

EMF-RF Training and Knowledge Transfer



Background

Electric grid operators around the world are facing multiple challenges stemming from the goal of a clean energy future and grid infrastructure changes to accommodate electric vehicle growth that require a more flexible and resilient grid. Addressing electric and magnetic fields (EMF) issues is a vital component of expeditious grid expansion since project cost and delays can affect timely implementation of vital new assets. In addition, employee issues such as Radio Frequency (RF) safety and interactions with medical devices must be addressed with knowledgeable and reliable information. However, electric companies are challenged with a high loss of institutional knowledge, including on EMF issues. This loss may lead to unnecessary work or errors, lost opportunities, poor customer relations, delayed or cancelled projects, expensive rerouting, or even costly litigation.

Since its founding in 1972, the EPRI Electric and Magnetic Field and Radiofrequency Fields Health Assessment and Safety Program (P60) remains one of a few research programs worldwide that is dedicated to advancing the science and tools for effective management of EMF/RF issues. This project will assist funders to address EMF issues using results from the EPRI research program, EPRI expertise, and practical experience.

Objectives

This project will provide virtual, instructor-led training and access to self-led training modules on a wide variety of topics

- Up to five hours of instructor-led, virtual training
- Annual subscription to the EPRI | U P60 self-led Training Modules for the given membership year
- Benefits:
 - Enhanced knowledge of EMF issues to facilitate better interactions with members of the public for broad staff training (no limit on number of company participants)
 - Valuable EMF knowledge to proactively mitigate EMF concerns and address employee questions.

that are essential for new and/or existing EMF/RF issue managers and other staff within a company (with no limit on the number of company participants). This training and knowledge transfer offering will enable companies to access experts and to develop deployable in-house expertise.

New Learnings

Application of the knowledge delivered through the webinars is intended to inform worker protection programs and decisions regarding installation of powerlines and substations, leading to enhanced employee safety as well as demonstrating company commitment to research on EMF issues.

The two-way interaction with funders of this project will provide an opportunity for EPRI to better evaluate and address specific regional issues facing an electric company, including regulatory and site-specific concerns. These learnings are expected to inform future P60 research and new learnings can be shared in collaboration with other EPRI members around the world.

Benefits

The training modules will focus on basic principles necessary for addressing technical matters and for managing EMF inquiries from the workforce or the public. Course subject matter materials and training represent the state-of-the-science of EMF knowledge that are relevant to the electric power industry. This EMF information and knowledge transfer

offering is based on the latest research that EPRI is uniquely qualified to provide. Benefits of participating in this project include:

- Reduction of EMF training time
- Improvement of relations with members of the public
- Enhancement of employee confidence and knowledge
- More informed decisions on design of transmission and distribution lines to proactively mitigate EMF concerns
- Maintain current knowledge of technical matters

Project Approach and Summary

This supplemental is comprised of up to five hours of instructor-led, virtual training on subjects that the funder can select (see representative topics below). Training on customized topics may be conducted, depending on availability of time and funding. Customized training will need to be discussed with the EPRI Technical Contact.

Webinar topics (select up to four topics to be delivered during the webinars, other topics can be discussed with EPRI):

- Overview of Health Effects – Biology and Epidemiology
- EMF Basics – physics, calculations, and measurements
- Exposure Guidelines – limits and basis
- EMF Mitigation Options
- Exposure Assessments and Case Studies
- RF Safety awareness employee program elements
- 5G technology and potential exposure issues
- Considerations for an employee medical device policy

In addition, funders of this project will also have access to the EPRI | U P60 self-led Training Modules that are available during the funding year. Examples include:

- [Epidemiology 101 – Part 1](#)
- [Epidemiology 101 – Part 2](#)
- [Optimal Phasing for EMF Mitigation](#)
- [NESC 5mA Rule – Overview and Application](#)

New modules will be added on an ongoing basis, increasing the amount of training materials for members to access.

Deliverables

- Up to five hours of instructor-led, virtual training
- Funding company will have access to the EPRI | U, self-

led training modules in P60 during the calendar year(s) they fund the project. If the supplemental project is not renewed each year, access to pre-existing and new training materials will no longer be granted.

Price of Project

Project cost is based on participation status in Program 60. This project is eligible for Self-Directed Funds or co-funding.

P60 Members Full/Partial	\$30k/per year
Non-Members	\$45k/per year

Project Status and Schedule

The virtual seminars will take place when all parties find a mutually agreeable date/time. EPRI will deliver a limited number of seminars during each calendar year.

Who Should Join

Any funders needing a basic or a refresher course on EMF would benefit from this supplemental offering. Ideal end-users are issue managers, industrial hygienists, engineers, corporate attorneys, risk managers, human resource, and land acquisition staff interested in effectively addressing EMF issues.

Contact Information

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (askepri@epri.com).

Technical Contact

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