

Improving Hiring and Staffing Flexibility Through Maintenance and Technical Training and Task Evaluations

Summary

EPRI's Common Initial Training (CIT) and Standardized Task Evaluation (STE) projects enhance hiring flexibility and staffing for maintenance and technical jobs in the energy sector.

Example – Member Application

Members of CIT and STE projects have realized cost savings and efficiency for training and qualifying maintenance, chemistry, and radiation protection personnel.

Background

Nuclear power plant operations rely on well-trained workers to ensure the safety of the workforce and the public, enable continued grid reliability, and promote asset protection. Additionally, various regulators implement 'training rules' to ensure training programs for key plant personnel are conducted in a systematic manner.

EPRI's CIT and STE projects consists of training programs and evaluation tools supporting chemistry, radiation protection, and maintenance technicians who will perform work at nuclear power plants and beyond. The products available through these projects meet nuclear training and accreditation expectations and are periodically reviewed to ensure applicability based on trends and operating experience.

EPRI's Role

The CIT and STE projects develop, maintain, and deliver training and evaluation products that are implemented through a collaborative network of industry stakeholders including nuclear utilities, workforce providers (e.g., vendor-suppliers, labor unions), training vendors, and industry oversight and support organizations.

Common Initial Training

The training content in the CIT program was developed

APPLICABILITY

All nuclear plants, workforce providers, and maintenance and technical staffing agencies

VALUE

Applying Common Initial Training and the Standardized Task Evaluation projects directly support hiring, staffing, and qualification needs while reducing site training burden and costs. Estimated savings per utility is directly based on application.

Typical single unit sites can save roughly **\$750k USD to \$1M USD annually** through the application of these two projects.

EPRI PROGRAM

Nuclear Training and Development

- 41.20.01: Common Initial Training (CIT)
- 41.20.02: Standardized Task Evaluations (STE)

to align with industry job and task information for maintenance, chemistry, and radiation protection technicians, and it was reviewed by industry stakeholders. The training content was implemented utilizing a modern approach to training with a focus on technical accuracy and the learner experience. Training materials are available to the learner using asynchronous methodologies and the learner is further supported by EPRI technical training instructors through scheduled office hours, computer chats, and one-on-one breakout sessions. In addition, site mentors are utilized to apply lessons and assist the learner complete dynamic learning activities.

The CIT curriculum is designed to permit organizations to hire staff and enroll this staff into flexible learning paths. This approach has demonstrated efficiency and flexibility



for hiring staff, starting technical training, enabling learners to advance through the program at various paces (based on their capabilities), pausing the training to support site activities and needs, and permitting resource sharing.

Development started in June of 2020 with the full content made available in 2025 for all three technical disciplines. To date, over 200 learners have completed learning paths with positive feedback from utilities through evaluating performance after finishing the training program.

Standardized Task Evaluations

The STE project was developed in the 1980s and is based on EPRI research on how to improve worker performance through the standardization of common tasks. Since then, members have implemented the STE program to efficiently ensure that workers possess the required knowledge and skills to perform common tasks before they arrive to a site. The library of maintenance and radiation protection STEs has nearly 100 common tasks. Each STE includes a task analysis, a knowledge examination, and a performance evaluation. To administer these, members must be an ac-

credited utility or complete a process call the Administration Protocol for Portable Practicals, or AP3. This process enables non-utility organizations to administer the knowledge examinations and performance evaluations while meeting industry standards. The results of the knowledge examination and performance evaluation are entered in the STE completion registry which contains over 50,000 records of individuals.

In 2024, STE members spearheaded a project to create chemistry STEs and digital instrumentation and controls STEs.

Value

These projects combine to support training and qualification of maintenance and technical in-house and supplemental staff. Members have realized cost savings and efficiency in the onboarding of staff.

CIT Value

- **Cost Savings** – Members have demonstrated time savings, reducing costs for learners and those that training staff would spend for equivalent training.

