

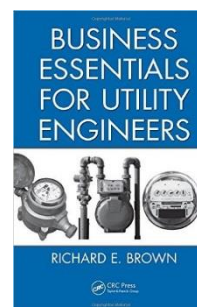
# BUSINESS ESSENTIALS FOR UTILITY ENGINEERS

**5<sup>th</sup> – 7<sup>th</sup> October 2015** Kuala Lumpur, Malaysia

Arm engineers with the tools and vocabulary necessary to be more effective when interacting with senior management, and for promotion to senior management.



Take Away:  
Business essentials for  
utility engineers book  
by Richard E brown



“Good overview of how and why top level financial decisions are made in electric utility companies, and how this affects conversations and communications between engineering and the finance people that are running the company.” – Cost analyst

“As a mid-career utility engineer with very little exposure to business essentials, I thought the material was just what I needed to improve current job performance and give me a skill set that will make me more marketable for future positions.” - Engineer

Media Partners:



OilVoice



# Overview

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For the past 20 years, utilities have gradually been transitioning from engineering-driven to business-driven decision-making. In the past, most top executives at utilities came from the engineering ranks and understood engineering issues in detail. Today, most top executives at utilities have business backgrounds and are primarily concerned with investor relations and “the bottom line.” One consequence of this shift is an increasing communications gap between utility executives and the engineers. Spending can no longer be justified with the argument “it makes good engineering sense.” Rather, spending must be justified with “it makes good business sense.” It is now the responsibility of the engineer to communicate engineering needs in terms of business goals and metrics. To do this, it is critical for utility engineers to be armed with the essential business skills covered in this three-day course.

The book *Business Essentials for Utility Engineers*, written by course instructor Richard Brown, will be included with the course materials.

## **Attend this course to Master:**

This course will review and discuss ten topics that are essential for utility companies transitioning from an Engineering -based to a business-based paradigm:

- Utilities
- Accounting
- Economics
- Finance
- Risk management
- Utility ratemaking
- Budgeting / Spending prioritization
- Asset management/Contracts
- Strategy
- Leadership

## **Unique features of this training:**

Having the ability to implement directly once you are back at your workplace is crucial for every participant.

This course include a lot of group discussion and interaction. There will be an end-of-section study questions that are discussed in small group breakouts.

## **This program is intended**

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This is a perfect course to balance the technical skills of engineering with the business skills of management.

This course is ideal for:

- Utility Planners/Engineers/Managers who wish to learn the essentials of business through a rigorous and tailored approach.
- Non-engineers in utility business support functions – Procurement, Inventories, cost and budgeting and etc.
- Engineers from electric utilities (transmission and distribution in addition to power plants), water and sewage supply and natural gas utilities.
- Engineers already familiar with general business topics will learn how to properly apply this knowledge within a regulated utility environment.
- Engineers with a general knowledge of utility business processes will learn the business theory behind these processes.

# BUSINESS ESSENTIALS FOR UTILITY ENGINEERS (3 Days)

## Utilities

- Public Utilities
- Vertical and Horizontal Integration
- Regulation and Restructuring
- Franchise Agreements and Obligation to Serve

## Accounting

- Accounting Principles
- Journals, Ledgers, and Accounts
- Financial Statements
- Financial Ratios

## Economics

- Supply and Demand
- Market Pricing
- Producer Surplus and Monopolies
- Business Cycles

## Finance

- Company Valuation
- Market Efficiency
- Event Studies and Stock Price Movement
- Market Inefficiencies

## Finance/Risk

- Equity, Paid-in Capital, and Secondary Markets
- Debt Financing and Debt Seniority
- Tax Shields
- Bankruptcy

## Risk

- Portfolio Theory
- Beta and the Capital Asset Pricing Model
- Financial Options and Black-Scholes Pricing
- Real Options

## Ratemaking

- Revenue Requirements and the Rate Base
- Rate Design
- Rate Cases
- Rate Base Misconceptions

## Budgeting and Spending Prioritization

- Utility budgeting process
- Marginal benefit-to-cost assessment
- Multiple performance targets
- Risk-based spending

## Asset Management/Contracts

- Engineering Versus Business Culture
- Organization and Process
- Contracts
- CAPEX versus OPEX

## Strategy

- Industry analysis and Porter's Five Forces
- Internal analysis and core competence
- Game theory and anti-trust
- Developing a sound strategy

## Leadership

- Carnegie and people skills
- Covey and values
- Kotter and behavior
- Collins and Level 5 Leadership

## End of course



Energy1 is a sub-division of PETRO1 focus on provide trainings & technical Consultancy services ranging from Revenue losses reduction, Maintenance & reliability, spares parts optimization and business related activities in the Energy & Utilities industry. We had successfully made impact to energy & utilities professional mainly the top players in the South East Asia Region.

