The IAEA and the Nexus
Climate Change and Nuclear Power

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SDGs & Paris Agreement

7 Affordable and Clean Energy
9 Industry, Innovation and Infrastructure
13 Climate Action

Limit the increase of global average temperatures to well below 2°C

SPECIAL REPORT

Global Warming of 1.5 °C
1.5°C Challenge

**TODAY**

70% of electricity comes from **burning fossil fuels**

**2050**

≈ 80% of electricity will need to be **low carbon**
“…without significant progress on using the full potential of nuclear power, it will be difficult for the world to secure sufficient energy to achieve sustainable development and to mitigate climate change.”

Yukiya Amano, IAEA Director General
Role of Nuclear Power

- Nuclear power has an important role to play to achieve UN Sustainable Development Goals and climate change targets.
- **Innovation** is key for the expanded role of nuclear power.
- IAEA is addressing growing interest of Member States through different activities supporting innovation in the current NPP fleet and development and deployment of advanced and innovative nuclear energy systems.
Provided Member States and stakeholders with an update on the status of and new concepts in nuclear–renewable hybrid systems for decarbonized energy production and cogeneration

Provide a forum to exchange knowledge on these technology designs and related innovations, and to gather information

24 participants from 17 Member States and 2 International Organizations with full papers
TECDOC as a Proceedings
Technical Meeting on the Deployment of Non-Electric Applications Using Nuclear Energy for Climate Change Mitigation – IAEA-HQ – 14-16 April 2018

Objectives:
• Discuss the role of NP and its non-electric applications in efforts to mitigate climate change
• Explore the use of nuclear cogeneration, and especially of waste heat from NPPs, to meet the increasing demands for heat in the heating and transport sectors
• Discuss expected challenges in the deployment of nuclear cogeneration, especially with regard to public acceptance
• Facilitate the efficient exchange of information regarding the design and operation of cogeneration plants as well as regarding the associated infrastructures

20 participants from 16 MSs

Main conclusions:
• The technology of HTGR and light water SMR can be a viable alternative for near term strategy for climate change mitigation for water stressed countries. Other initiatives for low temperature heating reactors are also seen as another alternative
• Development of an integrated Zero Liquid Discharge based desalination system could increase the economic competitiveness of nuclear energy while leading a step forward to minimize environmental impact and mitigate climate change
• Non-electric applications of nuclear energy faces several challenges such as national position, bilateral cooperation, project’s viability, public acceptance, site selection, regulatory framework, etc.
Objectives:
• Evaluate the options of nuclear hydrogen production and its role in a future hydrogen economy, taking into account the various climate change scenarios
• Examine the cost of nuclear hydrogen production depending on the technologies that are used
• Provide training on the IAEA's Hydrogen Economic Evaluation Programme (HEEP) and collect feedback on the tool for further development

✓ Participants expected from: Argentina, Canada, Germany, Hungary, Indonesia, Italy, Libya, Romania, Russian federation, Spain, UK, and USA.
International Conference on
Climate Change and the Role of Nuclear Power

7–11 October 2019
Vienna, Austria

#Atoms4Climate
Purpose/ scope:
To provide a forum for the exchange of information on the role of nuclear power, and on the opportunities and challenges of safe, secure and safeguarded nuclear technology development in supporting the low-carbon energy transformation needed to achieve the climate change goals.

The conference themes include a description of the mitigation challenge, implications for the power sector, environmental perspectives, and potential roles of existing, evolutionary and innovative nuclear power systems, including the integration of nuclear/renewable energy systems.

Email:
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Topics:

• Advancing energy policies that achieve the climate change goals.
• The increasing contribution of nuclear power in the mitigation of climate change, including synergies with other low-carbon power generation sources.
• Development and deployment of advanced nuclear power technologies to increase the use of low-carbon energy.
• Shaping the future of the nuclear industry in regulated and deregulated energy markets to address climate change.
• Enhancing international cooperation and partnership in nuclear power deployment.
• Public and non-nuclear stakeholders’ perception of the role of nuclear power in climate change mitigation.
Scientific Secretaries:

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Key deadlines:

• Submission of contributed papers, including Forms A and B, through official channels to the IAEA 28 April 2019

• Submission of Grant Application Form (Form C) through official channels 28 April 2019

• Deadline for exhibitor registration 31 May 2019

• Notification of acceptance of paper 26 June 2019
Thank you!