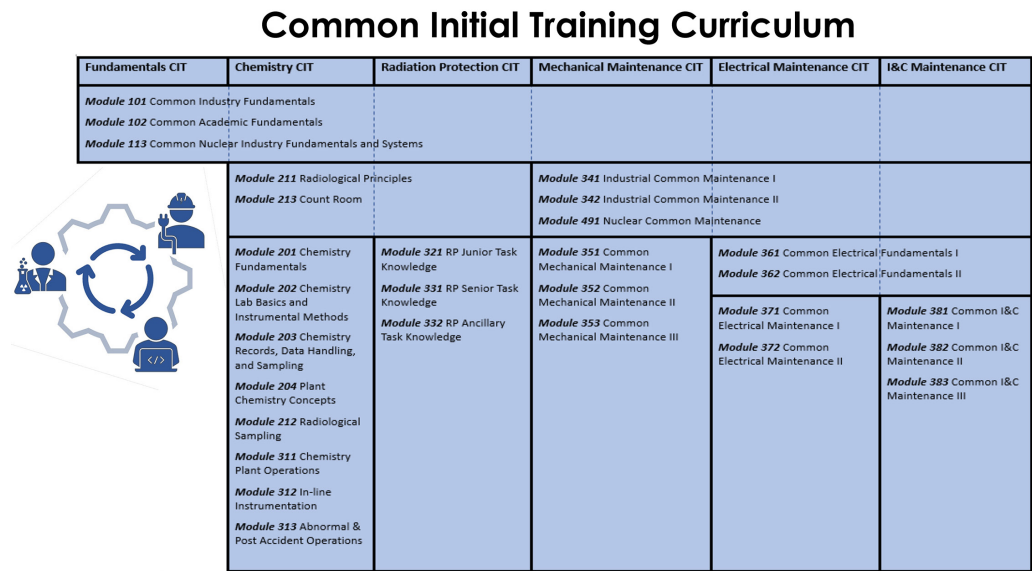


Figure 1. Common Initial Training Learning Paths Supporting Chemistry, RP, and Maintenance Technicians in the Energy Industry



- **Efficiency** – Common approach permits for a reduced duplication of effort across participants for oversight, maintenance, and program improvements.
- **Shared Accreditation** – CIT processes and content has been vetted for accreditation objectives and criteria allowing for a shared accreditation by program members.
- **Site Focus** – The common elements are taught by EPRI permitting site training staff to focus on site training needs and performance improvements.
- **Modern Learning** – A modern approach to learning is foundational to the CIT program, applying the science of learning techniques and technology.
- **Learner Experience** – Learners are able to engage with the training in their time and space, enabling learning from any location and at any time, and they are empowered to provide anytime feedback to improve their learning experience.

STE Value

- **Efficiency** – Workers go directly to the job and start work sooner vs. an onboarding process. STE common evaluation tools and completion registry are centralized online and user-friendly, providing simplified record-keeping for worker qualification.
- **Quality and Consistency** – Workforce readiness increases confidence in performing assigned jobs, and common examinations are used across the industry.
- **Portability** – Workers’ credentials are documented and verified in the STE registry.
- **Cost Savings** – Participants can realize significant reductions in training and processing costs, including those for training staff and resources.
- **Worker Performance** – STEs can improve worker performance, enhancing plant safety and investment protection.
- **Workforce Pipeline** – STEs address workforce pipeline issues by providing credentials to employ workers, especially RP techs.

