

Energy Seminars, Inc.  
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Electricity 101

\$795.00

The Original Course on Restructuring of Power Markets

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You Will Learn:

- How electricity is made and moved over the transmission system or "grid"
- What the opportunities are for retail and wholesale competition transactions
- Why there has been a shift from vertically integrated utilities to an "unbundled" world
- What are Independent System Operators (ISOs), Power Exchanges (PXs), Regional Transmission Organizations (RTOs), and Independent Transmission Providers (ITPs)
- How the FERC's Standard Market Design proposal in 2002 will reshape the industry
- The lessons of California and the Northeast and the promise of Texas deregulation
- What electric users want and need
- How the transmission system works and how it is scheduled
- Why understanding transmission is key to understanding electric markets
- How the energy and ancillary services markets work
- How restructuring will change the electric business
- The way electric systems are kept reliable and how this affects customers and marketers
- How transmission is priced and how congestion is managed

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Who Should Attend

Those interested in understanding and profiting from the turmoil in the electric markets

Designed for the professional who wants to become familiar with the concepts, language, mechanics, and future direction of the electric power industry, this seminar will benefit those new to the industry, energy marketers, project developers and financiers, consumers of electricity, managers moving to new areas of responsibility, and others wanting to advance their careers by learning more about the nuts and bolts details of the evolving electricity business.

Oil and natural gas marketers will learn how to apply their trading skills to this evolving market.

Electric industry personnel will gain a working knowledge of the fundamentals of trading in this rapidly growing and changing field.

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#### About the Instructor

Robert Stein's over 30 years in the utility business both as a senior executive at an investor-owned utility and as a consultant to developers of unregulated generation projects gives him a unique and valuable perspective on the rapidly changing electric energy field. In addition he has been intimately involved in the establishment in 1996 of the ISO in New England, including development of its latest market rules.

In addition to teaching E101 he currently represents market participants in the Northeast, advocating their interests in the trading rules and assuring their access to the transmission system. He has worked on proposals to create Regional Transmission Organizations (RTOs ).  
  
Mr. Stein is a principal and co-founder of Signal Hill Consulting Group LLC, with offices throughout New England.

Signal Hill's focus is to assist a wide range of utility and electric consumer clients in capturing the value that will result from the developing competitive power market.  
  
Prior to his consulting career he held positions of increasing responsibility at a power pool, investor-owned utilities, and a municipal power agency in the areas of transmission and resource planning, finance, and wholesale power marketing.  
  
Mr. Stein holds a B.S. in

electrical engineering from Worcester Polytechnic Institute and an MBA from Western New England College. He also attended the Harvard Advanced Management Program.

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## Agenda

### 1 From Power plant to consumer

- How power plants work
- The importance of transmission
- Why reliability is critical and its effect on markets
- Control areas and their function

### 2 New Entrants: How the Market Has Evolved

- The rise of unregulated generation:  
IPPs (Independent Power Producers), Cogeneration,  
Self-Generation, Merchant Plants, combinations of the above
- Brokers and Marketers in the marketplace, the products sold

### 3 The wholesale and retail markets

- Why wholesale competition works in some areas and has failed in others
- The importance of transmission
- Retail competition
  - Why it has failed to date
  - Why it appears to be a success in Texas

### 4 The new Competitive Entrants

- Merchant Plants and how they compete
- The functions of Brokers and Marketers
- Why it has become a boom and bust business
- FERC's initiatives that will reshape the industry

### 5 How the industry will evolve

- The breakup of the vertically integrated monopoly
- The continuation of Regulated Businesses
  - Transmission
  - Distribution
- Spin-off of generation into unregulated businesses
  - The effect of stranded costs
- New market entrants

### 6 The Products traded and their function

- Energy

- Firm and non-firm contracts and their role in the marketplace
- Capacity
- Ancillary services markets and their importance
  - Reserves
  - Automatic Generation Control
  - Voltage support
- Balancing Services

## 7 Transmission

- How it works
- How are flow limits determined
- Who maintains reliability and why reliability effects wholesale transactions
- Congestion management
- Why transmission is the key to understanding electric markets

## 8 Reshaping the landscape

- Independent system Operators ISOs
  - Why are there only 5 functioning in the US
  - Lessons from California
- The FERC's Nationwide initiative to open markets nationwide
  - Standard Market Design (SMD) and the push for Independent Transmission Providers (ITPs)
    - How will this effect the current ISOs and the remainder of the country
- Maintaining reliability in an unregulated world
- Power Exchanges
  - Market systems in place now
  - How will they evolve
  - Why are price caps needed

## 9 The future

- How will Generation companies evolve
- Regulated transmission companies grow and merge
  - Merchant transmission fills a niche
- The role of marketers
- The fate of the existing old fleet of generators
- Companies refocus on their core competencies

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