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LANGUAGE

The working language of the Forum will be English.

CONFERENCE WEB PAGE

Detailed information on administrative procedures including participation and registration is provided on the Forum website: www.iaea.org/scientific-forum

20-02372

SCIENTIFIC FORUM

NUCLEAR ENERGY FOR CLIMATE

22–23 SEPTEMBER

NUCLEAR POWER AND THE CLEAN ENERGY TRANSITION

VIENNA INTERNATIONAL CENTRE
Board Room D / C Building / 4th Floor

#Atoms4Climate
IAEA.ORG

IAEA
International Atomic Energy Agency
Atoms for Peace and Development

2020

BACKGROUND

The world faces a growing demand for energy at the same time as it needs to tackle the realities of climate change. For climate change goals to be met by 2050, 90 per cent of electricity will need to be produced by low carbon sources. Nuclear power currently provides one third of all low carbon electricity. This year's Scientific Forum will examine how nuclear power can play a role in the clean energy transition, with technological and scientific progress in the use of atomic energy offering great potential to help countries achieve both global climate goals and their own development aspirations.

IAEA Director General Rafael Mariano Grossi will open the Forum, which will also be attended by several other high level speakers. In four sessions over two days, leading experts from around the world will highlight advances in nuclear energy and its vital role in meeting the world's current and future energy needs.

SESSION 1

Innovations for Achieving a Clean Energy Transition

The first session will focus on the scientific and technological innovations that are underway across the nuclear energy sector and how innovative reactor designs or construction methods, for example, can make a difference in the future. Nuclear power's current role in the clean energy transition will also be explored, highlighting scientific and engineering breakthroughs that support the long-term operation of current reactors to complement increasing shares of variable renewable energy sources (VREs).

SESSION 2

Raising the Bar: Nuclear Energy for "Deep Decarbonization"

If the world is to achieve net zero CO_2 emissions by mid-century, emission reductions will be required not only in electricity production but also in energy consumption across key industrial sectors, such as construction and transport. This session will highlight how nuclear power is in a position to uniquely support this "deep decarbonization" by furnishing process heat for industries and district heat for buildings, desalinating seawater for consumption in increasingly arid regions, and producing hydrogen for a variety of uses. The session will also look at how energy systems using a mix of nuclear- and renewable energy sources could lead the way to net zero emissions.

SESSION 3

Managing the Life Cycle for a Sustainable Future

All forms of energy production come at a cost, from natural resource utilization to waste generation. This session will examine the externalities of nuclear energy production and their management, including storage and disposal methods for spent nuclear fuel. It will also consider how innovations in the nuclear fuel cycle can bring recycling to a new level and reduce both the volume and toxicity of high level waste, contributing to the sustainability of nuclear power.

SESSION 4

Advancing the Clean Energy Transition

This session will look at key barriers hindering the greater use of nuclear power in the global transition to clean energy, such as concerns over costs and financing. The IAEA's role in fostering technological innovation and in transferring this technology to its Member States will also be highlighted.

CLOSING SESSION

IAEA Director General Rafael Mariano Grossi will lead the final discussion of the Forum with high level panellists, highlighting key findings on the role of nuclear power in the clean energy transition, for the public, Member States and the IAEA.