



**IAEA**

International Atomic Energy Agency

*Atoms for Peace and Development*

# **Workshop on Modelling the Contribution of Nuclear Power to Net Zero Transitions**

**IAEA Headquarters, Vienna, Austria**

**8–12 July 2024**

**Ref. No.: EVT2303759**

## **Information Sheet**

### **Introduction**

The International Atomic Energy Agency (IAEA) is organizing a Workshop on Modelling the Contribution of Nuclear Power to Net Zero Transition Scenarios at IAEA’s Headquarters in Vienna, Austria, on 8-12 July 2024, as part of the US-funded PUI project “*Modelling the Contribution of Nuclear Energy to Energy Transitions towards Net Zero*”, and the Atoms4NetZero initiative launched by the IAEA Director General at COP27.

Net Zero energy scenarios are developed to inform policymakers on the options for, and implications and challenges of, meeting the goals of the Paris Agreement – i.e., to hold global warming to well below 2°C and pursue efforts towards a limit of 1.5°C. Net zero scenario modelling can suggest pathways to reach carbon neutrality by the middle of the century or soon after, while also addressing the need for affordable, secure, and resilient energy supply.

Net zero energy scenarios generally consider nuclear energy’s proven potential for decarbonizing electricity production. Deep decarbonization will require increased electrification, to which all available low-carbon technologies will need to contribute, including nuclear energy. The IEA’s Net Zero Emissions by 2050 Scenario, recently updated in 2023, for example foresees a more than doubling of nuclear generation by 2050. But to achieve net zero emissions by the middle of the century, the entire energy system – including those sectors and activities that cannot be easily electrified, for instance heavy duty or maritime transport, or energy-intensive industrial activities such as steel making, etc – will also need to be decarbonized, using low carbon fuels and heat. In particular, hydrogen is increasingly seen as a key energy vector to help decarbonize hard to abate sectors provided it can be produced without emissions, from decarbonized electricity grids, from dedicated low-carbon energy sources such as renewables or nuclear power or from fossil fuels with CCS. Hydrogen could also play an important role to provide the flexibility and long-term storage requirements of a low-carbon power system. Heat supply from nuclear energy could address the needs

of decarbonized district heating or process steam for industry.

The development of advanced reactors including Small Modular Reactors can provide opportunities for nuclear energy systems to address not only power generation, but also non-power applications such as heating, desalination, or hydrogen or other low-carbon fuel production. Consideration of such applications in energy scenario modelling can help inform policymakers about the potential of nuclear technology to contribute to net zero objectives.

## **Objectives**

The main objective of this event is to gather and share information on net zero energy scenario studies performed by Member States, and how these studies are used or planned to be used for policymaking. The event will focus on how the decarbonization potential of nuclear energy, for electricity and other applications, is considered in scenario models and assumptions, and related analyses, as well as in the communication of scenario modelling outputs to decision makers.

The event will also provide an opportunity for the IAEA to present the Atoms4NetZero initiative launched by IAEA Director General, Rafael Mariano Grossi, at COP27 in November 2022, and identify Member States and organizations wishing to join the initiative.

## **Target Audience**

Member States are invited to designate one participant for this event who has specialized knowledge of, or experience in, the design and/or use of energy scenario models to investigate pathways for the decarbonization of energy systems. This event is suitable for policymakers, technology developers, scientists, managers from the electricity, nuclear and hydrogen industries as well as representatives of financial institutions working on or interested in low carbon energy systems and the potential role of nuclear energy to contribute to cost-effective transitions to net zero. Member States are strongly encouraged to identify suitable women participants.

## **Working Language(s)**

English

## **Topics**

The following topics will be included in the event agenda:

- The role of nuclear energy in decarbonization scenarios, as a source of low-carbon power integrated in energy systems with large shares of variable renewables, as well as a source of energy to produce heat, hydrogen, or other low-carbon fuels.
- Cost optimization of energy transitions.

- Modelling assumptions (costs, financing parameters, technology readiness, etc) for nuclear technologies and other low-carbon technologies.
- Modelling the impact of climate change in scenarios to assess the climate-resilience of future energy pathways/systems.
- Scenario modelling to inform policymaking and/or sustainable finance.

## Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **1 May 2024**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
  - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
  - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
  - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
  - Search for the relevant event under the ‘My Eligible Events’ tab;
  - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org));
  - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
  - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
  - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **1 May 2024**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org).

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

## **Expenditures and Grants**

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **1 May 2024**.

## **Venue**

The event will be held at the Vienna International Centre (VIC) where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

[www.iaea.org/events](http://www.iaea.org/events).

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

## **Visas**

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

# IAEA Contacts

## Scientific Secretary:

### Mr Henri Paillère

Head of the Planning and Economic Studies Section  
Division of Planning, Information and Knowledge Management  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22776

Fax: +43 1 26007

Email: [H.Paillere@iaea.org](mailto:H.Paillere@iaea.org)

## Co-Scientific Secretaries:

### Mr Hal Turton

Division of Planning, Information and Knowledge Management  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 26043

Fax: +43 1 26007

Email: [H.Turton@iaea.org](mailto:H.Turton@iaea.org)

### Mr Mohamed Bassam Ben Ticha

Division of Planning, Information and Knowledge Management  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 21384

Fax: +43 1 26007

Email: [M.Ben-Ticha@iaea.org](mailto:M.Ben-Ticha@iaea.org)

## **Administrative Secretaries:**

### **Ms Valerie Gartner**

Division of Planning, Information and Knowledge Management  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22778

Fax: +43 1 26007

Email: [V.Gartner@iaea.org](mailto:V.Gartner@iaea.org)

### **Ms Eugenie Hartzell**

Division of Planning, Information and Knowledge Management  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22779

Fax: +43 1 26007

Email: [E.T.B.Hartzell@iaea.org](mailto:E.T.B.Hartzell@iaea.org)

Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries and correspondence on other matters related to the event to the Administrative Secretaries.

# Participation Form

## Workshop on Modelling the Contribution of Nuclear Power to Net Zero Transitions

**IAEA Headquarters Vienna, Austria**

**8–12 July 2024**

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary [H.Paillere@iaea.org](mailto:H.Paillere@iaea.org) and to the Administrative Secretaries [V.Gartner@iaea.org](mailto:V.Gartner@iaea.org) and [E.T.B.Hartzell@iaea.org](mailto:E.T.B.Hartzell@iaea.org).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

**Deadline for receipt by IAEA through official channels: 1 May 2024**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable: Do you intend to submit a paper?                      Yes <input type="checkbox"/> No <input type="checkbox"/> Would you prefer to present your paper as a poster?    Yes <input type="checkbox"/> No <input type="checkbox"/> Title:		

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

# Grant Application Form

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**Deadline for receipt by IAEA through official channels: 1 May 2024**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	
I plan to attend virtually:	Yes <input type="checkbox"/> No <input type="checkbox"/>	

### 1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended	
			from	to

### 2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked	
			from	to

### 3. Description of work performed over the last three years:

### 4. Institute's/Member State's programme in field of event:

Date: \_\_\_\_\_ Signature of applicant: \_\_\_\_\_

Date: \_\_\_\_\_ Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority \_\_\_\_\_