ICEF2026 Statement

Since its inception in 2014, ICEF has highlighted the central role of innovation in addressing climate change and accelerating the transformation toward deep decarbonization while ensuring energy security, affordability and prosperity. Building on this foundation, the 13th Annual Meeting of the Innovation for Cool Earth Forum (ICEF2026) was focused on Electrostate and Security under the main theme of "Green Transformation". "Electrostate" here refers to a transition model that seeks to make maximum use of low-carbon electricity and related energy systems as a foundation for the economy, industry, and society, while simultaneously pursuing carbon neutrality, energy security, affordability and economic growth.

Amid rising geopolitical risks, Green Transformation (GX) has moved beyond a response to climate change and has become a core security agenda, encompassing stable energy supply, access to critical minerals, supply chain resilience, and strengthened industrial competitiveness. ICEF2026 held systematic discussions from the following six interconnected perspectives, addressing the question of how to evaluate the future potential of individual technologies and how to design and deploy economic operating systems centered on low-carbon electricity and related energy systems enabled by such technologies.

1. The broad value expected of EVs: EVs are an option for decarbonizing the mobility sector, and ways to utilize them as demand-side resources should be developed so that they can contribute to grid flexibility and improved resilience.
2. Stable supply through advanced nuclear reactors: The use of nuclear power should be promoted to realize a stable, low-carbon energy system, and the development of innovative reactors should also be advanced as a foundation for helping address radioactive waste issues. Important role of Pyroprocessing is recognized and need of trilateral collaboration between the US, Japan and Korea is advised.
3. Energy security in the digital age: Through collaboration and innovation, meeting exponential growth of data centers and the associated power demand should be managed to provide value to the grid by increasing demand flexibility, investing in low carbon power, addition of energy storage, and integration of AI capabilities to optimize planning and operation for increasingly complex power grids. In deploying space-based data centers, companies and policymakers should proceed with great caution.
4. Circular economy and data connectivity: Using the textile industry as a model case, the role of data connectivity in accelerating resource circulation should be clarified.
5. Market formation for low-emission hydrogen: As hydrogen, as an energy carrier, moves from the stage of expectations and concepts to market formation based on real demand and social implementation, pathways for connecting the supply of low-emission hydrogen with actual demand should be clarified.
6. International cooperation in the power sector: The potential and importance of international cooperation should be explored in order to address challenges and enhance energy security, flexibility, and resilience, while promoting broad access to new technologies.

These discussions call not only for the expansion of power generation capacity, but also for the optimization of the entire economic operating system through the integration of institutions, markets, and finance. At the same time, the deployment of new technologies and infrastructure should take into account their potential environmental and ecosystem impacts. What is increasingly important is not to consider individual technologies in isolation, but to connect and integrate them into broader systems. ICEF2026 examined how the transition through "Electrostates" can connect Green Transformation (GX), security, industrial competitiveness, physical and digital infrastructure, resource circulation, and international cooperation.

ICEF will continue to promote innovation and foster dialogue and collaboration across sectors and regions to simultaneously achieve decarbonization, economic growth, and energy security by respecting diverse technologies and transition pathways and by connecting technology, institutions, finance, markets, and trust.