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ENFORCEMENT

In this issue:

FERC'S ENFORCEMENT ORDER ON GREENHAT AND TAKEAWAYS FOR MARKET PARTICIPANTS

The Federal Energy Regulatory Commission (Commission or FERC) recently issued a significant enforcement order,[1] in which FERC found that GreenHat Energy, LLC (GreenHat) and its founders and employees, John Bartholomew, Kevin Ziegenhorn, and Andrew Kittell[2] (collectively, Respondents) engaged in a manipulative scheme in the Financial Transmission Rights (FTR) market operated by PJM. GreenHat's default resulted in nearly $180 million in losses, almost all of which were shouldered by PJM FTR market participants.

FERC ultimately ordered the disgorgement of some $13 million in unlawful gains from GreenHat and its founders, plus a $179 million civil penalty against GreenHat and $25 million civil penalties against each of the two surviving individual respondents. Unfortunately, PJM market participants should not expect reimbursement any time soon. GreenHat itself is bankrupt, and civil penalties are paid into the US Treasury[3] rather than to the victims of the market manipulation. It remains to be seen whether FERC will succeed in collecting the disgorged profits from the individual Respondents, who were held jointly and severally liable along with GreenHat for that sum. The Commission must go to federal court to enforce its orders, if the Respondents do not pay voluntarily, and FERC filed its complaint in federal court on January 6, 2022.[4] Respondents clearly intend to contest the penalties, so it may be some time before the matter is resolved.

The GreenHat default is certainly one of the more significant events the Office of Enforcement has sought to address. The order, along with Commissioner Danly's dissent, highlighted some of the difficulties inherent in proving market manipulation by fraud and put a spotlight on weaknesses that were present in the PJM FTR market that GreenHat was able to exploit.

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[1] *GreenHat Energy, LLC*, 177 FERC ¶ 61,073 (2021) (Order).

[2] Kittell died on January 6, 2021 and the proceeding continued against Kittell's Estate.

[3] Order, Ordering Paragraphs A, C, and D.

[4] *FERC v. GreenHat Energy, LLC*, No. 2:22-CV-00044-MAK (E.D. Pa. filed Jan. 6, 2022).

What Did They Do?

GreenHat was founded by Bartholomew, Ziegenhorn, and Kittell to buy and sell FTRs in the PJM market. As participants in organized markets are aware, FTRs are financial instruments that reflect the cost of transmission congestion between two specific points on PJM's transmission system at a particular time. While utilities use them to hedge transactions against congestion charges, FTRs can also be instruments for financial speculation. Traders can buy and sell FTRs through PJM auctions or they can engage in bilateral sales by buying and selling directly with each other.

In essence, FERC found that GreenHat identified and purchased long-term FTRs based solely on which FTRs carried the lowest possible collateral requirement, ignoring traditional market fundamentals such as expected future changes in generation, transmission, or load that could affect congestion prices. GreenHat used the PJM Credit Requirements Calculator, a mechanism that valued FTRs (and hence the amount of collateral needed to purchase them) using a metric based on their historical values and purchase price. Where an FTR's projected value was higher than the bid price, no additional collateral was required beyond the $500,000 collateral posting PJM requires of all FTR market participants. By purchasing only long-term FTRs, GreenHat deferred the ultimate settlement dates (and associated payments) well into the future.

Targeting low collateral FTRs allowed GreenHat to accumulate a sizeable portfolio, albeit one that proved to be significantly negatively valued (eventually it reached a negative $35 million). Order P 49. Despite the overall negative value, the portfolio did contain individual FTRs with a positive value. GreenHat collected $13 million by selling those FTRs bilaterally to other market participants at a discount. Order P 42. After those sales, GreenHat transferred the profits out of the LLC to the accounts of a holding company, and from there to the accounts of the individual Respondents. The negatively valued FTRs remained in the GreenHat portfolio.

Over time, the sales of positively valued FTRs and the retention of negatively valued ones reduced the overall value of the portfolio to the point where PJM notified GreenHat that it was considering a margin or collateral call. The day after this notification, individual Respondents transferred all of the money in GreenHat's bank account to themselves.

GreenHat then delayed PJM from acting on its margin call by falsely representing to PJM that it was still owed over $62 million from bilateral FTR sales to Shell. PJM sought permission to confirm this with Shell, but GreenHat refused. PJM and GreenHat then entered into months-long negotiations over a pledge agreement, during which time PJM agreed not to proceed with the margin call if GreenHat pledged the money from Shell to PJM. GreenHat provided PJM with manipulated documents that improperly inflated the amount owed from Shell. Order PP 53-54. During the course of the negotiations with PJM, Shell resold the FTRs it had purchased from GreenHat at auction. GreenHat bid on the FTRs in order to drive up their value and increase the final sum Shell owed to GreenHat. Order P 47. When GreenHat received the final payment from Shell, individual Respondents once again transferred it to themselves.

