(Attachment 2)

Ten (10) specific comments on the three draft plans: the Plan for Global Warming Countermeasures, the Seventh Strategic Energy Plan, and the Green Transformation (GX) 2040 Vision[1]

January 2025,
Submitted by the "Citizens and Scientists Alliance Concerned about Climate Change"

Introduction

Climate change is an urgent issue that directly affects the survival of human civilization. It is an environmental, economic, and social "sustainability" issue, essential for the survival and well-being of current and future generations. A society that appropriately conserves and moderately utilizes nature filled with rich renewable resources, while ensuring social justice, will be the most economically rational and environmentally sustainable, thus providing sound well-being for people.

The drafted three interrelated plans, i.e. the Plan for Global Warming Countermeasures, the Seventh Strategic Energy Plan, and the Green Transformation (GX) 2040 Vision, have many problems in terms of content and process, which should be corrected as explained below. We must now make a major change in the basic direction of our society. We must not repeat the mistakes of the past, which prioritized short-term economic benefits for particular individuals and industries, causing serious social problems and undermining sustainability.

1. Public involvement in the policy formulation process is limited

Basic climate and energy policies to be decided by the three proposed plans should be consulted fully with the public since such policies affect their everyday lives. Also important is full consultation with the ministries concerned since climate and energy policies are closely related to various other sectors. However, the Ministry of Economy, Trade and Industry (METI) has dominated the policy formulation process, which ended up only prioritizing the interests of a few industries over others. This policy process featured by a short period for deliberations without objective policy evaluation and limited public involvement is not considered appropriate for a democratic country like Japan. Participatory processes such as climate citizens assemblies should be introduced at the national level, so public opinions can be heard and reflected more in policymaking. It is also necessary to introduce a new mechanism to conduct fair policy evaluation to enable better policies.

[1] For more information, contact the Japan Association of Environment and Society for the 21st Century: info@kanbun.org

2. The model exercise employed in the process was not adequate

Major policy decisions in developing the draft Strategic Energy Plan were made with excessive reliance on one specific model. Indeed, expert discussions were not conducted using multiple models, as they should have been. Issues associated with large uncertainties, such as future emission reduction targets and energy supply and demand, require open discussions with the participation of different stakeholders. To help summarize such open discussions, a few models that can appropriately predict futures by integrating various scientific knowledge should be employed.

On the other hand, a model is not reality itself, but a tool that cuts out a part of it and expresses it mainly using mathematical formulas. Therefore, the process of model development necessarily reflects the developer's subjectivity. In addition, various uncertainties are inherent in the model. Policy decisions on subjects with substantial uncertainties such as emission reduction targets should not rely on a single model. Instead, results obtained under different conditions using multiple models reflecting diverse perspectives should be fairly compared and discussed.

3. Proposed 2035 reduction target is inappropriate in light of the 1.5°C carbon budget and reduction pathways

The IPCC Sixth Assessment Report states that the increase in global average temperature since pre-industrial times is proportional to the cumulative global anthropogenic CO_2 emissions. Based on this carbon budgeting approach, the allowable global CO_2 emissions to achieve the 1.5°C target are estimated to be 500 Gt CO_2 in 2020, with a 50% probability.

If the current level of emissions continues, the remaining budget will be almost exhausted by 2030. Therefore, the IPCC's Sixth Assessment Report identifies years up to 2030 as a "critical decade".

The first Global Stock Take, which concluded at COP 28 in 2023, states that to achieve the 1.5°C target, global greenhouse gas emissions must be reduced by 43% by 2030 and 60% by 2035, compared to the 2019 level, and CO_2 emissions must be net zero by 2050. Even if all national reduction targets submitted are added together, there is a huge gigaton gap in achieving the 1.5°C target. Therefore, all countries are required to deepen their reduction targets by 2030. The '60% reduction by 2035' proposed by the three draft plans is based on the 2013 level. This figure equals only a 54% reduction compared to the 2019 level, thus the proposed 2035 target is inconsistent with the 1.5°C target set by the I PCC.

4. Proposed 2035 reduction target ignores equity in carbon budget allocation

The Japanese Government is promoting decarbonization along a linear pathway from 2013 as the base year to 2050. It then argues two points: (i) that Japan's current greenhouse gas reductions are on track (unlike many other countries) with that pathway and therefore not a problem; and (ii) that Japan's 2030 and 2035 targets are in line with the Paris Agreement's 1.5°C target.

However, there are three serious problems with this logic as follows:

(i) it does not properly consider differences in base year setting between Japan and other countries, (ii) it deliberately confuses the 1.5°C target emission pathway required for the world with that required for Japan, and (iii) it completely lacks a discussion of equity.

In particular, the current government proposal conveniently allocates the global carbon budget more to Japan by ignoring the equity criteria stipulated by the IPCC for emission reduction targets, such as greenhouse gas emissions per capita, GDP per capita, historical greenhouse gas emissions, and emission reduction costs per GDP of the country.

5. Further deepening of the 2030 reduction target has a sound rationale

Japan's current greenhouse gas reduction target for 2030 is as follows: a 46% reduction compared to the 2013 level, but aiming for a higher target of 50%. However, the draft Energy Strategic Plan proposed refers only to 'the 46% reduction compared to 2013'. Japan's emission reduction pathway consistent with the 1.5°C target is not simply to achieve zero emissions in 2050, but to do so while keeping cumulative emissions as small as possible.

