



IAEA

Atoms for Peace
and Development

**International Conference on
Fuel Supply Chain
for Sustainable Nuclear Power Development**

**IAEA Headquarters
Vienna, Austria**

13–15 October 2026

**Organized by the
International Atomic Energy Agency (IAEA)**

In cooperation with the

**European Commission
Nuclear Energy Agency of the Organisation for Economic Co-operation
and Development**

**World Nuclear Association
World Nuclear Transport Institute**

Announcement and Call for Papers

A. Background

As we look ahead to the next decades, especially in light of the first global stock-take at COP28 and the declaration made by more than 30 countries to work towards tripling global nuclear energy capacity by 2050, it is crucial to recognize every step of the fuel supply chain. From raw materials to fuel fabrication, every segment of the nuclear fuel cycle's front end will face rising demand. While industrial capacities to convert, enrich and fabricate conventional nuclear fuels already exist worldwide, operators will need to ensure long term operations by investing in upgrades and streamlining processes to enhance efficiency whilst decreasing operational costs and minimizing waste generation. However, industrial capacities to convert, enrich, and fabricate advanced nuclear fuels—such as uranium enriched up to 10% for the current reactor fleet, or high-assay low-enriched uranium (HALEU, up to 20%) for advanced reactors, including small modular reactors (SMRs)—still need to be deployed or expanded. Major investments along with licensing and construction efforts are needed to meet the growing demand of the front end of the supply chain, particularly if the construction of new reactors increases worldwide.

World annual reactor-related uranium requirements are projected to rise to between around 90,000 tonnes per year to 142,000 tonnes per year by 2050. According to the 2024 edition of the joint IAEA-NEA report *Uranium Resources, Production and Demand* (commonly referred to as the Red Book), around 7.9 million tonnes of identified recoverable uranium resources are available at costs below 130 USD/kgU as of January 2023. However, the path from identifying uranium deposits to producing yellow cake for conversion can take decades. If planned and prospective production does not come online, or if new deposits are not discovered and mined, a supply shortfall in primary uranium production could begin as early as the late 2020s. It is assumed that secondary uranium supplies will alleviate such shortfalls, but secondary supplies are dwindling. New fuel designs, based on HALEU, especially for the deployment of some SMR designs, will increase the demand for uranium. Therefore, timely investments in new exploration, mining operations and processing techniques will be essential to ensure that uranium becomes available to the market when it is needed. Increased interest in thorium based reactors may drive the need to better understand the thorium resource base.

Advanced nuclear fuels and materials play a crucial role in the deployment and operation of nuclear power. For existing reactors, key objectives include enhancing economic viability by achieving higher burnup rates, extending fuel cycle durations from 12 to 18 and 24 months, and improving fuel reliability by minimizing failures. Advanced Technology Fuels (ATFs), which incorporate new cladding and fuel pellet designs, are being developed to enhance the safety, competitiveness, and economic feasibility of both current and future reactors. The development of innovative nuclear reactors, including SMRs, has accelerated research into new fuel design concepts, many of which require irradiation testing and examination under expected operating conditions before being qualified. Sharing good practices is essential to ensuring nuclear fuels perform reliably.

A life cycle approach, which is key to any circular economy, is also essential for the nuclear fuel cycle. The nuclear industry is learning from other sectors while sharing its technologies and good practices. A circular economy approach applied to the recovery of uranium and thorium from conventional and unconventional resources, as well as mining and processing wastes, tailings and residues, would benefit the nuclear industry by improving the availability of uranium and thorium resources while supporting environmental, social and governance objectives within the nuclear industry. At the back end of the nuclear fuel cycle, some countries are actively working to fully close their nuclear fuel cycles by recycling valuable materials like reprocessed uranium (RepU) and plutonium, and by transmuting minor actinides. These examples show how a circular economy approach can both sustain energy production and minimize the waste burden for future generations.

B. Purpose and Objectives

The purpose of the event is to provide a forum, in the context of a renewed interest in nuclear power, for exchanging information on achievements, challenges, lessons learned and prospects concerning the nuclear fuel supply chain. It will help identify the nuclear industry needs (e.g. fissile/fertile materials, new fuel types that are more efficient and cost-effective, etc.) to meet the demand of the expected deployment of SMRs and other advanced reactors, as well as to fulfill ambitions to triple nuclear power capacity by 2050. The conference will also share and consider achievements, challenges, lessons learned, and prospects on the application of circular economy principles at the different stages of the nuclear fuel cycle. It will identify and prioritize current needs and sharing of information on the strategies and approaches that would enable and enhance environmentally friendly and cost beneficial practices. The conference will highlight the importance of addressing the societal expectations for minimizing waste burden as well as advancing sustainability in nuclear energy development.

