



## PSERC WEBINAR

### Distribution Network Security with Distributed Energy Resource Aggregators

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Distributed energy resource aggregators (DERAs) and distribution utility customers must share a distribution network. In this talk, I will begin by discussing mechanisms that allow them to operate on the same network, but in ways that do not jeopardize distribution network security. I will first present our recent results on calculations of caps on installed capacities of resources such as solar panels in ways that their operations do not cause appreciable violations of distribution network constraints. Then, I will present an alternate approach via forward auction designs to allocate distribution network access rights (think operating envelopes) to DERAs. These rights are such that when DERAs operate their downstream resources from their customers within their acquired rights, the security of the distribution network is guaranteed, and no intervention from the utility is required during DERAs' real-time transactions with the wholesale market.

**MARCH 6, 2024**

[LINK TO WEBINAR](#)

**1:00-2:00 P.M. ET**

(10:00-11:00 A.M. PT)

**Bose Subhonmesh** is an Associate Professor and Stanley Helm Fellow in the Department of Electrical and Computer Engineering and the Coordinated Science Laboratory at University of Illinois Urbana-Champaign (UIUC). His research lies in the intersection of optimization, control theory, game theory, and machine learning, with applications in power system operations and transportation electrification. Before joining UIUC, he was a postdoctoral fellow at the Atkinson Center for Sustainability at Cornell University. Prior to that, he received his MS and Ph.D. degrees from Caltech in 2012 and 2014, respectively. He received the NSF CAREER Award in 2021. His research projects have been supported by grants from the NSF, PSERC, Siebel Energy Institute, and C3.ai, among others.