On the other hand, an efficient measure to avoid generating stranded assets is to introduce energy-saving equipment at the right time for renewal, emphasizing the rationale for effectively utilizing the remaining time. In this sense, it should aim for even higher reduction levels, such as 50% or even 60%, rather than sticking to the 46% reduction in 2030. This would encourage the proactive adoption of measures that are feasible at the moment and facilitate the eventual realization of a decarbonized society.

6. Dependence on nuclear power should be reduced

Following the accident at TEPCO's Fukushima Daiichi Nuclear Power Station, decommissioning work has faced extreme difficulties and associated disposal costs have considerably ballooned. With no guarantee of nuclear safety in earthquake-prone Japan, the Japanese Government has changed its policy to support nuclear power and deleted 'reducing dependence on nuclear power' from the draft of the Basic Energy Plan. The proposed draft calls for nuclear power generation to account for around 20% of the total power supply in 2040, by putting new and additional nuclear power plants in service.

All of this is proposed despite the increasing availability of more economically rational alternatives such as renewables and energy savings. The huge costs associated with this nuclear expansion will be added to the electricity bill and borne by the public, using the framework of the Long-Term Decarbonization Power Auction, a new system for developing new power sources including nuclear.

Nuclear power is not a sustainable energy source, not to mention serious problems associated with nuclear waste disposal and management. In addition, once an accident occurs, the entire power supply would have to be shut down and thermal power may have to be used instead for a long period. Therefore, nuclear power is not a solution to climate change. We should get rid of it as soon as possible.

7. ‘Top priority’ assigned to renewable energy in the previous plans should be maintained

The proposed draft plans have deleted the ‘top priority’ assigned to renewable energy in the previous Strategic Energy Plan, and the proposed drafts set the ratio of renewables in the total power generation capacity in 2040 very low, only at around 40-50%.

Renewables such as solar and wind, are already practical technologies, that prove to be cheaper, and have less environmental impact. However, the Long-Term Decarbonization Power Auction introduced recently targets mainly retrofitting of nuclear and thermal power plants and effectively excludes renewables. This has already slowed the growth of renewable energy and discouraged entrepreneurs from investing.

The renewable energy target proposed should be set much higher, by strengthening the power transmission and distribution network, installing more storage batteries, and enhancing the demand response to increase the flexibility of the power system. This will benefit the Japanese economy through multiple co-benefits such as improved energy security, activated local production and consumption, reduced outflow of national wealth, enhanced circular economy, and expanded job opportunities.

8. Future electricity demand by data centers does not justify increased nuclear power plants

The electricity demand for data centers in Japan is estimated to be 0.46% of Japan's total electricity demand in 2022 according to the government's Comprehensive Energy Statistics, about 1.5% in 2018 by the Japan Science and Technology Agency, and 0.8% in 2022 by the Fuji Chimera Research Institute. Whichever the case, it is around 1%. Even if this ratio increases at an annual rate of 20% over the next 10 years, it will be at most up to 10% of the total electricity demand. Energy-saving efforts in other areas could comfortably offset the increase of this magnitude. Furthermore, energy savings in data centers themselves are progressing.

In addition, the total electricity demand forecast for 2050 by the Central Research Institute of Electric Power Industry, is often quoted in government council meetings. indicates 1.2 times the 2021 level under the medium growth scenario, and 1.37 times under the high growth scenario. The 1.37 times growth up to 2050 equals only about a 1% increase per annum. This cannot be regarded as a ‘dramatic increase’, thus the proposed nuclear power expansion cannot be justified.

9. Effective, full-fledged, and internationally acceptable carbon pricing should be introduced as early as possible

The current ‘Pro-Growth Carbon Pricing’ under the GX Promotion Act has the following flaws.

i) A surcharge on fossil fuel supply will be introduced only from 2028, which is not early enough to meet the greenhouse gas reduction target by 2030.

ii) Fossil fuel surcharge and emissions trading specific business contributions are not designed to reduce emissions. In practice, they are set only at the level required to redeem GX Economy Transition Bonds, indicating that the main objective is securing financial resources.

As a result, the carbon price to be set under the GX scheme will be less than a tenth of the international level. Therefore, the two flaws mentioned above should be properly addressed, and an effective, full-fledged, internationally acceptable carbon pricing system needs to be introduced as soon as possible.

10. Hydrogen, ammonia, and CCUS should not be used to keep utilizing coal-fired power plants

Japan currently has 167 coal-fired power plants with a capacity of 55.65 MW. The IEA's 1.5°C roadmap indicates that coal-fired power generation must be phased out by 2030 in developed countries, and this was agreed at the G7 meeting.

However, the proposed draft plans set forth a policy to keep holding coal-fired plants beyond 2040, by integrating hydrogen, ammonia, and CCUS into coal-based power generation. Hydrogen, ammonia, and CCUS technologies are inherently expensive and have little effect on reducing CO_2 emissions. Ammonia is also a toxic substance that produces large amounts of NO_x upon combustion and causes air pollution. They should be used only in sectors where replacement by renewables is difficult. They should not be promoted in electricity generation, where renewables are already technically well-established.

(End)