

The background of the image is a composite scene. On the left, there are solar panels tilted towards the sun. In the center, several wind turbines are visible against a bright, hazy sky. On the right, a large white container with 'ENERGY STORAGE' written on it is shown. The sun is low on the horizon, creating a strong lens flare and illuminating the scene with a warm, golden light. The foreground is filled with tall, dark grass.

**PIVOTAL** 180

# BATTERY STORAGE

MODELING COURSE

# Battery Storage Modeling Course

## Why Learn With Pivotal180?

### World-Class Course Content

- Learn the types, uses, economic value drivers and risks related to battery energy storage projects and investments
- Instruction from top industry experts and academics, available in various formats

### Continuous Online Access

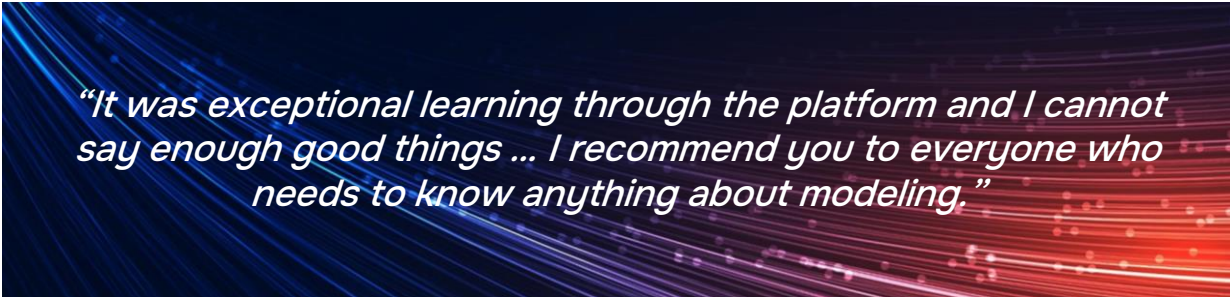
- One year of access to our online lessons including videos, slides, and model walk-through
- Highly discounted annual subscription renewal
- Includes a course completion certificate

### Open to All Experience Levels

- Perfect for anyone interested in learning the fundamentals of energy storage
- Ideal for current project finance professionals, students targeting the sector, and energy market participants

### Practical Transaction Skills

- Understand the key inputs, calculations and outputs for battery projects
- Grasp finance and operations concepts for standalone and co-located storage
- Align financials with project needs, legalities, and market risks
- Run scenarios and sensitivities for informed decision-making
- Generate clear outputs for presentation



*"It was exceptional learning through the platform and I cannot say enough good things ... I recommend you to everyone who needs to know anything about modeling."*

# Battery Storage Modeling Course

## Course Syllabus

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### Pre-course Material

Excel functions, formulas and shortcuts | Best practice modeling concepts | Intro to debt and equity | Benefits of leverage | Present value concepts and formulas | Introduction to battery model

### Energy Markets and the Grid

Capacity vs energy | Power plant economics | Energy demand and dispatch | The “duck curve” | Energy demand and pricing | The need for batteries | Uses of energy storage | Supply shifting | Ancillary services | Types of storage | Terminology

### Battery Operations, Benefits and Costs

Battery energy flows | Inverters and efficiency | Battery arbitrage | Revenues for supply shifting vs ancillary services | Revenue stream stacking | Global battery market comparisons | Capital costs | Capex drivers and trends | Operating expenses | Degradation, cycles and DoD | Augmentation | Investment Tax Credit (ITC)

### Financing Considerations

Risks and due diligence | Lender considerations | Sizing debt for merchant batteries

### Solar + Storage Coupling

Intermittency | Curtailment | Inverter clipping | Benefits of coupling solar + storage | Energy flows + risks: standalone, AC-coupled, and DC-coupled storage | Project-level efficiency | Standalone, AC- and DC-coupled revenue models | AC versus DC coupling scenarios and considerations

### Case Studies

Battery size/use case revenues and costs | Solar, storage and co-located scenarios and sensitivities

# Battery Storage Modeling Course

## Course Delivery Options

### In-person

- One or two days, ~8.5 hours
- Private and public classes
- Homework to ensure and deepen understanding

### Live Stream

- Four sessions over 2 to 3 weeks (~8.5 hours total)
- Small class sizes (max ~12)
- Homework + class recordings

### Online Self-paced

- ~6-8 hours completion time
- Learn on your schedule
- Complete model walk-through and chapter quizzes

## The Pivotal180 Difference

**Unrivaled experience.** The Pivotal180 team have decades of experience as principal investors, advisors, and university professors, and have held board positions in multiple companies.

**More than Excel coding.** Learn how to analyze deals. We teach market structures, policy and incentives, financial modeling, how to read legal documents, and deal management based on real experience, ensuring students deepen their skills and understanding.

**The most tailored courses in the market.** Learning in context works. Courses can be tailored to reflect your business, including incorporation of actual deals, transaction documents, and country-specific tax regimes.

**Access to online learning platform.** All participants in our in-person and live-stream courses receive free access to our online learning courses to dive deeper into topics, including access to discussion forums for ongoing questions.

**Dedicated to training.** We teach over 1,500 students each year for some of the world's premier investors. Clients include Macquarie, GIP, Santander, Engie, CRC-IB, Nomura, Generate Capital, Lendlease, NY Green Bank and more.

## Current Courses Available

Renewable Energy  
Project Finance  
Modeling

Tax Equity  
Modeling

Battery Storage  
Modeling

Project Finance  
and Infrastructure  
Modeling