

# School of Energy

**LIVE**  
**IN PERSON**

**May 17-18, 2022**

RBN's Latest Crude, Gas and  
NGL Curriculum

**PLUS**

Making The Energy Transition:  
CO<sub>2</sub>, H<sub>2</sub>, Renewable Fuels

## A New Era for Oil, Natural Gas and NGLs – Energy Transition *Slams* into Energy Reality

The illusion of a smooth energy transition was swept away in 2021, with the drive toward decarbonization running headlong into the reality of energy markets. It is now clear that the transition and its effects are permeating all aspects of supply and demand, from the chaos in European natural gas, to producer capital restraint in the oil patch, to the rising impact of renewable fuels and, of course, to the escalating roadblocks in pipeline construction. Gone are the days when traditional energy markets operated independently of the energy transition. Today the markets for crude oil, natural gas and NGLs are inextricably tied to renewables, decarbonization, and sustainability. It's simply impossible to understand energy market behavior without a solid grasp of how these market factors are tied together.

**That is what School of Energy – Spring 2022 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.**

And for the first time in over two years, we are LIVE and IN PERSON! That's right. Our 2022 Spring School of Energy will be held at the Houstonian in Houston May 17-18, 2022. We have updated our content to reflect the massive changes we've seen over the past six months, along with additional faculty and upgraded models. And the curriculum includes an entire half day dedicated to what we believe are the most important hydrocarbon-related issues in the energy transition. That means CO<sub>2</sub>, hydrogen and renewable fuels.

**This is nothing like other natural gas, crude oil or NGL conferences! The course work is hands-on. In each module we'll drill down on an important aspect of the market, explain how it works, download a spreadsheet model and learn how to use it. You walk out the door with the how-to Power Points and the Excel models on your hard drive.**

A Special thanks  
to our sponsor  
**PROJECT CANARY**



 **RBN Energy** LLC

# Making Connections Across Energy Markets

**In RBN's highly respected blog, industry 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 traditional energy markets we target: crude oil, natural gas or NGLs.

You will need a laptop computer with internet access and Microsoft Office 2013 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. There will be math. But nothing beyond your basic spreadsheet formulas and functions.

You will have access to both the Power Point slides and spreadsheet models used in the coursework in real-time. Additionally, we have added supplemental videos for extra model instruction to give us more time to discuss energy transition topics on day two. At the end of the course, you will walk away with all of these materials.

## School of Energy Faculty



**Rusty Braziel,**  
Executive Chairman  
Previously with Bentek  
Energy, Texaco (Chevron),  
Williams and Altra



**David Braziel,**  
President and CEO  
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,  
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**Rick Smead,**  
Managing Director,  
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Previously with Navigant,  
El Paso Pipeline Group  
and Colorado Interstate  
Gas Company



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



**Todd Root,**  
Director, NGLs and  
Petrochemicals, RBN Energy  
Previously with  
Westlake Chemical and  
Lyondell Petrochemical



**TJ Braziel,**  
Director of Client Services,  
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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 BNOOC



**Jeremy Meier,**  
Production Analyst  
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**Lindsay Schneider,**  
Senior Analyst  
and Consultant  
Previously with  
Wood Mackenzie and  
Exelon Generation



**Noel Copeland,**  
Director of GIS Services,  
RBN Energy  
Previously with  
Bentek Energy  
and Platts



**Martin King,**  
Senior Analyst and  
Consultant, RBN  
Energy

# Register Now!

<https://rbnenergy.com/soe>

Registration Fees for Event: \$1,950 Early Bird | \$2,450 after April 18th

Phone: 888-612-9488 | Email: [school@rbnenergy.com](mailto:school@rbnenergy.com)

# RBN School of Energy Curriculum: May 17-18, 2022

## Day 1

### Welcome, Introductions

#### Hydrocarbon Markets in a Decarbonizing World

The Dynamics of Supply/Demand Balances,  
Capacity Constraints and Prices  
Energy Transition Slams into Energy Reality

#### Module #1: Fundamentals

The Fundamentals of Fundamentals  
North American NGL Fundamentals

### Break

Understanding Energy Fundamentals Models  
LAB Model 1.5b – 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  
LAB Model 2.1b – Production Economics

### Lunch

Production Forecast Concepts and Methodologies  
LAB Model 2.2b – 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 3.4b – Petroleum Product Prices  
and Crack Spreads  
LAB Model 3.4c – Refinery Yields and Representative Margins

#### Module #4 – Natural Gas Markets

North America Gas Market Overview, Price and Demand  
Appalachian Gas Balance, Egress, and Basis

### Happy Hour Reception

## 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, Terminaling,  
Shipping and the Arb

### Lunch

#### Module #6: Navigating the Energy Transition

Making the Most of the Energy Transition  
Legacy CO<sub>2</sub>, Enhanced Oil Recovery, Pore Space  
CO<sub>2</sub> Regulation: 45Q Tax Credits, Carbon Intensity Scores,  
Injection Well Permits

### Break

Understanding Hydrogen Markets and Metrics  
Existing refinery, petrochemical and merchant Hydrogen markets  
Hydrogen Infrastructure  
Green, Blue and Other Colors of Hydrogen Projects  
The Emergence of Renewable Diesel

#### Module #7: Where Do we Go From Here?

### Adjourn

## Bonus Material and Lab Modules - Prerecorded

Lab Model 4.2b: Gas Market Analytics Using Pipeline Flow Data  
Lab Model 4.4b: Key Driver of Demand: Coal to Gas Switching  
Lab Model 4.7b: Estimating Rates for Natural Gas Pipelines  
Lab Model 5.1b: The NGL Frac Spread

Lab Model 5.2b: Natural Gas Processing Model  
Lab Model 5.3b: Ethane Recovery and Rejection Economics  
Lab Model 5.4b: Petrochemical (Steam Cracker) Feedstock Margins  
Lab Model 6.4b: Hydrogen Unit Conversion Calculator