151 FERC ¶ 61,179
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Philip D. Moeller, Cheryl A. LaFleur,
Tony Clark, and Colette D. Honorable.

Houlian Chen
Powhatan Energy Fund, LLC
HEEP Fund, LLC
CU Fund, Inc.

Docket No. IN15-3-000

ORDER ASSESSING CIVIL PENALTIES

(Issued May 29, 2015)

Paragraph Numbers

1. In this Order, we find that Dr. Houlian Chen (Dr. Chen), Powhatan Energy Fund, LLC (Powhatan), HEEP Fund, LLC (HEEP), and CU Fund, Inc. (CU Fund) (collectively, Respondents) violated section 222 of the Federal Power Act (FPA)[1] and section 1c.2 of the Commission's regulations,[2] which prohibit energy market manipulation, through a scheme to engage in fraudulent Up-To Congestion (UTC) transactions in PJM Interconnection L.L.C.'s (PJM) energy markets to garner excessive amounts of certain credit payments to transmission customers. In light of the seriousness of these violations, we find that it is appropriate to assess civil penalties pursuant to section 316A of the FPA[3] in the following amounts: $16,800,000 against Powhatan, $10,080,000 against CU Fund, $1,920,000 against HEEP, and $1,000,000 against Dr. Chen. The Commission further directs the disgorgement of unjust profits, plus applicable interest, pursuant to section 309 of the FPA,[4] in the following amounts: $3,465,108 for Powhatan, $1,080,576 for CU Fund, and $173,100 for HEEP.

I. Executive Summary

2. Respondents' scheme involved financial trading in the wholesale electricity market administered by PJM. As discussed in further detail below,[5] PJM operates both a day-ahead market, in which generation is scheduled one-day prior to the relevant operating day, and a real-time market, in which generation is scheduled and dispatched to correct for variations between the day-ahead schedule and actual demand for electricity. PJM's energy market offers products that involve the physical movement of electricity, as well as various financial or virtual products that do not involve the exchange of physical energy, including the UTC product. A UTC product is a type of spread trade that allows market participants to arbitrage the difference between day-ahead and real-time congestion prices at two different locations.[6] When the UTC transactions discussed

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[1] 16 U.S.C. § 824v(a) (2012).

[2] 18 C.F.R. § 1c.2 (2014) (Anti-Manipulation Rule).

[3] *Id.* § 825o-1(b).

[4] *Id.* § 825h.

[5] Details regarding the PJM Market, UTC product, and transmission credit payments at issue in this proceeding are discussed in the background section. *See* discussion *supra* PP 15-25.

[6] In particular, a UTC bid that clears PJM's market will pay the difference between the day-ahead prices at location A and location B, and receive the difference between the real-time prices at location A and location B.

in this proceeding were made, PJM's market rules required market participants to reserve transmission service in connection with their UTC trade.[7] As a result, UTC transactions became eligible to receive certain transmission credits, known as Marginal Loss Surplus Allocation (MLSA).[8] PJM distributed the MLSA payments on a *pro rata* basis to all customers who paid for transmission service.

3. From June 1 to August 3, 2010 (Manipulation Period),[9] Respondents designed and implemented a fraudulent UTC trading scheme to receive excessive amounts of MLSA payments. To do this, Respondents intentionally placed a high-volume of "round-trip" UTC trades that canceled each other out by placing the first leg of the trade from locations A to B, and simultaneously placing a second leg of equal volume from locations B to A. The contemporaneous evidence shows that Respondents artificially created these round-trip UTC trades solely to reserve transmission service to enable them to collect excessive MLSA payments during the Manipulation Period.

4. Based on the totality of the record in this proceeding, we find that Respondents' round-trip UTC trading during the Manipulation Period violated section 222 of the FPA and the Anti-Manipulation Rule. When used appropriately, UTC trades in PJM permit financial traders to profit by arbitraging market prices between two locations in the day-ahead and real-time market; these transactions can benefit PJM's market by encouraging convergence between day-ahead and real-time market prices.[10] Respondents' testimony makes clear that they understood this, yet they intentionally placed fraudulent round-trip UTC trades that did not provide any benefit to the PJM market. Respondents knew that their round-trip UTC trades would net no market position, and that on their own these

[7] Confidential Referral of Potential Violations of FERC Market Rule, at 2, 4 (Aug. 16, 2010) (PJM Referral). A reservation for transmission service that is accepted by PJM provides the market participant with the right to flow electricity on a designated transmission path. Any given transmission path has a limited amount of capacity.

[8] *See* discussion *infra* PP 22-25.

[9] While HEEP continued to place certain UTC trades through August 18, 2010, Respondents' UTC trades that are the subject of this order ceased on August 3, 2010. Thus, we will define the Manipulation Period for purposes of this order as June 1 through August 3, 2010.

[10] *Black Oak Energy, L.L.C., et al. v. PJM Interconnection, L.L.C.*, 122 FERC ¶ 61,208, at n.85 (2008); *Black Oak Energy, L.L.C., et al. v. PJM Interconnection, L.L.C.*, 125 FERC ¶ 61,042, at P 43 (2008) (noting that financial arbitrage transaction is of value in energy markets); *see also* discussion *infra* PP 18-21.

round-trip trades would not generate a profit or a loss based on price spreads. But, by making these trades, Respondents collected MLSA payments exceeding the transaction costs they incurred for the trades, and yielding a significant profit, as they expected.

5. We disagree with Respondents' argument that their round-trip UTC trading scheme does not constitute fraud because the trades were permissible under a "loophole" in PJM's tariff and, according to them, did not involve any active deception, such as false statements or active concealment. As the Commission has previously articulated, "[a]n entity need not violate a tariff, rule or regulation to commit fraud."[11] The fact that the PJM tariff does not explicitly prohibit round-trip UTC trades does not create a loophole or otherwise render Respondents' transactions lawful. Moreover, Respondents' round-trip UTC transactions were deceptive and manipulative. Respondents placed separate bids for each leg of their round-trip UTC transactions in the PJM market, just as other market participants would place routine arbitrage-based UTC trades. As a result, the two separate legs of Respondents' offsetting trades were not connected and falsely appeared to PJM as legitimate UTC trades, thus concealing their fraudulent nature and purpose.

6. Moreover, we find that Respondents' round-trip UTC transactions constitute wash trades, and that all market participants had notice that wash trades violate section 222 of the FPA and the Commission's Anti-Manipulation Rule.[12] Respondents' round-trip UTC trades were designed to ensure that both legs of a transaction would cancel each other out, thereby eliminating any associated price spread risk. As the Commission has previously articulated, trades that are pre-arranged to cancel each other out and involve no economic risk are wash trades, which are inherently fraudulent.[13]

7. Further, we conclude that Respondents engaged in this scheme knowingly and intentionally. Testimony, email communications, and other evidence demonstrate that Respondents chose to engage in UTC trades solely to garner excessive MLSA payments in a manner inconsistent with the market function of UTC transactions. Respondents also understood that, as a consequence of this trading scheme, other market participants would

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[11] *Competitive Energy Services, LLC*, 144 FERC ¶ 61,163, at P 50 (2013) (citations omitted); *Richard Silkman*, 144 FERC ¶ 61,164, at P 50 (2013); *Lincoln Paper and Tissue, LLC*, 144 FERC ¶ 61,162, at P 36 (2013). *See also In re Make-Whole Payments and Related Bidding Strategies*, 144 FERC ¶ 61,068, at P 83 (2013) (citations omitted).

[12] *See* discussion *infra* PP 103-107.

[13] *Investigation of Terms and Conditions of Public Utility Market-Based Rule Authorizations*, 105 FERC ¶ 61,218, at P 53 (2003).

receive a proportionally smaller share of MLSA payments. As Respondents' UTC transactions increased, their transmission service reservations and proportionate share of MLSA payments increased, thus decreasing the available transmission and MLSA payments for other eligible market participants. Accordingly, by targeting MLSA payments through these artificial, high-volume, round-trip UTC trades, Respondents fraudulently obtained MLSA payments that otherwise would have been distributed to other market participants.

8. We also find that the Commission has jurisdiction over Respondents' conduct. The U.S. Court of Appeals for the District of Columbia Circuit has held that the Commission has authority under the FPA to regulate the activity of traders, like the Respondents, who participate in energy markets.[14] Moreover, the Commission has jurisdiction over the transmission or sale of electric energy at wholesale in interstate commerce,[15] as well as a responsibility to ensure that the rates and charges for transmission and wholesale power sales are just and reasonable and not unduly discriminatory or preferential.[16] As applicable here, virtual transactions, including UTC trades, are integral to the operation and settlement of Commission-jurisdictional wholesale electricity markets. Respondents engaged in UTC transactions, reserved transmission capacity, and received MLSA payments pursuant to PJM's Commission-approved tariff.

9. Finally, having found that Respondents knowingly and intentionally devised and participated in a fraudulent scheme to manipulate PJM's wholesale electricity market in violation of the Commission's regulations, we conclude that both civil penalties and disgorgement should be assessed against Respondents. This determination is consistent with the Commission's long-standing practice to require disgorgement of unjust profits,[17] as well as the Commission's discretion to assess civil penalties against any person who violates Part II of the FPA, or any rule or order thereunder.[18]

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[14] *Kourouma v. FERC*, 723 F.3d 274, 276 (D.C. Cir. 2012).

[15] 16 U.S.C. § 824(b)(1) (2012).

[16] *Id.* §§ 824d, 824e.

[17] *Enforcement of Statutes, Regulations, & Orders*, 123 FERC ¶ 61,156, at P 43 (2008) (Revised Policy Statement on Enforcement).

[18] 16 U.S.C. § 825o-1(b).

II. Background

A. Relevant Entities

10. Respondents in this case consist of Dr. Chen and a series of financial entities on whose behalf Dr. Chen traded UTCs in PJM during the Manipulative Period. Certain of Respondents (HEEP and CU Fund) are wholly-owned by Dr. Chen, while Respondent Powhatan was owned by investors who sought to capitalize on Dr. Chen's UTC trading expertise.

11. Dr. Chen started HEEP in August 2007 and began trading in PJM markets in September 2007. On and after September 2007, nearly all of HEEP's trading was in UTCs.[19] Starting in May 2008, Dr. Chen, through HEEP, began trading UTCs pursuant to a contractual arrangement with companies owned, in part, by brothers Richard and Kevin Gates, first with TFS Capital LLC (TFS) and Huntrise Energy Fund, LLC (Huntrise), which were effectively predecessors in interest to Respondent Powhatan.[20]

12. On May 1, 2008, HEEP executed an agreement with TFS (the Advisory Agreement), under which Dr. Chen agreed to conduct UTC trades on behalf of TFS "mirroring UTC trades he executed for HEEP on a two-and-a-half-to-one basis."[21] This meant that for every megawatt (MW) Dr. Chen placed on behalf of HEEP he placed 2.5 MW for TFS at the same nodes. Thus, to the extent Dr. Chen profited, TFS and its investors earned more profit. In June 2008, Dr. Chen stopped trading for TFS and began trading on behalf of Huntrise, which succeeded to TFS's interest in the Advisory Agreement (under the same two-and-a-half-to-one trading basis).[22]

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[19] Chen Test. Vol. I Tr. 37:1-2; 38:10-16; 78:1-4; 76:6-24.

[20] When we refer to Mr. Gates in the remainder of this Order, we are referring to Mr. Kevin Gates.

[21] *Houlian Chen, et al.*, 149 FERC ¶ 61,261 (Order to Show Cause), *revised*, 149 FERC ¶ 61,263 (2014) (Revised Order to Show Cause); App. A to Order to Show Cause at 6 (Staff Report) (citing POW00000071).

[22] Staff Report at 6-7; Chen Test. Vol. I Tr. 40:14-23; POW00000071. During the relevant period of time, Huntrise had one investor: the Huntrise Fund of Funds, which, in turn, was controlled by its managing members, the Gates brothers and Mr. Eiben. Staff Report at 7 n.35. TFS was "controlled by the same small circle of individuals as Huntrise and Powhatan." *Id.* at 7; Chen Test. Vol. I Tr. 40:17-41:1.

13. In March 2010, the Gates brothers formed Powhatan along with Larry Eiben. On May 18, 2010, HEEP executed a new Advisory Agreement with Powhatan that increased the ratio of Dr. Chen's UTC trades from the earlier two-and-a-half-to-one basis for TFS and Huntrise to a twenty-to-one basis for Powhatan.[23]

14. Later, on July 17, 2010, Dr. Chen formed Respondent CU Fund. Unlike HEEP, CU Fund had no Advisory Agreement with Powhatan obligating him to make trades on behalf of Powhatan. Thus, Dr. Chen was able to trade UTCs on behalf of CU Fund and collect the associated MLSA payments solely for his own economic benefit.

B. The PJM Market

15. PJM, one of several Commission-regulated Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs), operates a wholesale electricity market, which balances the minute-by-minute supply and demand requirements for electric power, in a 13-state region extending from Illinois to North Carolina.[24] PJM uses market-based systems to determine a least-cost solution by optimizing available assets within its territory to meet electricity demand and reliability requirements. Electricity prices in PJM vary based on the specific location, or node, within the market. For this reason, electricity prices at the various locations are called Locational Marginal Prices (LMP). Three components summed together form the LMP: (i) an energy price (which is the same at each node and represents the cost to serve the next increment of load (demand) at a pre-determined reference location); (ii) the cost of congestion (which varies at each node depending on the limitations of the transmission system to move power freely between constrained and non-constrained locations); and (iii) the cost of line losses (which are central to this proceeding and which we discuss in greater detail below).

16. PJM operates a dual settlement market, with both a day-ahead market and a real-time market. PJM determines LMPs through the least-cost solution on an hourly basis in the day-ahead and on a five-minute basis (which can be integrated into an hourly figure) in the real-time for all nodes.

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[23] Staff Report at 8; Advisory Agreement between HEEP and Powhatan, dated May 18, 2010 (POW00000067).

[24] PJM's footprint includes all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. http://www.pjm.com/about-pjm/who-we-are/territory-served.aspx (last visited May 8, 2015).

17. In addition to physical transactions, which are premised on the actual delivery of electricity, PJM offers various virtual products, including UTCs[25] for which no generation is dispatched and no load is served, and obligations are met through cash settlement. Virtual products are designed to increase market liquidity, drive convergence[26] between the day-ahead and real-time market, and provide vehicles for hedging. While virtual products carry no obligation to buy or sell physical power, they serve a direct role in day-ahead price formation as reflected in day-ahead LMPs. As such, virtual products can: (1) be the price setting marginal factor in determining day-ahead LMPs; (2) affect day-ahead dispatch; and (3) affect other market participant positions.[27]

C. <u>PJM's Up-To Congestion Product</u>

18. UTCs were initially created as a tool to hedge congestion price risk associated with physical transactions,[28] and later became a way for market participants to profit by arbitraging the price differences between two nodes in the day-ahead and real-time

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[25] A virtual transaction does not require generation to be dispatched or load to be served. Rather, it allows a market participant to arbitrage day-ahead versus real-time prices by either purchasing or selling a position in the day-ahead market, and then doing the opposite in an equal volume at the same location in the real-time market, thereby taking no physical position when the system is dispatched.

[26] Convergence in the PJM market is the reduction in the spread between day-ahead and real-time LMPs at a specific node. As indicated by PJM's Independent Market Monitor (IMM), "price convergence does not necessarily mean a zero or even a very small difference in prices between [d]ay-[a]head and [r]eal-[t]ime [e]nergy [m]arkets. There may be factors, from operating reserve charges to risk that result in a competitive, market-based differential." PJM's IMM, *2010 State of the Market for PJM*, vol. 2 (Mar. 10, 2011), *available at* http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2010/2010-som-pjm-volume2-sec2.pdf

[27] Howard J. Haas, *Spread Bidding: MA Concerns and Mitigation Outline* (Sept. 10, 2009), *available at* http://www.monitoringanalytics.com/reports/Presentations/2009/Spread_Bidding_MA_Concerns_and_Mitigation_Outline_20090910.pdf.

[28] *PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,121, at P 3 (2013); *see also Calif. Indep. Sys. Operator Corp.*, 143 FERC ¶ 61,087, at P 6 (2013) (noting that market participants can use virtual transactions to "hedge financial expectations").

markets.[29] A UTC bid that clears "will pay the difference between the [d]ay-ahead sink LMP and the source LMP and be paid the difference between the [r]eal-time sink LMP and source LMP."[30] Thus, "cleared UTC transactions in the direction of congestion are profitable when real-time congestion is greater than day-ahead congestion. In the counter-flow direction, UTC transactions are profitable when real-time congestion decreases or reverses from the counter-flow direction toward the direction of congestion."[31]

19. UTC transactions in PJM are designed to serve two purposes. First, market participants use them as a congestion management tool to hedge exposure to real-time congestion charges between the source and sink (which can differ significantly from day-ahead congestion charges) of physical energy transactions in PJM.[32] Second, financial traders use them as a "purely virtual product."[33] Specifically, arbitrageurs can use UTCs to take on directional price risk related to the differences between LMP in the day-ahead and real-time markets. As the Commission has explained:

> Under an Up-To congestion price arrangement, arbitrageurs may sell power at point A and buy power at point B in the [d]ay-[a]head market as long as the price differential between these points is no greater than the specified amount. If during the [r]eal-[t]ime market, the spread between these points increases, the arbitrageur makes money; if the spread decreases, it loses money.[34]

20. UTCs, like other virtual products, can promote market efficiency because, as we have recognized, virtual products "increase[] market liquidity and [create] price

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[29] *PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,121, at P 19 (2013).

[30] *PJM Interconnection, L.L.C.*, 148 FERC ¶ 61,144, at n.8 (2014).

[31] *Id*.

[32] *PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,121 at P 3.

[33] *Id.* P 19 (noting the "evolution of the UTC product from a day-ahead financial hedge of a real-time physical transaction to its present primary use as a purely virtual product").

[34] *Black Oak Energy, L.L.C., et al. v. PJM Interconnection, L.L.C.*, 122 FERC ¶ 61,208 at n.85.

convergence between the day-ahead and real-time markets."[35] Although they are settled financially, virtual (including UTC) transactions can affect prices in the day-ahead market as well as what units are dispatched by PJM to provide energy to the wholesale grid.[36]

21. At the time Respondents traded the UTCs at issue in this proceeding, PJM required all UTC transactions to be associated with transmission service reservations,[37] which once obtained, provided the right to flow electricity across the PJM system. In 2010, Respondents reserved non-firm point-to-point transmission for their UTC trades.

D. <u>Marginal Loss Surplus Allocations</u>

22. At the time of Respondents' conduct, all UTC transactions associated with transmission service in PJM were eligible to receive a portion of MLSA payments. MLSA refers to the PJM-developed and Commission-accepted distribution to market participants of the surplus revenues that PJM collects for transmission line losses.

23. When electricity flows through a transmission line, a certain amount of energy is lost in the form of heat. The farther electricity travels on any given transmission line, the greater the loss.[38] In calculating the cost of line loss, as part of LMP, PJM sets the price

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[35] *PJM Interconnection, L.L.C.*, 104 FERC ¶ 61,309, at P 20 (2003); *see also ISO New England Inc.*, 110 FERC ¶ 61,250, at P 30 (2005) ("In fact, virtual trading activities provide important benefits to the market, including price convergence between the [d]ay-[a]head and [r]eal-[t]ime markets, price discovery, market liquidity, and increased competition.").

[36] *Black Oak Energy*, 122 FERC ¶ 61,208 at P 38 (noting that there is a "price impact of the virtual transaction on the physical transmission system that forms the basis for both the [d]ay-[a]head and [r]eal-[t]ime [e]nergy [m]arkets").

