

2023 Workshop on SF₆ Emission Reductions and Alternatives

July 25–26 | Salt Lake City, Utah



SF₆ & ALTERNATIVES
COALITION



PRODUCT EDUCATION SESSIONS

COME LEARN ABOUT GE'S SF₆-FREE ROADMAP

Over thirty leading utilities have chosen GE's g³ solution for SF₆-FREE projects including more than 200 bays of GIS, over 100 live tank circuit breakers and over 5 kilometers of GIL with installations thus far representing gas mass reduction of >1,000,000 tons of CO₂e. This presentation will provide an update on GE's SF₆ alternative, g³, and its comparison to SF₆ for use in high voltage circuit breakers covering design, performance and maintenance. GE's g³ development roadmap will be discussed with plans for products up to 550kV including dead tank circuit breakers.

JOIN DILO DIRECT AS WE SHOWCASE EXPERT-LEVEL SF₆ GAS WEIGHT TRACKING AND REPORTING PROCESSES

We will review a company's complete life cycle from gas-in to gas-out as we bring new SF₆ breakers into our installed base and expire older-generation equipment. Learn how to track and manage your SF₆ inventory like the experts - DILO Direct!

Learning Outcomes:

- Recommendations for new GIE specifications (*beginning of life cycle*)
- GIE maintenance, how to recycle SF₆ during general maintenance of the GIE (*during the life cycle*)
- Essential considerations for gas recovery and disposal when you retire GIE (*end of life cycle*)

Did you know a company can access live SF₆ inventory data, and track changes on the go, to meet state and federal reporting requirements? End the stress of SF₆ reporting once and for all and learn the Life-Hack of using Direct-Track.

PRODUCT EDUCATION SESSIONS, CONTINUED

AT SCHNEIDER ELECTRIC, WE ARE RETHINKING GAS INSULATED SWITCHGEAR

For years, SF₆ gas has been the preferred insulation material in medium voltage systems due to its insulating and current breaking properties in a compact footprint. As potential drawbacks to SF₆ gas have been discovered, Schneider Electric has continuously evolved its GIS products with sustainability in mind, implementing risk-mitigating technologies and services to support our customers from commissioning to recapture.

As evidence of our commitment to sustainability, Schneider Electric is already driving towards a SF₆-free future with its Pure Air Technology. Pure Air is a combination of well-researched compressed air and vacuum switching technology, making it as reliable, available, and effective as SF₆ gas insulation with significantly less CO₂ impact.

Come learn about how Schneider Electric is leading innovation in switchgear spaces, utilizing risk-mitigating technologies today while we drive towards a more sustainable future with Pure Air technology.

THE RH SYSTEMS MODEL 973-SF6 ANALYZER

Learn about the evolution of chilled mirror technology to measure dew point and SF₆ purity from laboratory beginnings into a rugged field instrument. The RH Systems Model 973-SF₆ Analyzer was specifically designed to measure humidity and SF₆ purity in gas insulated switchgear systems. One of the first instruments to feature gas capture and pump-back capability, our technology performs high accuracy measurements and is commonly referred to as the “argument settler” when crews have issues with other test sets having non-repeatable or questionable measurements. We will explain how the ‘ice test’ can be used in the field to verify calibrated accuracy, and thereby minimize calibration times and trips to a lab. Presented by Bob Hardy, founder and CTO of RH Systems, Gilbert, AZ, and Participant in CIGRE, IEC and IEEE groups on SF₆ measurement standards.

Headquartered in Phoenix, AZ, RH Systems operates one of the most accurate moisture calibration labs in the country – certified to NVLAP lab code – and also produces high precision moisture generators to support its premium SF₆ quality analyzer. RH knows moisture! RH systems celebrates 25 years in business!

G&W ELECTRIC SPECIALIZES IN SOLUTIONS FOR UNIQUE AND CRITICAL APPLICATIONS

G&W Electric provides a wide range of products which utilize SF₆-alternative technologies for load and fault interrupting switchgear, reclosers, current limiting system protection, power grid automation, high accuracy sensors, and cable accessories. G&W Electric is known for specializing in solutions for unique and critical applications. This presentation will discuss some of these applications, including the new Viper-HV which is the world’s first high-voltage (72.5kV) pole top recloser that provides reliable overcurrent protection on sub-transmission lines without the cost of a substation.

PRODUCT EDUCATION SESSIONS, CONTINUED

S&C ELECTRIC IS REDUCING SF₆ EMISSIONS RISK WITH MEDIUM VOLTAGE SWITCHGEAR

Medium voltage power systems are critical to delivering the reliability needed for the power grid as utilities support an acceleration of the energy transition. At the same time, utilities are actively seeking solutions to reduce emissions risk associated with SF₆ equipment used on medium voltage power systems. The complexity associated with reducing emissions risk is significant considering the requirements for medium-voltage switchgear to function effectively within the power system, including ratings, functionality, and constraints on available physical space. This presentation will review technologies and other solutions to help reduce emissions risk while still delivering the power reliability that consumers of electric power need.

MEPPI'S COMPREHENSIVE APPROACH FOR SWITCHGEAR WITH ZERO GLOBAL WARMING POTENTIAL

Mitsubishi Electric Power Products, Inc. will be sharing a comprehensive approach for switchgear with zero global warming potential, including:

- Roadmap of solutions to address typical Engineering and Project requirements
- Important changes to Operations & Maintenance when using vacuum and dry air
- Lifecycle considerations for Environmental Compliance
- Procurement and Supply Chain considerations

HITACHI ENERGY'S ECONIQ™ HIGH-VOLTAGE TECHNOLOGY AND INNOVATION: OUR PROMISE TOWARDS A SUSTAINABLE ENERGY FUTURE FOR ALL

Our introduction to the EconiQ portfolio of products will begin by defining our technology and its technical merits. The presentation will walk through the lifetime of our EconiQ products and provide guidance regarding product maintenance, gas handling and the associated tools available. We will conclude with a discussion of our product roadmap and coming product launches, with a focus on dead tank circuit breakers for the North American market.