

2017 IEEE PES SUBSTATIONS COMMITTEE

TECH TOURS - Richmond

TUESDAY, MAY 9TH (2 TOURS IN ONE DAY)

TECH TOUR 1A – REAL TIME DIGITAL SIMULATOR LAB

1:00pm—2:30pm

Dominion's Real-time Digital Simulator laboratory has state of the art equipment and technology to support Dominion's Electric Transmission & Distribution grid operations, event analyses, and technology evaluations. The RTDS simulation equipment allows the capability to model and solve complex issues experienced on the grid, such as blackstart dynamic simulations and operator feedback, Ferroresonance, harmonic propagation, and FACTS device coordination.



Added to the modeling aspects is the capability to perform hardware-in-the-loop (HIL) studies with actual Transmission & Distribution substation and field equipment, including protective relays, PMUs, meters, inverters, and large control systems for FACTS devices. The HIL capabilities allow engineers, operators, and technicians the ability to get hands on with field equipment in a lab environment, evaluate the response and performance of the devices, and train incoming personnel on the complexities of the equipment and control systems in a safe and controlled environment.



Once this tour is completed (2:30pm), the bus will take everyone to Stone Brewery for part two of the day's events. However, if you do not wish to participate in the Stone Brewery Tour, just stay on the bus at the Brewery and once everyone else has disembarked, it will take you back to the Omni Richmond Hotel.

Tour 1A Details:

Tour Starting Point: Omni Richmond Hotel
Tour Ending Point: Omni Richmond Hotel
via Stone Brewery
Duration: 1 ½ Hours

TECH TOUR 1B – STONE BREWERY TOUR

2:30pm—5:45pm



Stone Brewing's brand-new Richmond brewery is now open for brewery tours. As your expert guide (aka Indoctrination Specialist) takes you through the heart of our brewing facility in Richmond, you'll learn all about the brewing process & craft beer culture. Tours last approximately 45 minutes and are followed by a guided tasting of the brewery's phenomenal beers.

If you are only joining Tech Tour 1B, please head straight to Stone Brewery as transportation will only be departing from the Lab; simply take an Uber or taxi directly to the brewery and meet us there.

Although Tech Tour 1B ends at 5:30 pm, with the bus departing the brewery for the Omni Richmond Hotel, you are free to stay longer and enjoy the facilities and libations. With the brewery just a few miles away from the hotel, you can easily utilize Uber or a taxi for your return to the hotel.

Tour 1B Details:

Tour Starting Point: Dominion's RTDS Lab
Tour Ending Point: Omni Richmond Hotel
Duration: 3 ¼ Hours

Combined Tour 1A & 1B Details:

Tour Starting Point: Omni Richmond Hotel
Tour Ending Point: Omni Richmond Hotel
Duration: 4 ¾ Hours



WEDNESDAY, MAY 10TH

TECH TOUR 2 – DOMINION SAFETY & TRAINING CENTER

12:30pm-4:45pm

PPE Requirements:

- ✓ Closed-toed shoes (no sandals or high heels)
- ✓ •Other PPE will be provided locally, if deemed necessary

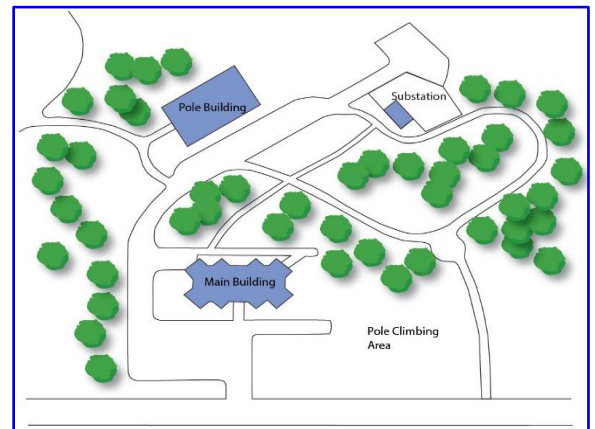
Lunch is included!

Dominion’s Electric Safety & Training Center, located in Chester, Virginia, is dedicated to teaching and promoting safety-first work habits and procedures.

The various simulated work environments, from substations and switchyards to protection and control and operator areas, provide a near identical to real life training environment for employees, contractors, first responders, and others to learn and practice safety-minded electric utility operations.

Some of the training simulation areas you will visit at the Dominion Safety & Training Center include:

- Relay control room
- Switch operation
- Substation training
- Electrical Equipment
- Physical security
- Mobile GIS
- Indoor Breakers area



Details:

Tour Starting Point: Omni Richmond Hotel
Tour Ending Point: Omni Richmond Hotel
Duration: 4 ¼ Hours

THURSDAY, MAY 11TH

TECH TOUR 3 – K6 IEEE GIS USERS MEETING

8:30am-5:00pm

Dominion Virginia Power 500KV GIS and 230KV GIB Substation

PPE Requirements:

- ✓ Sturdy, closed-toed shoes with a defined heel (no sandals or high heels)
- ✓ •Other PPE will be provided locally
- ✓ Visitors will not be allowed to bring electronic equipment into substation, including cell phones. (Dominion reserves the right to deny access to individuals without cause).



For those interested, a tour of a Dominion 500,000-volt substation will be available on Thursday beginning at 08:30 from the Omni Hotel in Richmond. There will be a two-hour bus ride to the substation located in Northern Virginia. The substation tour will provide a visual opportunity to see Dominion's 500KV GIS from Mitsubishi and a 230KV GIB from Siemens. Joining the tour will be employees from both suppliers to entertain equipment questions. We are estimating a substation departure of 15:00 returning to Richmond. More details are to follow as logistics are confirmed.

Per Dominion's security requirements you will see those items below to be provided in advance by each attendee.

- Full Name
- Agency
- City, State, Country of Residence
- Government issued identification upon arrival (if U.S. Citizen)
- Passport Number and Expiration Date to be provided upon arrival (if not US Citizen)

Please note that an early RSVP will be required, as space on this tour is limited. All attendees must pre-register through 123Signup Registration.

Contact:
David K Mitchell
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Details:

Tour Starting Point: Omni Richmond Hotel (2-hour Bus Ride to and from Substation)
Tour Ending Point: Omni Richmond Hotel
Duration: 8 ½ Hours