[37] PJM Referral at 2, 4. PJM assessed certain transmission charges for transmission service reservations. Reserved capacity with a Midcontinent Independent System Operator, Inc. (MISO) point of delivery, however, was not assessed any transmission fees. Monitoring Analytics' PJM Marginal Loss Surplus Allocation and Market Participant Transaction Activity: May 15, 2010 through September 17, 2010, at 7 (Jan. 6, 2011) (IMM Referral).

[38] *Atlantic City Elec. Co., et al. v. PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,132, at P 3 (2006) ("As in the case of all electric transmission, there is some loss of the scheduled megawatts as the power is transmitted from the point of generation to the point of delivery. That is, the total megawatt-hours of energy received by customers is

(continued...)

at marginal cost, rather than average cost.[39] Because marginal costs of line losses are greater than average costs, PJM receives more payments than necessary to compensate for actual line losses, resulting in a surplus revenue.[40]

24. The Commission recognized that "a method needs to be determined for disbursing the over collected amounts" of line loss payments.[41] In September 2009, the Commission accepted PJM's proposed distribution method, which paid MLSA on a *pro rata* basis to network service users and transmission customers (including virtual traders) in proportion to their ratio shares of the total MWs of energy: (i) delivered to load in PJM; (ii) exported from PJM; or (iii) cleared in a UTC transaction that paid for transmission services during such hour.[42]

25. Mathematically, MLSA was calculated hourly as a market participant's eligible MW (i.e., in energy delivered to load or transmission reservations for exports and UTCs) divided by the total PJM eligible MW (i.e., total energy delivered to load and transmission reservations). Under this distribution mechanism, as a market participant's cleared UTC transactions increased, its transmission reservations increased and, thus, its share of the available MLSA also increased (while inversely decreasing the available MLSA for other market participants).

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less than the total megawatt-hours of energy produced by generators. Such loss results in a cost PJM incurs to maintain the level of the scheduled power and to deliver it under conditions of system reliability.").

[39] *Id.* P 4.

[40] *Id.* P 5.

[41] *Id.* P 24.

[42] *Black Oak Energy, L.L.C., et al. v. PJM Interconnection, L.L.C.*, 128 FERC ¶ 61,262, at P 23 (2009). The Commission found that PJM's proposed method of distributing line loss surplus to those that pay to support the fixed costs of the transmission grid is reasonable. *Id.* ("The Commission finds that PJM's proposal is a just and reasonable method of allocating the surplus, subject to the condition that PJM clarify that its tariff complies with our finding that payments be made only to those who pay for the costs of the transmission grid.").

E. PJM and IMM Referrals, Office of Enforcement Investigation, and Order to Show Cause

26. In August 2010, PJM sent the Commission's Office of Enforcement (OE) a referral related to Respondents' round-trip UTC trades. The PJM referral was prompted by a market participant who contacted PJM on July 23, 2010, complaining about unusually high volumes of transmission reservations on PJM's Open Access Same-Time Information System (OASIS) and wondering whether certain market participants "were 'trying to game the system in some way' by 'trying to lock people out of transmission purchases.'"[43] PJM confirmed that several market participants reserved large quantities of transmission and discovered that such reservations were associated with high volumes of UTC bids, beginning on June 1, 2010.[44] PJM identified Powhatan, HEEP, and CU Fund as market participants submitting high volumes of UTC transactions "in opposite directions between the same two points."[45] PJM explained that such transactions "result[ed] in no risk of any day-ahead or balancing market settlement (because the settlement of the transactions in the opposite directions would offset each other in both the day-ahead and balancing markets)."[46] PJM explained that these offsetting UTC transactions resulted in an "allocation of marginal loss surplus based on the cleared MWh of transactions."[47]

27. PJM believed that Respondents' "opposite-direction" UTC transactions "constituted a scheme of 'wash' or offsetting trades that created no economic value and little to no risk to the participant, solely to inflate transaction volumes in order to receive an improper allocation of marginal loss surplus allocation revenue."[48] PJM believed "that these offsetting trades were undertaken with the intent of manipulating PJM market rules so as to gain an allocation of marginal loss surplus revenue without any corresponding usage of the transmission system."[49] PJM asked OE to investigate the

[43] PJM Referral at 1. Another market participant contacted PJM on July 28, 2010, with a similar complaint. *Id.*

[44] *Id.* at 1.

[45] *Id.* at 2.

[46] *Id.*

[47] *Id.*

[48] *Id.* at 4.

[49] *Id.*

conduct and to require Respondents to disgorge any of the revenue they received since June 1, 2010, as a result of this scheme.[50]

28. In August 2010, based on the referral from PJM, OE Staff launched an investigation of Dr. Chen's UTC transactions on behalf of the Respondents.[51] On August 25, 2010, the Commission issued an order formalizing the investigation.[52] In that order, we noted PJM's allegations that "trades were undertaken with the intent of manipulating PJM market rules so as to gain an allocation of marginal loss surplus revenue without any corresponding usage of the transmission system," and authorized OE to conduct an investigation "regarding violations of the Commission's . . . Prohibition of electric energy market manipulation, that may have occurred in connection with, or related to, certain [UTC] transactions in PJM."[53] We also directed OE Staff to report the results of that investigation to the Commission.[54]

29. On January 6, 2011, PJM's IMM submitted a similar referral to OE. The IMM stated that Respondents' "offsetting" UTC transactions were "similar in fundamentals to wash trades, which have been expressly identified as prohibited activities by the Commission."[55] The IMM further compared the trades to wash trades conducted by Enron that also "took the form of energy market transactions that canceled out but created the illusion of volume trading."[56] Similar to PJM, the IMM asserted that the referred trading activities "exploit the marginal loss allocation rules implemented by PJM to derive a benefit from transactions with no fundamental economic rationale or value."[57] The IMM emphasized that because "there is no rational basis for characterizing such transactions as economic without the marginal loss surplus allocation, a determination that such transactions were intended to operate as a fraud or deceit upon PJM and

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[50] *Id.* at 6.

[51] Staff Report at 43.

[52] *PJM Up-To Congestion Transactions*, 132 FERC ¶ 61,169 (2010).

[53] *Id.* PP 1-2 (citation and internal quotations omitted).

[54] *Id.* at Ordering Paragraph.

[55] IMM Referral at 4.

[56] *Id.*

[57] *Id.* at 3.

participants in the markets administered by PJM is warranted. Such behavior violates the Commission's rule prohibiting energy market manipulation . . . ."[58]

30. On August 9, 2013, OE Staff issued Preliminary Findings Letters to Respondents explaining the factual and legal bases for its preliminary findings of violations.[59] Respondents replied to the Preliminary Findings Letters on October 9, 2013.[60] The Office of the Secretary issued a Notice of Alleged Violations on August 5, 2014. After settlement discussions proved unavailing, OE Staff provided notices under section 1b.19 of the Commission's regulations[61] of its intent to recommend the initiation of a public proceeding against the Respondents. On September 24, 2014, Respondents provided their responses to OE Staff's 1b.19 letters.[62]

31. On December 17, 2014, the Commission issued an Order to Show Cause, which commenced this public proceeding.[63] In the Staff Report attached to the Order to Show Cause, OE Staff alleges that the Respondents violated the Commission's Anti-Manipulation Rule from June 1, 2010 to August 18, 2010. OE Staff recommends that the Commission assess: (1) a civil penalty of $16,800,000 and disgorgement of $3,465,108, plus interest, against Powhatan; (2) a civil penalty of $10,080,000 and disgorgement of $1,080,576, plus interest, against CU Fund; (3) a civil penalty of $1,920,000 and disgorgement of $173,100, plus interest, against HEEP; and (4) a civil penalty of $500,000 against Dr. Chen for trades executed through and on behalf of HEEP and

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[58] *Id.* at 3-4.

[59] *See* Letter from S. Tabackman, OE Staff, to J. Estes, III, counsel for Dr. Chen (Aug. 9, 2013); Letter from S. Tabackman to W. McSwain, counsel for Powhatan (Aug. 9, 2013).

[60] Dr. Chen's attorney provided a substantive response. *See* Letter from J. Estes, III, counsel for Dr. Chen, to S. Tabackman, OE Staff (Oct. 9, 2013). Powhatan's attorney did not. *See* Letter from W. McSwain, counsel for Powhatan, to S. Tabackman, OE Staff (Oct. 8, 2013).

[61] 18 C.F.R. § 1b.19 (2014).

[62] *See* Letter from J. Estes, III, counsel for Dr. Chen, to S. Tabackman, OE Staff (September 24, 2014); Letter from W. McSwain, counsel for Powhatan, to S. Tabackman (September 24, 2014).

[63] Order to Show Cause, 149 FERC ¶ 61,261 at 1.

Powhatan and an additional $500,000 against Dr. Chen for trades executed through and on behalf of CU Fund.[64]

32. In the Order to Show Cause, the Commission directed Respondents to file an answer within 30 days showing cause why they should not be found to have violated section 222 of the FPA and section 1c.2 of the Commission's regulations by engaging in fraudulent UTC transactions in PJM's energy markets.[65] In addition, the Commission directed Respondents to show cause why the proposed penalties should not be assessed.[66] The Revised Order to Show Cause also directed Respondents to show cause why they should not be required to disgorge unjust profits with interest.[67] The Order to Show Cause also stated that Respondents must, within 30 days, elect either an administrative hearing before an Administrative Law Judge at the Commission prior to the assessment of a penalty pursuant to section 31(d)(2) of the FPA or, if the Commission finds a violation, an immediate penalty assessment by the Commission pursuant to section 31(d)(3)(A) of the FPA.[68] The Revised Order to Show Cause further allowed OE Staff to file a reply within 30 days of the filing of Respondents' answers.[69]

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[64] Revised Order to Show Cause, 149 FERC ¶ 61,263.

[65] Order to Show Cause, 149 FERC ¶ 61,261 at Ordering Paragraph (A). On December 31, 2014, the Commission extended the Respondents' deadline to respond to the Order to Show Cause to February 2, 2015. On January 30, 2015, the Commission denied the Respondents' request for a second extension of time but permitted the Respondents to file supplemental answers by February 9, 2015 in response to materials produced by OE Staff on January 29, 2015.

[66] *Id.* at Ordering Paragraph (B).

[67] Revised Order to Show Cause, 149 FERC ¶ 61,263. The recommended disgorgement amounts were as follows: (1) Powhatan: $3,465,108, plus interest, (2) CU Fund: $1,080,576, plus interest and (3) HEEP: $173,100, plus interest.

[68] 16 U.S.C. §§ 823b(d)(2) and 823b(d)(3)(A) (2012); Order to Show Cause, 149 FERC ¶ 61,261 at P 4.

[69] On January 2, 2015, OE Staff submitted non-public investigative materials to the Commission and, pursuant to the cover letter accompanying those materials, the Commission understands Respondents received them as well.

33. On January 12, 2015, Respondents submitted a joint notice of their election under section 31(d)(3)(A) of the FPA and the Order to Show Cause,[70] thereby electing an immediate penalty assessment if the Commission finds a violation. On February 2, 2015, Dr. Chen, HEEP, and CU Fund (Chen Answer) and Powhatan (Powhatan Answer) submitted answers to the Order to Show Cause (together, Respondents' Show Cause Answers). On February 3, 2015, Eric S. Morris submitted a non-party protest in this proceeding in support of the Respondents.[71] On February 9, 2015, Dr. Chen, HEEP, and CU Fund submitted a Supplemental Answer (Supplemental Answer). On March 2, 2015, OE Staff filed its Reply to Respondents' answers (Staff Reply). On March 18, 2015, Dr. Chen, HEEP, and CU Fund submitted an answer to the Staff Reply (Dr. Chen's second answer).[72] On April 1, 2015, PJM submitted comments in this proceeding.[73] On April 14, 2015, Dr. Chen submitted a response to PJM's comments. On April 23, 2015, Dr. Chen submitted a "Citation of Supplemental Authority."

34. As part of our adjudication of this matter, we have considered all accepted pleadings and attachments, as well as the investigative materials submitted to the Commission.

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[70] Order to Show Cause, 149 FERC ¶ 61,261 at Ordering Paragraph (D).

[71] Rule 214 of the Commission's Rules of Practice and Procedure provides that "[n]o person . . . may intervene as a matter of right in a proceeding arising from an investigation pursuant to Part 1b of this chapter." 18 C.F.R. § 385.214(a)(4) (2014). Therefore, Mr. Morris is not a party to this proceeding and we will not accept Mr Morris' protest.

[72] We note that the Order to Show Cause directed Respondents to submit answers in response to the Order and allowed OE Staff to submit a reply within 30 days of the Respondents' answer. The Order to Show Cause did not authorize a second answer in response to OE Staff's reply. Additionally, Rule 213(a) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a) (2014), prohibits an answer to a protest or an answer, unless otherwise permitted by the decisional authority. We are not persuaded to accept Dr. Chen's second answer or his later filed "Citation to Supplemental Authority."

[73] As we noted above, Rule 214 of the Commission's Rules of Practice and Procedure provides that "[n]o person . . . may intervene as a matter of right in a proceeding arising from an investigation pursuant to Part 1b of this chapter." 18 C.F.R. § 385.214(a)(4). Therefore, PJM is not a party to this proceeding and we will not accept PJM's comments or Dr. Chen's response to those comments.

III. Discussion

35. Section 222 of the FPA makes it unlawful for any entity to use a deceptive or manipulative device in connection with the purchase or sale of electric energy or the transmission of electric energy subject to the Commission's jurisdiction.[74] Order No. 670 implemented this prohibition, adopting the Anti-Manipulation Rule. That rule, among other matters, prohibits any entity from: (1) using a fraudulent device, scheme, or artifice, or making a material misrepresentation or a material omission as to which there is a duty to speak under a Commission-filed tariff, Commission order, rule, or regulation, or engaging in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity; (2) with the requisite scienter; (3) in connection with the purchase, sale or transmission of electric energy subject to the jurisdiction of the Commission.[75] Under the Anti-Manipulation Rule, fraud includes, but is not limited to, "any action, transaction, or conspiracy for the purpose of impairing, obstructing, or defeating a well-functioning market."[76]

36. Pursuant to section 316A(b) of the FPA, the Commission may assess a civil penalty of up to $1 million per day, per violation against any person who violates Part II of the FPA (including section 222 of the FPA) or any rule or order thereunder.[77] In determining the amount of a proposed penalty, section 316A(b) requires the Commission to consider "the seriousness of the violation and the efforts of such person to remedy the violation in a timely manner."[78]

37. As discussed below, we find that the Respondents violated section 222(a) of the FPA and section 1c.2 of the Commission's regulations by engaging in fraudulent UTC transactions in the PJM energy market to receive large shares of MLSA payments that otherwise would have been allocated to other market participants.

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[74] 16 U.S.C. § 824v(a) (2012).

[75] 18 C.F.R. § 1c.2 (2014); *Prohibition of Energy Market Manipulation*, Order No. 670, FERC Stats. & Regs. ¶ 31,202, P 38, *reh'g denied*, 114 FERC ¶ 61,300 (2006) (Order No. 670); s*ee also Barclays Bank PLC, et al.*, 144 FERC ¶ 61,041 (2013) (*Barclays*).

[76] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50.

[77] 16 U.S.C. § 825o-1(b) (2012). Under section 3 of the FPA, "'person' means an individual or a corporation." *Id.* § 796(4).

[78] *Id.* § 825o-1(b).

A. Findings of Fact – Relevant UTC Trading Conduct

38. Dr. Chen's UTC trading in PJM can be broken into an introductory period in which he learned of the UTC product and three subsequent phases in which he evolved his strategies for trading that product. The introductory period extended from 2005 to 2007 when, as an analyst for Merrill Lynch, Dr. Chen first studied PJM's UTC product.[79] Dr. Chen's studies provided him with an understanding of the use of the UTC trading product as a tool for both physical and financial transactions. For physical transactions, Dr. Chen then realized that the UTC "provides a mechanism to hedge in [the] day-ahead market the price spread between the source node and sink node by specifying the maximum price you are willing to pay for the congestion."[80] For financial transactions, Dr. Chen described UTC products as "[y]ou're just trying to improve day-ahead and real-time price spreads . . . trying to make them converge, and so that the goal is to improve market efficiency."[81] Based on these understandings, Dr. Chen developed a model to forecast conditions under which UTC trading was likely to be profitable.[82] Specifically, Dr. Chen identified the most profitable nodes for both UTC import and export and developed a "similar day" model that enabled him to anticipate prices based on similar historical circumstances.[83] In 2007, Dr. Chen left Merrill Lynch to form his own company, HEEP, which would enable him to trade UTCs.[84]

39. In the first phase of Dr. Chen's UTC trading, extending from September 2007 through October 2009, Dr. Chen actively traded UTC products in PJM based on market fundamentals and the models he developed.[85] Here, Dr. Chen took a careful, low risk approach of what he called "directional bets."[86] Nearly all of his UTC bids in this first phase were under 100 MW, and his trades' profitability depended on favorable price

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[79] Chen Test. Vol. I Tr. 27:13-29:8, 30:15-31:10, 55:24-56:8.

[80] *Id.* at 31:18-21.

[81] *Id.* at 31:14-18.

[82] *Id.* at 28:10-18, 31:2-10.

[83] *Id.* at 73:19-74:20, 74:22-75:5.

[84] *Id.* at 27:21-28:4, 37:4-14, 70:20-71:4.

[85] *Id.* at 73:19-75:5.

[86] *Id.* at 51:3-6; Chen Test. Vol. II Tr. 105:15.

spreads.[87] Dr. Chen during this time also selected what he termed "correlated pairs," which he expected to typically move in similar ways, due to their geographic proximity.[88]

40. It was during this first phase that Dr. Chen met Mr. Gates and began trading UTCs on behalf of TFS, and later Huntrise, pursuant to their Advisory Agreements.[89] Throughout this time, Dr. Chen provided Mr. Gates with daily and monthly trading reports listing the UTC nodes he traded, hours and volumes traded, hourly prices, and other relevant information.[90] Additionally, on one occasion, Dr. Chen met with Mr. Gates (along with one of his partners) to deepen their understanding of UTC transactions and Dr. Chen's strategy in selecting particular nodes for trading.[91]

41. The second phase of Dr. Chen's UTC trading began in October 2009, after Dr. Chen discovered that he had received lucrative MLSA payments, and lasted through May 2010. In October 2009, Dr. Chen learned that his prior UTC transactions became eligible for retroactive MLSA distributions and he told Mr. Gates of this change.[92]

42. During this second phase, as he analyzed retroactive MLSA distributions, Dr. Chen altered his UTC trading strategy away from fundamentals-based spread trading to a strategy designed to capture increased volumes of MLSA payments.[93] In December 2009, Mr. Gates explained to his partners that although Dr. Chen's UTC trades had lost approximately $30,000 in November 2009, retroactive application of the MLSA

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[87] Chen Test. Vol. I Tr. 51:3-6, 78:5-19; Staff Report at 15, n.84.

[88] Staff Report at 15.

[89] *See, e.g.,* POW00000071 (TFS and HEEP execute an Advisory Agreement on May 1, 2008); Chen Test. Vol. I Tr. 39:12-40:2, 41:1-7; POW00000071 (TFS's interest in the Advisory Agreement was succeeded by Huntrise); K. Gates Test. Vol. I Tr. 55:20-56:5; Staff Report at 7 (Chen traded for Huntrise from June 2008 through May 2010).

[90] *See, e.g.,* POW00000488-91; POW0014142-46; POW00013949-53; POW00013998-14003; POW00000557 (K. Gates Test. Vol II Ex. 4).

[91] *See, e.g.,* POW0017336, POW00015175, K. Gates Test. Vol. I Tr. 19:13.

[92] Chen Test. Vol. I Tr. 44:17- 45:24, 90:10-12.

