ISSN: 0973-4929, Vol. 17, No. (3) 2022, Pg. 516-517

Current World Environment

www.cwejournal.org

Coping with Climate Change: Nuclear as a Clean Energy Option

UMESH CHANDRA KULSHRESTHA

School of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India.

Article History

Published on: 26 December 2022

Recently, during COP 27, UN Chief mentioned about his efforts in introducing Climate Solidarity Pact aiming that all countries will put extra efforts to reduce emissions in order to achieve in ambition of 1.5 ^{0}C warming which will further need to accelerate renewable energy and to end fossil fuel. He emphasized that the voices of people who are on the frontline of climate change crisis should heard. The COP 27 discussed about climate justice too. In this regard, it has been decided to create `Loss and Damage Funds' which will help developing countries to deal with climate change. Who will contribute and how much in this fund, will be decided by a Transition Committee. The fund will be used to provide technical and financial help to reduce carbon emissions from the developing nations including India. The fund will be used to provide financial help to climate victims and vulnerable countries e.g. recently flood hit Pakistan. Recently, it is observed that the number of extreme weather events due to climate change is increasing globally, hence, creation of such fund will definitely be a step forward towards climate justice.

Coping with climate change needs clean energy options and a holistic approach for finding out sustainable life style. Nuclear energy is considered as one of the clean energy sources. The nuclear power is free from air pollution. It is a constant source of energy so it is highly suitable for electricity supply in hospitals, rail transport and other places where continuous supply of electricity is needed. It is very cost effective. The United States is the top producer of nuclear power having installed capacity of 91.5 GW with more than 30% share in global nuclear energy production catering around 20% demand of electricity. Other nine out of top ten nuclear powered countries includes France (61.3GW), China (50.8GW), Japan (31.7GW), Russia (29.6GW), South Korea (24.5GW), Canada (13.6GW), Ukraine (13.1GW), United Kingdom (8.9GW), Spain (7.1GW).[1]

CONTACT Umesh Chandra Kulshrestha umesh@mail.jnu.ac.in School of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India.

Doi: http://dx.doi.org/10.12944/CWE.17.3.1

Presently, India has 6.78 GW capacity to produce nuclear power and aims to enhance to 22.48 GW by 2031.[2] India is planning to set up nuclear plants under public-private partnership to boost clean energy actions.[3] The plan is to achieve it through small plants which require less capital cost compared to the traditional plants. For this purpose, five new sites have been identified for the construction of nuclear power facilities. The funds have been sanctioned for setting up 10 new 0.7 GW Pressurized Heavy Water Reactors (PHWRs) having indigenous technology.

In order to achieve the targets of Paris Climate Agreement and Net Zero carbon emissions, clean energy sources are needed. Due to rapid population growth in future, energy demand will also grow drastically which can only be met by nuclear and renewable sources. In 2020, India produced about 38% of total installed capacity from renewable energy sources.[4] The combination of nuclear and renewable energy can meet the requirement of the citizens.

References

1. PT, 2021. The top ten nuclear energy-producing countries in 2021 https://www.power-technology.com/features/top-ten-nuclear-energy-producing-countries/. Accessed on December 19, 2022.
2. Indbiz, 2021. India to produce 22480-MW of Nuclear Energy by 2031. https://indbiz.gov.in/india-to-produce-22480-mw-of-nuclear-energy-by-2031-2/, Accessed on December 19, 2022.
3. ET, 2022. India to fire up nuclear power production in green shift. https://economictimes.indiatimes.com/industry/energy/power/india-to-fire-up-nuclear-power-production-in-green-shift/articleshow/96238451.cms. Accessed on December 18, 2022.
4. REI, 2021. Renewable Energy of India. https://en.wikipedia.org/wiki/Renewable_energy_in_India#:~:text=India%20is%20world's%203rd%20largest,in%202020%20from%20renewable%20sources.Retrieved on November 6, 2021.