



SCPPA Training Course

Natural Gas and LNG Production and Markets in SoCal

April 16 – 17, 2019

Course Overview

This class will provide an overview of shale gas production and Liquefied Natural Gas (LNG) and the effects of natural gas supplies, pipeline transportation and prices in Southern California. Students will learn how physical gas is priced, how index prices are calculated and what publications are most useful to gas procurement and markets. The class will also cover LNG infrastructure, market trends, pricing and the effects of LNG exports on natural gas supplies to SoCal.

Course Agenda

Day 1

Shale Gas Plays and Regional Market Trends

- Overview of Major Gas Plays and Production Trends
 - Major shale gas plays throughout North America (Bakken, Barnett, Eagle Ford, Marcellus, Permian, etc.)
 - Other Shale Gas Plays in the Southwest and Rockies important to Southern California (Great Green River Basin, Mancos, Niobrara, Uinta Basin, San Juan Basin, etc.)
- Regional gas markets with emphasize on Southern California, Southwest and Rockies
 - How is the gas commodity priced
 - Specific mechanisms and factors that cause the prices to fluctuate up or down
 - Regional price (short term and long term)
 - Examples of markets and trends that affect shippers on Kern River and the SoCalGas systems



SCPPA Training Course

- Interstate pipeline system industry trends with emphasis on the Southwest and Rockies regions
 - New projects, build outs, operations, pipeline availability, etc.
 - Seasonal pipeline % usage on Kern River, PG&E, Questar, Transwestern, El Paso (Kinder Morgan)
 - Capacity Release Market and Trends
 - % of shipper renewals / turn backs and short and long term outlook
 - Any other pertinent data (pipeline owners hiring, layoffs, capital investments etc.)
- Changes and trends at NAESB regarding new gas standards
- Update on the unique differences and characteristics of the different pricing publications and services. (Platts Gas Daily, ICE, NGI, Bloomberg, Inside FERC, etc.)
 - Important information to track or have
 - Industry standard/common practice for transaction settling
 - Key information to extract from publications
 - Detailed explanation of how indices are established
 - Detailed explanation of Bid Week and how best to use the information
 - CFTC's Large Trader Report



SCPPA Training Course

Day 2

- Liquefied Natural Gas trends and technology updates
 - How is the gas commodity priced there. Cost comparison to the standard gas commodity.
 - Mechanisms and factors cause the prices to fluctuate up or down (regional/global supply/demand)
 - The effects of increasing LNG exports on gas prices and pipeline transportation rates/builds
 - Regional, national and global trends
 - Storage rules and regulations / limitations set by DOT in California

- Traditional LNG Supply Chain
 - Liquefaction Plant Types including Micro LNG Plants
 - LNG Train Size
 - LNG Loading

- LNG Receiving Terminals
 - Onshore LNG Terminals
 - Offshore LNG Terminals
 - LNG Storage

- Offshore LNG Supply Chain
 - Floating Production Storage Offloading and Offloading (FPSO) and Floating LNG
 - Offshore LNG Regasification
 - Floating Storage & Regasification Units (FSRU)

- LNG Project Costs
 - Cost Allocation of LNG Project
 - Liquefaction Plant Costs



SCPPA Training Course

- Buyers and Sellers in the LNG Supply Chain

- U.S. LNG Exports
 - Key U.S. LNG Stakeholders
 - LNG Pricing Mechanisms
 - Examples of LNG Pricing Mechanisms

- LNG Trade and Markets
 - Global LNG Market Growth
 - LNG Import and Export Markets
 - Global LNG Mega Projects and Players
 - New LNG Players in Mexico and Canada
 - Small-scale LNG Transportation via Ship and Truck to Southern California

- Purchasing LNG for Use in the U.S.
 - Key Suppliers
 - Typical Contracts
 - Pricing mechanisms
 - Retail LNG Prices vs Other Fuels