[93] Staff Report at 17; Chen Test. Vol. I Tr. 90:14-91:11, 93:15-18, 94:5-8.

meant that Huntrise would ultimately end up with a gain of over $400,000.[94] Dr. Chen then began to trade to cancel price spread risk and to profit from MLSA payments.[95] To obtain more MLSA payments, Dr. Chen ramped up the volumes of UTC transactions he executed on behalf of HEEP and Huntrise.[96] In addition, he used a new variation of his "correlated pairs" strategy, "which resulted in an internal transaction with nodal prices moving in tandem."[97] Because Dr. Chen's selected nodes had similar price movements, the price spread risk between those nodes was intended to be minimal, thereby shifting the economics more towards the difference between UTC's transactions costs and the MLSA payments.

43. Dr. Chen continued to share his insight about PJM's MLSA payments with Mr. Gates.[98] Based on his analysis, Dr. Chen concluded that MLSA would be much smaller in milder weather, too small to cover the transaction costs incurred in scheduling transmission service. However, MLSA payments would be larger in "the colder winter, hot summer" and that during those months, the MLSA payments would cover all transaction charges.[99]

44. By March of 2010, Dr. Chen told Mr. Gates that he expected to earn more from the MLSA-based strategy, especially given the approach of the summer months.[100] Dr. Chen noted that, prior to January 2010 he did not specifically target MLSA, but in February 2010, he "kicked up a notch to target" MLSA, and by March 2010, he "added

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[94] Email from Kevin Gates to Richard Gates, et al. (Dec. 8, 2009, 09:16:07 PM) (POW00008242).

[95] *See, e.g.*, Email from Alan Chen to Kevin Gates (March 5, 2010, 9:37 PM) (POW00016599) (explaining that in February 2010 he "kicked [it] up a notch targeting for [MLSA]" and that his UTC trades, with MLSA were "suddenly becoming risk-free (almost to the point) trades").

[96] Staff Report at 17 (citing Written Submission to Commission Investigation Staff on Behalf of Dr. Houlian Chen, at 14 (Dec. 13, 2010)).

[97] *Id.*

[98] Staff Report at 16-18; Chen Test. Vol. I 92:3-19.

[99] Chen Test. Vol. I Tr. 94:10-12.

[100] Email from Alan Chen to Kevin Gates (Mar. 5, 2010, 11:28:46 AM) (POW00011676).

some more."[101] He stated that he was "now using about 50% of the TLC ["Transmission Loss Credits" (another term for MLSA)] advantage in March 2010," and wanted to gradually lower it for April and May months and then increase it for the summer months.[102]

45. Both Dr. Chen and Mr. Gates understood the increasing centrality of the role played by the MLSA payments in Dr. Chen's UTC trading during the second phase. Dr. Chen's March 5, 2010 email emphasized that without MLSA, he "would not touch some of the trades . . . [b]ut with TLC as is, they are suddenly becoming risk-free (almost to the point) trades . . . ."[103] In the same communication, Dr. Chen told Mr. Gates that he would "take down a little bit starting tomorrow knowing that we are leaving a lot of money on the table."[104] In response, Mr. Gates directed Dr. Chen not to "take down tomorrow for my sake. I don't want to leave money on the table . . . ."[105] After reviewing Dr. Chen's February 2010 profit and loss report, Mr. Gates said in his email to his colleagues that he wanted to "scale-up and try to become rich."[106]

46. Mr. Gates also understood that Dr. Chen's UTC trades made their money through their transmission volumes not their underlying arbitrage economics. In a later email to Dr. Chen, Mr. Gates described the round-trip UTC trades as the ability to "make money by moving electricity around in a circle."[107] In order to "ramp-up" their participation in this new form of UTC trading and to avoid the potential liability of having to return MLSA payments should PJM decide to return to the days prior to MLSA payments, the

[101] Email from Alan Chen to Kevin Gates (Mar. 5, 2010, 9:37 PM) (POW00016599).

[102] *Id*.

[103] *Id.*

[104] *Id.*

[105] Email from Kevin Gates to Alan Chen (Mar. 5, 2010, 09:40:46 PM) (POW00016599).

[106] Email from Kevin Gates to Richard Gates et al. (Feb. 26, 2010, 08:20:52 AM) (POW00008242).

[107] Staff Report at 30 (quoting Email from Kevin Gates to Alan Chen (Aug. 12, 2010, 4:18 PM) (POW00004685)).

Gates brothers and other investors created Powhatan in March 2010.[108] Powhatan and Dr. Chen signed another Advisory Agreement, this time requiring Dr. Chen to trade 20 MWs on behalf of Powhatan for every one MW he traded on behalf of HEEP.[109]

47. Finally, the third phase of Dr. Chen's UTC trading, lasting from June 1, 2010 through August 3, 2010, began after an unexpected $176,000 loss Dr. Chen suffered during three hours on May 30, 2010, when one leg of his correlated pair experienced an unexpected price spike.[110] Following this loss, Dr. Chen developed his round-trip UTC trading strategy between the same two points (A-to-B, B-to-A). Round-trip trading would effectively eliminate any risk of losing (or earning) money based on price spreads because the matched trades' price spreads canceled each other out.[111] Dr. Chen's round-trip UTC strategy canceled price spread risk; profits instead came only from collection of MLSA payments, which themselves were now collected in a more effective way than they had been in phase two where some price spread risk was possible if the selected nodes did not move in tandem.

48. This approach proved so profitable that, on July 17, 2010, Dr. Chen formed CU Fund, a new company through which he could pursue this strategy without being bound to any contractual arrangement with Powhatan, thus allowing him to keep all of the proceeds from his trading on behalf of CU Fund for himself.[112] Of more than 2.6 million MWh of UTC transactions that Dr. Chen scheduled on behalf of CU Fund, never was one leg of a paired trade rejected.[113]

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[108] *Id.* at 22, n.128; Email from Kevin Gates to Richard Gates (Mar. 21, 2010, 7:55 AM) (POW00007990) (explaining that if PJM decided to take back the MLSA payments, Dr. Chen "could bankrupt his company so that he doesn't pay us. If so, we'd bankrupt our company and not pay PJM").

[109] *Id.* at 6; Staff Reply at 11.

[110] *See* Written Submission to Commission Investigation Staff on Behalf of Dr. Houlian Chen, at 15 (Dec. 13, 2010).

[111] Staff Report at 24-27.

[112] Chen Test. Vol. I Tr. 41:18-22, Chen Test. Vol. II Tr. 139:9-12, 139:13-19.

[113] Staff Report at 29; Chen Test. Vol. II Tr. 13:6-10.

B. Determination of Violation

1. Fraudulent Device, Scheme or Artifice or Course of Business that Operated as a Fraud

49. Fraud is the first element necessary to establish a violation of the Commission's Anti-Manipulation Rule.[114] Fraud is a question of fact that must be determined based on the particular circumstances of each case.[115] The Commission has explained that, under the Anti-Manipulation Rule, fraud includes, but is not limited to, "any action, transaction, or conspiracy for the purpose of impairing, obstructing, or defeating a well-functioning market."[116] Section 222 of the FPA states that:

> It shall be unlawful for any entity . . . directly or indirectly, to use or employ, in connection with the purchase or sale of electric energy or the purchase or sale of transmission services subject to the jurisdiction of the Commission, any manipulative or deceptive device or contrivance . . . in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of electric ratepayers.[117]

In light of the broad language of section 222 of the FPA, our use of the term "well-functioning market" is not limited just to consideration of price or economically efficient outcomes in a market. Instead, we view the term to also broadly include consideration of "such rules and regulations as the Commission may prescribe as necessary or appropriate,"[118] which necessarily includes the rates, terms, and conditions of service in a market. Here, we find that intentionally subverting the allocation of payments provided by a tariff approved by the Commission constitutes interference with a "well-functioning market."

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[114] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 49.

[115] *Id.* P 50.

[116] *Id.*

[117] 16 U.S.C. § 824v (2012); *see generally* 16 U.S.C. §§ 824d, 824e.

[118] *Id.* § 824v.

50. OE Staff alleges that, from June 1, 2010 to August 18, 2010, Respondents engaged in a practice that operated as a fraud or deceit on PJM and PJM market participants and that Respondents' actions constituted a course of business that operated as a fraud, or a fraudulent device, scheme, or artifice, thereby violating FPA section 222 and the Anti-Manipulation Rule.[119]

51. As discussed below, based on the totality of evidence, we find that the Respondents' UTC trading during the Manipulation Period operated as a course of business to defraud and a device, scheme, or artifice to defraud the PJM market and market participants.[120] We find OE Staff's arguments are persuasive. The evidence demonstrates that Respondents placed high-volume round-trip UTC trades without regard to market fundamentals and with the intent to benefit not from the spread on UTC trades but solely from the MLSA payments, and we find those actions to constitute fraud. We also find that Respondents were engaged in wash trading, which the Commission has long recognized as fraudulent conduct. Moreover, we find that the Respondents had notice that the type of trading at issue here is fraudulent and violates FPA section 222 and our Anti-Manipulation Rule.

a. Course of Business to Defraud and Device, Scheme or Artifice to Defraud

i. Respondents' Show Cause Answers

52. Respondents claim that their Manipulation Period UTC transactions were legal, permissible, not fraudulent, and executed for a legitimate economic purpose.[121]

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[119] *See, e.g.*, Staff Report at 37-38; *see generally* Staff Reply *passim*.

[120] While OE Staff alleges that Respondents' actions constituted both a "course of business to defraud" and a scheme to defraud—each in violation of section 222 of the FPA and the Anti-Manipulation Rule—OE Staff's submissions frequently address the acts solely as a scheme. We find both occurred and rely on the same evidence to support each finding.

[121] Chen Answer at 13-29; Powhatan Answer at 4-8, 25-49. Respondents also provide twelve documents attached to the Chen Answer as "Expert Testimony," which are cited to by both the Chen Answer and Powhatan Answer. Chen Answer at 30 and *passim*; Powhatan Answer at 2 and *passim*. Respondents' Answers refer to twelve "expert reports." While we have reviewed those materials, we question the appropriateness of such statements as evidence. We do not find the reports persuasive; throughout this Order, we address various arguments raised therein and explain why they are rejected.

Respondents describe their trades as spread trades,[122] and argue that rather than lacking economic substance, Respondents affirmatively sought to profit from the trades in ways other than the MLSA payments.[123] In this regard, Respondents state that the trades not only had risk and exposure to congestion profit and loss, but that the trades were entered into to potentially profit from congestion revenues, especially should one of the legs of the transaction break (i.e., fail to clear) and hit a "home run."[124]

53. Respondents point out that Dr. Chen sometimes bid $35/MWh, rather than the maximum of $50/MWh, on certain transaction legs. Respondents allege that trading at less than $50/MWh increased the likelihood that the particular bid on one leg would not clear, proving that Respondents sought to expose themselves to risk and profit beyond the MLSA payments.[125] Respondents also state that not all of their Manipulation Period UTC trades were volumetrically-matched and therefore were exposed to risk.[126] Moreover, Respondents note that their UTC trades were especially exposed to congestion outcomes in times of stress such as the "Polar Vortex" of January 2014.[127] Respondents claim that had Dr. Chen's round-trip trades been in place during the 2014 Polar Vortex, at

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[122] Chen Answer at 20-29; Powhatan Answer at 7, 19, 45. *See also* Statement of Professor Larry Harris at 2-3; Affidavit of Stewart Mayhew (November 6, 2013) at 9, 15-17, 26-28.

[123] *See, e.g.*, Chen Answer at 3-8, 20-29; Powhatan Answer at 25-29.

[124] Chen Answer at 4-5; Powhatan Answer at 25-26. *See also* Affidavit of Houlian Chen, at 1-5 (Feb. 2, 2015) (Chen Affidavit) (explaining the "one leg breaking" element of his strategy); Affidavit of Dr. Craig Pirrong, at 8 (Dec. 8, 2010); Affidavit and Appendices of Richard D. Tabors, PhD., at 12 (Oct. 21, 2011). Powhatan describes the "home run" strategy as a "'spread trading' strategy in which [Dr. Chen] hoped to hit it big (or hit a 'home run') if one of the legs of his trades did not clear." Powhatan Answer at 25.

[125] Chen Answer at 23-29; Powhatan Answer at 25-29.

[126] Chen Answer at 16; Powhatan Answer at 33-34.

[127] Polar Vortex refers to the extreme weather conditions experienced in the Northeast Region in January 2014, impacting the wholesale energy markets, including PJM.

least one leg would have broken for each of the five paired nodal combinations he used.[128] Thus, Respondents posit that the possibility of one leg breaking was present.

54. Respondents assert that their UTC trades were not deceptive and that other traders, PJM, and the PJM IMM could see the trades.[129] Moreover, Respondents argue there is no evidence that their trades involved any false statements, active concealment, or explicit tariff violations.[130] In that regard, Respondents argue that their trading is unlike Enron's "Death Star" trades during the Western Energy Crisis.[131] Powhatan reasons that the Death Star trades were deceptive because the California Independent System Operator, Inc. (CAISO) could only see the portion of the scheme that occurred in California, whereas here, Respondents did not hide their transactions, strategy, or intent.[132] Dr. Chen distinguishes his trading from Enron's Death Star trades by noting that his trades did not involve physical flows of power, false schedules, or misrepresentations.[133] Moreover, Dr. Chen likens his UTC trading to the trading in the *Lake Erie Loop Flow* order, in which the Commission found there was no concealment because the transactions were openly placed and there was no deception or manipulation because system operators could see accurate, identifying information regarding the transactions.[134]

55. Respondents also claim that their UTC trades had a legitimate economic purpose to profit, including by the collection of MLSA payments, which they claim were as much a part of the pricing incentive as other information, such as transaction costs and other

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[128] Chen Answer at 7, 24-25.

[129] *See e.g.* Chen Answer at 15, Powhatan Answer at 45 (citing Statements of David Hunger at 4 and Chester S. Spatt at 8).

[130] Chen Answer at 15.

[131] Powhatan Answer at 44-45.

[132] *Id.* at 45.

[133] Chen Answer at 29-30.

[134] *Id.* (citing *New York Indep. Sys. Operator, Inc.*, 128 FERC ¶ 61,049 (*Lake Erie Loop Flow*), App. A, Non-Public Investigation into Allegations of Market Manipulation in Connection with Lake Erie Loop Flows at 21-22 (2009)).

potential profit making opportunities.[135] In that respect, Respondents claim that the Commission previously found that the existence of a pricing incentive suggests a lack of fraudulent intent.[136] Similarly, Respondents assert that the Commission previously determined that offsetting energy transactions entered into for the sole purpose of accruing benefits associated with renewable energy credits did not constitute market manipulation.[137] Respondents also note that, in a separate case, wind generators had an economic incentive to lose money on electricity sales by offering zero or negative bids into their respective markets to capture the wind energy production tax credit. In that instance, Respondents argue the Commission acknowledged that certain resources are incentivized to make negative bids to gain revenue through the credits.[138]

56. Further, Powhatan states that "maybe [Dr Chen] was, maybe [Dr.Chen] wasn't" exploiting a loophole in the PJM Tariff through his trading.[139] Nevertheless, Powhatan argues that exploiting loopholes is a "time-honored tradition," that market participants do the "market and rule makers a service" by exposing inefficiencies, and that a former Acting Director of the Office of Enforcement agrees that exploiting loopholes does not constitute fraud.[140] Dr. Chen disagrees, and concludes that this matter is "not about exploiting a loophole."[141] Respondents all agree, however, that even if they were exploiting a loophole, such behavior is neither fraudulent nor illegal.[142]

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[135] *Id.* at 16-19, 33; Powhatan Answer at 3, 4-8, 28-29, 31-32, 37-38; Electricity Market Design Flaws and Market Manipulation, William W. Hogan, at 8 (Feb. 3, 2014); Report of Chester S. Spatt (Nov. 4, 2013); Chen Answer at 16-17, 33.

[136] Powhatan Answer at 31 (citing *Lake Erie Loop Flow*, 128 FERC ¶ 61,049, App. A at 21-22 at 22, 24).

[137] *Id.* at 32 (citing *Idaho Wind Partners 1, LLC,* 134 FERC ¶ 61,217, at PP 6, 24 (2011) (*Idaho Wind*)).

[138] *Id.* at 32 (citing *Midwest Indep. Transmission Sys. Operator, Inc.*, 134 FERC ¶ 61,141, at P 83 (2011)).

[139] *Id.* at 4.

[140] *Id.* at 5-7.

[141] Chen Answer at 43.

[142] *Id.* at 8-9, 34-35; Powhatan Answer at 3-8.

57. Finally, Respondents contend that their trades caused no harm.[143] Specifically, the Respondents argue that no entity is entitled to any particular share of the MLSA payments.[144]

ii. <u>OE Staff Report and Reply</u>

58. OE Staff alleges that Respondents manipulated Commission-regulated markets by implementing a strategy of placing high-volume, volumetrically-matched, round-trip UTC trades for no purpose other than to receive MLSA payments, without regard to the relationship between supply and demand fundamentals, and not for the purpose of arbitraging price spreads for profit.[145] OE Staff alleges this UTC trading was done at the expense of other market participants.[146]

59. OE Staff avers that Dr. Chen, trading on behalf of Powhatan, HEEP and, later, CU Fund, conceived of a fraudulent scheme in connection with PJM's UTC product and that he communicated the details of that scheme to Powhatan's principals. In addition, OE Staff alleges that Powhatan's principals knowingly encouraged and approved of Dr. Chen's trading and increased their stake in the scheme by increasing the volume of trades Dr. Chen was obligated to trade on Powhatan's behalf.[147]

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[143] Chen Answer at 67; Powhatan Answer at 47-48. Respondents "incorporate by reference" prior submissions into their Answers to the Order to Show Cause. *See* Chen Answer at 11 n.21; Powhatan Answer at 3 n.2. The Commission addressed this practice again recently. *Barclays*, 144 FERC ¶ 61,041 at n.63. We have made clear that arguments not explicitly set forth in Respondents' Answers are not "salvaged" by the "incorporation by reference" of arguments and evidence from prior submissions. *Id.* Our precedent is clear and we will follow that precedent here: "to the extent [Respondent] simply claims to incorporate such defenses by general reference, we may properly exercise our discretion to decline to consider these additional arguments." *Barclays*, 144 FERC ¶ 61,041 at n.63.

[144] Powhatan Answer at 18.

[145] Staff Report at 36-74; Staff Reply at 56.

[146] Staff Report at 12-46; Staff Reply at 56.

[147] Staff Report at 22, 25-26, 28; Staff Reply at 10-11. Dr. Chen's solely-controlled HEEP and CU Fund also were aware of and supported the strategy.

60. OE Staff notes that Respondents' round-trip UTC trading evolved and differed from the UTC trading strategy Respondents engaged in during earlier timeframes.[148] Respondents' UTC trading strategy exhibited its first marked change after October 2009, when Dr. Chen and TFS/Huntrise's principals discovered they were receiving MLSA payments and began developing a scheme to access those payments to their benefit. OE Staff charges that Respondents developed the round-trip UTC trading strategy in direct response to large losses that their non-round-trip UTC trades incurred on May 30, 2010. OE Staff alleges that Respondents' round-trip trading scheme was "as far from the [d]ay-[a]head/[r]eal-[t]ime price arbitrage as one could go."[149]

61. In short, OE Staff states that the UTC trades themselves were uneconomic, lacked economic substance and were placed to garner MLSA payments. OE Staff notes that Dr. Chen sometimes placed directional, one-way bets in addition to and on the same path as one leg of the volumetrically matched, round-trip UTC trades.[150] OE Staff explains that to the "extent that Respondents trades took 'a significant directional bet,' staff has not included those trades in calculating harm, penalties, or disgorgement."[151]

62. OE Staff argues that there is no contemporaneous evidence to support Respondents' defense of a "home run" strategy, as there is no indication that Respondents intended to make trades premised on the economics of legs failing to clear.[152] OE Staff further argues that Respondents' reliance on the Polar Vortex to support the existence of a risk is inapposite because Respondents' trading occurred four years before the Polar Vortex.[153] OE Staff states there is no evidence that Dr. Chen had any expectation that what happened four year later during the 2014 Polar Vortex would occur in his 2010 summer trading.[154]

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[148] Staff Report at 17; Staff Reply at 10-11. Prior to Powhatan's establishment in March 2010, Powhatan's principals/investors traded through TFS and Huntrise.

