

**TERMS OF REFERENCE FOR
THE IAEA TECHNICAL WORKING GROUP ON
SMALL AND MEDIUM SIZED OR MODULAR REACTORS
TWG-SMR**

The Technical Working Group on Small and Medium Sized or Modular Reactors (TWG-SMR) is a group of experts established to provide advice, recommendations and support to the IAEA for programmatic planning and implementation in all areas related to technology development, design, development and economics of small and medium sized or modular reactors (SMRs) that can be used for the production of electricity and/or industrial process heat. Reflecting a global network of excellence and expertise, this Technical Working Group is specifically meant to provide guidance to the IAEA on addressing challenges associated with the assessment of technology readiness and deployability of SMRs in Member States. The TWG-SMR, through its advice and recommendations, will benefit the Member States by strengthening the effectiveness and coordination of the IAEA's activities on SMR technology development, design, deployment and economics.

I. SCOPE

The TWG-SMR focuses on technology development, design, deployment and economics of SMRs that can be used for the production of electricity and/or industrial process heat in both expanding and embarking countries. The Technical Working Group will provide advice, recommendations and formulate programmatic guidance for the IAEA's activities on SMRs, specifically in the following areas:

- Research, technology development and innovation;
- Development of generic technical requirements for user countries;
- Technology assessment approaches for advanced SMR designs;
- Reliability, safeguardability, and constructability;
- Codes and design standardization of structures, systems and components;
- Industrialization of SMRs, covering design, engineering, manufacturing and supply chain;
- Site characterization;
- Economic competitiveness, financial considerations, market needs and cost analysis;
- Capacity building for embarking and expanding nuclear countries;
- International cooperation.

In order to avoid unnecessary duplication of activities and to develop the necessary synergies and complementarities, the TWG-SMR will coordinate its activities with other in-house IAEA programmes in cross-cutting areas, as well as with related activities of other international organizations.

II. FUNCTIONS

The functions of the TWG-SMR are:

- a) To provide advice and guidance, and to marshal support in interested Member States for implementation of the IAEA's programmatic activities on technology development, design, deployment and economics of SMRs for the production of electricity and/or industrial process heat (the Technical Working Group will also provide guidance on developing roadmaps to assess the technology readiness level of SMR designs for deployment in Member States);
- b) To provide a forum for information and knowledge sharing on national and international programmes in the area of SMR technology development, deployment and human capacity building;
- c) To act as a link between the IAEA's activities in specific areas and national technical and industrial communities, as well as delivering information from and to national communities;
- d) To provide advice on preparatory technical missions in Member States, on the IAEA's activities in planning and implementing coordinated research programmes, collaborative assessments and other activities, as well as on the review of the results of SMR demonstration projects;
- e) To develop and/or review selected IAEA publications from the IAEA Nuclear Energy Series or the IAEA Technical Documents series, assess existing gaps and advise on the preparation of new publications or other outputs;
- f) To identify important topics for discussion by the Standing Advisory Group on Nuclear Energy (SAGNE) and contribute to status reports, Technical Meetings and topical conferences in the field of advanced SMRs and their applications;
- g) To encourage the participation of young nuclear professionals, in particular from embarking countries, as appropriate, in IAEA activities.

III. MEMBERSHIP

Members of the TWG-SMR shall be appointed by the Deputy Director General, Head of the Department of Nuclear Energy, following consultation with the respective national authorities or organizations.

Members of the TWG-SMR:

- shall be acknowledged experts in advanced reactor design and technology development and deployment, including economic aspects, and shall have extensive links with international/professional technical communities;
- are to serve for a standard term of four (4) years;
- shall participate in the TWG-SMR in their personal capacity and shall provide, as appropriate, views on national policies and strategies in the Technical Working Group's technical field;
- may, as appropriate, bring experts to provide additional information and share experience during the meetings of the TWG-SMR.

The total membership of the TWG-SMR shall not exceed twenty (20) members.

The Deputy Director General, Head of the Department of Nuclear Energy may from time to time also co-opt additional members and/or invite observers from other Member States and international or regional organizations on an ad-hoc or continuing basis.

IV. CHAIRMANSHIP

The Chairman of the TWG-SMR shall be selected from the members of the TWG-SMR by the Deputy Director General, Head of the Department of Nuclear Energy.

V. SECRETARIAT AND ADMINISTRATIVE AND TECHNICAL SUPPORT

Within available resources, the Deputy Director General, Head of the Department of Nuclear Energy will provide for administrative and secretariat services required by the TWG-SMR, including meeting facilities, maintenance of records and distribution of documents. The Nuclear Power Technology Development Section of the Department of Nuclear Energy shall provide the services of a Scientific Secretary. Support, when required, will also be provided by managers and staff from the Department of Nuclear Energy or other relevant Departments.

VI. METHODS OF WORK AND DELIVERABLES

Except as otherwise herein stated, the TWG-SMR will determine its own methods of work, including preparation of its Agenda, establishment of special groups, keeping of records and other procedures, and will report on its findings to SAGNE and to the Deputy Director General, Head of the Department of Nuclear Energy.

The activities of the TWG-SMR between periodic meetings shall be coordinated by the Scientific Secretary taking into due consideration the relevant recommendations of the TWG-SMR and SAGNE.

Following each meeting, the TWG-SMR shall provide the Deputy Director General, Head of the Department of Nuclear Energy with a report on its achievements and recommendations. The report shall also be published on the Web in a format and content agreeable to all members.

The Chairman of the TWG shall communicate to SAGNE the recommendations for strategic development or other important topics to be discussed at SAGNE meetings.

VII. MEETINGS

The TWG-SMR will meet at regular intervals but not more frequently than once a year with each meeting lasting up to four working days. Extraordinary meetings may be called when required.

Meetings will be conducted in English only.

VIII. COSTS

The IAEA is not in a position to bear the travel and other costs of the TWG-SMR members to attend the TWG-SMR meetings. All costs involved in the participation of each member, including travel and per diem expenses, shall, in general, be supported by the Member State/organization. However, the IAEA may contribute to covering the cost of attendance of members from developing countries, if sufficient funds are available and if a significant contribution can be made to the meeting by the respective members.