- Metropolitan Waterworks Authority Thailand.
- Tenaga nasional berhad.
- San Fernando Electric Light & Power co, Inc
- Sarawak Energy
- SP Powergrid Ltd.
- Power Seraya
- Star Energy Geothermal
- Perbadanan bekalan air pulau pinang
- Aliran ihsan resources berhad
- Visayan Electrical company
- Glow Company
- Suruhanjaya Tenaga
- Indah Water Konsortium
- Jimah O&M

# Principal Program Facilitator

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## Richard E. Brown, Practice Director, Exponent

- Director of the engineering management consulting practice for Exponent.
- 22 years of experiences and internationally recognized expert in power distribution systems, system reliability, system operations, storm hardening, performance-based regulation, utility rates, avoided cost calculation, smart grid, system automation, distributed energy resources, and benefit-to-cost analysis.
- Held executive positions with ABB, KEMA, QUANTA Services and Worley Parsons.
- Published more than 90 technical articles related to asset management and performance management.
- Author of the books *Business Essentials for Utility Engineers* and *Electric Power Distribution Reliability*.
- Performed consulting services to most of the major electric utilities in the U.S. and many around the world.
- Registered professional engineer and a Fellow of the IEEE.

### Some of the Projects performed by Richard:

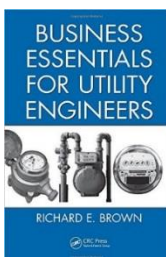
- T&D Asset Management Assessment (Cleco)
- Distribution Reliability Assessment (Pepco)
- URD Cable Benchmark Survey (Confidential)
- Colorado River Authority Project Utility Program Review (Bureau of Indian Affairs)
- Substation Flood Protection (LIPA)
- System Hardening and Reliability Improvement (BGE)
- Cost-to-Benefit Analysis (Idaho Power)
- Smart Grid Strategy Analysis (3M)
- Distribution Planning Manual (CEATI)
- Storm Impact on System Reliability (Puget Sound Energy)
- Texas Hurricane Hardening (Public Utility Commission of Texas)
- Distribution Reliability Planning Study (Scottish Power) and many more.

### Honors and Awards

- IEEE Power Engineering Society
  - Technical Committee Working Group Recognition Award (2008). *Awarded by the Power System Operations Committee for work on power system transmission planning.*
  - Technical Committee Working Group Recognition Award (2007). *Awarded by the Power System Analysis, Computing & Economics Committee for contributing to the development of an electric delivery system reliability tutorial.*
  - Technical Committee Working Group Recognition Award (2007). *Awarded by the Power System Operations Committee for work on Aging Power System Infrastructure.*
  - Technical Committee Working Group Recognition Award (2006). *For work which resulted in a special issue of the IEEE Power and Energy magazine, May 2005.*
  - Walter Fee Outstanding Young Engineer Award (2003). *For outstanding contributions in predictive reliability modeling of distribution systems.*
- ABB Award of Excellence: President's Award (1999)
- ABB Award of Excellence: Product Development (1998)
- Member, Eta Kappa Nu (Electrical Engineering Honor Society)
- Member, Beta Gamma Sigma (Business Honor Society)

### Held executive positions with ABB, KEMA, QUANTA Services and Worley Parsons.

- Worley Parsons, Denver, CO - Vice President, Power Networks for United States and Caribbean Region
- Quanta Technology LLC, Raleigh, NC - Senior Vice President, Consulting
- KEMA T&D Consulting, Raleigh, NC - Vice President, Asset Management
- ABB
  - Director of Technology, ABB Consulting, Raleigh, NC
  - Principal Engineer, ABB Power Distribution Solutions, Raleigh, NC
  - Senior Engineer, ABB Corporate Research, Raleigh, NC



This book covers all business concepts important to utility engineers, including regulation, ratemaking, accounting, finance, risk management, economics, budgeting, and asset management. The author applies his vast corporate experience to give readers a solid foundation for business theory, discussing the idiosyncrasies of utilities and using advanced mathematics to demonstrate business concepts. He also explains how to properly apply this theory to utilities, expounding on specific business skills that will greatly benefit utility engineers in their daily jobs.

