

**UNIVERSITY OF MACAU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT of CIVIL and ENVIRONMENTAL
ENGINEERING**

Integrated Whole Building Energy Design

By

Mr. Paul Rode

Project Executive for
the Solutions Division of the Building Efficiency unit of
Johnson Controls

Date: 10/10/2012 (Wednesday)

Time: 11:30 – 13:00

Venue: HG03

Abstract

It is widely known that a significant percentage of energy is used in the buildings that we live and work in. What is the correct amount of energy that should be used? How deep can energy savings take a building, is 5%, 10% or 50% energy savings possible? Is Net Zero possible and profitable? The program will cover the introduction of a energy retrofit business model, that includes a high level description of the most common technologies used, preparation of a business case, and real examples from some of New York's largest office towers and its airports. We will cover deep energy retrofits in existing buildings and the classic design pathway of load reduction, energy efficiency, behavior modification and renewable power production in the context of cities and buildings in particular. We will look at what is done to reduce energy use in a building in an appropriate and profitable way. How the business of energy retrofits is put together and how small and large companies, building owners, and tenants can benefits from this industry. All examples will be drawn from real examples of work being done by Johnson Controls in New York City.

About the Speaker

Mr. Rode is a Project Executive for the Solutions Division of the Building Efficiency unit of Johnson Controls where he is responsible for working with Johnson's commercial clients to develop and deliver an array of energy services. Based in New York City, and covering a national footprint he leads a team of engineers, and project managers applying innovative techniques to develop retrofit strategies that yield deep energy savings, and managing the implementation of energy savings projects through performance contracting. The projects typically include retro commissioning, energy savings guarantees, smart building technologies, lighting, distributed generation, and operational studies. He has been with Johnson Controls for 16 years and has held the positions of Senior Project Manager, Performance Contracting Team Leader, Account Executive, and Business Development Director. Recently he led the Johnson Controls team responsible for the energy efficiency retrofit of the Empire State Building.

Prior to joining Johnson Controls Mr. Rode worked for EUA Cogenex as an engineer developing paid from savings energy projects for a variety of industrial and commercial customers.

Mr. Rode has spent 10 years on foreign project management assignments involving the construction of generation / cogeneration stations in Zimbabwe, South Africa, Brazil, Russia (Soviet Union at the time), and Saudi Arabia.

Mr. Rode is Professional Engineer with a BE degree in Chemical Engineering, has contributed to trade publications, and governmental energy policy.

ALL ARE WELCOME!