[149] Staff Report at 24.

[150] Staff Reply at 13 n.25, 43.

[151] *Id.* at 13 n.25

[152] *Id.* at 53, 56.

[153] *See, e.g.*, Staff Reply at 22.

[154] Staff Reply at 22.

63. OE Staff further argues that profitability alone "does not inoculate trading from any potential manipulation claim,"[155] but that any profits Respondents earned resulted only from the MLSA payments. Staff avers that, rather than a valid measure of profitability, this represents the benefit from engaging in manipulative trades.[156] Moreover, OE Staff argues that Respondents' reliance on *Idaho Wind* is inapposite because the petitioners in that matter requested Commission approval prior to taking any action.[157]

64. OE Staff also argues that Respondents' round-trip UTC trading scheme was similar to Enron's Death Star, and that Respondents fail to distinguish their scheme in any meaningful way.[158] OE Staff asserts that Death Star was a circular scheduling strategy in which traders made money by moving electricity in a circle from A-B/B-A, resulting in no net position and no possibility for profit or loss from market prices. OE Staff avers that the Death Star strategy was profitable so long as the amount of credits received exceeded the cost of scheduling the transactions. OE Staff argues that Respondents similarly engaged in round-trip UTC trading from A-B/B-A that resulted in no net position and, thus, no possibility for profit or loss from market prices. The Respondents' strategy was profitable so long as the MLSA payments exceeded transaction costs.[159] OE Staff avers that in the current and Death Star matters, the trades were presented in a manner that appeared legitimate but instead disguised the transactions' true purpose. OE Staff further states that both the current and Death Star matters involved trading offsetting pairs to capture revenue without providing the corresponding benefit to the market.[160] Further, OE Staff rejects Respondents' argument that the Commission effectively reversed its condemnation of Death Star in the *Lake Erie Loop Flow* order. OE Staff argues that in *Lake Erie Loop Flow*, the market participants

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[155] Staff Report at 54 (quoting *Deutsche Bank Energy Trading, LLC*, 142 FERC ¶ 61,056, at P 20 (2013); other citations omitted).

[156] *Id.*

[157] Staff Reply at 40.

[158] Staff Report at 47-48; Staff Reply at 31-37.

[159] Staff Reply at 32.

[160] Staff Report at 48-49; Staff Reply at 33-34.

made spread trades based on the differences in price at different locations whereas here Respondents attempted to eliminate exposure to price differences.[161]

65. OE Staff further alleges that Respondents' trades were sham trades placed to appear as if they were legitimate spread trades.[162] OE Staff states that, contrary to the purpose of legitimate UTC spread trades, Respondents' round-trip trades neither hedged physical transactions nor promoted market efficiency by converging day-ahead and real-time prices.[163] OE Staff also states that Respondents knew that their trades provided the market with none of the benefits of arbitrage.[164] Instead, OE Staff avers that the "massive volume of sham trades" were placed to "lay a claim to" the MLSA payments without incurring the risk of spread trading.[165]

66. OE Staff rejects Respondents' suggestion in testimony and emails that trading to benefit from MLSA payments amounted to simply exploiting a loophole in the PJM Tariff.[166] OE Staff argues that Respondents misconstrue the relationship between market rules, like tariffs, and the Commission's anti-manipulation authority and the precedent arising from that authority.[167] OE Staff notes that the Commission need not decide whether it is permissible to exploit something characterized as a loophole, because it is a violation of the Commission's Anti-Manipulation Rule to "place what falsely appear to be spread trades to collect money that would otherwise go to other market participants doing real trades."[168]

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[161] Staff Reply at 37(citing *New York Indep. Sys. Operator, Inc.*, 128 FERC ¶ 61,049, at 61,256 (2009), *order granting clarification*, 128 FERC ¶ 61,239, *order on compliance*, 132 FERC ¶ 61,031 (2010)).

[162] *Id.* at 2.

[163] Staff Report at 2.

[164] Staff Reply at 2.

[165] *Id.* at 1.

[166] *See, e.g.*, Staff Report at 21, 27, 32, 77, nn.354, 367.

[167] Staff Reply at 50.

[168] *Id.* at 51.

67. On the issue of harm, OE Staff avers that Respondents' round-trip trades impaired, obstructed, and defeated a well-functioning market.[169] Specifically, OE Staff alleges that, as a consequence of Respondents' increased trading volume to garner more MLSA payments, Respondents also reserved "huge volumes of transmission capacity."[170] OE Staff notes that during the Manipulation Period, Respondents reserved 10 percent of all the reserved transmission capacity in PJM and by "hoarding" that transmission Respondents prevented other market participants from using the transmission for legitimate purposes to enter into real physical and arbitrage-based trades.[171]

68. OE Staff also avers that by collecting MLSA payments related to their illegitimate trades, Respondents impaired the market and took those funds from other PJM market participants who, but for Respondents' fraud, would have received larger shares of the MLSA payments. OE Staff emphasizes that the Respondents' conduct led to over $10 million in harm.[172] OE Staff provides additional information from PJM which demonstrated that:

> [H]arm from [Respondents'] trading was both widely distributed throughout PJM and significantly concentrated on certain load-serving entities. In fact, while hundreds of market participants were affected in some way, more than 20 market participants were deprived by [Respondents'] round-trip UTC trades of more than $100,000 each and four lost more than $500,000 each, including PECO Energy Company ($569,976), Commonwealth Edison Company ($656,933), Dominion Virginia Power (LSE) ($1,147,087) and Appalachian Power Company (AEP Generation) ($1,450,972).[173]

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[169] *Id.* at 1-2.

[170] Staff Report at 29.

[171] Staff Reply at 2, 45, 66 n.215 (citing Picard Test. Tr. 84:20-88:32).

[172] Staff Report at 2, 32, 81.

[173] OE Staff's Answer to Respondents' Request for Extension of Time, at 9 (filed January 29, 2015). OE Staff filed a corrected version of this material on February 2, 2015.

iii. Commission Determination

69. We find, based on the totality of evidence presented, that Respondents engaged in a course of business to defraud and a device, scheme, or artifice to defraud the PJM Market. As discussed in greater detail below, we find that: (i) Respondents' arguments are not persuasive; and (ii) OE Staff's allegations provide sufficient evidence that Respondents' actions violated section 222 of the FPA and the Anti-Manipulation Rule. The evidence demonstrates that Respondents engaged in round-trip UTC transactions not for hedging or arbitraging price spreads but instead to receive large shares of MLSA payments that otherwise would have been allocated to other market participants. This manipulative conduct had widespread effects because of Respondents' high volumes of round-trip UTC trades. PJM advised OE Staff that for the month of July 2010, the hourly UTC transaction requests for HEEP, Powhatan, and CU Fund were almost 9 million MWh.[174] Respondents neither dispute that they executed their round-trip trades during the Manipulation Period to collect MLSA payments, nor do they claim that they would have entered into the trades without the MLSA payments.[175]

(a) Communications, testimony, and other evidence demonstrate the existence of a scheme to defraud

70. We find that communications, testimony and other evidence demonstrate that Respondents did not engage in UTC trading for the arbitrage and convergence purposes, but instead to maximize MLSA payments that, but for their trades, would have gone to other market participants. For example, Dr. Chen explained to Mr. Gates "[o]n 5/30 we lost a lot of money on the one pair of trades and I tried to find a better hedged paired [sic] of trades. That's when I thought of using fully hedged paired trades."[176] Mr. Gates

[174] PJM's Jan.11, 2011 Response to Office of Enforcement's Second Data Request to PJM, Response No. 6.

[175] Staff Reply at 4. In fact, Dr. Chen told Mr. Gates in March 2010, that "[w]ithout [MLSA], I would not touch some of the trades and/or would not put in large volumes for some of the trades. But with [MLSA] as is, they are suddenly becoming risk-free (almost to the point) trades." Email from Alan Chen to Kevin Gates (March 5, 2010, 9:37 PM) (POW00016599).

[176] *See* Email from Alan Chen to Kevin Gates (Aug. 24, 2010, 06:20:38 PM) (POW00004874).

understood and supported Dr. Chen's actions and strategy.[177] He testified that "I remember [Dr. Chen] saying . . . very early on during Powhatan's trading, that he was very clearly trying to eliminate that [congestion spread], and he was going from A to B-B to A."[178] Mr. Gates further testified that, with the round-trip trading strategy, Dr. Chen "was trying to remove the day-ahead/real-time spread" and the strategy was akin to a "monkey . . . throwing darts."[179] Thus, together, the Respondents understood that trading A-B/B-A would necessarily result in no profits on the spread—in fact, Mr. Gates recognized, when transaction costs were taken into account "[y]ou were going to absolutely lose money on that trade."[180]

71. We find Respondents also knew their trades were profitable only due to MLSA payments. For example, during the Manipulation Period, Dr. Chen informed Mr. Gates that "we are losing quite a bit of money and for the whole day it is probably approaching -$60k. But we are still making more than $40K up to date (due to the updated TLC [MLSA] data of 6/2: making $63 instead of losing $56,742). I think optimistically we could have made more than $100K once the TLC data are published."[181] Two days later, Mr. Gates informed his partners that "I think that everyone should expect to have the ability to double their investment in Powhatan."[182]

72. These communications and testimony show that Respondents understood that their round-trip UTC trades had little price risk by design, were not undertaken to arbitrage price spreads, were certain themselves to lose money, and were placed only to create the illusion of volume trading to obtain transmission and thereby earn MLSA payments that otherwise would have gone to other market participants. Dr. Chen's description of his trades to Mr. Gates as "fully hedged paired trades" demonstrates that Respondents

[177] As a primary owner of Powhatan, Mr. Gates' statements and communications may be ascribed to Respondent Powhatan.

[178] K. Gates Test. Vol. II Tr. 178:12-15. These communications similarly provide evidence of scienter. *See* discussion *infra* PP 128-140.

[179] K. Gates Test. Vol. II Tr. 216:13-217:3, 309:20-21.

[180] *Id.* 175:2-4.

[181] Email from Alan Chen to Kevin Gates (June 7, 2010, 9:57 PM) (POW00003761).

[182] Email from Kevin Gates to Richard Gates, et al. (June 9, 2010, 03:04:45 PM) (POW00004350).

intended their strategy to be as risk free as energy trading could get: the trades in Dr. Chen's estimation were not only "fully hedged," but represented opposite sides of the same spread, or "paired trades." By engaging in a real "hedged" strategy, Dr. Chen could have provided Respondents some protection against price risk. However, by employing what he termed a "paired" strategy, Dr. Chen eliminated as much price risk as possible—short of not trading at all. We also find unavailing Respondents' argument that Dr. Chen affirmatively sought risk on these round-trip trades and economically wanted to hit a "home run" through one leg breaking.[183] The contemporaneous communications, and the other evidence in this proceeding, do not bear this out. In fact, we conclude he sought the opposite result as we explain further below.

73. We similarly reject Dr. Chen's view that Respondents' trades are nothing more than "ubiquitous" acts by market participants to "hedge congestion risks. . . ."[184] Respondents' trades were not a hedge; the trades were a nullity. By immediately nullifying the A-B path with a B-A path, there was no transaction left to hedge. Essentially, Dr. Chen argues that Respondents' trades "hedged" the underlying trade by completely reversing the risk in the underlying trade with a trade of the exact same product, at the exact same time, in the exact same volume, all in the opposite direction. Such trades are inconsistent with any definition of a "hedge." They are, however, consistent with the definition of a "wash trade" in our markets.[185]

(b) <u>Pattern: the difference between trades before and after MLSA payments</u>

74. We find Respondents' UTC trading pattern before they became aware of the MLSA payments was decidedly different from their UTC trading pattern after they became aware of those payments.[186] In short, Dr. Chen moved from arbitraging price

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[183] *See* Chen Answer at 4-7, 16, 20-21 n.47, 22, 25, 50 (referring to possibility of a leg breaking); Powhatan Answer at 25-27 (citing Expert Reports).

[184] Chen Answer at 3. Dr. Chen asserts: "[w]e do not know of any prior case in which the Commission has said that it is problematic – not to mention fraud-based market manipulation – to reduce or eliminate exposure to congestion gains and losses in RTO day-ahead and real-time markets." *Id.*

[185] *See* discussion *infra* PP 103-107.

[186] *See* Staff Report at 15, 17-18; Chen Test. Vol. I Tr. 51:3-6, 73:19-75:5; Email from Alan Chen to Kevin Gates (March 5, 2010, 9:37 PM) (POW00016599) (explaining that in February 2010 he "kicked [it] up a notch targeting for [MLSA]" and that his UTC trades, with MLSA were "suddenly becoming risk-free (almost to the point) trades");

(continued...)

spreads toward risk-free UTC trading whose purpose was to maximize MLSA payments through high-volume round-trip UTC trading.

75. During Dr. Chen's introductory period, he learned that the purpose of the UTC product as a financial transaction is to "improve the day-ahead and real-time price spreads . . . trying to make them converge, and so that the goal is to improve market efficiency."[187] From 2007 to 2009, during his first phase of trading, Dr. Chen based his trading on market fundamentals, using historical spreads and historical similar day models. Dr. Chen took a careful, low risk approach, bidding in small volumes under 100 MW, and his profitability depended on favorable changes in congestion price between the day-ahead and real-time markets. However, Dr. Chen abandoned this strategy after discovering the MLSA payments. He then in his second phase of UTC trading sought to cancel price spread risk and profit solely from MLSA payments, which he ultimately perfected as his round-trip trading scheme in his phase three strategy.[188] This pattern of trading demonstrates that, with increasing trading experience, Respondents honed their scheme to defraud PJM and PJM's market participants. This pattern further supports our conclusion of fraud in this matter.[189]

(c) <u>Respondents' round-trip UTC trades were uneconomic and contrary to market design purpose</u>

76. We also find that Respondents' round-trip UTC trades were routinely uneconomic and contrary to the market design purposes for which PJM offered the UTC product. Specifically, we find that not only were Respondents' round-trip UTC trades routinely unprofitable when measured from a price arbitrage perspective, but the evidence demonstrates that Respondents expected no more from them.[190] This lack of profit from

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Written Submission to Commission Investigation Staff on Behalf of Dr. Houlian Chen, at 14 (Dec. 13, 2010).

[187] Chen Test. Vol. I Tr. 31:14-18; *see also* discussion *supra* P 38.

[188] *See, e.g.*, K. Gates Test. Vol. II Tr. 178:12-15; Chen Test. Vol. I Tr. 66:9-15; Chen Test. Vol. II Tr. 94:10-11.

[189] *See Barclays*, 144 FERC ¶ 61,041 at PP 7, 32, 38-41, 60, n.152.

[190] *See* K. Gates Test. Vol. II Tr. 175:2-4; Email from Alan Chen to Kevin Gates (June 7, 2010, 9:57 PM) (POW00003761). We understand that Respondents argue that they were attempting to profit from the actual trading (irrespective of the MLSA) or that the round-trip trades were risky enough to expose them to potential profits if one of the

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economic fundamentals was an anticipated by-product of Respondents' risk-canceling, round-trip trading. Further, Respondents were required to purchase transmission service to effectuate their UTC trades and be eligible for MLSA. As a result, the profit and loss calculation associated with such round-trip UTC trades, absent MLSA payments, necessarily resulted in a net loss to Respondents. We agree with the underlying PJM IMM's referral that these trades had "no fundamental economic rationale or value."[191]

77. The Commission has previously noted that while "profitability is not determinative on the question of manipulation and does not inoculate trading from any potential manipulation claim,"[192] it "is an indicium to be considered among the overall facts that the Commission examines when considering a potential violation of its Anti-Manipulation Rule, but standing alone it is neither necessary nor dispositive."[193] Here, Respondents' underlying round-trip UTC trading (i.e., from the spread product, not the MLSA payment) was consistently and purposefully uneconomic which supports the conclusion that a course of business and a scheme to defraud existed.[194]

78. While Respondents argue that the round-trip trades were profitable, we find they only became profitable because of the MLSA payments. That the MLSA payments were not, and should not be considered, part of the underlying UTC trade is clear: UTCs were created as a tool for hedging congestion price risk associated with physical transactions,[195] and later became a way for market participants to profit by arbitraging the

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legs of the trades "broke." Chen Answer at 4-7, 16, 20-21 n.47, 22, 25, 50 (referring to the possibility of a leg breaking); Powhatan Answer at 25-27. As we set forth below, this argument is inconsistent with communications contemporaneous to the strategy and its development and with other evidence. *See* discussion *infra* PP 86-93.

[191] IMM Referral at 3.

[192] *Deutsche Bank Energy Trading, LLC*, 142 FERC ¶ 61,056 at P 20.

[193] *Barclays*, 144 FERC ¶ 61,041 at P 43.

[194] As Dr. Chen explained to Mr. Gates, "[t]he volumes have been increasing pretty significantly, but the risks associated with the trades are actually lower than before. . . . Without [MLSA], the transaction costs would absorb them and deem them unprofitable." Email from Alan Chen to Kevin Gates (March 5, 2010, 8:52 PM) (POW00012123).

[195] *PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,121 at P 3; *see also Calif. Indep. Sys. Operator Corp.*, 143 FERC ¶ 61,087, at P 6 (2013) (noting that market participants can use virtual transactions to "hedge financial expectations").

price differences between two nodes in the day-ahead and real-time markets.[196] Dr. Chen recognized this early on in his career. He understood that for financial transactions, the purpose of the UTC product is to ". . . . improve day-ahead and real-time price spreads. You're actually trying to make them converge, and so that the goal is to improve market efficiency."[197]

79. We find that Mr. Gates similarly understood that financial UTC transactions were traded based on market fundamentals and market views of the spread between day-ahead and real-time prices. He testified, for example, that before Dr. Chen learned of his eligibility for MLSA payments, Dr. Chen traded UTCs based on his "ability to model congestion [and] his ability to model the day-ahead versus the real-time spread."[198]

80. Respondents' trades were neither consistent with how the UTC product historically traded nor aligned with the arbitrage purpose of those trades. Respondents' round-trip UTC trades did not "converge" the day-ahead and real-time spreads and, applying Dr. Chen's logic, did not "improve market efficiency." Moreover, we conclude that the UTC products' history and purpose demonstrate that engaging in round-trip UTC trades with the MLSA payments as the sole or primary price signal is improper. Speculative UTC trades placed to arbitrage price spreads will have as their sole or primary price signal the price risk of the underlying UTC spread and will be placed with the purpose of profiting based on the direction of the spread. Yet, despite the market purpose behind UTCs and despite Dr. Chen's and Mr. Gates' articulated understanding of that purpose,[199] Respondents engaged in round-trip UTC trades that had no relationship to this purpose.

81. We reject Powhatan's reliance on prior Commission orders to claim that any profit-driven actions in response to pricing incentives are not fraudulent. Those orders are distinguishable and involved trading behavior that differed significantly from Respondents' conduct. The *Lake Erie Loop Flow* matter involved responses to price signals, created by market fundamentals that indicated that it was cheaper to schedule energy to flow clockwise around Lake Erie than to flow it in the more direct, counterclockwise path. Those transactions were executed to lower market participants'

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[196] S*ee PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,121 at P 19.

[197] Chen Test. Vol. I Tr. 31:14-18.

[198] K. Gates Test. Vol. II Tr. 172:25-173:2.

[199] *See, e.g.*, Chen Test. Vol. I Tr. 31:14-18; K. Gates Test. Vol. II Tr. 172:25-173:2.

costs based on market fundamentals for transactions they already sought to engage in, and were not "created by any intentional actions of market participants to obstruct an otherwise well-functioning market."[200] That differs significantly from Dr. Chen's risk-free round-trip UTC trades, which were devoid of independent economic substance and designed solely to capture MLSA payments.