C. Themes and Topics

The IAEA welcomes high quality contributions that fall under the umbrella of the four topics listed here below:

Topic 1. Industry Prospects and Challenges Facing Raising Fuel Supply Demand:

Challenges in supply and front-end services to meet the increasing infrastructure requirements for conversion, enrichment and fuel fabrication:

- Market fluctuations impacting supply chains.
- Political support: policies and strategies.
- Expansion of conversion enrichment and fuel fabrication facilities to meet growing demand.
- Technological advancements improving processes' efficiency and sustainability.

Topic 2. Supply and Demand of Raw Materials for Nuclear Fuel Supply:

Innovations in the front-end of the nuclear fuel cycle, from exploration to mining:

- New uranium exploration and mining projects.
- Innovative advancements in uranium exploration and mining.
- Uranium and thorium resources, processing and mining and the circular economy.

Topic 3. Advanced Nuclear Fuels for Innovative Reactor Technologies:

Advanced technology fuels and fuels for advanced reactors:

- Design, qualification and operation of ATFs, LEU+ and HALEU fuels, TRISO fuels, fuels for fast reactors and multiple recycling in all types of reactors, including molten salt reactors.
- Advances in nuclear fuel fabrication processes and quality control (automation, additive manufacturing and use of artificial intelligence).

Topic 4. Industrial and Innovative Technologies for Recycling Nuclear Materials:

Industrial operating experience and lessons learned in reprocessing for recycling:

- Experience of uranium (U) and plutonium (Pu) recycling and requirements for multi-recycling U and Pu in Thermal and Fast Reactors.
- Prospects for reprocessing of spent fuels from advanced reactors, including the management of minor actinides.
- Infrastructure development and implementation for reprocessing and managing nuclear materials to be recycled.
- Life cycle of reprocessing and recycling and impacts on the final wastes to be disposed of.

D. Structure

Over two and a half days, the conference programme will consist of an opening plenary session, panel sessions, parallel technical and poster sessions, and a closing plenary session with the results of the Young Generation contest.

E. Expected Outcomes

The conference aims to:

- Strengthen Member States’ understanding of, and capabilities for addressing, the challenges of a sustainable fuel supply chain for nuclear power development.
- Facilitate discussion and information sharing among interested Member States on recent and future developments in fuel development, recycling technologies and advanced fuel cycle options for current and next generations of nuclear power reactors, including SMRs.
- Bridge the gap among generations by fostering the participation of young professionals and improving gender balance in the nuclear fuel supply chain.

F. Target Audience

The conference is designed for a broad range of stakeholders from IAEA Member States including technology developers, operators, regulators, governmental authorities, decision makers, industrials, R&D and technical support organizations among others.

G. Call for Papers

Contributions on the topics listed in Section C are welcome oral or poster presentations. All submissions, apart from invited papers, must present original work which has not been published elsewhere. Authors of accepted papers should be ready to participate and present their work during one of the sessions.

G.1. Submission of Abstracts

Abstracts (approximately 150 to 200 words on one A4 page, may contain any charts, graphs, figures and references) should give enough information on the content of the proposed paper to enable the Programme Committee to evaluate it. Anyone wishing to present at the conference must submit an abstract in electronic format using the conference’s file submission system ([IAEA-INDICO](#)), which is accessible from the conference web page (see Section Q). The abstract can be submitted through this system until **1 February 2026**. Specifications for the layout will be available on IAEA-INDICO. The system for electronic submission of abstracts, IAEA-INDICO, is the sole mechanism for submission of contributed abstracts. Authors are encouraged to submit abstracts as early as possible. The IAEA will not accept submissions via email.

In addition, authors must register online using the InTouch+ platform (see Section H). The online registration together with the auto-generated Participation Form (Form A) and Form for Submission of a Paper (Form B) must reach the IAEA no later than **1 February 2026**.

IMPORTANT: The Programme Committee will consider uploaded abstracts only if these two forms have been received by the IAEA through the established official channels (see Section H).

G.2. Acceptance of Abstracts

The Secretariat reserves the right to exclude abstracts that do not comply with its technical or scientific quality standards and that do not apply to one of the topics listed in Section C.

Authors will be informed by **31 March 2026** as to whether their submission has been accepted, either orally or as a poster, for presentation at the conference. Accepted abstracts will also be reproduced in an unedited electronic compilation of Abstracts which will be made available to all registered participants of the conference.

G.3 Submission of Extended Abstracts

Authors of accepted abstracts will be requested to submit an extended abstract in Word format, of no more than 4 pages in length. A compilation of extended abstracts (in electronic format) will be made available to participants via the Conference App.

