The IEEE Ottawa Section is inviting all interested IEEE members and non-members to a seminar

“A Microinverter Based, Self-Forming Nanogrid for ON and OFF Grid Applications”

By
Edward Keyes M.Eng, Solantro Semiconductor Corporation

DATE: Thursday May 24th 2018
TIME: Refreshments, Registration and Networking: 18:00; Seminar: 18:30 – 20:00.
PLACE: Algonquin College, T-Building, Room T129, 1385 Woodroffe Ave., Ottawa.
ADMISSION: Free. Registration required. Please register by e-mail contacting: ottawapels@gmail.com

Abstract - This talk will disclose a novel, microinverter based, all AC nanogrid architecture using photovoltaic panels and lithium ion battery storage. Much of the nanogrid's hardware is based on Solantro's Digital Power Processor chipset. The nanogrid is capable of on-grid and off-grid (islanded) operation with “hot” switching between modes. While in grid tied mode the nanogrid can provide a variety of grid support services to increase the percentage of renewables on the utility grid. These include power smoothing, peak limiting, time shifting of PV generation, and California Rule 21 behaviors. The architecture is granular and highly scaleable. It can be scaled from a single microinverter and battery into the hundreds of devices. In islanded operation the nanogrid is self forming with battery operation controlled by a novel resistive droop control method.

Speaker's Bio
Mr. Keyes is the Nanogrid Projects Manager at Solantro Semiconductor where he leads the company’s development of nanogrid technology. He holds a B. Sc. in Applied Physics from the University of Waterloo and a Masters in Electronic Engineering from Carleton University. Mr. Keyes was formerly Chief Technology Officer of Semiconductor Insights (now Techinsights Inc.) where he led the company’s R&D activities. Previous to Techinsights Mr. Keyes held positions at Optotek Ltd, Xerox Research Corp. and Atomic Energy of Canada Ltd. Mr. Keyes holds over 14 US patents in a range of areas including power electronics, nanogrids and integrated circuit analysis.