



**CLEAN ENERGY SERVICE**



Our **Clean Energy Service** provides fundamental-based outlooks for renewables market investors, owners & carbon market traders to make better investment & trading decisions.

# Clean Energy Service

ESAI Power evaluates the clean energy issues, markets and trends in PJM, NYISO & ISO-NE. Coverage includes traditional Renewable Energy (solar, wind, hydro, and storage), Carbon Markets and Wholesale Power markets.

- **Renewables Watch** details regulatory & market factors impacting Class I RECs prices and project the supply and demand balance of Class I RECs through 2032 in each region.
- **Energy Watch** includes 10-year forecasts of pool-wide and zonal energy prices for both power and natural gas forecasts that reflect fundamental analysis, regional basis spreads, LNG Projects, and key issues impacting the gas market.
- **Emissions Watch** closely follows the impact of Federal, Regional & State Level regulations on SO<sub>2</sub>, NO<sub>x</sub> & CO<sub>2</sub> allowance price forecasts.

## ESAI Power's Clean Energy coverage includes:

- Class I REC price forecasts and factors driving changes to Class I supply & demand balance, including:
  - Changes to individual state Renewable Portfolio Standard (RPS) mandates;
  - State Renewable RFPs (Class I land-based and offshore wind resources);
  - Status of renewable generation development.
- RGGI Allowance price forecast to 2032.
- CSAPR NO<sub>x</sub> Allowance price forecasts.
- State Level Carbon coverage (e.g., Mass CO<sub>2</sub> regulation)
- Renewable energy development trends such as costs of renewable energy technologies, and the changing penetration of different technology types.
- Coverage of relevant federal issues such as offshore wind permitting, Investment Tax Credit & Production Tax Credit status.
- Granular forecasts of pool-wide & zonal energy pricing, fuel input forecasts, policy changes & how these impact energy prices.



## ESAI Power's Clean Energy Service

### Long-Term Reports

- **Renewables Watch™**
- **Emissions Watch™**
- **Energy Watch™ Quarterly**

# Clean Energy Insights & Analysis

Our **Clean Energy Service** includes access to the following reports published quarterly, access to the energy asset database and access to our team of Clean Energy market experts.

- Make critical investment decisions.
- Renewable energy asset revenue & gross margin analysis.
- Validate Asset Valuation Models and Projections.
- Stay updated with unbiased long-term price forecasts.
- Understand and manage market and regulatory risks.
- Test analytical models and compare them to industry-standard Capacity, Carbon, RECs, Energy & NatGas price forecast benchmarks.



**Renewables Watch™** – Provides quarterly updates on significant policies (state and federal) facing the PJM, NYISO & ISO-NE renewable energy markets. In addition, inputs to ESAI's Class I REC supply and demand models are updated quarterly to provide timely updates to Class I REC forecasts. ESAI also covers federal issues impacting renewable policy and development in the Northeast.

**Energy Watch Quarterly™** – Quarterly analysis of market & policy issues affecting energy prices over 10-years for power & natural gas. Includes forecasts of pool-wide and zonal energy prices in ISO-NE, NYISO & PJM, and forecasts of fuel inputs. The dynamics of market & policy changes are analyzed and impacts on energy prices are assessed. These impacts are placed in the context of high-level benchmark economics of theoretical plants in specific locations. The report provides annual 7x24 data resolution. Our long-term natural gas outlook includes fundamental analysis, basis spreads, LNG projects under consideration & key gas market issues.



**Emissions Watch™** – This quarterly report contains our outlooks and views on the emissions markets ISO-NE, NYISO & PJM. ESAI provides regular updates and analysis on developments in the SO<sub>2</sub>, NO<sub>x</sub> and CO<sub>2</sub> emissions markets as well as price forecasts for state and regional markets. In addition, regular updates are provided on the RGGI program as well as other state-specific emissions programs, such as Massachusetts CO<sub>2</sub> Cap regulation.

# Clean Energy Research Methodology

## Research Methodology

Clean Energy Asset investment, RECs & Carbon trading decisions should always be based upon fundamentally sound inputs and detailed Renewable project outlooks. While the demand side of the equation for Renewable energy asset valuations and energy pricing is relatively straightforward, getting the supply side data correct relies upon a detailed and accurate understanding of construction of generation projects, the likelihood of project completion, and energy asset retirements and those at-risk of retirement. Supply forecasts also require a broad understanding of how development, transmission, congestion, emissions, and renewable energy mandates impact capacity and energy price outcomes.

## Independent, Unbiased Analysis

For 20 years, ESAI Power has provided investors & generation owners with objective analysis based on sound fundamental modeling. With a deep understanding of market rules and regulatory issues that impact market outcomes in PJM, NYISO and ISO-NE, ESAI's reports include price forecasts for Class I RECs, Capacity, Carbon emissions, Power & Natural Gas. Our forecasts are published to our generation owners, investors, regulators, and utilities - and must always remain unbiased. We're committed to covering these markets consistently in our price forecasts. ESAI is well known for publishing "the unvarnished truth" in our forward curve forecasts.



## Contact Us

For more information about how we can make a difference for your business, please call Brian Doyle at **+1 (617) 678-7962** or email [\*\*bdoyle@esai.com\*\*](mailto:bdoyle@esai.com)

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## About ESAI Power

ESAI Power is a market research and consulting firm that delivers focused analysis of the wholesale power markets of PJM, NYISO, ISO-NE, MISO & CAISO. Since 2001, ESAI has provided market-focused research product content and custom consulting services for Northeast power market participants, including investors (banks, private-equity, & hedge funds) & developers, generation owners & operators, utilities, regulatory bodies, traders, and end-users & buyers. ESAI Power LLC, 401 Edgewater Place, Suite 640, Wakefield, MA 01880.

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