INTEGRATING IBRs – STABILITY CHALLENGES AND MITIGATION

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Grid Integration and Stability – Renewable Energy

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OVERVIEW

This presentation will focus on some of the challenges of integrating IBRs - Stability challenges conventional resources vs the IBRs, practical examples of voltage collapse case with IBRs, Weak Grid aspects, and challenges with emerging grid codes.

BIO

Dr. Sapkota joined GE Consulting Service in 2012 and has since worked on several types of projects; including: Control design, tuning, and modeling for both thermal and inverter-based resources. Dr. Sapkota leads Grid Integration and Stability – Renewable Energy Team of GE Vernova Consulting Services. His team focuses on technology innovation for IBRs including electrical design, model development in both EMT and Phasor domain, and validation study for onshore and offshore wind turbines. His team also performs Grid Code compliance, Volt/VAR coordination, sub-synchronous control interaction, weak grid studies among others. Prior to joining GE, Dr. Sapkota was an operations engineer in the Operations Planning Department at California Independent System Operator, where he performed several system planning and operating studies. Dr Sapkota's research while at ASU was focused on dynamic VAR planning in a large power system using trajectory sensitivities.