**Technical Meeting on Modernization of**

**Instrumentation and Control of Nuclear Power**

**Plants Designed According to Earlier Standards:**

**Safety Considerations**

**IAEA Headquarters, Vienna, Austria**

and virtual participation via Cisco Webex

27–31 March 2023

Ref. No.: EVT2103182

**Supplementary Information Sheet**

**Introduction**

The arrangements for the *Technical Meeting on Modernization of Instrumentation and Control of Nuclear Power Plants Designed According to Earlier Standards: Safety Considerations* are described in the event information sheet (<https://www.iaea.org/sites/default/files/22/11/evt2103182_information_sheet.pdf>). This supplementary information sheet provides further detail regarding the content and format of the event.

**Content**

The objective of the technical meeting is to allow member states to exchange information regarding their experience in the modernisation of instrumentation and control systems at nuclear power plants and other civil nuclear facilities.

The sharing of experience on this topic will facilitate the development of a new IAEA publication (TECDOC) that may be used by member states to inform their own modernisation activities and to learn lessons from previous projects.

The focus of the meeting will be the safety considerations associated with I&C modernisation projects where standards and expectations for acceptance have changed since the original plant design. These projects may range from major control and protection system upgrades and replacements to the use of new smart devices. Consequently, in addition to those topics identified on the event information sheet, the safety aspects of the following modernisation themes will be considered:

* Requirements engineering and management
* I&C safety function categorisation and I&C SSC classification
* Overall I&C architecture (incl.)
  + Independence
  + Defence in depth and diversity
  + Redundancy
  + Deterministic behaviour
* System level design and development (incl.)
  + Platform
  + Application
  + Tools
* Installation, testing, commissioning and transition to operations
* Equipment environmental qualification
* Cyber and physical security
* Human factors engineering
* Provision and use of simulators for staff training
* Management, oversight and governance
* Safety case / justification
* Self-testing and diagnostic functions to replace manual surveillance testing
* Other safety considerations as identified by the participants

**Format**

The meeting will be held at the Vienna International Centre (VIC), where the IAEA’s Headquarters are located. Participants will also be able to join the meeting via Webex.

Participants are invited to share their experiences of instrumentation and control modernisation projects using presentations. Joint presentations from utilities, suppliers and regulators associated with specific projects are encouraged. Those wishing to provide presentations should follow the arrangements detailed on the information sheet on the event web page (<https://www.iaea.org/events/evt2103182>). The IAEA respectfully requests that presentations explicitly include the learning that will assist other member states in their undertaking of similar activities.

In addition to presentations the event will also include a number of panel sessions where participants will have the opportunity to ask questions of the presenters as well as sharing their own experience of modernisation projects in an open discussion. The panel sessions will be an opportunity to elaborate on specific aspects of participant’s experiences and will facilitate the capture of key learning points for the TECDOC to be developed following the event.

Participants are therefore requested to attend to both learn from other’s experiences and to also share their own.

Participants are invited to identify those specific topics they would like to see discussed at a panel session to the Scientific Secretary of the event (see contact details below) no later than 27 January 2023.

**IAEA Contacts**

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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.

**Event Web Page**

Please visit the following IAEA web page regularly for new information regarding this event: [www.iaea.org/events/EVT2103182](http://www.iaea.org/events/EVT2103182).