

# WHITE PAPER

# LET'S GET REAL PRACTICAL USE CASES OF FINTECH TO ACCELERATE ENERGY TRANSITION

### Contributors:

Karen Lukacs, FIS Energy Sales Executive Mike Radzvilowicz, FIS Energy Senior Pre-sales Consultant John Kim, FIS Energy Pre-sales Manager Disruptive global events, volatilities in the energy markets and new regulatory reporting requirements have increased the pressure on energy and utilities companies to reduce their carbon footprint and transition to cleaner, renewable energy sources. As consensus for a clean energy transition grows, the energy and utilities industry is being called to lead the charge toward decarbonization while simultaneously keeping up with growing demand across the markets they serve.

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While strong forces are driving the energy transition, the challenges are becoming more apparent. In addition to meeting strict industry mandates, energy and utilities companies are tasked with managing their market positions and risk profiles, and meeting the increasingly green expectations of their customers. Energy and utilities leaders have concerns regarding revenue, risk, cost to the consumer and regulatory reporting, and are considering all these factors as they evaluate the cost/ benefit ratio of going clean.

A major obstacle in the energy transition is the use of legacy software that requires manual processes for payments, reconciliation and regulatory reporting. They also lack the new functionality required for the new asks of going green. The lack of modern technology makes it difficult to understand and address the ROI of energy transition with any level of agility.

Fortunately, new solutions are helping energy and utilities companies address these issues. Technology is advancing to help companies gain insights into customer and market activity to manage multiple assets in the energy transition more effectively. Modern financial technology enables companies to minimize manual processes, consolidate disparate reporting sources with regulatory requirements and achieve more accurate cash forecasting.

In this white paper, we'll look at how innovative energy and utilities companies are implementing technology to overcome the four obstacles of revenue, risk, cost to the consumer and regulatory reporting and, ultimately, achieve their goals in the energy transition.



### Are these questions keeping you up at night? Continue reading to discover how fintech is helping energy and utilities executives address these and other concerns.

- What's the cost impact of going green?
- How can we forecast the P&L of switching from coal/ natural gas to wind turbines or other renewables now and in 10 years?
- How do we manage our risk associated with revenue?
- How can we manage new commodities related to regulatory standards?
- How do we balance the need to lead the charge toward decarbonization while still keeping up with growing demand across markets served?
- How do we deal with the risk of cyberattacks?





# Challenge #1: Managing revenue

Regulators, investors, individuals and organizations are propelling the energy transition forward, yet a recent McKinsey study noted the cost to achieve net-zero carbon emissions could reach roughly USD\$275 trillion by 2050. In addition to cost challenges, energy and utilities companies face complexities and uncertainties in pricing for traditional commodities that are experiencing fluctuating price points. This is a pain point particularly when managing large customers with locked-in commercial and industrial terms and rates.

Energy and utilities companies also face revenue risk associated with Renewable Energy Certificate (REC) and Renewable Identification Number (RIN) management in a deregulated market where the price curves are not yet established. These companies are also under increased pressure to accurately forecast demand and revenue for their customers and their own operational health. In theory, Energy Trading and Risk Management (ETRM) solutions should be able to provide energy and utilities companies with daily P/L and forecasting for cash, derivatives, dividends, future information and advanced analytics. But the reality is that many cannot.

Savvy energy and utilities leaders are looking for ETRMs that can provide intuitive self-led reporting to analyze their true cash position at any point in time. This helps facilitate balanced decisions made with energy transition expenditures and modernization projects.



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# Challenge #2: Mitigating internal and external risks

Energy and utilities companies face five major categories of risk in the transition to renewables:



# 1. Locational price risk

examines how prices are going to change regionally, nationally and globally due to specific weather patterns and obstructions.



# 2. Volume metric risk

has to do with volatility of demand in different geographies, such as when consumers change their energy usage in response to various factors including cost and a changing environment.



# 3. Credit risk

involves wholesale players such as banks, utilities companies, energy retailers and counterparties. These companies need to be able to calculate a margin call based on what they believe will happen in the market, the level of demand for credit management and cash flow. Additionally, recent reports of bank instability have renewed concerns and requirements for managing the possibility of loan default.



# 4. Cyberattacks

pose a new risk for the energy industry which has been a late adopter of cloud technology. The threat is real, as exemplified by recent attacks. A single compromised password enabled the hack that took down the largest fuel pipeline in the U.S. and led to shortages across the East Coast, and a cyberattack on a major Canadian energy company impacted payment operations at many of their gas stations across Canada.



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# 5. Unknown risks

related to the regulatory environment create challenges for energy and utilities companies. Challenges include but are not limited to: how to minimize costs to meet mandates, how to address the market's changing responses to RECs, RINs and other forthcoming green obligations.

Cyberattacks on energy infrastructure reached a record high in 2022.

# Challenge #3: Minimizing cost to the consumer

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Energy and utilities companies are also grappling with the challenge of keeping customer costs in check, as overall energy costs as a percent of retail bills have risen over the last few years.

One obstacle is the wide variability in energy and utilities pricing as geographies continue to refine and revise their Renewable Portfolio Standards (RPS), clean electricity standards (CES), and solar renewable energy certificates (SREC) and policies. In the U.S., of the 29 states plus Washington, DC with an RPS, 16 have RPS targets of at least 50% of retail sales and 17 states have a 100% CES or RPS target.

