ECE 590I POWER & ENERGY SYSTEMS SEMINAR

Monday, March 9, 4:00 – 5:00 p.m., Room 2017, ECEB

Transformation of the Electricity Grid

Hisham Othman
Innovative Power System Engineer and Entrepreneur

Abstract

We are witnessing a transformation in the electricity industry that promises better resiliency, reliability, cost, and environmental footprint. This revolution is propelled by the declining costs and modularity of distributed energy technologies. At the fundamental level, individual consumers are increasingly making choices and financial commitments in the sourcing of their energy systems, while regulators are searching for more effective ways to spend the required capital to maintain the reliable service of electricity.

In this seminar, we will review recent developments in several US electricity regions that favor investments in smart distributed technologies to the traditional choice of wires and generators. Additionally, we will review the global trends to leapfrog the fossil fuel era in Africa and Asia to the mobile solar age.

The innovations of the past 20 years in wholesale market restructuring, smart grids, power electronics, and renewable energy have paved the path to today’s revolution. New innovations are upon us to connect the plethora of assets and players to ensure reliable, safe, cost-effective, and clean future.

Biography

Hisham started his career in the energy industry working for industry leaders GE and ABB in a progression of technical and senior management leadership roles in conventional grids as well as smart grids and deregulated electricity markets. Hisham’s career aspirations evolved following his 5 year ex-pat assignment in the Middle East where he led ABB’s corporate strategy development and execution and managed ABB’s business in the Near East.

Hisham joined the renewable industry 4 years ago and his passion grew for bringing clean and affordable energy solutions not only to the haves in the developed grids but also to the hundreds of millions without affordable energy solutions. He has designed and implemented hybrid microgrids including solar PV, battery storage, and diesel generators, and investigated financing solutions. He is passionate about combining clean energy with modern agriculture and water purification to improve the economic productivity of people around the World.

Hisham earned a PhD from the University of Illinois at Urbana-Champaign, and a Masters from the University of Michigan at Ann-Arbor, all in electrical engineering with a power systems focus.

Hisham is a board member of the Energy Storage Association.