

School of Energy VIRTUAL!

November 9-10, 2021

RBN's Latest Crude, Gas and NGL Curriculum

PLUS

Making The Energy Transition:
CO₂, H₂, Renewable Diesel

Hydrocarbon Markets in a Decarbonizing World

This is a time of transition for energy markets. But it is going to be a bumpy transition. Upstream, midstream and downstream companies must live, work and produce hydrocarbon-based products the way the world works today, but at the same time prepare for, and invest in a transitioned energy market that many believe means net-zero greenhouse gas emissions – not including hydrocarbons.

That is what School of Energy – Fall 2021 is all about! We will consider the most important developments that energy markets must deal with in the real world of today but do so in the context of a greener future that could represent radical changes in how energy commodities are produced, transported and used. Already this year we are seeing some evidence of what this future might look like with natural gas and NGL prices soaring. Economies that have moved rapidly toward decarbonization find themselves in trouble when renewables don't produce enough energy, and they are stuck with paying whatever price for hydrocarbon energy is necessary to keep the lights on.

This School of Energy will be VIRTUAL. We will webcast the entire School in real-time, November 9-10. We have updated our content to reflect the massive changes we've seen over the past year, along with additional faculty and updated models. But the big change is the addition of an entire half day dedicated to what we believe are the most important hydrocarbon-related issues in the energy transition. That means CO₂, hydrogen and renewable fuels – especially renewable diesel.

This is nothing like other natural gas, crude oil, NGL or renewables conferences! Instead, we'll highlight the interdependencies between the markets in an instructional and interactive format and we'll do everything we can to make the experience just like our in-person conferences, including live Q&A, real-time access to presentation materials, and downloadable models.



Making Connections **Across Energy Markets**

In RBN's highly respected blog, industry conference presentations and consulting practice, we explain the how and why of the most important developments in the markets for crude oil, natural gas and NGLs.

At the School of Energy, we bring this perspective to an intense two day curriculum of energy market fundamentals. Your instructors will apply down-to-earth, understandable concepts, real world examples and usable economic models toward the goal of understanding energy markets.

There will be no industry luminaries waxing eloquent about the hottest infrastructure project or game changing developments. Instead, RBN instructors will lead you through a tightly scheduled curriculum designed for maximum learning.

This is not a course for complete newbies. We assume you have some working knowledge of at least one of the three energy markets we are targeting: crude oil, natural gas or NGLs.

- You will need a laptop computer with internet access and Microsoft Office 2010 or higher. Yes that means you will be downloading several RBN energy economic models and working with them in class. That's what hands-on means.
- The webcast will be hosted on the RBN Energy website. You will need to be logged in under an profile with an active School of Energy License to access the videos and material.
- You will have access to both the Power Point slides and spreadsheet models used in the coursework in real-time. At the end of the course you will walk away with all of these materials.
- There will be math. But nothing beyond your basic spreadsheet formulas and functions.

School of Energy **Faculty**



Rusty Braziel,
CEO, RBN Energy
Previously with Bentek
Energy, Texaco (Chevron),
Williams and Altra



David Braziel,
President, RBN Energy
Previously with Direct
Energy and Apache
Corporation



Scott Potter,
Managing Director,
Business Development,
RBN Energy
Previously with Aquila,
Texaco and Altra



Sheetal Nasta,
Managing Editor,
RBN Energy
Previously with Bentek
Energy and Platts



Rick Smead,
Managing Director,
Advisory Services,
RBN Energy
Previously with Navigant,
El Paso Pipeline Group
and Colorado Interstate
Gas Company



Jason Ferguson,
Director, Energy
Fundamental Analysis,
RBN Energy
Previously with Koch
Energy Services, Shell
and ExxonMobil



Jeremy Meier,
Production Analyst
RBN Energy



TJ Braziel,
Director of Client Services,
RBN Energy
Previously with
Bentek Energy, Genscape
and RigData



Amy Kalt,
Consultant,
Manager of Analytical
Services, Baker & O'Brien



Simon Hill,
Chief Executive Officer
at CAZBAA LTD
Previously with Petredec,
Texaco (Chevron)
and BNO



Noel Copeland,
Director of GIS Services,
RBN Energy



Lindsay Schneider,
Senior Analyst
and Consultant
Previously with
Wood Mackenzie and
Exelon Generation



Martin King,
Senior Analyst and
Consultant, RBN
Energy

Register Now!

www.rbnenergy.com/school-of-energy

Registration Fees for Event: \$1,250

Phone: 888-612-9488 | Email: school@rbnenergy.com

RBN School of Energy Class Schedule: November 9-10, 2021

Day 1

Welcome, Introductions

Hydrocarbon Markets in a Decarbonizing World

New Market Realities: More Exports, Higher Prices, Global Influence

Enough Hydrocarbons to Make it Through the Energy Transition?

Module #1: Fundamentals

The Fundamentals of Fundamentals

North American NGL Fundamentals

Break

Understanding Energy Fundamentals Models

LABModel – Propane to Crude Ratio

Module #2: Production

Production Economics – The Basics

Price Scenarios, Type Curves, and Investment Returns

Well Cost, Production Rates, Decline Curves and Other Variables

LABModel – Production Economics

Lunch

Production Forecast Concepts and Methodologies

LABModel – Production Forecasting

Oil, Gas and NGL Production Forecasts

Module #3 – Crude Oil Markets

Crude Oil Market Overview, Export Drivers and Constraints

Permian Crude Infrastructure, Flows, Constraints

Break

Crude Quality: Implications for Prices, Pipelines and Refining

Fundamentals of Refining: Units, Processes and Products

LAB Model – Petroleum Product Prices and Crack Spreads

LAB Model – Refinery Yields and Representative Margins

Module #4 – Natural Gas Markets

North America Gas Market Overview

Appalachian Gas Balance, Egress, and Basis

Adjourn

Day 2

Welcome Back

Module #4 – Natural Gas Markets (Cont.)

Natural Gas Pricing and Demand Factors

LNG Exports, Feedgas and Projects

Permian Gas: Flow, Capacity and Pricing Developments

Natural Gas Transportation, Rates and Regulation

Module #5: Natural Gas Liquids Markets

NGL Production, Demand, Exports and Price Volatility

Break

Natural Gas Processing

Ethane Recovery and Rejection Economics

Petrochemical (Steam Cracker) Feedstock Margins

International LPG Markets: Destinations, Terminating, Shipping and the Arb

Lunch

Module #6: Navigating the Energy Transition

The Energy Transition Imperative: Can We Get There From Here

Legacy CO₂ and Permian CO₂

CO₂ Regulation (45Q, Class VI injection wells, etc.)

Break

Understanding Hydrogen Markets and Metrics

Existing refinery, petrochemical and merchant Hydrogen markets

Green and Blue Hydrogen Projects

The Emergence of Renewable Diesel

Module #7: Where Do we Go From Here

Adjourn

All Modules Subject to Change