All of this adds considerable cost to consumers – RPS compliance costs alone average roughly 3.5% of retail electricity bills across RPS states, with the highest costs (8-12% of retail bills) in states with solar carve-outs and high SREC prices. As consumers grapple with rising costs across the board, energy and utilities leaders must be sensitive to their customers' pricepoint sensitivities. Energy supply costs need to be minimized to meet customer demand and expectations as well as regulatory obligations, and this can only be accomplished by investing in financial technology.

Energy and utilities companies must also be able to provide transparent and simplified billing, bill payment and budgeting options – all of which help improve the customer experience and build long-term loyalty. A strong ETRM solution enables companies to achieve all these things and more.



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### **Challenge #4: Responding to regulatory reporting and pressures**

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As the push toward renewables accelerates and governments implement additional industry regulations, energy and utilities companies are required to report numerous new energy requirements in addition to their own internal reporting.

RECs have grown into a new commodity requiring energy and utilities companies to have solutions that can deal with all aspects of RECs including trading, valuation, inventory management and regulatory reporting, with the additional complexity of tracking of interstate trading. As more U.S. states adopt RPS, CES and SREC, standards and regulations vary from state to state and further complicate energy and utilities companies' reporting obligations. While many energy and utilities companies are building their own reporting engines using a centralized repository like data lake and analytics like Power BI, these tools lack the ability to integrate such complex data across various systems. Forwardlooking energy and utilities companies are using integrated ETRM solutions that streamline data collection and analysis. With a strong reporting engine, users can generate their own reporting while also managing complex reporting requirements for the transition to clean energy.



The growth of RECs into a new commodity is having an especially large impact on energy and utilities companies.



# How energy and utilities leaders are addressing these challenges - ETRMs should be the foundation of change

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Gartner Research lists asset data, market trade data, market price data and demand forecasts as the core elements of an energy trading risk management (ETRM) platform. Through centralized information, reporting, processing and analysis, the ETRM platform helps energy leaders more accurately determine market forecasts and budgets and mitigate the aforementioned risks across the enterprise. Here are a few examples:

- A containerized approach to ETRM releases allowed Enovos, Luxembourg's main energy supplier, to address the unpredictable CAPEX cost and long lead times needed to implement software changes. By implementing a shared resource solution for deploying and running applications on a single host situated in the cloud, Enovos was able to achieve a simpler, more streamlined production, test and development environment.
- Advanced reporting functionality in ETRM systems enables reporting on ESG-related activities and links these to specific trading strategies and outcomes. This helps traders, risk managers, fuel buyers and others in the energy commodity supply chain align regulatory and stakeholder mandates with prudent commodity trading strategies. A trading operation is then able to prove, in quantifiable and consistent terms, that it effectively balances ESG initiatives and profitability.
- Digital technologies enabled energy distributor Gulf Gas & Power to improve transparency, reduce complexity, minimize cost inefficiency and deliver fair pricing for natural gas and electrical power to their customers in the Netherlands and the United Kingdom. The company achieved their goals by implementing a solution designed for smaller energy and retail companies that offers cost-effective portfolio management and price-risk quantification from the procurement and sale of energy.



By using ETRM tools, energy and utilities companies can more successfully navigate market volatility and complex regulations while simultaneously taking advantage of new opportunities to drive efficiency and minimize risk while transitioning to new energy.





# **Putting it all together**

While the energy transition is a necessary undertaking for the future, companies in this sector must be able to balance must be able to balance the current energy demands of their customers with the revenue goals of their own enterprises while also managing risk.

The most influential energy and utilities companies are managing multiple, disparate systems for financial and operational needs, which often leads to costly inefficiencies. It's become clear that a one-size-fits-all enterprise resource planning (ERP) software system does not work. To enable efficiency, reliability and economic viability, energy industry leaders need a customized ETRM solution powered by modern digital technology.

ETRM solutions are key to accommodating complex energyspecific reporting requirements across multiple commodities spanning various regions. Self-serve reporting provides the tools for cash flow analysis and real-time positioning to help energy and utilities companies meet their energy transition goals. Transforming the legacy systems and processes inherent to the energy and utilities industry is a massive undertaking. By partnering with a single innovative and experienced vendor, energy and utilities companies can leverage economies of scale and more effectively meet their goals for the energy transition.

The FIS® Energy Trading, Risk and Logistics Platform utilizes more than 3,000 fintech solutions as well as over 1,500 cybersecurity leaders and 1,000 risk experts to help energy and utilities companies increase their efficiency. The energy industry is changing. FIS enables that change through our investment in growing your technology possibilities.

Contact us at: Fintech for the World's Energy Companies



# **About FIS**

FIS is a leading provider of technology solutions for financial institutions and businesses of all sizes and across any industry globally. We enable the movement of commerce by unlocking the financial technology that powers the world's economy. Our employees are dedicated to advancing the way the world pays, banks and invests through our trusted innovation, absolute performance and flexible architecture. We help our clients use technology in innovative ways to solve business-critical challenges and deliver superior experiences for their customers. Headquartered in Jacksonville, Florida, FIS ranks #241 on the 2021 Fortune 500 and is a member of Standard & Poor's 500<sup>®</sup> Index. To learn more, visit www.fisglobal.com. Follow FIS on Facebook, LinkedIn and Twitter (@FISGlobal).

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