

# 2022 IAEA International Data Visualization Competition on Plant Life Management

Finalists to be presented during the

## **Fifth International Conference on Nuclear Power Plant Life Management (PLiM-5)**

Students and early career professionals under 35 years of age are invited to submit innovative and original data visualizations or poster designs that convey the current status, challenges, opportunities, or successes of ageing management and plant life management of operating nuclear power plants. The [IAEA Power Reactor Information System \(PRIS\)](#) database shall be the primary source of data presented. Finalists in the competition will be invited to participate in and present their designs at a side event during the IAEA's [Fifth International Conference on Nuclear Power Plant Life Management](#), to be held in Vienna, Austria, from 28 November to 2 December 2022.

The data visualization competition aims to promote creative thinking about, broaden engagement around and widen awareness of plant life management challenges and opportunities as well as highlight the diverse utility of the PRIS database.

### **Competition Guidelines**

Submission deadline: **Friday 30 September 2022, at 11:59 p.m., Vienna Time (CET)**

- Format: Electronic static or/and dynamic 'poster' or other forms of data visualization such as heat maps, animations, mobile applications for print and/or online deployment with diverse utility via social media and other outreach mechanisms
- The submission must be in a format easily read / run using common, web-based applications, platforms and devices—including mobile devices
- Optional: a 250 work (max) abstract or summary may be included in the submission.
- Limit: One entry per person
- Language: English. Please refer to the Terms and Conditions for details.

### **Prizes**

The finalists will receive financial support to help cover flight tickets, accommodation and daily living expenses to attend and present their designs at the PLiM-5 side event in Vienna, Austria (28 November – 2 December 2022). The posters will be posted on the IAEA Conference Website with a link on the IAEA Conference App for the duration of the Conference and included in the conference proceedings. Please see the Terms and Conditions for more information.

### **Timelines and Selection Process**

- Submission Deadline: **Friday 30 September 2022, at 11:59 p.m., Vienna Time (CET)**
- Valid submissions will be reviewed and scored by a selection committee comprised of IAEA staff and at least one independent, external PLiM expert.
- Submitted abstracts will be evaluated anonymously, without regard to nationality, gender, age or occupation of the applicant.
- Submissions will be scored on
  - Originality
  - Creativity of design and of the use of PRIS data
  - Effectiveness of communicating the current status, challenges, opportunities, or successes of ageing management and plant life management of operating nuclear power plants
- Announcement of finalists: No later than **21 October 2022**

For access to the PRIS database, please contact: [PrisAdmin@iaea.org](mailto:PrisAdmin@iaea.org)

For any additional queries, please contact [Plim-5@iaea.org](mailto:Plim-5@iaea.org)

## **Terms and Conditions**

1. The competition is open to nationals of all IAEA Member States.
2. Applicants must be under 35 years of age. Finalists will be requested to send their identification documents (e.g. copy of passport) to facilitate administrative arrangements and travel to Austria.
3. Only one submission is allowed per entrant. Once a design has been submitted, the applicant will not have the opportunity to revise it. Please carefully check before submitting the final copy and ensure that all supplementary information is correct.
4. All submissions must be an original work by the applicant. If text is included, it must be in the applicant's own words, except for quotations from published and unpublished sources, which must be clearly indicated and acknowledged as such. Citations must follow internationally recognized styles (Chicago, MLA, ACS, IEEE, NLM, Vancouver, AAA, APA, APSA, etc.). Applicants can, at any time, be requested to provide clarification of the source. Any content that can be identified as plagiarism will result in immediate disqualification.
5. The overall themes for PLIM-5 are as follows:
  - A. Approaches to Plant Life Management
    - Implementation of the lessons learned from the severe accident at the Fukushima Daiichi NPP and their implications for LTO;
    - Methodology and scope, terms and definitions for the development of PLiM and LTO programmes and their implementation;
    - Methodology for integrated plant assessments, including the condition of systems, structures and components;
    - Selection criteria for NPPs for LTO; and
    - New NPP design features that consider PLiM experiences and feedback.
  - B. Economics of Plant Life Management
    - Potential business opportunities and risks, including power uprating issues related to PLiM;
    - Cost-effective strategies for modernization and replacement/refurbishment of SSCs;
    - Economic analysis for decision making on LTO;
    - Cost-effective technologies/practices for maintenance, inspection and surveillance;
    - Supply chain health, equipment obsolescence and commercial grade dedication
    - Premature shutdown preparation strategy and procedures, including technical aspects;
    - Long term strategies for spent fuel storage (on-site) and waste management;
    - Replacement of large components (e.g. steam generators, reactor vessel heads and turbine generators);
    - Flexible operation in response to increased grid variability;
    - Innovative solutions that address LTO challenges and help ensure operational sustainability; and
    - NPP PLiM and the dawn of Integrated Energy Systems.
  - C. Ageing Management and Preparation of Long-Term Operation
    - Safety standards to support LTO;
    - Scoping and screening of SSCs for LTO;
    - Ageing management review;
    - Use of the experience gained from implementation of the International Generic Ageing Lessons Learned (IGALL) programme;
    - Development, implementation and improvement of effective ageing management programmes;
    - Revalidation of time-limited ageing analysis;
    - Technological obsolescence;
    - Research to support LTO and ageing management;
    - Inspection methodologies and strategies for significant components; and
    - In-service inspection and non-destructive examination.
  - D. Configuration and Modification Management for Safety Enhancement and Improved Reliability

- Safety standards to support LTO;
  - Scoping and screening of SSCs for LTO;
  - Ageing management review;
  - Use of the experience gained from implementation of the International Generic Ageing Lessons Learned (IGALL) programme;
  - Development, implementation and improvement of effective ageing management programmes;
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  - Technological obsolescence;
  - Research to support LTO and ageing management;
  - Inspection methodologies and strategies for significant components; and
  - In-service inspection and non-destructive examination.
- E. Stakeholder Engagement, Human Factors and Managerial Aspects
- Stakeholder engagement and public understanding;
  - Human resource development and workforce planning for LTO;
  - Knowledge management methods/processes to preserve plant history and experiences; and
  - Innovative NPP operational and business models.
- F. Regulatory Approaches to Ageing Management and Long-Term Operation
- Stakeholder engagement and public understanding;
  - Human resource development and workforce planning for LTO;
  - Knowledge management methods/processes to preserve plant history and experiences; and
  - Innovative NPP operational and business models.

More information and expected technical topics can be found on the [Conference Webpage](#)

6. The submission e-mail should:

- Be sent to [Plim-5@iaea.org](mailto:Plim-5@iaea.org)
- Contain “PLiM-5 Data Visualization”\_“applicant’s family name” in the subject line - e.g. PLiM-5 Data Visualization\_Smith
- Have the electronic ‘poster’ / file as an attachment
- Contain the following information in the body of the e-mail:
  1. Applicant’s first and last name as in the passport:
  2. Title (Mr/Ms):
  3. School/organization/affiliation:
  4. If a student, enrolled programme (bachelors, Masters, PhD)
  5. Country of passport:

8. Only entries submitted before **Friday, 30 September 2022**, at 11:59 p.m., Vienna Time (CET) will be considered for the competition.