When the first of the negatively valued long-term FTRs at last became due for settlement in June of 2018, GreenHat defaulted. By that time, GreenHat had only $559,447 on deposit at PJM as collateral. The ensuing market losses totaled almost $180 million. At the time of the default, the FERC Office of

Enforcement was already investigating GreenHat, because GreenHat's efforts to interest other market participants in its trading strategy had resulted in two separate tips to the FERC Enforcement hotline.

Based on the facts it found, the Commission determined that the Respondents had intentionally and knowingly violated the Anti-Manipulation Rule[5] (Order P 69) in four ways:

- Respondents engaged in a fraudulent scheme to defraud the PJM market and market participants by: (1) amassing a huge FTR portfolio based not on market fundamentals but on acquiring FTRs with virtually no collateral requirement; (2) buying primarily long-term FTRs; (3) planning not to pay for losses at settlement; and (4) obtaining cash in the interim for the individual Respondents by selling the portfolio's profitable FTRs to third parties at a discount (selling off the "winners" and holding onto the "losers"). Order P 131.

- Respondents purchased FTRs in a way to minimize collateral requirements, and not to build a profitable portfolio, with the intent not to pay for GreenHat's losses at settlement. Order P 160.

- Respondents falsely represented to PJM that GreenHat was owed more than $62 million pursuant to an existing bilateral FTR sale to Shell, with the intent to convince PJM not to proceed with a planned margin call. Order P 182.

- Respondents submitted bids into PJM's FTR auctions not with the legitimate goal of acquiring FTRs based on their value as investments, but rather with the intent to raise the auction clearing price for FTRs that Shell bought from GreenHat and then offered for auction. Order P 199.

Proving Market Manipulation by Fraud

Some of the key tensions in FERC's order are highlighted in Commissioner Danly's lengthy dissent. Although declaring himself "deeply skeptical" of respondent's explanations for their activities (Danly, Comm'r, dissenting P 3), he contends that the Office of Enforcement did not carry its burden of showing that Respondents committed market manipulation (Danly, Comm'r, dissenting P 4).

As a general matter, market manipulation by fraud is notoriously difficult to prove, because it requires a finding that respondents had the intent to defraud. Absent a confession, this can be hard to show. The law allows the trier of fact to make logical inferences about a respondent's intent from their actions (*United States v. Tager*, 788 F.2d 349, 353 (6th Cir. 1986)), which is what FERC has done here. The crux of the Commission's finding of the requisite intent is that GreenHat's trading strategies were not based on market fundamentals. This is not as simple a conclusion as it may sound.

Commissioner Danly maintains that if the GreenHat strategy had worked, there would have been no question of market manipulation (Danly, Comm'r, dissenting P 16). The Commission explicitly rejects this approach (Order P 164 n.409), finding that trading without reference to market fundamentals is an indicium of manipulative conduct. Though this is not the first time FERC has reached this conclusion,

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[5] Federal Power Act (FPA) section 222, 16 U.S.C. § 824v. FERC also found violations of section 1c.2 of the Commission's regulations against energy market manipulation; attachment Q, section Ia.B of the PJM Open Access Transmission Tariff; and section 15.1.3 of PJM's Amended and Restated Operating Agreement.

it is worth noting that if trading without reference to market fundamentals is an indicium of fraud, thousands of individual stockholders do this every day, most without any intent to manipulate the market. Commissioner Danly complains that the Office of Enforcement produced no direct evidence of Respondents' intent or belief (Danly, Comm'r, dissenting P 20), and that the Commission is basing all its inferences on trading without reference to market fundamentals.

While this analysis does not necessarily mean that the Commission got it wrong,[6] it does highlight a certain circularity in the approach. Had GreenHat's strategy been profitable, it would not have defaulted and no case would ever have been brought. Had the strategy been unprofitable, but GreenHat better capitalized, GreenHat might have failed, but no case would necessarily have been brought. GreenHat was not found to have violated any market rules or tariff requirements that were not associated with its inferred deceptive intent. For example, GreenHat's default was a violation of its obligation to pay (and its inferred intention not to do so), and the submission of deceptive documents to PJM was a violation of certification requirements (and its inferred intent to mislead PJM), but GreenHat's trading strategy, by itself, did not violate any substantive rule or tariff requirement.

