Hi LiNE ENGINEERING
a GDS Associates Company

2024 Electric Vehicle (EV) Webinar Series

Hi-Line is offering the following **EV-related webinars** for **2024**.

Each webinar consists of one hour of instruction and a thirty-minute question and answer session. Most presentations will be in PowerPoint format with presentation handouts, although more extensive materials may be available for some of the sessions.

All webinars in this series will begin at 1:00pm Central Time.

January 23	Introduction to EV Vehicles

This webinar will discuss the various manufacturers and model options. This will include discussions on charger types, plug options, and communications with the vehicle charging system. Larger EV vehicles such as school buses and trucks will also be addressed. The webinar will cover vehicle-to-grid, or V2G technology. Impacts to household wiring will be discussed and how it will impact customer decisions for Level 1 or Level 2 chargers.

February 6	Charging Profiles

This webinar will move to charging profiles of EV vehicles. Level 1 has a slower charge rate, and the shape of the energy consumption is different from Level 2 and Level 3 chargers. The discussion will include how the state-of-charge impacts charging profiles. Case studies will be presented showing the combination of different profiles served by a single transformer and/or feeder. Level 2 business charging groups will be presented to determine impacts to transformers and feeders. Level 3 charging will also be presented.

February 27	Projecting EV Loads in the Future

To plan for the orderly growth due to EV loads, it is necessary to determine existing EV loads and project adoption rates by consumers. Methods will be presented to determine the existing number of registered EV within a given community. Sales projections from national and regional data sets can be made to help determine short term and long-term saturation levels. Further, the existing penetration of hybrid vehicles can be leveraged for predicting PEV penetrations. The growth of EV vehicles within a community is impacted by the availability of public charging availability. Growth in public charging will be discussed to determine how this hinders or accelerates growth in EV.

March 26	EV Impacts to the Distribution Grid

Adding hundreds of EV vehicles to a substation area will increase system peaks. This webinar will investigate resources to determine increases in substation demands. Modeling techniques will be explored for projecting EV loads into load flow programs to explore various growth options. The webinar will also discuss methods for sizing transformers serving residential homes with EV chargers. New planned subdivisions with potential for chargers in each garage will be discussed in terms of designing service to the development.

April 16	Retail Rate Strategies for EV Loads

This webinar will investigate current strategies used by utilities for EV loads. Often utilities employ Time of Use (TOU) rates to influence charging patterns. The rate structure will be explored along with best practices. For public charging, retail rates can be applied to recognize the large demand component coupled with correlation with solar resources.

May 21	Load Management – Part One

Innovations in load management technologies, dynamic energy pricing structures, and energy storage technologies are helping to minimize overall strain on the grid, reduce the need for grid hardware upgrades, and defray demand charge costs for charging network operators and site hosts. This webinar will address both active and passive load control options.

June 4	Load Management – Part Two

This webinar will be an extension of the prior webinar and will include case studies and applications available and used by utilities.

About Hi-Line Engineering

Hi-Line Engineering specializes in providing engineering consulting services to electric utilities. The firm is a wholly owned subsidiary of GDS Associates, Inc.

Hi-Line's mission is to provide quality **energy delivery consulting** services at rates conducive to the demands of the deregulated marketplace. We specialize in safe, reliable, and *efficient* planning, design, and contract administration.

Our staff exhibits diverse experience in the planning, design, operation, and maintenance of electric distribution systems. We have designed hundreds of miles of distribution line in all types of terrain and loading conditions. Many of these projects included contract administration and right-of-way acquisition. Our planning services include experience in a variety of environments consisting of dense urban, resort beach, rural agricultural, and sparsely populated areas. Hi-Line has prepared planning studies for rural electric cooperatives, municipals, and military bases.

About Webinar Instructors

Kevin Mara, P.E., a Vice President of GDS Associates, and the Principal Engineer of Hi-Line Engineering, a GDS Company, is considered an expert in many of the facets of power distribution systems including system planning, system operation, power system modeling and analysis, and system design. He has over 30 years of experience as a distribution engineer including six years as Distribution Engineer at Savannah Electric and Power.

Kevin has extensive knowledge in power quality analysis, system reliability, loss analysis, territory, joint-use issues, as well as management and operation of electric utilities. He has designed SPCC plans, broadband over powerline (BPL), street lighting systems, system valuations, and substations.

Kevin manages a team of engineers and analysts who together assess the valuation of electric distribution systems for privatization. His team has reviewed and reported on more than 50 systems located throughout the United States. Kevin earned his BS in Electrical Engineering from Georgia Institute of Technology. He is a Registered Professional Engineer in 17 states including Georgia, Alabama Florida, Indiana, Kentucky, Louisiana, Michigan, North Carolina, Ohio, South Carolina, Tennessee, Texas, Virginia, Missouri, Kansas, Mississippi, and South Dakota.

2024 EV WEBINAR SERIES REGISTRATION FORM

EV Webinar Dates and Subjects		Check desired webinars
1.	**January 23** – Introduction to EV Vehicles	☐
2.	**February 6** – Charging Profiles	☐
3.	**February 27** – Projecting EV Loads in the Future	☐
4.	**March 26** – EV Impacts to the Distribution Grid	☐
5.	**April 16** – Retail Rate Strategies for EV Loads	☐
6.	**May 21** – Load Management – Part One	☐
7.	**June 4** – Load Management – Part Two	☐

Pricing Subscriptions and Savings		
# of Attendees	**# of Webinars and Pricing** (check desired subscription below)	
	1 EV webinar	**Complete EV Series**
Single	$175 ☐	$975 ☐
3 to 20	$525 ☐	$2925 ☐
21 to 50	$1050 ☐	$5850 ☐
>50	$1575 ☐	$8775 ☐

Checkmark desired webinars above, based on selected pricing subscription checked at left.

Please fill in the information below and email to **rachael.harms@gdsassociates.com**
Questions? Call Rachael Harms at **334-887-3297** or email rachael.harms@gdsassociates.com

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