



Assessment of Anthraquinone (AQ) Wood Pole Treatment					
Objective	A small-scale pilot study has indicated that AQ has the potential to diminish wood pole impacts from woodpeckers. This study aims to investigate how treaters could combine AQ with existing pole treatments. The research would subsequently plan to fill knowledge gaps regarding the engineering and environmental characteristics of AQ when applied to treated wood poles and its compatibility with preservative treatment processes and performance.				
Value	Woodpeckers cause severe damage to utility poles resulting in significant annual economic losses to utility companies. This project plans to subject poles and sample materials treated with AQ to a multitude of tests to understand mechanical performance, environmental implications, and potential health risks. The outcome of the research could enable utilities to develop specifications, inspection programs, environmental programs, and end-of-life plans for various types of treated pole.				
Schedule	60 months	Price	\$150k, SDF qualifies		
Contact	Steven Dulin; (980) 867-8183; <u>sdulin@epri.com</u> Product ID: 3002030295 <u>Click here for two-page summary of project</u>			Announced	

Distribution Asset Inspection and Maintenance Maturity Assessment

Objective	The objective of this project is to work with project participants to further develop asset inspection and maintenance maturity models to create and apply an assessment framework that would enable utilities to assess their existing capabilities relative to those needed to achieve future goals and relative to industry peers.				
Value	Member companies can leverage the assessments of their asset inspection and maintenance programs to compare with industry leading practices, identify areas for improvement, and inform practices to help achieve corporate objectives related to reliability, cost, risk, and safety.				
Schedule	12 months	Price	\$15k, SDF qualifies		
Contact	John Tripolitis; <u>(</u> 610) 790-7487; <u>jtripolitis@epri.com</u> Product ID: 3002030241 Click here for two-page summary of project			Announced	





Distribution Solid-State Transformers: Applications and Laboratory Evaluation

Objective	In 2023, EPRI evaluated a novel solid state transformer (SST) design that could replace existing oil filled distribution transformers that has other built in while also having voltage regulation capabilities. This project intends to continue exploration of potential applications and challenges of using this solid-state transformer, and potentially other designs, on the distribution grid through lab testing of device performance for different use cases and applications.				
Value	Participant benefits include understanding how SSTs perform for specific applications, the development of specifications to consider when purchasing devices, and accelerating the evolution of SSTs				
Schedule	36 months	Price	\$150,000 for companies with distribution throughput greater than 50,000 GWh, \$90,000 for all otherSDF qualifies	Announced	
Contact	Jason Anderson; (704) 595-2857; <u>janderson@epri.com</u> Product ID: 3002030242 <u>Click here for two-page summary of project</u>				

Conductor Burndowns and Wildfire Mitigation when Using Compact Single-Phase Reclosers

Price



The purpose of this project is to understand the impacts of using single-phase reclosers on downstream taps and its implications for downed conductors and wildfire ignitions



Schedule

Benefits from this project include increased reliability and safety by reducing the likelihood of energized downed conductors and wildfire ignitions. Benefits also include an increased understanding of the impact on conductor burndown when using compact single-phase reclosers and how to reduce the likelihood of wildfire ignitions due to reclosing attempts.



\$85,000 for companies with distribution throughput greater than 30,000 GWh, \$65,000 for all other, SDF qualifies

Announced







Alternative Technologies for Recloser Backup Power







Contact

Jason Anderson; (704) 595-2857; janderson@epri.com Product ID: 3002020031 Click here for two-page summary of project

Distribution Sensor Life-Cycle Testing



This project plans to perform laboratory testing to understand the life-cycle characteristics of distribution sensor systems, along with a systematic teardown to determine potential degradation mechanisms. As sensing is more widely deployed on distribution systems, this research will help electric companies make better informed specification and selection decisions.



Electric companies may benefit from this research through enhanced knowledge of sensor functionality and aging, resulting in more informed decisions related to the acquisition, operation, maintenance, and disposal of distribution sensor systems. Electric companies can apply the results to promote increased visibility on the condition of the distribution grid.



12 months

Price

\$85k + \$20k per additional sensor, SDF qualifies



Contact

Jason Anderson; (704) 595-2857; janderson@epri.com Product ID: 3002030222 Click here for two-page summary of project

Drone Dock Lab Testing and Utility Applications





24 months

Price

\$60k, SDF qualifies







Contact

Dexter Lewis; (205) 332-5963; <u>dlewis@epri.com</u> Product ID: 3002026330 Click here for two-page summary of project

Grid Modernization Strategic Roadmapping



Developing a strategy for grid modernization is complicated. Investments are significant and must be sequenced over several years to add new capabilities. EPRI has developed a structured methodology and a set of tools to help utilities navigate this process. Through this project, EPRI will apply this approach with utilities to help them develop a detailed strategic roadmap, or review an existing roadmap, to help the utility accomplish desired objectives.