Further, PJM itself calculated the values in the PJM Credit Calculator on which GreenHat based its entire strategy (Danly, Comm'r, dissenting P 15). While the Commission essentially concluded that no reasonable trader could have relied on those values (Order P 118) and there is certainly evidence that other traders declined to purchase FTRs based on those values, the fact remains that PJM and its Independent Market Monitor previously defended those values as accurate (Danly, Comm'r, dissenting P 18). Thus, many of the Commission's inferences of deceptive intent trace back to its conclusion that Respondents had a trading strategy that was not based on what the Commission only later concluded were the applicable market fundamentals.

Market participants should take note of how this works when they assess their own trading strategies and compliance programs. In the face of any market outcome, there is a human tendency to look at what happens and assume it was what the trader meant to have happen. The Commission will also be scrutinizing market activities in light of market fundamentals, with the benefit of perfect hindsight as to what the market fundamentals actually were at the time.

All of this reinforces how important it is that clients participating in RTO markets document their trading strategies and the reasons underlying them. All strategies should be based on market fundamentals and contemporaneously documented in writing. Contemporaneous evidence of good intent is the best defense against future inferences of bad intent.

Lessons for Organized Markets

Commissioner Danly also used his dissent to highlight "the share of the blame that must rightly be assigned to PJM" (Danly, Comm'r, dissenting P 1) for the historic default. PJM:

- used an FTR Credit Requirements Calculator that seriously underestimated the risks of its FTRs and set collateral requirements for holding them considerably lower than market fundamentals justified. The calculator did not take into account significant transmission

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[6] There was a great deal of conduct that could give rise to negative inferences.

upgrades that changed congestion patterns in PJM and made historical values a poor predictor of future results;

- dismissed warnings from no less than four separate market participants who had analyzed the GreenHat portfolio, and warned that it had a high negative value and posed a major risk of default[7]; and

- allowed GreenHat to convince it to defer a margin call based on misleading information, without verification.

These were serious missteps. When utilities enter into bilateral transactions, they are responsible for assessing their counterparty's credit risks and policing changed circumstances in case credit arrangements must be altered. In an RTO market, market participants rely on the RTO to perform those functions on their behalf. PJM's failure to do so highlights how seriously a market can be harmed when these functions are not properly fulfilled.

FERC-regulated markets are not typically collateralized against the default of the largest participant, leaving participants to pick up the pieces and the bills when large defaults occur. In this respect, they differ from CFTC-regulated exchanges where electric commodities and derivatives are often traded. Of course, these same collateralization requirements are one of the reasons it is so expensive to trade on CFTC-regulated exchanges. Imposition of this level of collateralization on RTO markets would have significant price impacts and could make them prohibitively expensive for smaller participants. The Commission's requirements were a deliberate choice to balance those concerns. But so long as RTO markets are attractive to financial speculators, RTOs (and the Commission) must be prepared to enforce requirements rigorously in order to protect markets and market participants from fraud and manipulation.

PJM has since overhauled its rules and collateral requirements and hired a chief risk officer. On December 21, 2021 PJM submitted proposed changes to the PJM Open Access Transmission Tariff to revise the calculation of the FTR Credit Requirement, which sets the collateral that FTR participants are required to provide in order to participate in PJM's FTR market.[8] According to PJM, the revised requirements more accurately quantify the potential risks to the FTR market from an FTR participant default.

Risks remain. On January 10, 2022 PJM issued a margin call to Hill Energy on its FTR portfolio, and on January 11 it declared Hill Energy in default.[9] Fortunately, Hill Energy had a relatively small portfolio and poses substantially less risk to other market participants than GreenHat did. Nevertheless, there is some chance that market participants will have to pay for some of these losses.

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[7] David Kocieniewski & Naureen S. Malik, *The Power Grid is Just Another Casino for Energy Traders*, Bloomberg Businessweek (Nov. 5, 2021), https://www.bloomberg.com/news/features/2021-11-05/why-is-my-electric-bill-so-high-energy-traders-bets-could-be-the-culprit.

[8] PJM, Revisions to PJM's FTR Credit Requirement and Request for 28-Day Comment Period, Docket No. ER22-703-000 (Dec. 21, 2021), eLibrary No. 20211221-5202.

[9] Michael Yoder, *PJM Weighs Options on Hill Energy FTR Default*, RTO Insider (Jan. 27, 2022).

Still, PJM's quick action on this default gives some reason to hope that it has learned the lesson of moving quickly on problematic portfolios.

Conclusion

The GreenHat order is important as it represents the Commission's response to the historic default in PJM's FTR market. It remains to be seen whether any significant amount of money can be recouped for the market participants. The broader lessons for market participants highlight the importance of documenting market activities and trading strategies and demanding that RTOs rigorously enforce market requirements.

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