IAEA DESIGNATED INTERNATIONAL CENTRE BASED ON RESEARCH REACTOR (ICERR)

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ICERR designed to

- Increase **availability, accessibility** and use of existing RR capacity
- Recognise and foster increasing peer-to-peer **MS collaboration** (RR-User and RR-RR)
- Continue trend to thematic collaboration

- **ALL of the above** for MS with or without an operating RR
ICERR

Designation process

- RR Organisation submits
  - Facility and organisational profile,
  - self assessment,
  - statement on safety and security,
  - statement on activities to be considered,
  - government authority endorsement

- IAEA organised review (Selection Committee)

- In the case of a negative outcome, recommendations will be provided
  - IAEA assistance to implement, improve access by international community.

- Designation must be renewed every 5 years.
  - Demonstrate ongoing commitment, openness and continuous improvement
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Working for 1st ICERR submissions and reviews by
- 59th GC – September 2015, or
- International Conference on RRs – Vienna, November 2015.
Thank You

(Full presentation follows)
Many IAEA Member States (MSs) are initiating or increasing their interest in the broader applications of nuclear science and technology, including nuclear power.

They typically develop national competencies as well as a framework of research and development (R&D) strategies and plans to effectively support implementation.

To achieve these goals, they often require access to research reactor (RR) facilities typically to conduct nuclear R&D projects and to educate and train the young generation of nuclear scientists, engineers and technicians.

Accessing such facilities can present significant challenges for these IAEA MSs. Though access to such nuclear infrastructure at various research organizations and/or universities is available, it is often both expensive and cannot be quickly realized.
World-wide there are RRs facilities that have established long-standing nuclear R&D and capacity building programmes at an international/regional level.

IAEA MSs interest in nuclear science and technology programmes, as well as the expected growth of nuclear power programmes, could benefit from:

- the direct use of these facilities
- the expertise of their staff
- the processes and practices which have been established and adopted to operate these facilities
- continued and/or expanded international collaboration to more fully exploit the combined infrastructure
The “IAEA designated International Centre based on Research Reactor” (ICERR) scheme is intended to help IAEA MSs gain timely access to relevant nuclear infrastructure based on RRs and their ancillary facilities (AFs).

ICERRs will make available their RRs and AFs and resources to organizations of IAEA MSs seeking access to such nuclear infrastructure (named Affiliates).

For Affiliates, ICERRs will provide an opportunity to access RR capabilities much sooner and, probably, at a lower cost; on the other hand, an ICERR could benefit from additional scientific and/or technical resources made available by the Affiliate (e.g. Secondees) and by the increase of its international visibility.

The implementation of the ICERR scheme will also contribute to enhance the utilization of some existing RR facilities and, by fostering wider utilization in cooperative manner of RR(s) and AFs capabilities, also contribute to the development and deployment of innovative nuclear technologies.
The principal objective of the ICERR concept is to recognize and incentivise the following outcomes:

1. To make available existing RRs and their AFs to IAEA MSs that don’t have access to such nuclear infrastructure.

2. To provide a scientific hub for IAEA MSs (operating RRs or not) to support nuclear R&D and capacity building objectives relevant to their identified national priorities.

3. To improve accessibility of existing RRs and thereby optimizing the need for new RRs and/or orienting the IAEA MSs for appropriate facility investments;

4. To facilitate joint activities of IAEA MSs targeting the development of innovative nuclear technologies for various applications.

5. To enhance the utilization of existing RRs while supporting IAEA MSs to develop their nuclear R&D and capacity building programmes.
ICERR Scheme (2/5)

ICERRs are IAEA MSs organizations and/or institutions operating or constructing one or more RR(s) and AFs that, upon request, have been designated/re-designated by the IAEA on the basis of established criteria.

The **ICERR designation is limited to area(s) of activities** (e.g. education and training, reactor physics, neutron beams science, material testing, operation & maintenance, facility management, emergency preparedness and response, etc.) in which the compliance with the designation/re-designation criteria is demonstrated.

To enhance the collaboration among ICERRs, a network will be established by the IAEA (named **ICERRNet**); the network will allow ICERRs to share experience and lessons learned, to coordinate and to rationalize their offer of facilities, resources and services to interested IAEA MSs; the platform will also be a gateway to exchange information between ICERRs, Affiliates and the IAEA.
The ICERR-Affiliate relationship is established on contractual basis (commercial or in-kind) through a bilateral agreement.

IAEA, upon request, may provide support to an Affiliate, including financial and/or for the identification and selection of the ICERR, through IAEA established mechanisms and according to the IAEA rules and regulations; in this case, ICERR-Affiliate relationship remains on bilateral agreement and the IAEA doesn’t own any legal and financial liability.

