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AUTOMATED SOLUTIONS FOR DAILY PRICE DISCOVERY IN ENERGY DERIVATIVES

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ABSTRACT

The increasing complexity and volatility in energy markets necessitate efficient solutions for daily price discovery in energy derivatives. Traditional methods of price discovery, reliant on manual intervention and historical data analysis, often fail to keep pace with dynamic market conditions. This paper explores the development and implementation of automated solutions for daily price discovery in energy derivatives, leveraging advanced algorithms, machine learning models, and real-time data analytics. The proposed framework integrates market data feeds, predictive models, and automated trading mechanisms to enhance decision-making accuracy and speed. By minimizing latency and human error, automated solutions provide more accurate pricing models, ensuring fair market value assessments and risk mitigation. The research further investigates the role of artificial intelligence in identifying market patterns, arbitrage opportunities, and abnormal price fluctuations. A case study on energy exchanges highlights the practical implications and efficiency gains achieved through automation. This paper concludes by emphasizing the critical importance of continuous monitoring and optimization in automated price discovery systems to adapt to evolving regulatory requirements and market trends.

KEYWORDS: *Automated Price Discovery, Energy Derivatives, Machine Learning, Real-Time Data Analytics, Predictive Models, Algorithmic Trading, Market Volatility, Risk Mitigation, Energy Markets, Regulatory Compliance*