Grid Forming Energy Storage: Design Challenges, Technical Performance Results and Market Opportunities for the World First Large Scale Virtual Synchronous Machine Connected to the Australian National Power System

Instructor Bios:

Stanislav Cherevatskiy is a Senior Consulting Engineer for Hitachi ABB Power Grids and leads the Consultancy team in its Australian Grids Edge Solutions group. He specialises on integration of renewable energy into power systems using innovative control system technology and Energy Storage. Stanislav has over 10 years work experience in this space and has worked with both small and large scale microgrid and energy storage projects since joining Hitachi ABB Power Grids in Australia in 2015. In his work he takes microgrid and energy storage projects through the complete cycle from conceptual design, through grid connection, modelling, implementation to system commissioning.

In 2018 he led control system design, development and commissioning for the 30 MW Dalrymple ESCRI-SA BESS on the lower Yorke Peninsula in South Australia – the first application of utility-scale grid-forming BESS technology interconnected to a major power system.

Stanislav has worked in the German and Australian power system sectors and holds an M.Sc. degree in Electrical Engineering with focus on Renewable Energy and Power Systems from the Karlsruhe Institute of Technology in Germany. His recent publications include contributions to the CIGRE Paris 2020 session, the 18th International Wind Integration Workshop, the 2020 Western Protective Relay Conference and the 2020 CIRED Berlin Workshop.

John Glassmire is a senior advisor for Grid Edge Solutions at Hitachi ABB Power Grids. Trained as a mechanical/electrical engineer, John has extensive experience in the technical and economic potential for energy storage and distributed energy resources to provide clean, low-cost, reliable power. He has led and worked on a wide-variety of energy research and consulting projects including targeted business cases for customers considering renewable energy and batteries, cost-to-society environmental and economic impacts of clean energy technologies for grid planning, integrated resource planning for energy infrastructure, ex-post financial analysis of demand management programs, and monitoring and evaluation frameworks for energy efficiency and distributed energy programs.

His experience is global, ranging from small islands in the Pacific, to isolated Arctic diesel grids, to larger island utilities in the Caribbean, to grid edge technologies in mainland utility networks in

Australia, North America, and Europe. An accomplished speaker, he has led training workshops on unlocking the benefits of battery energy storage systems, integrating renewables into electrical grids, and microgrid resiliency for thousands of people worldwide.

John also serves as an adjunct professor in distributed power systems at the University of Washington. BSME (Rice), MSME (Northwestern).