



# Blaze Avenue

Empowering Business Ideas

## MODERN POWER SYSTEM

15th - 17th November 2017

PULLMAN HOTEL KUCHING, SARAWAK, MALAYSIA

3 D A Y S

W O R K S H O P

Puica Nitu

COURSE INSTRUCTOR

Limited Seats Only

## Past Clients

- Kenya Power & Lighting Co. Ltd - Kenya
- PT Bekasi Power - Indonesia
- PT Perusahaan Listrik Negara (PLN) - Indonesia
- Sarawak Energy Berhad - Malaysia
- Hong Kong Electric Company - Hong Kong
- National Electric Power Regulatory Authority (NEPRA) - Pakistan
- Saudi Electricity Company - Saudi Arabia
- National Grid Corporation Philippines (NGCP) - Phillipines
- Emirates SembCorp Water & Power Company - UAE
- Tenaga Nasional Berhad (TNB) - Malaysia
- DNV GL Private Limited - Singapore
- Ceylon Electricity Board (CEB) - Sri Lanka
- Sabah Electricity - Malaysia
- Lanka Electricity Company (Pvt) Ltd - Sri Lanka
- NamPower Corporation (Proprietary) Ltd - Namibia
- Kenya Generation (Kengen) - Kenya
- Transmission Company of Nigeria (TCN) - Nigeria
- Niger Delta Power Holding Company Limited (NDPHC) - Nigeria
- Metropolitan Electricity Authority (MEA) - Thailand
- Singapore Power (SP Group) - Singapore

## Blaze Avenue's Power Industry Courses:

- Reliability Centered Maintenance
- Demand Side Management
- Energy Markets Strategic Planning
- Economic Dispatch and Power System Planning
- Power Systems Planning and Operations
- Energy Trading and Energy Markets
- Energy Markets, Risk Assessment and Financial Management
- Reliability and Risk Applied to Physical Assets
- Economic Dispatch & Grid stability Constraints in Power Plants
- Power System State Estimation
- Communication Interfaces in Smart Grid
- The Role of IEC 61850 in Smart Grid
- Distributed Generation
- Distributed Wind Generation and its Impacts on the Network
- Modelling Analysis for Modern Electrical Systems
- Power Systems Economic Operation
- Reactive Power and Voltage Control on Electrical Networks
- Real Power & Control on Power System
- Substation Automation Systems
- Distribution Automation
- Power System Operations
- Power System Reliability
- Power System Restoration
- Methodologies & Implementation Strategies
- Vulnerability of Power Grids

**Get in touch:**

## INTRODUCTION

This course introduces the building blocks for the modern power systems. The electric power system is undergoing changes due to short-, mid-, and long term business objectives. In the same time, it has become increasingly necessary to leverage the changes brought by the new technologies in renewable resources and power electronics and balance these with the ever changing consumer expectations.

This course discusses the integration of new technologies within the power systems in light of regulatory changes and the penetration of renewable energy resources facilitated by the operating flexibility brought by power electronics.

## TAKE AWAYS:

**The participants will get exposure to all the aspects of the stable and reliable operation of the power system and gain understanding of system operation in a deregulated power market.**

- 1. The physical phenomena of the main components of the power systems.**
- 2. The key aspects of large power system components such as rotating machines and transformers and offers a review of the transmission and the generation system:**
  - a. The operating characteristics of rotating machines
  - b. The effect of magnetic flux in transformers
- 3. Renewable energy generation and the integration of renewable energy into the modern power grid is discussed from the perspective of power system operation and financial cost structures.**
- 4. Design and operation consideration of the Transmission system**
- 5. The power system in steady state with a review of the Load Flow**
- 6. Conversion of primary resources into electricity and the basic elements of construction and operation of:**
  - a. Fossil generating Plants
  - b. Hydroelectric Generating Plants
  - c. Nuclear Generating Plants
- 7. Optimum cost strategies**
- 8. Fundamental aspects of power system stability.**
- 9. Power system operation, operating requirements imbedded in a deregulated energy market**
- 10. Policies and methodologies to maintain the reliability and adequacy of the power system.**