



**IEEE Vehicular Technology Society
Philadelphia Chapter**



April 29, 2024, Meeting Announcement

Topic: Electrical Substation Battery Systems

Sponsors: IEEE Vehicular Technology Society (VTS) Philadelphia Chapter

Speakers: John Kim, Director, Industrial & Utilities, EnerSys (ENS)

Meeting date/time: Monday, April 29, 2023, 12:00 pm to 1:00 pm (Daylight Savings Time)

Location: *Virtual meeting* link posted on IEEE vTools prior to the meeting.

Cost of meeting: There is no charge for meeting attendance, only for PDH certificates.

Reservations: **Attendees are required to register at:** <https://events.vtools.ieee.org/m/417421>

A valid email address must be provided in order to receive the link for the meeting. If you have any questions, please contact Brandon Swartley at brandon.swartley@ieee.org.

Professional Development Hours: Attendees may apply for 1.0 PDH provided through the IEEE Certificates Program, accepted in all states. Send \$5.00 (USD) payment to Brandon Swartley via Zelle at brandon.swartley@ieee.org and complete online evaluation at <https://r2.ieee.org/philadelphia-vts/forms/> Evaluation form must be completed and payment received within one week to receive PDH certificate.

Abstract: This presentation discusses technical aspects of 125 V dc battery systems used in electrical substations. Utility and traction power substations typically use 125 V dc battery systems to provide uninterrupted backup power to protective relay systems, switchgear controls, and switchyard equipment. Batteries are selected based on owners' preferences and applications. They are sized based on the anticipated dc load profile upon a loss of power. Load profiles often include first minute equipment operation, an 8-hour loss of power, and expected switching operations to restore power. IEEE 485 is a recommended practice for sizing lead-acid batteries for stationary applications. Mr. John Kim will give a presentation on the history of batteries used in substations and today's latest battery technologies.

Agenda:

- History of substation batteries
- Today's latest battery technology
- Battery and charger selection

Speaker: John Kim has been in the energy storage industry for more than 35 years and is currently working as the Director of Industrial & Utility markets at EnerSys. He received his Bachelor of Science degree in Materials Engineering and his Master of Science in Engineering Management from Drexel University in Philadelphia, PA. John's background includes Engineering and Technical Marketing. He is knowledgeable in energy storage systems selection, specification writing, maintenance, and troubleshooting. John is an active member of the Institute of Electrical and Electronics Engineers (IEEE) standards committee and a member of Battcon's Technical Committee. He wrote numerous papers and presented at various industry-related conferences over the years.

IEEE VTS Philadelphia Chapter Officers:

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