82. The *Idaho Wind* case cited by Respondents is also distinguishable on several grounds. *Idaho Wind* involved (1) a bundled sale of energy and renewable energy credits (RECs) from eleven wind Qualifying Facilities (QFs) to a third party at market-based rates; (2) the QFs' instantaneous buy-back of only the energy (i.e., the same electric energy generated by the QFs but stripped of their RECs) pursuant to market-based rate authority at the same delivery point and same price; and (3) the subsequent sale of the QF output to Idaho Power pursuant to the Public Utility Regulatory Policies Act of 1978 (PURPA) mandatory purchase obligation at the avoided cost rate authorized by the Idaho Public Utilities Commission. The Commission stated explicitly that its conclusion was "based upon the facts presented and representations by Idaho Wind. . . . Any different or additional facts might lead us to a different determination."[201] First, *Idaho Wind* did not involve trading of virtual transactions in an RTO market. Second, the transaction involved entities (the QFs) that already possessed the benefit in question (the RECs) who were trying to sell that benefit. Idaho Wind did not have to engage in uneconomic trading designed to access the "benefit" like Respondents did. Finally, Idaho Wind sought declaratory judgment from the Commission before engaging in any transaction, which the Commission concluded: "suggest[s] that there is neither a fraudulent scheme nor scienter."[202] Nothing in the record before us here suggests that the comparison of the case to this proceeding is apt, or that Respondents consulted the Commission before engaging in the trading at issue.

83. Powhatan's reliance on *Midwest Independent Transmission Operator, Inc.* is similarly misplaced.[203] Powhatan claims that "[t]he Commission has acknowledged that certain resources are incentivized to make negative bids in order to gain revenue via [production tax credits] and has never suggested there is anything fraudulent about this

[200] *Lake Erie Loop Flow*, 128 FERC ¶ 61,049, App. A at 26.

[201] *Idaho Wind*, 134 FERC ¶ 61,217 at P 25.

[202] *Id.* P 24.

[203] Powhatan Answer at 32 (citing *Midwest Indep. Transmission Sys. Operator, Inc*., 134 FERC ¶ 61,141, at P 83 (2011)).

practice."[204] Powhatan is mistaken. In the MISO matter, the Commission ordered that resources should be settled in a manner that prohibited the creation of such an incentive through settlement at a different dollar value. Specifically, we found that it was appropriate for Dispatchable Intermittent Resources to be settled at the lower of the resource's offer price or the market price "even in the event that such resources submit negative offer prices."[205] We reasoned: "[s]ince any such negative offer prices would reflect the resources marginal cost for producing energy, settling excessive energy credits at $0 or at a non-negative market price instead of the resources negative offer prices would provide an incentive for Dispatchable Intermittent Resources to overproduce and gain revenues in excess of their marginal costs (e.g., via production tax credits)."[206]

84. We also reject Powhatan's argument that it did not engage in fraud because it had a legitimate economic purpose for its trades.[207] Here, the legitimate "economic" purpose Powhatan asserts is "profiting from each of the trades, which included the collection of transmission loss credits."[208] As we explained above, these trades were routinely uneconomic, and the idea that Respondents intended to hit a "home run" or profit from the trades in any way except from the MLSA payments is inconsistent with contemporaneous communications, testimony, and other evidence.[209]

85. Moreover, even if the notion that Respondents wanted to earn profits from the trades themselves (beyond earning MLSA payments) was supported by the evidence, and even if such statement was enough to substantiate a "legitimate business purpose" (which it is not), when promulgating the Anti-Manipulation Rule the Commission "rejected

[204] *Id.* at 32.

[205] *Midwest Indep. Transmission Sys. Operator, Inc*., 134 FERC ¶ 61,141 at P 83.

[206] *Id.* Of course, such an argument – i.e., essentially, earning a profit is in and of itself a legitimate economic purpose, and the round-trip UTC trades and the associated MLSA payments at issue here were undertaken to earn a profit – would, if accepted, justify any and all fraud because fraud is almost invariably undertaken to make money.

[207] Powhatan Answer at 31.

[208] *Id.*

[209] *See* discussion *infra* PP 86-93.

'calls for inclusion of a 'legitimate business purpose' affirmative defense.'"[210] The Commission explained that:

> [T]he reasons given by an entity for its actions are part of the overall facts and circumstances that will be weighed in deciding whether a violation of the anti-manipulation regulation has occurred. Consequently, an entity's business purposes will be relevant to an inquiry into manipulative intent, but a "legitimate business purpose" is not an affirmative defense to manipulation. And that is true here.[211]

We therefore reject Respondents' argument.

(d) <u>Respondents had no "home run" strategy</u>

86. Respondents argue that their round-trip trades were part of a trading strategy under which Dr. Chen hoped to "hit it big (or hit a home run)."[212] In essence, Respondents' argument is that their round-trip UTC trades were exposed to substantial risk because at any time one leg of the two-leg trade might not clear (i.e., leg A-B might clear where leg B-A did not). Respondents aver that this would "expose Dr. Chen and

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[210] *Barclays*, 144 FERC ¶ 61,041 at P 61 (quoting *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations,* 114 FERC ¶ 61,165, at P 29 (2006)).

[211] *Id.* (quoting *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 114 FERC ¶ 61,165 at P 29). The Commission also takes this opportunity to note that Powhatan is mistaken in its statement that the Commission "*must* look to 10b-5 precedent" when applying its Anti-Manipulation Rule. Powhatan Answer at 34-35 (emphasis added). As noted in Order No. 670, the Commission explained that it would apply specific securities law precedent on a case-by-case basis as appropriate under the specific facts, circumstances and situations in the energy industry. Order No. 670, FERC Stats. & Regs. ¶ 31,202 at PP 31, 42; *see also Barclays*, 144 FERC ¶ 61,041 at P 58. As we explained in *Barclays*, "The energy industry is not in all ways equivalent to the securities industry. Moreover, as we discuss below, our statutory mandate, unlike that of the SEC, is to ensure that rates for jurisdictional transactions are just and reasonable." *Barclays*, 144 FERC ¶ 61,041 at P 58.

[212] *See, e.g.*, Powhatan Answer at 25-27; Chen Answer at 4-7, 16, 20-21 n.47, 22, 25, 50 (referring to the possibility of a leg breaking, which is the same as the home run strategy).

Powhatan to a greater possibility of profit (as well as a corresponding greater risk of loss).”[213]

87. To illustrate his argument, Dr. Chen points to what would have happened to Respondents’ spreads during the Polar Vortex.[214] He argues that “if [Dr. Chen’s] A to B-B to A trades had been in place during the Polar Vortex in January 2014, one leg would have broken for each of the five paired nodal combinations he used, in a total of between 90 to 170 hours, depending on the ceiling price used, creating considerable profit.”[215] Moreover, Powhatan argues that Dr. Chen sometimes bid $35/MWh on a leg, instead of the congestion limit of $50/MWh, stating that Dr. Chen would have always bid at the maximum congestion limit if he wanted both legs to clear.[216]

88. We reject each of these arguments as fundamentally flawed. First, we conclude that Respondents’ suggestion that they sought to benefit from a “home run” or a “leg breaking” is an after-the-fact rationale, inconsistent with contemporaneous communications.[217] The evidence indicates that as Respondents developed their scheme and ultimately developed their round-trip strategy, they repeatedly discussed their desire to avoid risk.[218] And Dr. Chen affirmed in testimony that he selected the legs he did to

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[213] Powhatan Answer at 26.

[214] Chen Answer at 7, 16.

[215] *Id.* at 7 (citations omitted).

[216] Powhatan Answer at 25-26; *see also* Chen Answer at 4-5 (citation omitted).

[217] As Respondents recognize, no “home run” occurred during the Manipulation Period. Chen Answer at 18. Moreover, we reject Respondents’ explanation that no contemporaneous communications exist concerning the “home run” strategy because Dr. Chen did not share every detail about his trading strategies with Mr. Gates. Chen Answer at 24 n.55; Chen Affidavit at ¶ 20; Powhatan Answer at 26 n.7. This explanation ignores evidence that demonstrates that the “home run” strategy did not exist, including: (i) Respondents’ trading was completely inconsistent with a “home run” strategy; and (ii) that, inconsistent with a “home run” strategy, Mr. Gates understood that Dr. Chen’s trades sought to reduce risk. *See* discussion *supra* PP 70-72. Thus, we are persuaded that the Respondents had no “home run” strategy and that they knowingly executed the round-trip UTC trades to receive MLSA payment. *See* discussion *infra* PP 86-93; *see also* Staff Reply at 26-27.

[218] For example, Respondents discussed that: (i) the “risk is very limited” Email from Alan Chen to Kevin Gates (July 22, 2008, 1:31 PM) (POW00008996); (ii) with the

(continued...)

minimize the risk that one of the legs would not clear.[219] Dr. Chen stated that his goal was not to have a leg rejected, noting that it could possibly be rejected but that he is "not really trying to asking [sic] for it."[220] Rather, he states that he was trying to reduce the risk of the possibility that a leg would be rejected.[221] We find this evidence is inconsistent with a "home run" strategy.

89. We do not find credible Dr. Chen's October 2010 testimony suggesting he earlier took into account the potential of earning profits from a leg breaking.[222] That testimony occurred after the trading at issue and after Dr. Chen had been contacted by both the IMM and OE Staff questioning his trades. The contemporaneous evidence from spring and summer 2010 makes no reference to a "leg-breaking" or "home run" strategy. Moreover, this October 2010 testimony is inconsistent with Dr. Chen's other testimony where he states his goal was to minimize a leg break. Finally, even if we believed that Dr. Chen did at some point consider the potential for profit from a leg breaking as an ancillary goal of his round trip trades, which we do not, we would still conclude that the primary and overwhelming reason he conceived of and entered into the round-trip UTC trades was to eliminate all other profits and risks and instead to earn MLSA payments.

90. Mr. Gates' testimony further contradicts the "home run" theory. He recalls that Dr. Chen considered the failure of a leg to be a risk of the round-trip strategy that could not be completely eliminated, and he understood that failure to be catastrophic.[223] Mr. Gates stated that it was something that he was "very concerned with," a "risk that . . .

MLSA payments the trades "are suddenly becoming risk free (almost to the point)" Email from Alan Chen to Kevin Gates (March 5, 2010, 9:37 PM) (POW00016599); (iii) even with the increased volume in trading "the risks associated with the trades overall are actually lower than before" Email from Alan Chen to Kevin Gates (March 5, 2010, 8:52 PM) (POW00012123); and (iv) in searching for a way to avoid another loss like that of May 30, 2010, Dr. Chen "tried to find a better hedged paired [sic] of trades. That's when I thought of using fully hedged paired trades." Email from Alan to Kevin Gates (August 24, 2010, 06:20:38 PM) (POW00004874).

[219] Chen Test. Vol. I Tr. 65:1-4; Chen Test. Vol. II Tr. 66:10-22.

[220] Chen Test. Vol. II Tr. 61:18-62:1 (objection omitted).

[221] *Id.* 66: 2-12.

[222] Chen Affidavit at 13-21.

[223] Powhatan Supplemental Response to Data Request #10 (Dec. 17, 2010).

would [keep] me up at night."[224] The evidence shows that Dr. Chen performed analyses concerning the historical performance of "all the combinations" of UTC paths[225] and that Mr. Gates understood Dr. Chen to have developed a model to determine the MLSA payments.[226] Yet, there is no record evidence that he even analyzed this alleged "home run" strategy.

91. Moreover, Dr. Chen's attempts to avoid risk were quite successful during the Manipulation Period: in approximately 12,000 round-trip UTC trades, Powhatan, HEEP, and CU Fund never experienced a "broken leg."[227] Given the weight of all of the evidence, we conclude that Respondents' argument that they were attempting to "hit a home run" or increase risk is not credible and is inconsistent with other evidence in the matter.

92. Respondents' Polar Vortex argument is similarly flawed and unpersuasive. There is no evidence that the Respondents ever contemplated a Polar-Vortex type event when developing their alleged home run strategy. Rather, Respondents appear to be citing the Polar Vortex as a *post hoc* rationalization for their trading conduct.[228]

93. Finally, the Commission does not find persuasive Respondents' argument that Dr. Chen's occasional bids at $35/MWh reflect a willingness to take the risk that one leg of the trade would not clear. As we noted above, in the Manipulation Period, Respondents never experienced a leg break. Moreover, a historical review of the UTC trading paths used by Respondents during the Manipulation Period demonstrates that those paths were selected by Dr. Chen because they were unlikely to experience divergent price spikes. Indeed, Dr. Chen's bids were above the day-ahead spreads in "well over" 99 percent of the hours from January 2008 through December 2010 and in

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[224] *Id.*; Gates Test. Vol. I Tr. 82:19-84:22.

[225] Chen Test. Vol. I Tr. 73:25-75:5.

[226] Staff Report at 26 n.149.

[227] Staff Reply at 3. Respondents do not deny the fact that the legs never broke during the Manipulation Period.

[228] We are therefore not persuaded by Dr. Chen's tables on this subject. *See* Chen Answer at 24-25.

every hour in the 12 months before Dr. Chen implemented his round-trip trading strategy.[229] As OE Staff calculated:

> In fact, between July 1, 2005 and June 1, 2010, when Respondents began implementing their scheme, only two of the five principal paths Respondents used to effectuate their round-trip trading scheme (MISO-AEP and MISOCOMED) had *ever* experienced [d]ay-[a]head prices above $50; on all five, [d]ay [a]head prices above $20 were rare. Of the five main paths, only AEP-MISO had experienced [d]ay-[a]head prices above $20 in the 12 months preceding Respondents' trading.[230]

Thus, during the Manipulation Period, a trader would have reasonably expected a $35/MWh bid to have the same likelihood of being accepted into the UTC market on the paths here at issue as a $50/MWh bid.[231]

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[229] Staff Reply at 21 (relying on data provided by PJM).

[230] *Id.* at 20 (footnote omitted, emphasis in original); *see also* Staff Reply at 21 n.52. The same data (a PJM data set twice made available to Respondents) also shows that only 3.6 percent of Dr. Chen's bids were on the AEP-MISO path in the direction that ever experienced congestion prices above $20. OE Staff Submission of Non-Public Investigative Materials, January 2, 2015, at Staff Doc and Data Submission Jan 2, 2015\Transactional Data\PJM Trade Data\Trade_Data_POWHEF.xls.

[231] We similarly find Dr. Chen's graphic analysis of historical aggregate profitability at various bid levels unpersuasive. Chen Answer at 27. That analysis rolls up all months for all years from April 1, 2005 to August 3, 2014 – improperly incorporating outcomes from months after the Manipulation Period – and ignores any transaction costs. Providing a figure that rolls in results from after the Manipulation Period cannot inform us of what Dr. Chen understood about path performance at the time he placed his trades, as he would not have been privy to future market results. We are persuaded, on the other hand, that OE Staff's revisions to the graph present a more accurate view of the results. OE Staff's revisions demonstrate that historic revenues, even before transaction costs, were "anemic" and that after transaction costs were taken into consideration, the strategy would have been uniformly unprofitable. Staff Reply at 21-24.

(e) Respondents' loophole and deception arguments are unavailing

94. We find that describing these round-trip UTC trades as being made in response to a "loophole" in the PJM Tariff belies their fraudulent nature. The Commission has made clear that "[a]n entity need not violate a tariff, rule or regulation to commit fraud."[232] Thus, the fact that the PJM Tariff did not explicitly prohibit round-trip trades does not create a loophole. As set forth in greater detail below, market participants in the Commission's jurisdictional markets have been on notice for some time that round-trip trades such as these are improper.[233] Moreover, Respondents' round-trip UTC trades did not expose a market inefficiency as argued by Powhatan; the round-trip UTC trades furthered a scheme to defraud PJM and the MLSA payment recipients. Nor was this trading behavior a "service" to the market, as Powhatan suggests. Instead we find this behavior to have resulted in the manipulation of electric energy markets contrary to section 222 of the FPA and the Anti-Manipulation Rule.[234]

95. Additionally, Respondents argue that their trades were not deceptive and without deception there is no fraud.[235] We disagree. As stated above, "[f]raud is a question of fact to be determined by all the circumstances of a case." The market purpose behind speculative UTC trades in PJM was to permit traders to arbitrage the market to encourage

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[232] *Competitive Energy Services, LLC*, 144 FERC ¶ 61,163, at P 50 (2013) (citing Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 25); *Richard Silkman*, 144 FERC ¶ 61,164, at P 50 (2013); *Lincoln Paper and Tissue, LLC*, 144 FERC ¶ 61,162, at P 36 (2013). *See also In re Make-Whole Payments and Related Bidding Strategies*, 144 FERC ¶ 61,068, at P 83 (2013) (citations omitted).

[233] *See* discussion *infra* PP 115-123.

[234] We find that Powhatan's attempt to rely on Commission staff's 2009 testimony before the Committee of Energy and Natural Resources, Subcommittee on Energy to be inapposite. Powhatan Answer at 7. First, we have found that there was no loophole in this matter and that Respondents' trading violated the Commission's Anti-Manipulation Rule. Further, as we discuss below, the trades in question are wash trades and therefore *per se* fraudulent and manipulative. Moreover, Powhatan ignores the fact that, in the very same response it relies on, staff stated: "The big difference is the legal definition of . . . market manipulation. It's really a fraud statute. So what we have to show is that the trader had an intent to manipulate the market . . . ." As we set forth below, Respondents intended to and did manipulate the PJM market. *See* discussion *infra* PP 115-123.

[235] Chen Answer at 8-10, 15; Powhatan Answer at 7, 43.

convergence between the day-ahead and real-time markets.[236] Respondents' fraudulent trades could not and did not provide that benefit to the market. Nonetheless, Respondents placed their trades as market participants would place an arbitrage-based spread trade, except Respondents' round-trip UTC trades canceled each other out. The connected nature and purpose of the offsetting trades was concealed and created the illusion of high volume trading thereby subverting the PJM market. Specifically, as a result of Respondents' deception, PJM distributed less in MLSA funds to those market participants who were engaged in behavior supportive of and beneficial to the PJM market and instead provided those MLSA funds to Respondents. In short, we find that the Respondents defrauded PJM into allocating MLSA payments to Respondents by engaging in high volumes of fraudulent round-trip UTC trades solely to collect MLSA payments.

96. We also reject Respondents' argument that their trades were nothing like Enron's Death Star trading. Like Death Star's circular strategy, Respondents engaged in round-trip UTC trading that resulted in no net position and, thus, no possibility for profit or loss from market prices. Moreover, Death Star's strategy was profitable so long as the credits received exceeded the cost of scheduling the transactions; similarly, Respondents' strategy was profitable so long as the MLSA payments exceeded their transaction costs. In addition, Respondents' round-trip UTC trades falsely appeared to PJM as legitimate, arbitrage-related trades when in fact they were nullities placed to garner MLSA payments. Thus, similar to Death Star, Respondents' UTC trades involved offsetting pairs to capture revenues without providing the corresponding benefit to the market.

97. Dr. Chen's argument that our decision in the *Lake Erie Loop Flow*[237] case "blunts" any comparison to Enron is similarly unavailing.[238] This argument is similar to Respondents' argument that their trades were conducted in a "transparent manner."[239] The *Lake Erie Loop Flow* matter involved transactions "scheduled on a single tag, and thus showed the source, sink and intervening transmission," and scheduling requests between the ISOs were coordinated.[240] In contrast, Respondents' trades were not

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[236] *Black Oak Energy, L.L.C., et al. v. PJM Interconnection, L.L.C.*, 122 FERC ¶ 61,208 at n.85; *see also* discussion *supra* PP 18-21.

[237] *Lake Erie Loop Flow*, 128 FERC ¶ 61,049.

[238] Chen Answer at 30.