Chapters are organized to build sequentially upon each other, and take advantage of the mathematical sophistication and deductive nature of engineers when presenting material. After reading this book, utility engineers will view their industry from a new perspective, and will have a greatly expanded business vocabulary. Suitable for self-study, undergraduate study, graduate study, or as a desk reference, this book provides a robust framework for correct business thinking and a solid foundation for further learning.

Watch Richard E. Brown talk about his book at: [Click here](#)

# REGISTRATION FORM

## Investment Packages

Business essential for Utility engineers	Early Bird Full 3 Days	Standard Price Full 3 Days
Per Delegate	SGD 2967 ( )	SGD 3179 ( )
<b>REGISTER 3 SEND THE 4<sup>TH</sup> FREE</b> <ul style="list-style-type: none"> <li>Please note that all registration must be made at the same time to qualify.</li> <li>Early Bird Promotion Deadline – 28th August 2015</li> <li>The above price is inclusive of GST 6%.</li> </ul>		

## Delegate Details

1. Name: \_\_\_\_\_ Mr ☐ Mrs ☐ Ms ☐ Dr ☐

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

2. Name: \_\_\_\_\_ Mr ☐ Mrs ☐ Ms ☐ Dr ☐

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

3. Name: \_\_\_\_\_ Mr ☐ Mrs ☐ Ms ☐ Dr ☐

Job Title: \_\_\_\_\_

Email: \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

Head of Department: \_\_\_\_\_

## Invoice Details

Invoice Attention to: \_\_\_\_\_

Company: \_\_\_\_\_

Industry: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

## PROGRAM DETAILS

Venue: Kuala Lumpur, Malaysia  
Date: 5<sup>th</sup> – 7<sup>th</sup> Oct 2015

### REGISTER NOW

CONTACT: kelvin

MAIN: +603 7727 3952

FAX: +603 7722 5278

Email: registration@petro1.com.my

## Credit card Payment

Please Debit my credit card:

☐ VISA ☐ MASTERCARD

Card Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Security Code:       Expiry Date:

Named printed on card: \_\_\_\_\_

Signature: \_\_\_\_\_

### REGISTRATION DEADLINE

As an internationally operating training organization, PETRO1 would appreciate receiving registrations at least one (1) month prior to course commencement. Registrations after this date will be accepted provided that places are available. We strongly recommend early enrolment to avoid disappointment!

### GST input Tax claim

Organization who have register under GST is allow to claim on any GST incurred (Known as input tax) on their purchase to the business.

### Payment Method

By cheque/ Bank Draft: Made Payable to PETRO1 SDN BHD

By Direct Transfer: Please quote invoice numbers on remittance advice.

ACCOUNT NAME : PETRO1 SDN BHD

BANK : HSBC Amanah Malaysia Berhad

ACCOUNT NO : 054 – 048061 – 701 (SGD)

SWIFT CODE : HMABMYKL

All bank charges to be borne by payers. Please ensure that PETRO1 SDN BHD received the full invoice amount.

\* Credit card payment will include a charges 2.8%

**Payment Policy:** Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Payment is required with registration and must be received prior to the event to guarantee the seat. Payment has to be received 7 working days prior to the event date to confirm registration.

**Venue:** All of our training courses are held in 4 – 5 star venues.

The course fee does not include accommodation or travel cost. It's recommended to book the hotel room early as there are only limited room available at the discounted corporate rate.

### DATA PROTECTION

The information you provide will be safeguarded by Petro1 that may be used to keep you informed of relevant products and services. We take it seriously when it come s to protection of our client data.

**Cancellation & Substitutions:** Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Should you be unable to attend, substitutes are always welcome at no additional cost. Please inform us as early as possible. Payment is non-refundable if cancellation occurs 7 working days prior to event commencement. However a substitute is welcome at no additional charges. If cancellation occurs 5 working days prior to the registration date and there is no substitute, the organizer reserves the right to charge 50% of the total investment from your organization.

PETRO1 SDN BHD is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. PETRO1 SDN BHD shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, war, fire, labor strike, extreme weather or other emergency.

**Walk in Registration:** Walk-in participants with payment will only be admitted on the basis of seat availability at the event and with immediate full payment.

**Program Change policy:** The organizer reserves the right to make any amendments and/or changes to the workshop, venue, facilitator replacements and/or modules if warranted by circumstances beyond its control.