A utility may save time and money by leveraging EPRI's experience with other utilities, its industry expertise, and its world-class subject matter experts to develop a strategic roadmap that meets its specific needs. Each participant will receive a company-specific report documenting the results of the grid modernization roadmap development or assessment.



12-18 months



Public for Purchase, SDF qualifies





Bruce Rogers; (423) 341-4606; brogers@epri.com

Underground Structure Monitoring Guiding Alarm Settings and Monitor Deployment



As underground cables and components degrade, they can generate a variety of gases. These gases may be combustible and can build up and lead to an explosive event which can endanger the public, utility workers, and damage equipment. This research seeks to understand the expected movement, migration, pocketing, and dissipation characteristics of selected gases within an underground structure to inform detection sensor placement, sensitivities, and alarm settings.



This research is expected to increase industry understanding of combustible gas behavior in underground structures. Findings from this research will enable utilities to better leverage underground structure monitoring technologies to identify precursor conditions of underground structure events, enabling them to respond and minimize or prevent these events from occurring, and increase public safety.





Schedule	15 months	Price	\$50k, SDF qualifies		
Contact	Alex Bologna; (980) 495-7428; Product ID: 3002022789 <u>Click here for two-page summa</u>	ologna; (980) 495-7428; <u>abologna@epri.com</u> ct ID: 3002022789 ere for two-page summary of project			
Overhe	ad Distribution Struct	ure Te	esting		
Objective	The objective of full-scale overhead distribution structure testing is to collect performance data for a member, such as failure modes and fallen branch capture rates, and identify approaches to increase structural strength and reduce restoration time and frequency.				
Value	Because utilities provide the test materials and designs to be tested, engineers can directly apply the test results to improve structure resiliency through enhancements to construction standards or component selection.				
Schedule	3-6 months, depending on test requirements	Price	Varies based on test requirements, SDF qualifies		
Contact	Steven Dulin; (980) 867-8183; <u>sdulin@epri.com</u> <u>Click here to learn more</u>			Ongoing	

Terrestrial Imagery

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Objective	¥ 111 11	This research aims to evaluate and quantify the performance of vehicle-mounted data collection systems for distribution inspection. The research will begin with the identification of distribution use cases, then will transition into utility hosted pilot studies.				
Value	~~	This class of technology has potential to be a low-cost screening and risk mitigation tool that is easily deployed and could require minimal resources to implement. These technologies could increase a utility's geospatial situational awareness to conditionally manage overhead distribution assets which could improve reliability for end-users and the public.				
Schedule		TBD	Price	TBD	Beginning	





Dexter Lewis; (205) 332-5963; dlewis@epri.com

Improving Grid Safety and Resilience to Mitigate Ignition Incident and Fire Risks

Objective

The objective of this project is to extend EPRI's R&D on wildfire resilience by evaluating ignition reduction technologies, hardening of distribution assets and components, sensing and situational awareness systems, and fire protection technologies.



Benefits include new system hardening strategies and designs that reduce live downed conductor incidents, documentation of vegetation management methods that decrease line contacts and fire risk, increased understanding of the longevity of covered conductor designs, new strategies that reduce downed conductor incidents and enable enhanced public safety, increased understanding of the role of remote sensing and GIS tools to evaluate vegetation stress, fuel load, and fire risk near utility assets, and enhanced public and worker safety.

24 m

24 months

>75,000 GWh annual distribution or 15,000 MW peak transmission, \$90k. All others, \$50k. SDF qualifies

Underway					

Contact

chedule

Doug Dorr; (407) 968-3010; <u>ddorr@epri.com</u> Product ID: 3002026177 <u>Click here for two-page summary of document</u>

Evaluating Remote Inspection Technologies for Underground Structures

Price



This project is aimed at providing the industry with information to: 1) understand and compare the technologies that can be leveraged to remotely ascertain conditions in UG structures, including technology for creating a visual capture of the UG distribution system, 2) explore how the information captured by different technologies can be applied and the potential benefits and limitations associated with each approach and 3) understand the potential to remove workers from hazards while still performing necessary inspection and assessment activities.







Vehicle Impacts on Utility Poles					
Objective	The objective of this project is to better understand how different pole materials respond during a motor vehicle collision. The project will also test commercially available barrier options for protecting poles from vehicle collisions to assess their affect on pole performance.				
Value	The information generated by this project may help utilities better understand the risks associated with using different pole materials and identify options to mitigate those risks.				
Schedule	20 months	Price	\$45k, SDF qualifies		
Contact	Steven Dulin; (980) 867-8183; <u>sdulin@epri.com</u> Product ID: 3002025812 <u>Click here for two-page summary of document</u>			Underway	