[239] Powhatan Answer at 19; Chen Answer at 8-9, 15.

[240] *Lake Erie Loop Flow*, 128 FERC ¶ 61,049, App. A at 22.

scheduled via an electronic transmission tag so there was no mechanism by which PJM automatically could recognize their related nature, i.e., that the A-B transactions and the B-A transactions were linked and canceled each other out.[241]

(f) <u>Respondents' conduct resulted in harm</u>

98. We reject Powhatan's argument that Respondents' actions caused no harm because other market participants were not entitled to MLSA payments. While we have stated in the abstract that no market participant is entitled to a particular amount of MLSA payments and that PJM need not adopt a particular refund mechanism,[242] Powhatan ignores that PJM nevertheless filed a MLSA provision that later became effective as part of PJM's Commission-approved tariff.[243] Under the PJM Tariff's MLSA provision effective during the Manipulation Period, market participants who paid for transmission service for their transactions were entitled to receive the sum of MLSA payments established by the provision's Commission-approved hourly calculation. Accordingly, we find that identifiable market participants were harmed by Respondents' conduct; they did not receive the MLSA payments they would have received absent Respondents' unlawful round-trip UTC trades, as provided for under the then-effective PJM Tariff's MLSA provision. PJM's information included in OE Staff's Answer in Opposition to Respondents' January 27, 2015, Motion for a Two-Week Extension of Time indicated that Respondents' conduct led to over $10 million in harm, and deprived more than "20 market participants of more than $100,000 each, [and] four lost more than $500,000 each."[244]

99. In addition, we find Respondents' trades impacted transmission in PJM. During the Manipulation Period, Respondents scheduled more than 16.6 million MWh of transmission service in connection with their fraudulent, round-trip UTC trades, which

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[241] *See* Picard Test. Tr. 124:15-19 (in explaining the difficulty of deciphering Respondents' scheme, Mr. Picard explained, "there is 4000 OASIS that come up when you query it. You've got to go through every one of them. You could narrow it down through company. You have to know what you're looking at and we don't").

[242] *Atlantic City Elec. Co. v. PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,132 at P 24.

[243] *Black Oak Energy, L.L.C. et al. v. PJM Interconnection, L.L.C.*, 128 FERC ¶ 61,262 at PP 25-26.

[244] OE Staff's Answer to Respondents' Request for Extension of Time, at 9 (Jan. 29, 2015). OE Staff filed a corrected version of this material on February 2, 2015.

amounted to more than 10 percent of all day-ahead transmission service reservations in PJM.[245] Therefore, Respondents impacted the availability of transmission from the time they reserved this transmission service until the time it was released for other market participants' use in the real-time market.

b. Wash Trades Have Been Explicitly Prohibited in Our Markets

i. Respondents' Show Cause Answers

100. Respondents explain that by definition, wash trades do not make money, are economically meaningless, take no risk, cancel each other and have no legitimate purpose. They assert that their trades were exposed to profits and losses, had a legitimate purpose, were profitable, did not cancel each other out, and possessed risk.[246] Respondents emphasize that their "A-B/B-A paired trades" were exposed to risk because "a significant portion of the paired trades had unmatched daily volumes, meaning that overall there was a directional congestion bet" and "both the matched and unmatched volume paired trades were exposed to congestion if one leg failed to clear."[247]

ii. OE Staff Report and Reply

101. OE Staff charges that Respondents' round-trip UTC trades are akin to wash trades.[248] Moreover, OE Staff alleges that it was just this type of "gaming" of the energy markets that the Commission has found to be improper and illegal.[249] OE Staff argues that the trades at issue are the functional equivalent of wash trades, noting specifically that they were paired in order to cancel out each direction's respective price spread risk

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[245] Staff Report at 81; Staff Reply at 85 (citing PJM Referral at 111-72). One market participant, Mr. Picard, testified that, by the beginning of Summer 2010, he began noticing that when purchasing transmission between two points in OASIS, the Available Transmission Capacity [ATC] amounts were going down dramatically. Serge Picard Test. Tr. 85:4-86:10.

[246] Chen Answer at 18-19; Powhatan Answer at 29-33.

[247] Chen Answer at 18-19.

[248] Staff Report at 50-58 (citing *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 105 FERC ¶ 61,218 at PP 35, 53).

[249] *Id.* at 47-50.

so as to incur almost no economic risk.[250] Notwithstanding the existence of minimal risk should one leg fail to clear, OE Staff argues that these trades are wash trades because eliminating all risk is not an essential prerequisite to a finding of wash trading.[251]

102. OE Staff emphasizes that the Commission has explicitly prohibited wash trading as a *per se* violation, regardless of the trader's intent.[252] In addition, OE Staff states that the Commission was "clear that wash trading was merely a species of prohibited (even if not specifically defined) manipulative conduct, and that it would not be narrow, rigid, or formalistic in applying that concept when it came to defining market manipulation."[253] In this regard, OE Staff notes, the Commission has previously determined that any conduct functionally equivalent to wash trading, even if it differed in some immaterial way so as to fall outside a precise definition of wash trading, would nonetheless constitute a violation of the Commission's behavior rules against market manipulation.[254]

iii. Commission Determination

103. We find that the Respondents' round-trip UTC trades are wash trades, and therefore *per se* fraudulent and manipulative. The Commission's original Market Behavior Rules identified wash trades as possessing two key elements—that the transactions: (1) are pre-arranged to cancel each other out; and (2) involve no economic risk.[255] Order No. 670 later incorporated Market Behavior Rule 2 into the Commission's Anti-Manipulation Rule.[256] Pursuant to Order No. 670, the Commission stated explicitly

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[250] *Id.* at 53; Staff Reply at 37-48.

[251] Staff Report at 55; Staff Reply at 46-48.

[252] Staff Reply at 39 (citing *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 105 FERC ¶ 61,218 at P 58; *Amendments to Blanket Sales Certificates*, Order No. 644, 105 FERC ¶ 61,217, at PP 46-57 (2003)).

[253] *Id.*

[254] *Id.* at 39-40 (citing *In the Matter of Amendments to Blanket Sales Certificates*, 107 FERC ¶ 61,174, at P 47 (2004); *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 105 FERC ¶ 61,218 at P 41).

[255] *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 105 FERC ¶ 61,218 at P 53.

[256] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 58; *see also Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*,

(continued...)

that the prohibitions included in that Market Behavior Rule—including prohibitions against wash trades—would continue to be prohibited activities under the Anti-Manipulation Rule.[257]

104. As discussed above, we find Respondents' round-trip UTC trades satisfy both these elements and were, by design, wash trades.[258] That is, Respondents' trades were designed to cancel each other out and to eliminate price spread risk caused by differences in congestion prices between the selected nodes. We find that in Commission-regulated energy markets, the market risk associated with a wash trade need not be zero; it only need be small enough so that the risk has no practical or expected impact on the transaction, as was the case here.[259] While Respondents note the theoretical potential for one leg of the transaction to break, the evidence shows that Respondents' round-trip UTC trades always cleared during the Manipulation Period (as Respondents expected) and that because both legs cleared together, Respondents' round-trip UTC trades had no practical market risk.

105. Additionally, we disagree with Respondents' contention that their UTC trades were not wash trades because they were structured to produce a profit in their own right. As discussed above, we are persuaded that the way in which Respondents' profits were generated reveal a scheme that is supportive of and consistent with our finding of manipulation.[260] Respondents' trades generated profits only through the MLSA payments, which had no relationship to the underlying fundamentals of or the purposes

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114 FERC ¶ 61,165, at P 24 (2006) (rescinding Market Behavior Rule 2 because the "prohibited actions" were now prohibited under the Anti-Manipulation Rule).

[257] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 59.

[258] Because we find that Respondents' round-trip UTC trades fall squarely within the definition of wash trades, we do not address OE Staff's and Respondents' arguments regarding whether those trades are "akin" to wash trades.

[259] *See Piasio v. CFTC*, 54 Fed. App'x 702, 705 (2nd Cir. 2002); *SEC v. Colonial Inv. Mgmt. LLC*, 659 F. Supp. 2d 467, 473 (S.D.N.Y. 2009). *See also Wilson v.* CFTC, 322 F.3d 555, 559 (8th Cir. 2003) ("Wash trading produces a virtual financial nullity because the resulting net financial position is near or equal to zero."). *Cf.* Securities Exchange Act, Section 9 (defining wash trades, in pertinent part, as "an order or orders of substantially the same size . . . .").

[260] *See* discussion *supra* PP 76-78.

for the UTC product. In that way, Respondents' scheme operated like other wash trades we have found to be unlawful.

106. We also reject Respondents' claim that their trades were not wash trades because some of their trades consisted of "unmatched daily volumes." The only trades at issue here are Respondents' volumetrically identical, round-trip UTC trades. To the extent that there existed additional MWh on a particular node pair in a given hour, we have treated those as additional directional "bets" by Respondents that are not part of the round-trip trade.

107. Respondents' arguments that the trades in question were not manipulative or otherwise prohibited also ignores the Commission's long-standing policy that wash trades are inherently manipulative:

> Wash trades, by their very nature, are manipulative and purposely so. By definition, parties to a wash trade intend to create prearranged offsetting trades with no economic risk. Thus, we know of no legitimate business purpose attributable to such behavior and no commenter has suggested one.[261]

Moreover, the very nature of a wash trade is to conceal the true purpose of the trade. In this case, Respondents' wash trades concealed the fact that Respondents had used the UTC product to obtain transmission service reservations and thereby collect MLSA payments.

c. Respondents had notice that their trading is fraudulent, violates our statute and regulations, and is afforded no safe harbor

i. Respondents' Show Cause Answers

108. Respondents claim the Commission cannot find them to be in violation of the Anti-Manipulation Rule because they did not receive "fair notice" that their trades were prohibited, as required by the Due Process Clause of the United States Constitution.[262] Respondents assert that an agency "has the responsibility to state with ascertainable

[261] *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations,* 105 FERC ¶ 61,218 at P 58.

[262] Powhatan Answer at 8-25; Chen Answer at 37-54.

certainty what is meant by the standards [it] has promulgated."[263] In addition, Respondents argue that the trades were permitted under the PJM Tariff and that the Commission did not exclude round-trip UTC trades from receiving MLSA payments in the *Black Oak*[264] proceedings.[265]

109. Powhatan also argues that Respondents' trades should be protected pursuant to the safe harbor established in Order No. 670 because the Commission, in *Black Oak*, had specifically contemplated the type of trading Respondents pursued.[266] Because the Commission did not then state that trading to collect larger MLSA payments would be unlawful, Respondents claim that the Commission cannot now find Respondents' conduct to be manipulative.[267] Respondents each also point out that Dr. Chen stopped trading as soon as the PJM's IMM requested he do so.[268]

110. Moreover, Powhatan argues that this proceeding is similar to *National Fuel Marketing Co., LLC, et al.*[269] where two Commissioners raised issues regarding fair notice. Powhatan states that *National Fuel* involved issues related to the manipulation of natural gas markets and to the "shipper-must-have-title" requirement. In that proceeding, the Commission issued an order to show cause concerning bidding by multiple affiliates to obtain a larger allocation of pipeline capacity than the parent company could have acquired itself. According to Powhatan, two Commissioners dissented from the order to show cause, concluding that the company did not receive advance notice that multiple

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[263] Chen Answer at 39 (citing *Gates & Fox Co. v. OSHA*, 790 F.2d 154, 156 (D.C. Cir. 1986))*; see also* Powhatan Answer at 9.

[264] *Black Oak Energy, L.L.C. v. PJM Interconnection, L.L.C.*, 122 FERC ¶ 61,208, at P 51 (2008), *order on reh'g*, 125 FERC ¶ 61,042 (2008), *order on clarification*, 126 FERC ¶ 61,164 (2009), *order accepting compliance*, 128 FERC ¶ 61,262 (2009), *order on reh'g*, 131 FERC ¶ 61,024 (2010) (*Black Oak Proceeding*).

[265] Chen Answer at 15, 34-35, 40-48; Powhatan Answer at 3-12.

[266] Powhatan Answer at 9, 11-14 (citing Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50).

[267] *Id.* at 12-14; Chen Answer at 40-48.

[268] Powhatan Answer at 13; Chen Answer at 44.

[269] *Nat'l Fuel Mktg. Co., LLC, et al*., 126 FERC ¶ 61,042 (2009) (Moeller, Comm'r dissenting) (Spitzer, Comm'r dissenting).

affiliate bidding could be a violation of the Commission's Anti-Manipulation Rule. Powhatan argues that, as in *National Fuel*, "no Commission order or express regulation or rule ever alerted Powhatan that trades motivated by the collection of [MLSA] were unlawful."[270]

ii. OE Staff Report and Reply

111. OE Staff argues that federal agencies routinely apply broad statutory prohibitions similar in scope to the Commission's Anti-Manipulation Rule in a flexible way without running afoul of fair notice concerns.[271] OE Staff avers that such flexibility is necessary because the Commission long ago determined that it cannot identify in advance all the possible misconduct in which a market participant might engage.[272] As with the Securities and Exchange Commission's (SEC) Rule 10b-5, OE Staff explains that market participants do not get "one free bite" under the Commission's Anti-Manipulation Rule[273] simply because a particular fraudulent scheme was not specifically prohibited.

112. OE Staff states that Respondents had fair notice, and that with minimal effort they would have discovered both that the Commission disapproved of their trading strategy and similar strategies in the past.[274] OE Staff asserts that any reasonably prudent person familiar with the Commission's Anti-Manipulation Rule—like the market participants who refrained from such trading strategies and denounced them when they came to light—had fair notice.[275] In addition, OE Staff claims that Respondents knew they were

[270] Powhatan Answer at 18.

[271] Staff Reply at 61. OE Staff points to the Federal Trade Commission Act, the Sherman Antitrust Act, and the Securities Exchange Act as examples of other statutes that incorporate similar breadth and flexibility. *Id.* at 61-62 (citing 15 U.S.C. § 1 (2012); 15 U.S.C. § 78j (2012); 15 U.S.C. § 45 (2012)).

[272] *Id.* at 69 (citing *Am. Elec. Power Serv. Corp., et al.*, 106 FERC ¶ 61,020, at P 45 (2004)).

[273] *Id.* at 62.

[274] Staff Report at 66.

[275] *Id.* at 67, 69.

exploiting the MLSA mechanism, and further that they anticipated it could lead to disgorgement of the revenues they had received.[276]

113. Additionally, OE Staff argues that the *Black Oak* orders do not in any way reflect Commission approval of high-volume, round-trip UTC trades to collect MLSA revenues.[277] OE Staff acknowledges that certain participants in the *Black Oak* proceeding warned that the chosen MLSA allocation method could create perverse incentives for virtual traders to engage in volume trading to collect larger MLSA payments rather than to trade for arbitrage purposes.[278] But, OE Staff argues, other participants avowed that such conduct would not occur, and the Commission approved the MLSA allocation mechanism with those assurances in mind.[279] Also, OE Staff avers that if Respondents' interpretation of the *Black Oak* orders was correct, the Commission would have been silently reversing itself on several crucial points, including the purpose of virtual trading and the impropriety of wash trading.[280]

114. OE Staff further asserts that Powhatan's invocation of *National Fuel* is unavailing. OE Staff states that a majority of the Commissioners approved the order to show cause in *National Fuel* and that the two dissents were based on a prior order that appeared to explicitly allow the conduct at issue in *National Fuel*. Thereafter, the Commission became aware of the particular bidding technique (similar to those used in *National Fuel*) and the Commission declined twice to change its position. Moreover, OE Staff emphasizes that all such actions occurred before the show cause order in *National Fuel*. In the instant case, OE Staff asserts that:

> no market participant engaged in the relevant bidding strategy-volume trading to collect MLSA-until 2010, after the Commission issued the relevant Order (in 2009) approving PJM's tariff. As a result, unlike [*National Fuel*], when the

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[276] *Id.* at 70 (citing Email from Kevin Gates to Kevin Byrnes (July 26, 2010, 05:01:02 PM); Email from Kevin Gates to Larry Eiben, *et al*. (Aug. 19, 2010, 06:41:54 PM) (POW00006665); Email from Kevin Gates to Alan Chen (Mar. 5, 2010, 03:59:47) (POW00016981)).

[277] *Id.* at 59.

[278] *Id.* at 60-66, 68-69.

[279] *Id.* at 66.

[280] Staff Reply at 72-73.

> Commission issued the relevant Order, it was not aware of any market participant actually engaging in the relevant bidding strategy. . . Nor, obviously, did anyone ask the Commission to change the tariff rules approved in its 2009 Order until after Chen, Powhatan, and others carried out their volume trading strategy in the summer of 2010.[281]

iii. <u>Commission Determination</u>

115. We reject Respondents' claim that the Commission failed to provide fair notice that Respondents' trading strategy would be impermissible, and a violation of section 222 of the FPA and the Commission's Anti-Manipulation Rule. In short, we find that Respondents were on notice that placing round-trip UTC trades solely for the purpose of collecting MLSA payments violated the FPA and the Anti-Manipulation Rule.

116. Respondents improperly seek to use the fair notice doctrine as a shield to permit the very behavior that Congress sought to prohibit. Broadly written, FPA section 222 explicitly directed the Commission to adopt regulations in furtherance of the public interest and for the protection of electric ratepayers.[282] The Commission's implementing regulation, its Anti-Manipulation Rule, is written similarly broadly, like the statute, to encompass the full and wide variety of fraudulent activity that can occur.[283]

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[281] *Id.* at 74.

[282] 16 U.S.C. § 824v(a) (2012).

[283] *See, e.g.*, Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50 ("The Commission defines fraud generally, that is, to include any action, transaction, or conspiracy for the purpose of impairing, obstructing or defeating a well-functioning market."). Similar broad language exists in the Securities Exchange Act, which states in part that it is "unlawful for any person . . . [t]o use or employ, in connection with the purchase or sale of any security . . . , any manipulative or deceptive device or contrivance in contrivention of such rules and regulations as the [SEC] may prescribe." 15 U.S.C. § 78j(b). *See also SEC v. Zanford*, 535 U.S. 813, 819 (2002) ("we have explained that the statute should be construed not technically and restrictively, but flexibly to effectuate its remedial purposes"). The Sherman Antitrust Act ("Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal") and the Federal Trade Commission Act ("Unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful")

(continued...)

117. Although courts articulate fair notice in slightly different ways, they consistently consider whether a "reasonably prudent person, familiar with the conditions that the regulations are meant to address and the objectives the regulations are meant to achieve, [has] fair warning of what the regulations require."[284] For an agency to fail to provide sufficient notice, the regulation must be so ambiguous that it cannot be interpreted correctly and the agency must have failed to provide guidance before imposition of the penalty.[285]

118. Commission precedent invalidates any claim of ambiguity concerning the scope of our Anti-Manipulation Rule. When the Commission adopted the Anti-Manipulation Rule, it defined fraud generally, that is, to include "any action, transaction, or conspiracy for the purpose of impairing, obstructing or defeating a well-functioning market."[286] The Commission specifically addressed and rejected arguments that the regulation was vague or overbroad.[287] No entity appealed that decision. To raise the issue now is to collaterally, and thus, impermissibly attack Order No. 670, which the Commission will not entertain.

119. Moreover, Respondents had notice that round-trip trading has long been deemed manipulative and inappropriate in Commission-jurisdictional markets. We have found that these trades are wash trades.[288] As noted above, even before the adoption of the Anti-Manipulation Rule, Market Behavior Rule 2(a) prohibited pre-arranged offsetting trades of the same product among the same parties, involving no economic risk and no

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each have similarly broad prohibitions that are interpreted with flexibility. *See* 15 U.S.C. § 1; 15 U.S.C. § 45(a)(1).

