Summary of Press Conference Comments Made by Kazuhiro Ikebe, FEPC Chairman, on May 21, 2021

I am Kazuhiro Ikebe, Chairman of the Federation of Electric Power Companies (FEPC).

Today, I would like to discuss our basic approach to achieving carbon neutrality in 2050 and the essential conditions and policies for accomplishing that goal.

＜Achieving Carbon Neutrality in 2050＞

On April 22 ahead of the Leaders Summit on Climate, Prime Minister Suga announced an ambitious target, consistent with goal of carbon neutrality by 2050. He declared that Japan would reduce greenhouse gas emissions by 46% in fiscal year 2030 from fiscal year 2013 levels. Considering the limited timeline for reaching this target by fiscal year 2030, many difficulties are anticipated that will need to be overcome. We electric power operators will continue to contribute to maximizing adoption of renewable energies, work steadfastly to utilize nuclear power generation as much as possible upon the premise that safety is assured first and foremost, make thermal power generation even more efficient, develop technologies to that end, and strive to promote other efforts as well. In addition, along with reducing carbon emissions from and realizing carbon-free power sources on the supply side, we recognized the need to start promoting measures now on the demand side to facilitate more efficient use and electrification of energy throughout society.

From the “S+3E” standpoint in particular, the stable supply of electric power serves as the foundation for people’s livelihoods and economic activity. So that these are never sacrificed, I hope that our nation will engage in a sober discussion of the various issues that need to be addressed and how we will address them.

Right now, Japan is looking from many different angles at how to realize carbon

neutrality by the year 2050. At the end of last year, the FEPC also established the Committee for Achieving Carbon Neutral in 2050, which is comprised of the presidents of each electric power utility and has deliberated specific initiatives for realizing a carbon-free society. Today, I would like to discuss those efforts.

The FEPC, building on the on the concurrent achievement of "S+3E," declared that we will strive to take up this challenge of achieving carbon neutrality in 2050 through decarbonizing power sources on the supply side, promoting maximum electrification on the demand side, and consolidating our technologies and wisdom.

I would like to explain the direction that our initiatives will take. The achievement of carbon neutrality in 2050 is an extraordinarily challenging goal, and we recognize that the electric power industry must play a major role in this effort. It is important that we pursue a balanced energy mix that does not rely excessively on any particular power source yet takes into account the perspectives of resilience as well as Japan's dearth of energy resources and suitable sites for renewable energies. In addition to efficiently utilizing energy and facilitating maximum electrification on the demand side, we believe that it is necessary to promote the supply and use of carbon-free energies, such as hydrogen, in sectors where electrification has faced technical difficulties.

I would now like to describe some of our specific efforts in greater detail. As we leverage technologies, experience, and know-how that electric power operators have developed, we will push forward with the adoption of renewables to the greatest extent possible with the goal of making renewable energy a mainstay power source. We see the adoption of renewables an opportunity for growth and hope to collaborate with a variety of power producers, partners in other industries, states, research institutes, and other cohorts.

Nuclear power is an established carbon-free power source. We will continue autonomously to take the initiative in pursuing safety enhancements. We will realize

the early restart of current plants and their safe and stable operation toward reaching our initial goal of a 20 to 22% ratio our energy mix in the year 2030. Moreover, we will work to increase availability and maintain long-term operation to achieve maximum utilization. In addition, the replacement and new construction of plants with a view toward adopting next generation light water reactors, SMR, and other technologies will help us achieve use nuclear power sustainably in the future as well, and we will work to establish the nuclear fuel cycle, promote seamless decommissioning, and develop the backend of this cycle, including waste treatment and disposal.

Thermal power generation will be necessary to maintain adjustment capacity, inertial force, and synchronizing capability even when renewable energy is one of our main power sources. Toward the goal of decarbonization, we will aim to create and implement innovations such as hydrogen and ammonia-fired power generation, CCUS, and carbon recycling. We will approach such developments flexibly without being fixed on specific technologies. Upon the premise of supply chain establishment and state support, we will steadily implement hydrogen- and ammonia-fired power generation facilities beginning around 2030 and strive so that power generation projects are operating autonomously in the 2040 decade. As for CCUS and carbon recycling, assuming acceptable conditions are in place including CO2 transport and storage infrastructure, we will make use of policy subsidies and the support structure to introduce equipment starting around 2030 with the aim of achieving self-reliance and commercialization around the year 2050.

Demand-side initiatives comprise essentially two points. The first is promotion of electrification to the greatest extent possible in a variety of sectors. Electrification cannot be advanced only by the electric power industry. It is important that such initiatives be promoted in concert with customers, national and local governments, manufacturers, financial institutions, and other stakeholders. These actions are divided into four areas: service provision, promotion of understanding and change of attitudes towards electrification choices, technological development and innovation, and policies supporting electrification option, and each one of these will need to be addressed. The

other point is to consider new ways to make use of electrical energy in which “indirect electrification” is encouraged to facilitate use of hydrogen generated in water electrolysis as electrical energy available for sectors where electrification has faced technical difficulties. Although there will be issues faced in terms of increasing hydrogen production capacity and reducing costs, we will examine the feasibility of hydrogen production on a commercially-viable scale estimated to begin around 2025 and then gradually increase capacity with the aim of commercializing large-scale hydrogen production around the year 2040.

Now, I would like to talk about the essential conditions and policies for advancing these initiatives.

Energy policy establishes a foundation for the nation that underpins people’s livelihood and economic activity, and it goes without saying that it is vital that the policies for achieving carbon neutrality take into account S+3E. It is our earnest hope that the “decarbonization of power sources” and “promotion of maximum electrification,” both of which are premised upon S+3E, be ranked as key state policies. In addition, we would like Prime Minister Suga to exercise his leadership in promoting initiatives for achieving carbon neutrality through not only policies sponsored by the Ministry of Economy, Trade and Industry and Ministry of the Environment, but also policies advanced by other ministries and agencies throughout our government. The Ministry of Agriculture, Forestry and Fisheries is already promoting the use of renewable energies in agriculture, forestry, fisheries, and other industries, and the Ministry of Land, Infrastructure, Transport and Tourism energy savings through the use of better insulation and other such materials for residences and buildings. We hope that these sorts of initiatives will be further accelerated in the future.

In addition, it is also essential that there be a balance between socially-implementable innovative technologies and economic feasibility, as well as promotion and support for capital investment and R&D investment for achieving carbon neutrality together with the fostering of an environment and national consensus for society as a whole to assume such costs. We will integrate the wisdom, experience, and other assets held by electric

power companies as we make a concerted industry effort to work responsibly and comprehensively to overcome these difficult issues so that we may contribute to balancing global warming prevention with progress and development of Japanese society as a whole.

＜Replacement of FEPC Directors＞

Lastly, I would like to announce an FEPC director replacement.

I would like to report that the General Policy Committee Meeting today decided on the replacement for a part-time Vice Chairman following his retirement.

This concludes my remarks today.