

2025

CREATE Seminar Series

Friday,
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3:30 pm

Why One Future Is Not Enough: Scenario Planning for a Changing Grid

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Seminar location: Innovation E432

Abstract

The energy transition is unfolding amid significant uncertainty, including shifting policies, evolving load forecasts, and rapidly changing technology costs. Relying on a single view of the future is no longer sufficient for strategic decision-making. To address this, developing and maintaining multiple scenarios to capture a range of plausible futures is essential. These scenarios should be refreshed annually to reflect updated load forecasts, policy changes, and market dynamics. This talk will explore the rationale for scenario-based planning, the key dimensions analyzed such as supply, demand, costs, and policy, and the modeling tools that enable robust insights. We will discuss how capacity expansion modeling and production cost modeling work together to inform investment decisions, ensure reliability, and evaluate trade-offs across scenarios. By embracing multiple futures, organizations can better navigate uncertainty and make informed decisions in a rapidly changing energy landscape.

Bio

Mahraz Amini is the Director of Market Analytics at National Grid, where he leads the company's analytical strategy for electricity markets across the Northeast. In this role, he oversees teams that model and interpret market dynamics in ISO-NE, NYISO, and PJM, delivering actionable insights that guide investment decisions, shape long-term strategy, and ensure alignment with business priorities. His work involves close collaboration with strategy, regulatory, commercial, and engineering teams to support an affordable, reliable, and sustainable energy future. Mahraz earned his Ph.D. in Electrical Engineering from UVM in 2019, following his B.S. and M.S. degrees from the University of Tehran. Since joining National Grid in 2019, Mahraz has held roles spanning technology deployment, transmission asset development, strategy, and market analytics.



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