

# Job Description for Professional Posts

<b>Position ID:</b>	NE202203-P5-0
<b>Position and Grade:</b>	Senior Nuclear Expert (Fusion Technology) (P5)
<b>Organizational Unit:</b>	NENP-Nuclear Power Technology Development Section Division of Nuclear Power Department of Nuclear Energy
<b>Duty Station:</b>	Vienna, Austria
<b>Type/Duration of Appointment:</b>	Cost-Free Expert (CFE), 2 years

## Organizational Setting

The objective of the Department of Nuclear Energy (NE) is to foster the efficient and safe use of nuclear power by supporting interested Member States in: improving the performance of nuclear power plants, the nuclear fuel cycle, and the management of nuclear wastes; catalysing innovation in nuclear power and fuel cycle technologies; developing indigenous capabilities around the world for national energy planning; deploying new nuclear power plants; preserving and disseminating nuclear information and knowledge; and advancing science and industry through improved operation of research reactors.

The department has a dynamic, participative and interactive operating environment with inputs received from the Board of Governors, the General Conference, policy and decision-makers, and technical counterparts in Member States and the international development community.

The Division of Nuclear Power comprises the Nuclear Power Engineering Section, the Nuclear Power Technology Development Section, the Nuclear Infrastructure Development Section and the INPRO (International Project on Innovative Nuclear Reactors and Fuel Cycles) Section. The Division provides core engineering, technological, human resource development and management support to interested Member States in the field of nuclear power.

The Nuclear Power Technology Development Section assists Member States in developing safe, environmentally benign, economically viable, proliferation resistant and sustainable innovative solutions for all civil reactor technologies, including water-cooled reactors, gas-cooled reactors, fast neutron systems (both critical and sub-critical), small and medium-sized or modular reactors as well as fusion reactors for energy production. The section fosters international collaboration on technology development for reactor plants and for non-electric uses of nuclear power by facilitating coordinated research projects, technical meetings, and training courses. The section also maintains the Advanced Reactor Information System (ARIS) and Thermophysical Properties of Nuclear Materials (THERPRO) databases.

## Main Purpose

As member of the Section led by the Section Head and as a lead technical expert, the senior nuclear expert (Fusion Technology) coordinates and supervises projects involving fusion technologies

supporting fusion reactors for energy production, under the guidance of the Section Head and the Leadership of the Director.

## **Role**

The senior nuclear expert (Fusion Technology) is: (1) a technical lead who plans, directs, coordinates and supervises activities in the area of fusion reactor technology in accordance with Member States' needs and monitors their implementation; (2) a substantive expert contributor who manages projects of particular complexity and/or sensitivity; (3) a scientific secretary for international scientific meetings on fusion technology, and as such oversees the preparation and editing of scientific reports, manuals, proceedings and other scientific publications; (4) a coordinator of interagency collaborative projects within and outside the UN system who reviews and provides a systematic overview and preparation of technical documentation and papers.

## **Partnerships**

The Senior Nuclear Expert (Fusion Technology) engages high level technical counterparts in Member State institutions in programme planning and implementation to ensure the effective transfer and sharing of technical know-how and promotes partnership building with appropriate international organizations and other academic technical organizations. In addition, he/she meets regularly with the Section Head and other colleagues in the department to ensure effective utilization and integration of resources (human, financial and technical). He /She also works and coordinates work with technical experts in the Department of Nuclear Sciences and Applications and in the Department of Nuclear Safety and Security to ensure the seamless integration of all projects and programmes.

## **Functions / Key Results Expected**

- Plan, direct, coordinate, monitor the implementation of the activities of projects on nuclear fusion technology for improvements in technology development and deployment, as well as for the development of feasibility studies towards fusion demonstration plants, in accordance with Member States' needs.
- Broaden and deepen knowledge by organizing scientific meetings related to the specialized field and serve as scientific secretary; prepare scientific programmes, contribute to the preparation and editing of scientific reports, manuals, proceedings and other scientific publications; prepare and organize in-house meetings in support of the Section's scientific programme.
- Ensure the continued high standing and recognition of the IAEA in the scientific community by representing the IAEA at national and international meetings as required; establish and maintain contacts with individual scientists at various centres and other relevant international organizations, committees and scientific societies.

## **Competencies and Expertise**

- **Communication:** Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen to and understand the perspectives of others and proposes solutions.
- **Achieving Results:** Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.
- **Teamwork:** Actively contributes to achieving team results. Supports team decisions.
- **Planning and Organizing:** Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

- Analytical Thinking: Analyses information to identify cause and effect relationships and correlations. Identifies critical elements and assesses consequences of different courses of action and proposes solutions.
- Judgement/decision making: Consults with supervisor/manager and takes decisions in full compliance with the Agency's regulations and rules. Makes decisions reflecting best practice and professional theories and standards.
- Leading and supervising: Demonstrates initiative and role model behaviour. Is proactive and works toward supporting an achievement-oriented culture and performance excellence.
- Partnership building: Identifies and builds partnerships. Develops and maintains long lasting partnerships to strengthen relationships. Delivers programmatic outputs and acquires resources in support of Agency goals.
- Technical/scientific credibility: Ensures that work is in compliance with internationally accepted professional standards and scientific methods. Provides scientifically/technically accepted information that is credible and reliable.
- Nuclear Engineering | Project Management: Good knowledge and understanding of theories, concepts, methods, approaches and tools relevant to programme and project management.
- Nuclear Engineering | Nuclear Engineering and Technology: In-depth knowledge of advanced nuclear power reactor design and developmental activities.
- Other Technical Engineering | Engineering and Technology: In-depth knowledge of technology and engineering developments of nuclear fusion demonstration plants

## **Education, Experience and Language Skills**

- Advanced university degree in nuclear or mechanical engineering or in a related technical discipline.
- A minimum of ten years of relevant professional experience research and technology development in Nuclear Fusion Technology, including experience at the international level.
- Comprehensive experience in the management of scientific projects.
- Experience of working in a national/international nuclear organization or institute desirable.
- Fluency in spoken and written English. Knowledge of other official IAEA languages (i.e. Arabic, Chinese, French, Russian or Spanish) is an advantage.

**How to Apply:** <https://anl.box.com/v/HowToApply-CFE>

**Completed online job application form in the TALEO system is required.**