# Plenary Session 3: Nuclear Energy and Our Green Future

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## Summary

This final session touched on the future and role of nuclear energy. The first panelist, Suzuki Tatsujiro started off by promoting a wider definition of green future that not only entails how to respond to climate change. His second point was on the reassessment of nuclear energy after Fukushima. He advocating that countries make sure new safety goals are introduced, an assurance without which public support will not be regained. In his view what comes next is the management of a transition of society from a fossil-fuel consumption-based 20$^{th}$ century society to a carbon-free 21$^{st}$ century one. This requires a fundamental change in social, industrial and governmental infrastructures. Japan therefore has a great opportunity now to transition.

Chang Soon Heung equated green future to green growth. Renewable energy is good, but in Korea today 90% of energy comes from waste burning, while solar energy accounts for 1%. Renewable energy has very limited supply and is costly. In 2030 60% of electricity should come from nuclear energy. The electrification of means of transportation will place an additional requirement for nuclear power development. Stable energy supply has had a direct impact on the GNP disparity between North Korea and South Korea. After Fukushima, South Korea has carried out a nationwide inspection of power plants and has revitalized is focus on safety.

Ellen Laipson focused on the Gulf, and the reasons for interest in nuclear energy development among the countries in the region, which include socioeconomic development, a depletion of natural oil resources, rising energy demands, energy deficit in the region. National development goals in the region are sui generis and not necessarily linked to Iranian policy.

There is some interest in regional capabilities. Saudi Arabia, for instance, has associated itself with notion of regional program, in reality this is a national goal and it is not clear that. The UAE is even more in a rush than the Saudis. While the UAE was demonstrate its nonproliferation bona fides in its 123 Agreement, the Saudis have indicated that this is not the route they are prepared to take; they are not prepared to sacrifice any component of the process and so we should not expect them to forego enrichment and reprocessing as the UAE has. In terms of general energy development in the region, we are looking at a mix of hydrocarbons nuclear energy and solar.

Abdelmajid Mahjoub opined that Arab countries have experienced a delay in the development of nuclear energy. The interest in nuclear energy is driven by: industrial levels that have led to more pollution; improvement of living standards; water scarcity; high level of urbanization; health problems due to heat stress; possible oil decrease. Cost performance and availability of renewable technologies will determine the green future in the Middle East and North Africa. He provided a brief background on what his organization, the Arab Atomic Energy Agency, does, eg, provide assistance to countries in developing their programs and harmonize regulations for safety, security and safeguards. 60% of desalinated water is in Arab countries, mostly in the Gulf. Nuclear energy will smooth transition to renewable sources. A world free of nuclear weapons should not be a world free of nuclear science and applications.