



## IMPACT OF ELECTRIFICATION ON POWER GRID RELIABILITY

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**Tuesday, February 21 • 11:00 AM – Noon (PT) • EME 26**

### OVERVIEW

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Currently, there's over 200,000 fleets across the United States, and they have a mandate for electrification. Some of the concerns are reducing the scope of two emissions, how much is it going to cost to actually electrify these vehicles and continued electricity costs to charge these vehicles, as well as the risk of vehicles not being charged the next day.

To solve this problem, we've created a platform called Optify. Optify is a set it and forget it software only solution for EV fleets that tells the vehicle when to pull the charge from the charger. At the heart of our product is a predictive model that forecasts energy price and source. The platform tells the vehicle when to start and stop pulling the charge from the charger when energy is cheap, green, or a mix of both. With my combined experience at Siemens, ABB and California ISO. I am able to create a solution to reduce emissions, keeping it economically viable for the industry.

In this talk, I would like to talk about the basics of EV charging, charging infrastructure, and impact of the electrification on the grid. With supply side renewable integration and more and more EVs on the road, we are on a verge of the massive change in the century old electricity industry.

### BIO

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**Rekha Sharma** has over 15 years of experience in energy markets, grid reliability, transmission & distribution, power plant design across companies; *i.e.*, California ISO, Liberty utilities, ABB Inc, and Siemens. She is founder of Solv4x Inc. and leads innovation and strategy. As Energy SME, she is involved in designing the in-house software products.

In previous roles, she has managed development of energy market and grid reliability along with integrating energy storage, renewables (solar, wind) to the Western American Grid. She has developed applications like meshed short circuit, volt var optimization in network management suite (energy management, distribution management, outage management and SCADA). As part of Siemens engineering team, she designed multiple gas, coal power plants and led the engineering efforts of nuclear facilities. Rekha received her MS in Electrical Engineering from Texas A&M University and her MBA from Rotman School of Management.

