

Nuclear energy and climate change
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Abstract

The IPCC Special Report on Global Warming of 1.5°C concluded that limiting climate change will require global greenhouse gas emissions to reduce immediately. This will require a faster switch to electricity for energy end use and for that greater electricity demand to be met by low-carbon generation, renewables and nuclear.

Moreover to meet the growing demand for sustainable energy considering the climate change, we will need more renewables and nuclear, but less fossil. What can be the best energy mix in global and country terms?

IEA recommends that the nuclear energy for the shake of the global climate change should be provided at least 25% of electricity by 2050 as part of a clean and reliable low-carbon mix. Achieving this means nuclear generation must triple globally by 2050.

The energy portfolio taken by several countries are exemplified, and personal recommendation for the best energy mix to be suitable for the climate change and the sustainable energy is presented.

Keywords: *nuclear energy, climate change, renewable energy, energy mix, carbon tax*

Biography

Scientific Researcher of SCK-CEN working for ADS MYRRHA project with over 39 years of experience in nuclear, mechanical, structural dynamics and earthquake engineering (worked for Korea Univ, DGIST, ANL, KAERI). In the design and analysis of NSSS and BOP structures of Research Reactors, Generation II-IV reactors such as PWR, Sodium, and Lead-Bismuth coolant Fast Reactor systems. Holder of numerous patents and over 150 publications of journals and conference papers. education: SNU, UCSD, KAIST