ICERR designation/re-designation process is at ICERR candidate’s own cost, including the costs for the meeting of the Selection Committee and of the assessment mission at ICERR candidate’s site; where the IAEA established mechanisms permit, the IAEA, upon request, may provide financial support for the designation/re-designation of an ICERR according to the IAEA rules and regulations.
In the ICERR scheme, the **functions of the IAEA** are the following:

- **Facilitator** in the development of the relationship between an ICERR and Affiliates (e.g. through the web-based platform CONNECT)
- **Facilitator** in fostering the collaboration among ICERRs (e.g. promoting and supporting ICERRNet)
- **Promoter** for enhancing utilization of existing RR facilities
- **Designating body** responsible for ensuring that an ICERR candidate meets the establish criteria for the designation
ICERR Scheme (5/5)
An IAEA Member States’ organization and/or institution is eligible to be designated by the IAEA as ICERR if:

- It operates or is constructing one or more RR(s)
- It can demonstrate experience in hosting activities based on the RR with significant international/regional participation (these activities may or may not involve the IAEA)

The Criteria for designation address logistical capability, technical capability and sustainability
Logistics Criteria

- Having an established, demonstrated process, adequate infrastructure and internal organization and experience to host international/regional scientists, engineers, technicians and students, including:
  - demonstrated capacity and adequate internal organization to provide training at international/regional level (i.e. with a significant number of trainees from outside of the host country), including by secondment of staff, also to fill the gap between academic education and product-oriented training
  - demonstrated experience in hosting international/regional events such as conferences, workshops, symposia, seminars, etc., with a significant number of participants from outside of the host country
Having demonstrated experience in promoting and participating in collaborations at international/regional level, including:

- **demonstrated capability to accomplish the requests of international/regional potential users** (with possibility to communicate in regional languages and/or selected languages) in specific areas of the research reactors field of activities
- **demonstrated transparent selection and decision mechanisms to evaluate the requests of potential users, prioritize the activities and provide the feedback to the applicants**; for this purpose, when a dedicated access to the reactor or to its ancillary facilities is required, the ICERR candidate should have in place some type of an advisory board (e.g. Scientific Committee) while, for human resources development requests, the ICERR candidate should have in place adequate managerial measures
- **demonstrated capability to provide potential users with access to relevant technology, methodology and standards** in the area(s) of the research reactor activities for which designation is requested
Sustainability Criteria

- Demonstrated mid-term commitment (3-5 years) in terms of financial and human resources availability to assure continuous and reliable support to Affiliates.

- Demonstrated mid-term (3-5 years) capability to maintain sustainability for operation, training, licensing, waste management, etc.

- Continuous improvement plan in place to provide potential users with access to relevant technology, methodology and standards in the area(s) of the research reactor activities for which designation is requested.
Process for Designation (1/4)

- The designation process **will take into account and will be limited to the specific area(s) of RR(s) activities for which the designation is requested**.

- The **assessment of the ICERR candidate** will cover the **period of five (5) years** immediately preceding the date of the submission of the application.

- The **ICERR designation will last for a period of five (5) years** starting from the date of the designation.
The ICERR candidate will submit to the IAEA, through the Permanent Mission of the IAEA MS in which ICERR candidate is sited, a request for designation which shall include:

- A profile of the ICERR candidate, including a description of the relevant activities over the past five (5) years

- A self-assessment report prepared on the basis of the ICERR Eligibility and Designation criteria and of the Guidelines for Designation (see ICERR Scheme Terms of Reference)

- A statement in which the ICERR candidate ensures that the RR(s) and its AFs are safely and securely operated in accordance to national regulations, international standards and good practices, as applicable

- A statement clearly identifying the activity/activities for which the ICERR designation is requested

- A letter of endorsement of the request issued by the relevant Governmental Authority/Institution
Upon receipt of one or more requests, the IAEA will appoint a **Selection Committee** to review the request(s), including the self-assessment report(s), and to provide recommendations to the IAEA.

A **review mission at each ICERR candidate site** will be performed by designated members of a Selection Committee.

The designation process is expected to be completed within six (6) **months from the date of receipt of the request** for designation (unless delay is caused by the ICERR candidate in providing any requested additional information).

The IAEA will inform the ICERR candidate of the result of its decision based on the candidate’s self-assessment and on the recommendation of the Selection Committee.
In case of **positive outcome**, the ICERR status is awarded through an official communication from the IAEA which contains, inter alia:

- the undertakings of the ICERR and the IAEA
- the duration of the designation
- functions and clauses on termination, suspension, confidentiality, public information, liability, settlement of disputes, etc..

In case of a **negative outcome**, the IAEA will provide recommendations to the ICERR candidate to meet the criteria for designation and the time frame to implement them.
The ICERR concept was developed through several IAEA meetings

Criteria and process for ICERR’s designation were developed during a Consultancy Meeting attended by international experts representing institutions of different type (Universities, Research Centres, National Laboratories, etc.) and research reactor facilities of different size and utilization.

The ICERR scheme will contribute as an additional offer provided by the IAEA, different but complementary to others (e.g. Coordinated Research Projects, Technical Cooperation Projects, Joint Initiatives, Collaborating Centres, etc.) to support MSs engaged in nuclear R&D and capacity building programmes.
**Conclusion (2/2)**

*Time schedule for the implementation* of the ICERR scheme is expected to be the following:

- **Q4-2014/Q1-2015:** First ICERR candidate(s) application(s) received;
- **Q1-2015:** Appointment of IEXs and consultancy meeting for the evaluation of the ICERR candidature(s);
- **Q2-2015/Q3-2015:** Review mission(s) at each ICERR candidate’s site performed by the IEXs;
- **Q3-2015:** Designation process finalized by the IAEA;
- Designation of the ICERR status and award of an official plaque during the 59th IAEA General Conference (Sept. 2015) or the IAEA International RR Conference (16-20 Nov. 2015)

Thanks for the Attention!

International Conference on Research Reactors: Safe Management and Effective Utilization
16–20 November 2015, Vienna, Austria