

Atoms for Peace and Development

الوكالة الدولية للطاقة الذرية 国际原了子能机构 International Atomic Energy Agency Agence internationale de l'énergie atomique Международное агентство по атомной энергии Organismo Internacional de Energía Atómica

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In reply please refer to: EVT1904023 Dial directly to extension: (+43 1) 2600-22565

The Secretariat of the International Atomic Energy Agency (IAEA) presents its compliments to the IAEA's Member States and has the honour to draw their attention to the **Workshop on High Temperature Gas Cooled Reactor Technology** (hereinafter referred to as "event") to be held at the IAEA's Headquarters in Vienna, Austria, from **13 to 17 July 2020**.

The purpose of the event is to familiarize participants with modular high temperature reactors by presenting current technology, reactor design concepts, reactor physics, core thermal fluid design, safety analyses, modelling and simulation.

The attached Information Sheet provides further details of the event.

The event will be held in English.

Member States are invited to designate one or more participants to represent the Government at this event. Member States are strongly encouraged to identify suitable women 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 at the time of designating the participants using the attached Grant Application Form (Form C).

It should be noted that compensation is not payable by the IAEA for any damage to or loss of personal property. The IAEA also does not provide health insurance coverage for participants in IAEA events. Arrangements for private insurance coverage on an individual basis should therefore be made. The IAEA will, however, provide insurance coverage for accidents and illnesses that clearly result from any work performed for the IAEA.

Designations should be submitted to the IAEA through the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) not later than 30 April 2020 using the attached Participation Form (Form A). Completed and authorized Participation Forms should be sent either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Copies should be sent by email to the Scientific Secretary of the event, Mr Frederik Reitsma, Division of Nuclear Power, Department of Nuclear Energy (Email: F.Reitsma@iaea.org), and to the Administrative Secretary, Ms Ana Szentirmai (Email: A.Szentirmai@iaea.org). The Scientific Secretary of the event will liaise with the participants directly concerning further arrangements, including travel details, as appropriate, once official designations have been received.

Should Governments wish, in addition, to appoint one or more observers to assist and advise the designated participants, they are kindly requested to inform the IAEA of the names and contact details of any such observers by the above date. In accordance with the established rules, Governments are expected to bear the cost of attendance of any observers they may send to IAEA events. Compensation is not payable by the IAEA for any damage to or loss of observers' personal property or for illness, injury or death occurring while travelling to or in connection with their attendance at IAEA events.

The Secretariat of the International Atomic Energy Agency avails itself of this opportunity to renew to the IAEA's Member States the assurances of its highest consideration.



2020-03-27

Enclosures: Information Sheet Participation Form (Form A) Grant Application Form (Form C)



# Workshop on High Temperature Gas Cooled Reactor Technology

IAEA Headquarters Vienna, Austria

13-17 July 2020

Ref. No.: EVT1904023

# **Information Sheet**

# Introduction

High temperature gas cooled reactors (HTGRs) have been built and operated in Member States of the International Atomic Energy Agency (IAEA) as far back as the 1970s, in the form of both experimental and demonstration plants. A wealth of knowledge has been collected from these facilities. Today, only two experimental HTGRs are operational: the High Temperature Engineering Test Reactor in Japan and the HTR-10 in China.

After an HTGR project in South Africa came to an end in 2010, several other Member States have continued to show an interest in such projects, and some have also continued technology development. To ensure that knowledge in this area is maintained, the Technical Working Group on Gas Cooled Reactors has recommended the continuation of knowledge management and the preservation of HTGR technology through training courses and workshops. This event will cover software packages and computer codes available for design and safety analyses, in order to maintain, capture and expand knowledge in HTGR technology.

After several years of discussion and action, an agreement has been reached between the IAEA, the Jülich Research Centre and German export authorities to release the high temperature reactor code package (HCP code) for high temperature reactor safety performance analyses to the IAEA, so that more Member States can use this code to perform safety analysis of HTGRs. This HCP code will be showcased and demonstrated during the event. Other institutes, universities and vendors will also be invited to present their latest designs and software codes.

# **Objectives**

The purpose of the event is to familiarize participants with modular high temperature reactors by presenting current technology, reactor design concepts, reactor physics, core thermal fluid design, safety analyses, modelling and simulation.

## **Target Audience**

The event is targeted at decision makers, nuclear engineers, research scientists, university students and staff members of vendors, designers and regulatory bodies who are planning on studying, developing or licensing HTGR technology, or who are currently engaged in HTGR research. A scientific/technical background in nuclear science and engineering, mechanical engineering and power engineering is essential.

# Working Language(s)

English.

# Structure

Expert presentations will be followed by discussions among the participants, the primary goal being to exchange information and share knowledge. Discussions on possible future cooperation for the joint development of codes (especially based on the HCP code package to be made available) will also be included. The presentations and discussions will be led by experts from software developers, designers and research organizations.

# Topics

The focus will be on presenting state-of-the-art software and computer codes available to perform core design and safety analyses. The latest project and design status of participating vendors and developers will also be included. Other topics may include fuel technology, reactor design, heat removal and power conversion systems in both prismatic block and pebble bed HTGR designs. Ultimately, the event will also highlight contemporary research and development efforts that will lead to the near term deployment of HTGRs.

# **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, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **30 April 2020**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

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

Please note that the IAEA is in a transition phase to manage the entire registration process for all regular programme events electronically through the new InTouch+ (https://intouchplus.iaea.org) facility, which is the improved and expanded successor to the InTouch platform that has been used in recent years for the IAEA's technical cooperation events. Through InTouch+, prospective participants will be able to apply for events and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this new facility should write to: InTouchPlus.Contact-Point@iaea.org.

# **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 using the **Grant Application Form (Form C)** which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **30 April 2020**.

# 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: <a href="http://www-pub.iaea.org/iaeaevents/GeneralInfo/Guide/VIC">http://www-pub.iaea.org/iaeaevents/GeneralInfo/Guide/VIC</a>.

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 Frederik Reitsma

Division of Nuclear Power Department of Nuclear Energy International Atomic Energy Agency Vienna International Centre PO Box 100 1400 VIENNA AUSTRIA Tel.: +43 1 2600 22565/22803 Fax: +43 1 26007 Email: F.Reitsma@iaea.org

### Administrative Secretary:

### Ms Ana Szentirmai

Division of Nuclear Power Department of Nuclear Energy International Atomic Energy Agency Vienna International Centre PO Box 100 1400 VIENNA AUSTRIA Tel.: +43 1 2600 22803/22815 Fax: +43 1 26007 Email: <u>A.Szentirmai@iaea.org</u> Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on other matters related to the event to the Administrative Secretary.



# **Participation Form**

## Workshop on High Temperature Gas Cooled Reactor Technology

## IAEA Headquarters, Vienna, Austria

### 13-17 July 2020

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: <u>Official.Mail@iaea.org</u> or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary <u>F.Reitsma@iaea.org</u> and to the Administrative Secretary <u>A.Szentirmai@iaea.org</u>.

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: 30 April 2020

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 No	
Would you prefer to present your paper as a p	poster? Yes No	
Title:		



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## Workshop on High Temperature Gas Cooled Reactor Technology

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## Deadline for receipt by IAEA through official channels: 30 April 2020

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:	

#### 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 work from	to
			nom	

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