ICEF 2014 Statement from Steering Committee

Shinzo Abe, the Prime Minister of Japan, made the ambitious proposal to convene an international conference in order to establish a new global platform for governments, business, academia and others to promote innovation in energy and environmental technologies as well as cooperation on climate change. The First Annual Conference of Innovation for Cool Earth Forum (ICEF) was held in Tokyo on October 8th, 2014.

In total, about 800 policymakers, business leaders and researchers representing as many as 80 countries and regions participated.

After participating in the first ICEF meeting, we conclude:

1. Urgency to Combat Climate Change and the Importance of Innovation

IPCC Working Group I reported in September 2013 that "it is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century." While uncertainties remain, climate change is now recognized as an urgent and complicated global challenge that needs action including immediate, vigorous and continuous reduction of GHGs. We believe that technological and social innovations, and their dissemination, will play a key role in addressing climate change while achieving economic development.

2. Development and Utilization of Innovations

We need long-term efforts to promote innovations that drastically reduce GHG emissions, promote steady economic development and ensure access to sustainable energy for all. Governments, business, academia and others must share their visions and cooperate to:

- Promote research, development, demonstration and deployment of new technologies;
- Increase opportunities for interactions and the free exchange of ideas among scientific and research institution;
- Create market incentives and reform regulatory systems to promote the development, early introduction and widespread diffusion of innovative technologies, while avoiding unreasonable cost burdens;
- Foster the role of capital markets to promote innovation, including removal of needless regulatory and other barriers to deploying capital for clean energy technologies;
- Reduce investment risks to allow investors to make appropriate judgments in

financing the development and diffusion of innovative technologies;

- Develop infrastructure and systems to utilize new forms of energy as quickly as possible at reasonable cost;
- Train and deploy experts with expertise in clean energy technologies; and,
- Diffuse knowledge to enhance public acceptance of new technologies.

There are technologies with great potential to reduce GHG emissions, including geothermal power, solar energy, zero and low carbon emissions vehicles, smart community, improvement of energy efficiency especially in end use, wind power, nuclear power, natural gas including combined cycle gas turbine and carbon dioxide capture, utilization and storage (CCUS). Every technology has its own difficulties which we need to overcome with appropriate and timely reviews.

Concurrent sessions were held on the following topics and gave rise to discussions below:

Geothermal power: Increase deployment of conventional geothermal power technologies and invest in R&D on new technologies such as Enhanced Geothermal Systems;

Solar Energy: Expand solar electric power by accelerating development of cheaper and more efficient solar power systems and installing new technologies and management systems to stabilize grids, such as storage battery and natural gas turbines;

Automobiles: Deploy electric vehicles (EVs) and fuel cell vehicles (FCVs) and the infrastructure to support them; deploy fuel efficiency technologies; promote inter-modal shifts; deploy advanced bio-fuels; invest in R&D in all of the above;

Smart community: Develop and introduce smart energy management systems in order to maximize the introduction of renewables and achieve drastic energy conservation in the community as a whole, and strive to involve consumers to the extent possible.

Energy efficiency: Promote research on human behavior through utilization of big data, R&D on new efficient devices and equipments, and dissemination of existing energy-saving technologies.

Role of Public Sector for RDD&D: Ensure the appropriateness of public intervention, public policy and public subsidy for the downstream technology development process; and

Cooperation between Developing and Developed Countries: Adopt collaborative approaches to develop the most appropriate means for technology transfer to developing countries. Developed and developing countries also need to embrace and implement adequate national and international governance policies to promote innovation at a global scale and also ensure successful technology transfer to the poorest regions.

Technological roadmaps are one important tool for promoting innovation.
We noted the central role of technology research, development and deployment policies in promoting technology innovation. To thrive and prosper, innovations must be well-engineered and systems must be cost-consciously optimized, applied and refined in real-world settings. Low-carbon innovations cannot reduce emissions unless they are widely deployed. We also noted that new techno-economic paradigms to integrate innovation to a society as a system would be conducive to promoting innovation. Dissemination of technologies in developing countries is especially crucial for world-wide deployment of innovative technologies. It is important to encourage private sector technology transfer, which is facilitated by ensuring the rule of law and most especially intellectual property law.

There are a number of options for promoting innovation that require continuous effort on various fronts. We should cooperate to share our experience and knowledge with the world. We believe the ICEF will play a key role as a platform to gather and advance global wisdom on these issues. We also hope that the "Top 10 Innovation of the Year" will contribute to raising social awareness and interest in innovation.

3. Post-2020 International Climate Framework

We support an agreement under the UN Framework Convention on Climate Change for a post-2020 framework that includes a leading role for nationally appropriate decarbonization roadmaps and strategies by all major economies and engages the private sector. We believe such an agreement could make an important contribution to accelerating technology innovation and fighting climate change. Work in many other multilateral and bilateral fora, including the Clean Energy Ministerial (CEM), Sustainable Energy for All, Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) can do the same. ICEF can create awareness and stimulate innovative solutions. International knowledge-sharing and cooperation will play a leading role in promoting innovation and addressing climate change.

4. Future ICEF Activities

We have decided to hold the 2nd Annual Conference in Tokyo from the evening of October 6th to 8th, 2015. We will continue to foster ongoing discussion through the "ICEF Web-based platform".