[284] *Freeman United Coal Mining Co. v. Fed. Mine Safety & Health Review Comm'n*, 108 F.3d 358, 362 (D.C. Cir. 1997) (*Freeman*). *See also Rock of Ages Corp. v. Sec'y of Labor*, 170 F.3d 148, 156 (2d Cir. 1999) (citing *Freeman*); *Moussa I. Kourouma, d/b/a Quntum Energy LLC*, 135 FERC ¶ 61,245, at P 34 (2011) (citing *Freeman*).

[285] *United States v. Lachman*, 387 F.3d 42, 57 (1st Cir. 2004); *see also PMD Produce Brokerage Corp. v. USDA*, 234 F.3d 48, 53 (D.C. Cir. 2000).

[286] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50.

[287] *See id.* PP 30-32; *see also* 17 C.F.R. § 240.10b-5 (2014).

[288] *See* discussion *supra* P 103.

net change in beneficial ownership—i.e., wash trades.[289] As we explained, that prohibition continues under the Anti-Manipulation Rule.[290] Thus, the market has had notice that wash trading is not permitted for more than a decade (and for at least five years before Respondents' conduct here).

120. Respondents' arguments that their conduct is not actionable because it was not expressly prohibited in PJM's Tariff similarly ignore the meaning and purpose of the Anti-Manipulation Rule and Commission precedent. The Commission has explained that tariffs cannot be written to prohibit all possible fraudulent behavior[291] as "[t]he methods and techniques of manipulation are limited only by the ingenuity of man."[292] Accordingly, we have repeatedly held:

> An entity need not violate a tariff, rule or regulation to commit fraud. Nor does a finding of fraud require advance notice specifically prohibiting the conduct concerned. Fraud is a matter of fact and requires evaluation of all the facts and circumstances of each case. The Commission need not imagine and specifically proscribe in advance every example of fraudulent behavior.[293]

121. In this instance, the fact that the PJM Tariff did not explicitly prohibit the behavior is to no avail. Respondents participated in a scheme to manipulate, and thus have committed a fraud against our regulated markets, which violates section 222 of the FPA and the Anti-Manipulation Rule. Moreover, the Commission finds that Dr. Chen's

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[289] *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 105 FERC ¶ 61,218 at P 52.

[290] *See* discussion *supra* P 103; Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 59.

[291] *See, e.g.*, *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 114 FERC ¶ 61,165 at P 24.

[292] *Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1163 (8th Cir. 1971).

[293] *Competitive Energy Services, LLC*, 144 FERC ¶ 61,163 at P 50 (citations omitted); *Richard Silkman*, 144 FERC ¶ 61,164 at P 50; *Lincoln Paper and Tissue, LLC*, 144 FERC ¶ 61,162 at P 36. *See also In re Make Whole Payments and Related Bidding Strategies*, 144 FERC ¶ 61,068 at P 83 (citations omitted).

compliance with the PJM IMM's request to stop trading has no bearing on whether Respondents' received fair notice.

122. We also reject Respondents' view that our *Black Oak* orders can be read to authorize Respondents' fraudulent round-trip UTC trades and that their trades somehow fall within the safe harbor provisions provided by Order No. 670. For the safe harbor to be invoked, the action must have been "explicitly contemplated in Commission-approved rules or regulations . . . ."[294] We find that Respondents' actions were not explicitly contemplated by PJM's rules and that the Commission did not approve round-trip trades in the *Black Oak* proceedings, and therefore Respondents misinterpret and attempt to misapply the "safe harbor" provision. The *Black Oak* decisions' holdings focused only on the merits of an MLSA distribution mechanism, and not on how market participants trade UTCs or the ways in which a market participant might manipulate that mechanism. The Commission's passing mention of the issue in response to third-party comments was not an affirmation of the conduct.[295] Because the Commission's *Black Oak* orders did not explicitly contemplate trading UTCs for the purpose of capturing MLSA revenues, Respondents cannot now claim to have reasonably concluded that their trades would not be subject to Commission scrutiny. When it is unclear whether conduct would be legal, the risk associated with pursuing that conduct falls on the market participant.[296] Moreover, Respondents' arguments suggest that they relied on the *Black Oak* decisions as affirmation that their trades were allowed. No one has brought to our attention contemporaneous evidence that Respondents relied on the *Black Oak* decisions when Dr. Chen consummated their trades; in fact, there is no evidence that Respondents read or relied on the *Black Oak* decisions before they began their UTC trading scheme.

123. We also disagree that the dissents in *National Fuel* require a different answer here. The dissenting Commissioners in *National Fuel* argued that shippers had asked the Commission to rule on the conduct at issue in that matter, and the Commission declined

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[294] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 67.

[295] *See Black Oak Energy, L.L.C., et al. v. PJM Interconnection, L.L.C.*, 125 FERC ¶ 61,042, at PP 38, 43 (2008).

[296] *See Precious Metals Associates, Inc. v. CFTC*, 620 F.2d 900, 909 (1st Cir. 1980) ("Appellants went ahead with an operation knowing full well that it was probably illegal or, at the optimum, that its legality was doubtful. They cannot convert the Commission's silence into approval. They took their chances and must suffer the consequences."). Furthermore, as we set forth below, Respondents and all PJM market participants had notice that wash trading violates section 222 of the FPA and the Anti-Manipulation Rule. *See* discussion *supra* P 119.

their request to do so.[297] Notwithstanding those dissents, no entities have previously asked the Commission to rule on the lawfulness of using offsetting UTC positions to profit solely from the collection of MLSA payments. Therefore, the dissents in *National Fuel* provide no support to Powhatan.

2. <u>Scienter</u>

124. Scienter is the second element of the Commission's Anti-Manipulation Rule.[298] For purposes of establishing scienter, Order No. 670 requires reckless, knowing, or intentional actions taken in conjunction with a fraudulent scheme, material misrepresentation, or material omission.[299]

a. <u>Respondents' Show Cause Answers</u>

125. Respondents claim that they did not act with requisite scienter. First, they argue their UTC transactions responded to price incentives and thus had a legitimate economic purpose.[300] Second, HEEP, CU Fund, and Dr. Chen argue that Dr. Chen did not intend to engage in unlawful conduct.[301] Third, HEEP, CU Fund, and Dr. Chen argue that the communications OE Staff relies on fail to establish scienter because they predate the relevant trading conduct, involve exchanges with individuals other than Dr. Chen, or because OE Staff draws irrational conclusions from them.[302] Finally, Respondents argue that Dr. Chen executed his round-trip UTC transactions in an open, transparent manner,

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[297] *Nat'l Fuel Mktg. Co., LLC, et al.*, 126 FERC ¶ 61,042 (Moeller, Comm'r dissenting) (noting that a group of shippers had requested that the Commission rule on the conduct at issue, and the Commission "twice declined its opportunity to act") (Spitzer, Comm'r dissenting) (noting that the Commission "declined to prohibit multiple-affiliate bidding" after entities previously asked it to consider the issue and after holding a technical conference on the issue).

[298] *See* Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 49.

[299] *Id.* PP 52-53.

[300] Chen Answer at 56; Powhatan Answer at 31.

[301] Chen Answer at 55-57.

[302] *Id.* at 57-61.

which is inconsistent with any sort of fraudulent intent.[303] As discussed below, we find that these arguments lack merit.

b. OE Staff Report and Reply

126. OE Staff asserts that Dr. Chen (and, hence, HEEP and CU Fund) acted with scienter based on evidence that he: (1) knew his round-trip UTC trading strategy manipulated PJM's rules; (2) intentionally implemented the scheme and course of business to defraud for the monetary benefit of himself and the other Respondents; (3) knew that a substantial risk existed that the profits from the scheme would be clawed back when discovered; and (4) communicated the essential details of his strategy to Powhatan through Mr. Gates.[304] OE Staff asserts that Powhatan acted with scienter based on evidence that it: (1) understood the essential details of the scheme; (2) endorsed, willingly and significantly increased its investment in, and approved the scheme; (3) earned millions of dollars in unjust profits as a result of the scheme; and (4) expected its profits to come to an end as soon as the scheme was discovered.[305]

127. In addition, OE Staff asserts that Respondents' scienter is evidenced by their invention of a false *post hoc* explanation—the "home run" theory—for their trading conduct.[306] Finally, OE Staff claims that scienter is established based on Dr. Chen's repeated admissions that he understood the purpose of UTC trading and, yet, traded for the opposite purpose.[307]

c. Commission Determination

128. We agree with OE Staff that Respondents acted with the requisite scienter in connection with their scheme. We find sufficient evidence demonstrating Respondents' manipulative intent, including contemporaneous e-mail communications, testimony and other evidence, the pattern and evolution of Dr. Chen's trading, the absence of market fundamentals underlying the UTC trades at issue, and Respondents' deliberate actions to expand and increase their profits from the scheme. As discussed below, the evidence

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[303] Powhatan Answer at 7, 43; Chen Answer at 8-9.

[304] Staff Report at 75.

[305] *Id.*

[306] Staff Reply at 78.

[307] *Id.*

shows that Respondents, individually and together, knowingly and intentionally participated in a manipulative scheme to engage in wash trading and deceive PJM about the true nature of their transactions, thereby harming the market and other market participants.

i. <u>Dr. Chen, HEEP, and CU Fund Acted With Scienter</u>

129. We find that Dr. Chen, HEEP, and CU Fund acted with scienter based, principally, on: (1) evidence that Dr. Chen understood that his fraudulent trading scheme was inconsistent with, and obstructed the market design purpose of, UTC trading in PJM; (2) evidence of the pattern and evolution of Dr. Chen's round-trip UTC trading; and (3) Dr. Chen's deliberate decision to increase profits for himself after perfecting his scheme. We are also persuaded by OE Staff's argument that Respondents' scienter is further shown by their creation of a *post hoc* explanation—the home run strategy—for which there is no evidentiary support contemporaneous with the relevant trading conduct.[308]

130. As described above, Dr. Chen understood that UTCs served to "improve day-ahead and real-time price spreads . . . .[by] trying to make them converge, ... so that the goal is to improve market efficiency."[309] Yet, despite this understanding, Dr. Chen's contemporaneous communications, discussed above, reveal his intent to avoid all price spread risk in his UTC trading and, instead, profit solely based on collection of MLSA payments.[310]

131. Dr. Chen's manipulative intent is also reflected in the pattern and evolution of his UTC trades. As discussed above, Dr. Chen's UTC trading evolved from a fundamentals-based strategy focused on arbitraging price spreads to a strategy focused on eliminating as much price spread risk as possible. Dr. Chen's discovery of his MLSA eligibility triggered this change in strategy and his intent was clear from this time forward when he

[308] *See* OE Staff Reply at 78.

[309] Chen Test. Vol. I Tr. 31:14-21; *see also* discussion *supra* 38.

[310] *See, e.g.,* Email from Alan Chen to Kevin Gates (March 5, 2010, 9:37 PM) (POW00016599) (describing his trades as "suddenly becoming risk-free (almost to the point) trades"); Email from Alan Chen to Kevin Gates (Aug. 24, 2010, 6:20:38 PM) (POW00004874) (describing use of "fully hedged paired trades").

worked to perfect the strategy to find more effective ways to profit solely from MLSA payments.[311]

132. Dr. Chen further demonstrated his manipulative intent through his deliberate decision to increase his own profits after perfecting his round-trip trading scheme and seeing the profits it produced for HEEP. On July 17, 2010, Dr. Chen formed CU Fund, a company untethered to any contractual arrangement with Powhatan. CU Fund allowed Dr. Chen to implement his scheme without trading limits and to keep all of the proceeds for himself. As Dr. Chen testified, he made "much larger trades in CU Fund than [he] had ever done in the HEEP Fund," and "the overwhelming number of those [trades] . . . was equal and opposite pairs."[312] He testified further that a "goal" of creating CU Fund was "to take full advantage of the TLC."[313]

ii. <u>Dr. Chen, HEEP, and CU Fund's Scienter Arguments Lack Merit</u>

133. None of Dr. Chen's, HEEP's, and CU Fund's arguments convinces us that they acted without scienter. First, as noted above, we reject their claim that they traded for a legitimate economic purpose. Contemporaneous evidence show that, by his own admission, Dr. Chen executed the round-trip trades for the purpose of canceling the price spread risk of UTCs and profiting based solely on MLSA payments.[314] Seeking to obtain MLSA payments through round-trip trades is not a legitimate economic purpose. Moreover, assuming, *arguendo*, that Dr. Chen did have a legitimate economic purpose for engaging in these transactions, as we held in *Barclays*, "a 'legitimate business purpose' is not an affirmative defense to manipulation," but "just . . . one of many [factors] that the Commission would consider to determine whether each [Respondent] possessed scienter."[315]

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[311] *See* discussion *supra* PP 74-75.

[312] Chen Test. Vol. II Tr. 139:9-16.

[313] *Id.* at 139:17-19.

[314] *See, e.g.*, Email from Alan Chen to Kevin Gates (Aug. 24, 2010, 6:20:38 PM) (POW00004874) (explaining that he used "fully hedged paired trades" to reduce risk).

[315] *Barclays*, 144 FERC ¶ 61,041, at P 61 (2013) (citing *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 114 FERC ¶ 61,165, at P 29 (2006)).

134. Second, we are not persuaded by the argument that Dr. Chen did not intend to engage in unlawful trading behavior. Scienter does not require evidence that Dr. Chen intended to break the law but, rather, only that he intended to take certain actions and knew the consequences of such actions.[316] Dr. Chen intended to trade UTCs in PJM in a way that eliminated risk from price spreads in order to obtain transmission and profit solely from MLSA payments, and he understood the consequences of his trading on this basis—that he would be able to draw a greater share of MLSA payments at the expense of other market participants.

135. Third, we reject Dr. Chen, HEEP, and CU Fund's argument that many of the e-mail communications on which OE Staff relies cannot show scienter because they predate the relevant trading conduct.[317] To the contrary, we find these e-mail communications are highly relevant as they show Dr. Chen's consistent scienter in the evolution of his scheme to target MLSA payments (including during the time of his round-trip trading). As described above, while Dr. Chen's specific trading strategies evolved over time, his intent remained the same throughout—to minimize risk and profit as much as possible from MLSA payments. Dr. Chen's earlier communications show the development of his scheme and demonstrate that he had the same intent while he implemented his scheme as he did when he perfected it.[318] In any event, we do not rely

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[316] *Pittsburgh Terminal Corp. v. The Baltimore and Ohio Railroad Co.*, 680 F.2d 933, 942 (3d Cir. 1982) ("A violation of Section 10(b) does not require a specific intention to break the law. It requires only knowing or intentional actions which, objectively examined, amount to a violation."); *SEC v. Falstaff Brewing Corp.*, 629 F.2d 62, 77 (D.C. Cir. 1980) ("Knowledge means awareness of the underlying facts, not the labels that the law places on those facts. Except in very rare instances, no area of the law not even the criminal law demands that a defendant have thought his actions were illegal. A knowledge of what one is doing and the consequences of those actions suffices.").

[317] They also point out that some of the e-mails cited by OE Staff involve statements of individuals other than Dr. Chen. However, the Commission does not rely on any such communications in finding that Dr. Chen, HEEP, and CU Fund acted with the requisite scienter.

[318] *See Barclays*, 144 FERC ¶ 61,041 at P 75 (noting that "the fact that a particular email or IM may not coincide precisely in time with the commission of a manipulative act does not dilute that evidence"). *Cf. In re REMEC Inc. Secs. Litig.*, 702 F. Supp. 2d 1202, 1222 (S.D. Cal. 2010) (holding in a securities fraud class action suit that "[s]tatements made before the class period can be relevant evidence on this issue of

(continued...)

solely on e-mail communications that predate Respondents' round-trip trading scheme in finding that they acted with scienter.[319]

136. Finally, even if we agreed that Respondents' trades were otherwise legal, which we do not, we reject Respondents' argument that their trades were not fraudulent because they were executed in an open, transparent manner. The United States District Court for the Eastern District of California recently rejected the same argument from Barclays, holding that such a view "is not supportable." [320] This decision supports the clear Commission precedent on the issue: that "otherwise legal conduct—or what Barclays refers to as "real" transactions—may be proscribed by our anti-manipulation provisions"[321] and that "transactions entered into with manipulative intent can serve as the basis for a manipulation claim, even in the absence of some other deceptive conduct."[322] The Commission also held that "in consideration of the nature and structure of our markets and of our statutory mandate, we hold that in matters which allege a violation of the FPA section 222 or the Anti-Manipulation Rule the defense that trades were 'real' trades is not dispositive of the question of manipulation."[323] While Dr. Chen might have accurately entered his trades into the machine-read PJM market system, he placed them for a manipulative, deceptive purpose, creating the false appearance that he was trading based on price spread risk when in fact he traded to eliminate that risk.

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scienter because 'they may provide insight into what the defendant knew during the class period'" (citations and quotations omitted)).

[319] *See, e.g.*, Email from Alan Chen to Kevin Gates (Aug. 24, 2010, 6:20:38) (POW00004874); Email from Alan Chen to Kevin Gates (June 7, 2010, 9:57 PM (POW00003761).

[320] *FERC v. Barclays Bank PLC, et al*., No. 2:13-cv-2093-TLN-DAD, at 33 (E.D. Cal. May 20, 2015) (rejecting Barclays' argument "that trades which involve willing counterparties made on the open market cannot be actionable under Section 10(b)").

[321] *Barclays*, 144 FERC ¶ 61,041 at PP 50-58.

[322] *Id.* P 54 (citing *Brian Hunter*, 135 FERC ¶ 61,054, at P 50, *order denying reh'g*, 137 FERC ¶ 61,146 (2011), *rev'd sub nom. Hunter v. FERC*, 711 F.3d 155 (2013)).

[323] *Id.* P 58.

iii. Powhatan Acted With Scienter

137. We find that Powhatan also acted with the requisite scienter based on contemporaneous evidence showing its: (1) knowledge and understanding of Dr. Chen's round-trip UTC trading scheme, including the consequences of the scheme; (2) support, increased investment in and encouragement for the scheme; and (3) deliberate actions to increase its profits resulting from the scheme.[324]

138. Like Dr. Chen, Powhatan understood the purpose of UTC trading in PJM. Mr. Gates acknowledged, for example, that before Dr. Chen learned of his eligibility for MLSA payments, Dr. Chen traded UTCs based on "his ability to model congestion [and] his ability to model the day-ahead versus the real-time spread."[325] In other words, he understood that Dr. Chen initially traded UTCs based on market fundamentals. Mr. Gates also understood that Dr. Chen altered his UTC trading purpose away from market fundamentals after discovering that he was eligible to receive MLSA payments. Mr. Gates explained that under this new purpose, Dr. Chen "was trying to remove the day-ahead/real-time spread."[326] Specifically, Mr. Gates understood that Dr. Chen was "trying to drive . . . the day-ahead versus the real-time . . . to zero and isolate the bet to his ability to model the marginal loss credit . . . ."[327] Mr. Gates understood that Dr. Chen

[324] Although we rely on both direct and circumstantial evidence of intent here, circumstantial evidence of scienter is sufficient. *See, e.g.*, *Desert Palace, Inc. v. Costa*, 539 U.S. 90, 100 (2003) ("Circumstantial evidence is not only sufficient, but may be more certain, satisfying and persuasive than direct evidence."); *United States v. Philip Morris USA Inc.*, 566 F.3d 1095, 1118 (D.C. Cir. 2009) ("A person's state of mind is rarely susceptible of proof by direct evidence, so specific intent to defraud may be, and most often is, inferred from the totality of the circumstances, including indirect and circumstantial evidence."); *United States v. Kim*, 267 F. App'x 712, 713 (9th Cir. 2008) (citation omitted) ("Fraudulent intent may be, and often must be, proven by circumstantial evidence."); *United States v. Salameh*, 152 F.3d 88, 143 (2d Cir. 1998) ("… as a general rule most evidence of intent is circumstantial…"); *United States v. O'Brien*, 14 F.3d 703, 706 (1st Cir. 1994) (citation omitted) ("Guilty knowledge, like specific intent, seldom can be established by direct evidence. This principle has particular pertinence in respect to fraud crimes which, by their very nature, often yield little in the way of direct proof.").