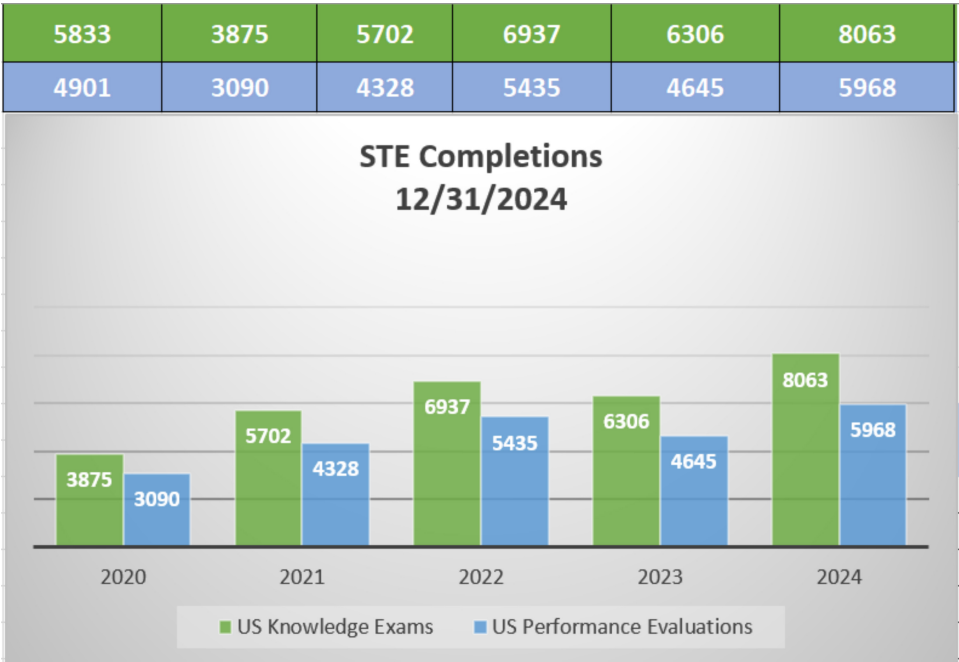


Figure 2. STE Completions from 2020 through 2024. Each exam and evaluation represent one individual who does not require duplicated training and qualifications

Resources

CIT Resources

- [3002030452](#), *Common Initial Training: Chemistry, Radiation Protection, Maintenance, and Fundamentals*

STE Resources

- [3002026623](#), *EPRI Standardized Task Evaluation Program Implementation Guide, Revision 2*
- [3002026573](#), *Standardized Task Evaluation Program: Administration Protocol for Portable Practicals (AP3) in Standardized Task Evaluations: Revision 3*
- [Standardized Task Evaluation \(STE\) Program Brochure](#)
- [EPRI Standardized Task Evaluation Program Video](#)
- [Administration Protocol for Portable Practicals \(AP3\) Introductory Video](#)

To support more effective technology transfer, EPRI is tracking implementation of key R&D activities.

Please access these links to provide input on your company's use of this particular research:

CIT: <https://www.surveymonkey.com/r/KYLDWXK>

STE: <https://www.surveymonkey.com/r/RP8MMH9>



Common Initial
Training



Standardized
Task Evaluation

Access additional Value Guides and examples of EPRI R&D application at:

<https://interactive.epri.com/nuclear-value/p/1>

- [3002029346](#), *Standardized Task Evaluation Program Enables Workforce Providers to Accelerate Qualification Efforts and Reduce Training Costs for Entergy and Other Utilities*
 - The use of STEs has reduced the workload for in-processing of supplemental personnel including for radiation protection and maintenance.
- [3002026026](#), *Tennessee Valley Authority Successfully Implements EPRI Radiation Protection STEs*
 - Improved efficiency and the resulting decrease in costs have helped make the EPRI Standardized Task Evaluation (STE) Program the primary method for evaluating supplemental radiation protection (RP) workers in the nuclear industry.
- [3002026025](#), *PSEG Incorporates EPRI's Standardized Task Evaluation Program into On-Boarding Process*
 - The Standardized Task Evaluation Program enables verification through the STE Completion Registry and PSEG can grant a full qualification without further site evaluation when a worker has proof of having passed the EPRI STE Industrial Rigging knowledge exam and performance evaluation.

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