Extended abstracts must also be submitted through the [IAEA-INDICO](#) file submission system in Word format. Submitting the extended abstract in the indicated electronic format is mandatory. Specifications for the layout and electronic format of the contributed extended abstracts and for the preparation of posters will be made available on IAEA-INDICO.

The IAEA reserves the right to exclude extended abstracts that do not comply with its quality standards and those that do not apply to one of the topics outlined in Section C above and those that do not meet the expectations based on the information in the abstract.

The deadline for electronic submission of the extended abstracts as Word files is **31 May 2026**. The IAEA will not accept extended abstracts submitted after the deadline.

The IAEA will notify authors of its completed review process of the extended abstracts after **31 July 2026**. The deadline for revised extended abstracts to be submitted through IAEA-INDICO is **15 September 2026**.

IMPORTANT: The system for electronic submission of extended abstracts, IAEA-INDICO, is the sole mechanism for submission of contributed extended abstracts. Authors are encouraged to submit extended abstracts as early as possible. The IAEA will not accept submissions via email.

G.4 Proceedings

Following the conference, the IAEA will publish a summary report. The proceedings will be made available to read online.

H. Participation and Registration

All persons wishing to participate in the event must be designated by an IAEA Member State or should be a member of an organization that has been invited to attend.

Registration through the InTouch+ platform:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):

- Persons with an existing NUCLEUS account can [sign in here](#) 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 ‘Basic Profile’ (if no financial support is requested) or under ‘Complete Profile’ (if financial support is requested) and upload the relevant supporting documents;
- Search for the relevant event (**EVT2501012**) 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 Conference.Contact-Point@iaea.org);
- If applicable, indicate whether a paper is being submitted and complete the relevant information;
- 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 Participation Form (Form A), Form for Submission of a Paper (Form B) and/or 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 form(s) will automatically be sent to the IAEA through the online platform.

NOTE: Should prospective participants wish to submit a paper or request financial support, the application needs to be submitted by the specified deadlines (see section O).

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.

If it is not possible to submit the application through the InTouch+ platform, prospective participants are requested to contact the IAEA’s Conference Services Section via email: Conference.Contact-Point@iaea.org.

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. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

I. 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 conference. The IAEA has, however, limited funds at its disposal to help cover 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 conference.

If participants wish to apply for a grant, they should submit applications to the IAEA using the InTouch+ platform through their competent national authority (see Section H). Participants should ensure that applications for grants are:

1. Submitted by **10 April 2026**;
2. Accompanied by Grant Application Form (Form C); and
3. Accompanied by Participation Form (Form A).

Applications that do not comply with the above conditions cannot be considered.

Approved grants will be issued in the form of a lump sum payment that usually covers **only part of the cost of attendance**.

J. Distribution of Documents

A preliminary and final programme will be made available on the conference web page (see Section Q) prior to the start of the conference. The electronic compilation of abstracts will be accessible free of charge to participants registered for the conference.

K. Exhibitions

A limited amount of space will be available for commercial vendors' displays/exhibits during the conference. Interested parties should contact the Scientific Secretariat by email nfsc26@iaea.org by **1 February 2026**.

L. Working Language

The working language of the conference will be English. All communications must be sent to the IAEA in English.

M. Venue and Accommodation

The conference will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. 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.

Participants must make their own travel and accommodation arrangements. Hotels offering a reduced rate for participants are listed on <https://www.iaea.org/events>. Please note that the IAEA is not in a position to assist participants with hotel bookings, nor can the IAEA assume responsibility for paying fees for cancellations, re-bookings and no-shows.

N. Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria as early as three months but not later than 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.

For more information, please see the Austria Visa Information document available on <https://www.iaea.org/events>.

O. Key Deadlines and Dates

Submission of abstracts through IAEA-INDICO	1 February 2026
Submission of Form B (together with Form A) through the InTouch+ platform	1 February 2026
Notification of acceptance of abstracts for oral or poster presentation	31 March 2026
Submission of Form C (together with Form A) through the InTouch+ platform	10 April 2026
Electronic submission of extended abstracts through IAEA-INDICO	31 May 2026
Notification of review of extended abstracts	31 July 2026
Deadline for submission of revised extended abstracts submitted through IAEA-INDICO	15 September 2026
Submission of Form A only (no paper submission, no grant request) through the InTouch+ platform	7 October 2026

P. Conference Secretariat

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on administrative matters to the IAEA's Conference Services Section.

Q. Conference Web Page

Please visit the IAEA conference [web page](#) regularly for new information regarding this conference.