



**Systems Council Chapter Presents
IEEE Distinguished Lecture Series on
Renewable Energy From Biogas, and its Role in California's
Energy Market**

by Mr. Mark McDannel, P.E., BCEE.

Date: March 2, 2018 (Friday)

Time: 4:00-6:30 PM

Location: ECS 317, California State University, Long Beach



Abstract: Biogas is fuel, typically methane, derived from biological waste and biological processes such as landfill gas, dairy manure digestion, and wastewater treatment digestion. Biogas currently contributes significantly to California's renewable energy production, but there remains significant potential for expanding its utilization. This presentation will discuss sources and uses of biogas, challenges to its broader adoption, and how biogas usage fits into California's energy market and regulatory structure.

About Speaker: Mr. Mark McDannel, P.E., BCEE, is the Section Head of the Energy Recovery Section at the Los Angeles County Sanitation Districts where his section is responsible for operation of renewable energy power plants development of new plants, compliance with environmental regulations, and buying and selling electricity for the agency. Mr. McDannel has 39 years of engineering experience in the public and private sector, and is an expert in renewable energy, air pollution control and measurement, and combustion. He holds an M.S. in Engineering from UC Irvine.