, which requires immediate CO<sub>2</sub> reductions. Their construction costs are significantly higher than initially planned in both countries, reaching around 2 trillion yen per unit. Even if only 10% of Japan's electricity is supplied by nuclear power after 2050, more than ten new reactors with such high costs will have to be built.

The GX Basic Policy also aims to accelerate the restart of existing nuclear power, but the measures required to restart the plants are extremely costly and require rigorous inspections before they can be put back into operation. Combined with safety concerns and the fact that there is no prospect for the disposal of radioactive waste, the strategy to make nuclear power the pillar of Japan's energy supply is not justified.

### **Adherence to Continued Use of Fossil Fuels**

Another flaw in the energy strategy set out in the Basic Policy is that, while it calls for "moving away from excessive dependence on fossil fuels," it has not changed its policy of promoting CCS for power generation and ammonia power generation, which is premised on co-firing with coal. As Renewable Energy Institute has pointed out, the government's energy strategy calls for the capture and storage of more than 300 million tonnes of CO<sub>2</sub> in 2050. Even if capture were possible, there is nowhere to store the large amount of CO<sub>2</sub> in Japan. The government has indicated that it will export and store CO<sub>2</sub> in South-East Asian countries, but this is far from being understood internationally.

### **Lack of Determination to Accelerate Renewable Energy Deployment**

In contrast to the apparent adherence to nuclear power and fossil fuels, what is lacking in the GX Basic Policy is a clear strategy to place renewables at the center of Japan's energy supply and demand. While it states that "renewable energies will become the main source of power," the power share for FY2030 has not changed beyond the target of 36-38% set in last year's Basic Energy Plan. At the G7 meeting held in May 2022, it was agreed to "a goal of achieving predominantly decarbonized electricity sectors by 2035," but the GX Basic Policy does not indicate how efforts will be made to realize this agreement.

Indeed, some government departments are seriously committed to deploying renewables, and their efforts are partially reflected in the current GX Basic Policy, such as accelerating the development of the power grid and promoting offshore wind power, including floating wind turbines. However, it lacks the determination for accelerated renewables deployment with the concerted efforts of the Government.

A report published this December by the International Energy Agency analyzed a 30% increase in the expected global renewables growth over the next five years compared to projections a year earlier and attributed this mainly to the introduction of new strategies by China, the EU and the US to accelerate the development of domestic renewables in response to the energy crisis. On the other hand, the report revised downward Japan's projection for deployment over the next five years from a year earlier. Japan's current renewable electricity share is only 20%, less than half that of the UK and Germany, and even if the 2030 target is realized, it will not reach the level of today's major European countries. The gap between Japan and other countries with much higher 2030 targets will widen further. The Kishida administration seems to need to realize how severe this delay in renewables is for Japan's energy supply stability and its response to the climate crisis.

## **Hesitation to Introduce Carbon Pricing**

The GX Basic Policy put forward a very passive carbon pricing concept. It states that a voluntary emissions trading scheme will continue for more than a decade and that a 'paid auction' will be launched in stages in the power generation sector only from FY2033. Since 2000, Japan has only been considering an emissions trading system for more than 20 years so far. During that time, Europe, the US and Canadian provinces, China and South Korea realized the introduction of such schemes, and in Japan, the Tokyo Metropolitan Government introduced a cap-and-trade system for large-scale business offices in 2010.

The carbon price level of the 'carbon levy' to be introduced from FY2028 is also very low, at about one-tenth of the level of \$130 per tonne that the IEA scenario expects developed countries to achieve by 2030. Why should the Kishida administration be so hesitant to introduce carbon pricing, an essential tool for a decarbonized society?

## **Rallying All National, Corporate, Municipal and Regional Forces for a Renewables-Based Japan**

The newly decided GX Basic Policy is a missed opportunity to provide a strategy for overcoming the energy and climate crisis neither in terms of energy policy nor a policy towards carbon pricing. At its outset, the GX Basic Policy states that it will "create new demand and markets in the decarbonization sector and re-strengthen Japan's industrial competitiveness". The intention to make the decarbonization strategy the country's economic growth strategy is correct. However, the Government is fixated on the promotion of nuclear power and the continued use of fossil fuels and hesitates to expand renewables and realize carbon pricing as soon as possible, which are essential to realizing a decarbonized society. With the GX Basic Plan, it is difficult to attract the necessary investment domestically and globally, and it will not succeed as a growth strategy.

The government should refrain from investing scarce human and financial resources in unsustainable nuclear power, CCS development, and ammonia co-firing in coal power generation. Many companies are already working on expanding new and additional renewable energy through using PPAs and other means, while local authorities have begun to take pioneering steps, such as the Tokyo Metropolitan Government and Kawasaki City moving forward with introducing solar PV rooftop installation requirements for home builders. Community power initiatives are also active, such as co-existence with agriculture through agri-voltaics.

Japan, which enjoys a variety of nature in all four seasons, is blessed with abundant natural resources such as solar, wind, hydropower, geothermal, and biomass. The Japanese government must set a significant policy to realize a society based on renewable energy that does not depend on nuclear power or fossil fuels and make a concerted effort on its initiative, as well as mobilizing the ability of companies, local governments, and communities. This is how Japan can best utilize the crises into opportunities.