

## PREMS II USERS GROUP

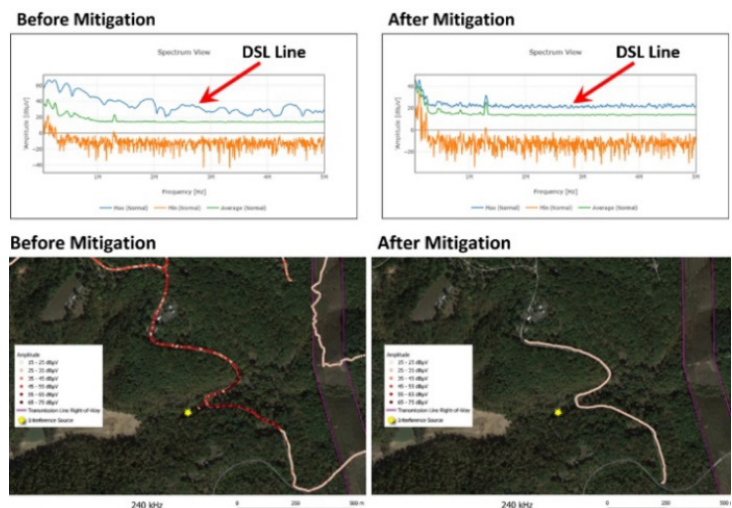


### PROJECT HIGHLIGHTS

- Bi-annual collaboration webcasts/ in-person meetings for Users to share individual findings and use techniques.
- User-informed PREMS II Software specifications and updates.
- Establishment of waveform signatures database to help identify issues.
- Collaborate with User Group members on best practices and use case findings.

### Background, Objectives, and New Learnings

The first generation Portable Radiated Emission Measurement System was a wheeled indoor unit developed in the early 2000s used to find anomalous sources of radiated emissions and signal interference within buildings. Leveraging our success with an indoor and outdoor robotic platform, and EPRI's Power Quality Program (Program 1) developed the Portable Radiated Emissions Measurement System (PREMS II) system to 'make the invisible, visible' with regards to anomalous frequency issues. Utility infrastructure components or other service provider's equipment may become damaged or degraded—a condition that can cause issues that may go undetected under normal visual inspections. Utilities specifically requested to have a mobile sensor pack and data monitoring system that could be easily deployed to scan for anomalous radiated emission issues that might be from offending or failing customer or utility grid equipment. Utilities desired the ability to easily scan their electric grid to help find these issues and solve related problems—sometimes before equipment or component failure has even occurred. The PREMS II tool allows users to do just that by giving them the ability to scan various sections of their grids and help locate areas efficiently and quickly that need further inspection or attention.



Current PREMS II Users have already proven its benefits by finding issues on their respective grids that would have gone unnoticed prior to an anomalous operation or failure event. Several cases have proven this to be true. In one case, the PREMS II system identified the source of a radio frequency interference issue in a day and a half that had eluded the utility and DSL internet provider and had prevented internet access for many customers for seven months.

As the electric grid changes with the increase of different generation sources and with additional connected loads, utilities need a tool that allows them to respond quickly to these changes and complaints on their grid. The PREMS II system has already proven that it can meet these needs. To help keep pace with these changes going into the future, the PREMS II Users Group provides the necessary support not only to help keep the PREMS II system up to date but also to help the PREMS II User Teams be successful with these inspections.

## Benefits

Users will have access to the latest operating software to better enable them to meet their customers' unique RFI issues, and thereby contribute to enhanced customer satisfaction.

Some users are finding unique applications of their PREMS II systems; this Users Group will allow all users to benefit from these learnings and increase their knowledge of using the PREMS II system to benefit their customers.

Users Group members will have the ability to inform future enhancements as part of a group collaboration process.

Users will also benefit from customer support, via email or phone, with their PREMS II systems for cases where they need assistance in solving unique issues that they may experience.

## Project Approach and Summary

This Users Group is organized to provide enhancement, maintenance, and support of the PREMS II systems and their users—providing them with the tools necessary to help them provide benefit to their utility customers.

## Deliverables

- Create a database of waveform signatures with their respective sources that will be available to users.
- Work with members to refine software improvements for the system.
- Research information to help users with ways to use the PREMS to measure unique phenomenon.
- Quarterly Collaboration Webcast meetings for Users to share individual finding and use techniques.
- Provide system support via telephone and email.

## Price of Project

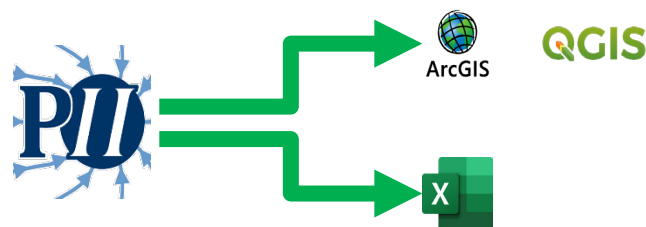
The price for this User Group is \$10,000. This project qualifies for use of Self-Directed Funds (SDF)

## Project Status and Schedule

This project is an annual user's group to provide continuous PREMS support and knowledge transfer. Participants can join at any time.

## Who Should Join

Users of the PREMS II system, others that are interested in RFI investigations, and those that are asked to conduct searches for sources of RFI that are impacting their customers.



## Contact Information

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

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