[325] Staff Report at 25 (quoting K. Gates Test. Vol. II Tr. 172:25-173:2).

[326] *Id.* (quoting K. Gates Test. Vol. II Tr. 309:20-21).

[327] *Id.* (quoting K. Gates Test. Vol. II Tr. 172:3-9).

accomplished this scheme through round-trip trades. He testified, "I remember [Chen] saying . . . that he was very clearly trying to eliminate that [spread], and he was going from A to B – B to A."[328] Mr. Gates also understood the consequences of Dr. Chen's scheme, knowing that it yielded large payments from PJM and that it gave Powhatan an "edge" over other market participants.[329]

139. Knowing and understanding that Dr. Chen was executing round-trip trades to profit solely from MLSA payments, Powhatan supported and encouraged the scheme to move forward. For example, Mr. Gates, talking about Dr. Chen's risk-free strategy of targeting MLSA payments, told Dr. Chen, "I don't want to leave money on the table."[330]

140. Powhatan's scienter is also reflected in its decision in Spring 2010 to increase the multiple of UTC trades executed on its behalf from four to twenty. This willingness to increase its exposure by a multiple of five shows that Powhatan knew that Dr. Chen's improved UTC trading scheme would allow it to secure profits without taking any of the risks inherent in ordinary spread trading.[331]

3. <u>In Connection With Jurisdictional Transaction</u>

141. The third element of establishing a violation under FPA section 222 and the Commission's Anti-Manipulation Rule is determining whether the conduct in question was "in connection with" a transaction subject to the Commission's jurisdiction.[332] Section 201(b)(1) of the FPA confers jurisdiction on the Commission over "the transmission of electric energy in interstate commerce and . . . . the sale of electric energy at wholesale in interstate commerce."[333]

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[328] *Id.* (quoting K. Gates Test. Vol. II Tr. 178:12-15).

[329] *Id.* at 29 (quoting Email from Kevin Gates to Kevin Byrnes (July 26, 2010, 5:01:02 PM) (POW00001849)).

[330] *Id.* at 20 (quoting Email from Kevin Gates to Alan Chen (March 5, 2010, 9:40:46 PM) (POW00016599)).

[331] We reject Powhatan's scienter arguments—that Dr. Chen had a legitimate economic purpose and placed his trades in an open, transparent manner—for the same reasons we rejected similar arguments made by HEEP, CU Fund, and Dr. Chen.

[332] 16 U.S.C. § 824v(a) (2012); 18 C.F.R. § 1c.2 (2014).

[333] 16 U.S.C. § 824(b)(1).

a. Respondents' Show Cause Answers

142. Dr. Chen argues that the Commission lacks jurisdiction over the Respondents' UTC trades at issue in this proceeding. Dr. Chen contends that his UTC trades were purely financial and, thus, cannot be deemed to be jurisdictional sales of physical power or transmission.[334] Also, Dr. Chen argues that because the UTC transaction did not result in the physical delivery of electricity, its transmission reservation was not a reservation of physical transmission; therefore, Dr. Chen asserts, the UTC trades cannot be jurisdictional.[335] Moreover, Dr. Chen argues that the relevant UTC trades were not in connection with jurisdictional transactions because OE Staff's allegations are based on the proposition that "the trades were always offsetting in the time period at issue, and thus never affected congestion outcomes."[336] Powhatan does not contest jurisdiction in its Answer.

b. OE Staff Report and Reply

143. OE Staff asserts that, contrary to Dr. Chen's contention, Respondents' conduct falls within the Commission's jurisdiction. OE Staff argues that Respondents' UTC transactions affected, or had the potential to affect, the price of physical electricity because they are an integral part of PJM's day-ahead model and, therefore, play an important role in setting day-ahead prices.[337] OE Staff claims that the Commission has jurisdiction over virtual transactions even though no actual delivery of power is involved in the transaction.[338] OE Staff explains that the Commission has found that virtual bidding is an integral part of the operation of the wholesale markets[339] and, as such, it falls within the Commission's responsibility under FPA section 205 to ensure that rates for jurisdictional power sales are just and reasonable.[340] Moreover, OE Staff avers that

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[334] Chen Answer at 63.

[335] *Id*.

[336] Chen Answer at 63-64.

[337] Staff Report at 77-79; Staff Reply at 81-82.

[338] Staff Reply at 84 (citing *Cal. Indep. Sys. Operator Corp.*, 110 FERC ¶ 61,041, at P 31(2005)).

[339] Staff Report at 78 (citing *Cal. Indep. Sys. Operator Corp.*, 108 FERC ¶ 61,254, at P 74 (2004)).

[340] *Id.* (citing *Cal. Indep. Sys. Operator Corp.*, 110 FERC ¶ 61,041 at P 31).

Dr. Chen reserved and purchased Commission-jurisdictional transmission services when executing the UTC transactions at issue and that such transmission provided the physical link between the day-ahead and real-time markets.[341] OE Staff also argues that Respondents' reservations of huge volumes of transmission affected other market participants' available capacity and that the Commission's authority over transmission services extends to ATC.[342]

c. Commission Determination

144. We find that the Commission has jurisdiction over the Respondents' UTC trading during the Manipulation Period. Respondents challenge the Commission's jurisdiction because their round-trip UTC trades did not result in actual delivery of power. We find that such an argument ignores our broad statutory obligation that provides jurisdiction over the transmission or sale of electric energy at wholesale in interstate commerce,[343] as well as the responsibility to ensure that rates and charges for transmission and wholesale power sales are just and reasonable and not unduly discriminatory or preferential.[344] Moreover, the Court of Appeals for the District of Columbia Circuit has affirmed in recent years that the Commission has "authority under the FPA to regulate the activity of traders who participate in energy markets."[345]

145. Respondents engaged in round-trip UTC trades within PJM's energy market; their UTC transactions, associated transmission service reservations, and MLSA payments

[341] *Id.* at 77-80; Staff Reply at 84-86.

[342] Staff Reply at 84-86.

[343] 16 U.S.C. § 824(b).

[344] Section 205(a) of the FPA charges the Commission with ensuring that rates and charges for jurisdictional sales by public utilities and "all rules and regulations affecting or pertaining to such rates or charges" are just and reasonable. *Id.* § 824d(a). Section 206(a) gives the Commission authority over rate and charges by public utilities for jurisdictional sales as well as "any rule, regulation, practice or contract affecting such rates and charges" to make sure that they are just and reasonable and not unduly discriminatory or preferential. *Id.* § 824e(a).

[345] *Kourouma v. FERC*, 723 F.3d 274, 276 (D.C. Cir. 2012).

were implemented under PJM's Commission-approved tariff.[346] Thus, by virtue of engaging in UTC transactions and benefiting from MLSA allocation, both of which operated under a Commission-approved tariff within PJM, a Commission-regulated RTO, we find the UTC trades at issue are under our jurisdictional purview.

146. Also, virtual transactions, including UTC transactions, are integral to the operation and settlement of Commission-jurisdictional wholesale markets.[347] In the context of CAISO's convergence bidding (virtual bidding), the Commission explained that:

> [t]o participate in virtual bidding, a participant is required to submit virtual bids in the same way and at the same time as all other day-ahead bids. Virtual bids are cleared along with those other bids, and can affect the outcomes of the settlement of the day-ahead physical market. Therefore, virtual bids can be seen as a substitute for bids for physical power.[348]

The Commission stated that it has jurisdiction over practices that affect rates and because "convergence bidding affects the market clearing price for wholesale power by determining, in conjunction with other bids, the unit that sets the market clearing price, the Commission has statutory authority over this type of bidding to ensure that the rates it produces are just and reasonable."[349] Therefore, we conclude that we have jurisdiction over the Respondents' virtual product trades conducted during the Manipulation Period.

147. Further, the Respondents' round-trip UTC trades involved the reservation of jurisdictional transmission services within the PJM market. At the time of the transactions at issue in this proceeding, all UTC transactions were required to reserve transmission service and, as such, the Respondents scheduled non-firm transmission service. As explained above, transmission of energy is within the Commission's jurisdiction. Moreover, the Commission's jurisdiction over transmission is extremely

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[346] *Black Oak Energy, L.L.C., et al.*, 128 FERC ¶ 61,262 (2009); *PJM Interconnection, L.L.C.*, 91 FERC ¶ 61,148 (2000); *Atlantic City Elec. Co., et al.*, 86 FERC ¶ 61,147 (1999).

[347] *Cal. Indep. Sys. Operator Corp.*, 108 FERC ¶ 61,254 at P 74.

[348] *Id.*

[349] *Cal. Indep. Sys. Operator Corp.*, 110 FERC ¶ 61,041 at P 31.

broad.[350] We reject the argument that this transmission service was not physical transmission because it did not result in delivery of physical energy. As OE Staff correctly points out, "[t]here is no such thing as 'virtual' transmission."[351] Respondents' UTC bids and associated transmission service reservations were integral to the settlement of PJM's day-ahead market, regardless of whether the transmission reservation lacked delivery of physical energy.

148. Apart from our direct jurisdiction, Respondents' conduct also was "in connection with" other market participants' jurisdictional transactions such that the necessary jurisdictional nexus under FPA section 222 is also satisfied on this basis. We have noted that the *in connection with* element encompasses "situations in which there is a nexus between the fraudulent conduct of an entity and a jurisdictional transaction."[352] Even where underlying fraudulent transactions do not involve the transmission or sale of electric energy in interstate commerce, they nonetheless can fall within the ambit of our jurisdiction if "the entity . . . . intend[s] to affect, or . . . . act[s] recklessly to affect, a jurisdictional transaction."[353] We find that Respondents' UTC transactions and associated transmission service reservations affected the amount of transmission service available to other market participants to use for their transactions, including physical power sales.

C. Remedies and Sanctions

149. Having concluded that Respondents, in connection with jurisdictional UTC transactions and associated transmission services, intentionally or knowingly devised and participated in a fraudulent scheme to manipulate and a course of business to defraud PJM's wholesale power market in violation of FPA section 222(a) and section 1c.2 of the Commission's regulations, we now must determine the appropriate remedies to assess. OE Staff recommends both civil penalties and disgorgement be assessed against Respondents. After assessing the legal and factual issues, including those raised by Respondents, and "tak[ing] into consideration the seriousness of the violation[s] and the

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[350] *New York v. FERC*, 535 U.S. 1, 16-17 (2002) (noting that the Commission has jurisdiction over the entire transmission grid).

[351] Staff Reply at 80 n. 258.

[352] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 22; *see also Barclays*, 144 FERC ¶ 61,041 at P 113; *BP America Inc., et al.*, 147 FERC ¶ 61,130, at P 23 (2014).

[353] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 22.

efforts of such person[s] to remedy the violation[s] in a timely manner,"[354] we agree with OE Staff's recommendations to assess penalties and disgorgement. As explained more fully below, although we disagree with one aspect of OE Staff's penalty analysis, we exercise our discretion and accept its proposed penalty amounts, which fall within the applicable Penalty Guidelines' ranges.

1. Penalties

150. Pursuant to FPA section 316A(b), the Commission may assess a civil penalty of up to $1 million per day, per violation against any person who violates Part II of the FPA (including section 222 of the FPA) or any rule or order thereunder.[355] HEEP and Powhatan each executed fraudulent trades on 64 days and CU Fund executed them on 16 days.[356] Even at a rate of one violation per day—an underestimation of the violations committed—we have the statutory authority to assess penalties of up to $64 million each against HEEP and Powhatan and $16 million against CU Fund.

151. In determining an appropriate penalty amount within the statutory maximums, section 316A(b) requires the Commission to consider "the seriousness of the violation and the efforts of such person to remedy the violation in a timely manner."[357] Although the Penalty Guidelines are not mandatory—and do not apply to individuals such as Dr. Chen—the Commission uses them and its Policy Statements on Enforcement,[358] to guide its penalty analysis for organizations, such as HEEP, CU Fund, and Powhatan.[359]

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[354] 16 U.S.C. § 825o-1(b).

[355] *Id.*

[356] Staff Report at 80 n.412.

[357] 16 U.S.C. § 825o-1(b).

[358] *Enforcement of Statutes, Orders, Rules, and Regulations*, 123 FERC ¶ 61,156 (2008); *Enforcement of Statutes, Orders, Rules, and Regulations*, 113 FERC ¶ 61,068 (2005).

[359] *See Enforcement of Statutes, Orders, Rules, and Regulations*, 132 FERC ¶ 61,216 (2010) (Revised Policy Statement on Penalty Guidelines); *Enforcement of Statutes, Orders, Rules, and Regulations*, 130 FERC ¶ 61,220, at PP 6, 26 (2010) (Initial Policy Statement on Penalty Guidelines) (seriousness of violation and timely efforts to remedy a violation will continue to be significant factors under the Penalty Guidelines). The Commission also stated when issuing its Initial Policy Statement on Penalty

(continued...)

152. The Penalty Guidelines use two sets of factors to establish penalties. First, the Penalty Guidelines calculate a Base Penalty amount based on factors specifically tailored to the seriousness of the violation, including the loss caused by the violation. Second, the Penalty Guidelines consider several culpability factors, including efforts to remedy violations, which lead to minimum and maximum multipliers of the Base Penalty amount to arrive at the applicable penalty range.

153. For fraud, the Penalty Guidelines start with a pre-assigned Base Violation Level (6 points) and then adjust this level based on the loss caused by the violation and an enhancement for either the amount of energy involved in the violation or the duration of the violation, whichever is greater.[360] A Base Penalty is then established as the greater of (1) a pre-established dollar amount associated with the final calculated Violation Level; (2) the pecuniary gain to the organization from the violation; or (3) the pecuniary loss caused by the violation.[361]

154. After establishing a Base Penalty amount, the Penalty Guidelines then determine the culpability score (using a variety of factors), which establishes corresponding minimum and maximum culpability score multipliers that are multiplied by the Base Penalty to establish a penalty range. By creating "a penalty *range*, rather than an absolute figure," we "retain some discretion," and the "[s]pecific facts of each case will determine where in the range the ultimate penalty might fall."[362] The specific facts determine, for example, whether the ultimate penalty should fall within, or, in appropriate circumstances, outside the indicated civil penalty range. Where facts warrant, the Commission retains discretion to deviate from the Penalty Guidelines range, but we have noted that we "do not intend to depart from the Penalty Guidelines regularly."[363]

Guidelines that it will continue to rely on factors identified in its previous policy statements on enforcement and policy statement on compliance to measure the seriousness of violations and timely efforts to remedy violations. The Commission noted that any conflict will be resolved in favor of the Penalty Guidelines. Initial Policy Statement on Penalty Guidelines, 130 FERC ¶ 61,220 at P 63. The Penalty Guidelines are appended to the Revised Policy Statement on Penalty Guidelines.

[360] FERC Penalty Guidelines § 2B1.1.

[361] *Id.* § 1C2.2(a).

[362] Initial Policy Statement on Penalty Guidelines, 130 FERC ¶ 61,220 at P 32 (emphasis in original).

[363] *Id.*

155. The foregoing Penalty Guidelines analysis does not apply to individuals, like Dr. Chen. Instead, we determine penalties for individuals "based on the facts and circumstances of the violation," and "look to [the Penalty] Guidelines for guidance in setting those penalties."[364] Thus, below we apply the Penalty Guidelines to HEEP, CU Fund, and Powhatan as part of our penalty determination, while conducting a separate penalty analysis for Dr. Chen, guided by the facts and circumstances of his violations and some of the same factors described in the Penalty Guidelines.

a. Assessment of Civil Penalty Against HEEP and CU Fund

156. OE Staff recommends civil penalties of $1,920,000 for HEEP and $10,080,000 for CU Fund.[365] Applying the Penalty Guidelines, OE Staff's recommendation accounts for the following factors: (1) after netting out transaction costs (i.e., the cost of the transmission purchased in the fraudulent wash trades) HEEP and CU Fund earned $173,100 and $1,080,576, respectively, in unjust profits; (2) the manipulative trades involved more than 100,000 MWh of electricity for each company; (3) both companies cooperated adequately with OE Staff's investigation; (4) neither company accepted responsibility for the violations; (5) neither company self-reported the violations; and (6) neither company had compliance programs in effect at the time of the violations.[366] In light of the collusion between them, OE Staff recommends holding HEEP and Powhatan jointly and severally liable for the penalty against HEEP.[367]

157. The Commission agrees with OE Staff that HEEP's and CU Fund's violations were serious and warrant penalties.

i. Seriousness of the Violations

158. In the following paragraphs, we discuss the factors in the Penalty Guidelines that are relevant to the seriousness of HEEP's and CU Fund's violations.

159. *Manipulation, Deceit, Fraud, and Recklessness or Indifference to Results of Actions (Penalty Guidelines § 2B1.1).* As described above, HEEP and CU Fund, through Dr. Chen, developed and participated in a course of business to defraud and a

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[364] FERC Penalty Guidelines § 1A1.1, Application Note 1.

[365] Staff Report at 81-82.

[366] *Id.* at 81.

[367] *Id.* at 82.

manipulative scheme to defraud the PJM market in violation of FPA section 222(a) and section 1c.2 of the Commission's regulations.[368] This course of business and scheme operated as a fraud on PJM because it relied on wash trades and created the false appearance that Respondents were trading UTCs for their intended purpose—to take risk by arbitraging differences between day-ahead and real-time prices—when in fact they were placing those trades solely for the purpose of negating that arbitrage price risk in order to collect MLSA payments that otherwise would have gone to other market participants who reserved transmission service for their transactions. The Respondents' acts fall under section 2B1.1 of the Penalty Guidelines and thus our analysis begins with a pre-assigned Base Violation Level of 6.

160. *Loss Caused by the Violation (Penalty Guidelines § 2B1.1(b)(1))*. The Penalty Guidelines measure the seriousness of a fraud-based violation by considering the loss it caused, and specify that "loss" is the greater of "actual loss or intended loss."[369] "Actual loss" is defined as "the reasonably foreseeable pecuniary harm that resulted from the violation."[370] OE Staff's loss calculation for purposes of calculating the Violation Level used Respondents' unjust profits, which netted out transaction costs, instead of using the actual loss that resulted from Respondents' violations.[371] We disagree with this approach because the Penalty Guidelines distinguish loss from gain and make clear that "[t]he Commission will use the gain that resulted from the violation as an alternative measure of loss *only if* there is a loss but it reasonably cannot be determined."[372] In this case, the loss can reasonably be determined—it is the total amount of MLSA payments (without netting out any costs) Respondents received that otherwise would have been paid to other market participants making legitimate transactions.[373] Specifically, HEEP received $398,770 and CU Fund received $1,784,145 in MLSA payments attributable to their round-trip

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[368] As also discussed above, Powhatan was part of this scheme to defraud.

[369] FERC Penalty Guidelines § 2B1.1, Application Note 2(A).

[370] *Id*. § 2B1.1, Application Note 2(A)(i).

[371] Staff Report at 82.

[372] FERC Penalty Guidelines § 2B1.1, Application Note 2B (emphasis added).

[373] In addition to this loss caused by the misallocation of MLSA payments, Dr. Chen's fraudulent trading may have caused other more tangential market impacts. The Commission, however, "need only make a reasonable estimate of the loss." *Id.* § 2B1.1, Application Note 2(C).

UTC trade volumes. Using these loss figures increases HEEP's Base Violation Level by 12 points and CU Fund's by 16 points.[374]

161. *Scope of Violations as Measured by Volume and Duration (Penalty Guidelines § 2B1.1(b)(2))*. After accounting for loss, the Penalty Guidelines further adjust the Base Violation Level based on the scope of the violation, as measured by an adder based on either the amount of energy involved in the violation or the duration of the violation, whichever is greater. HEEP's and CU Fund's scheme each persisted from June 1, 2010 to August 3, 2010, and involved more than 100,000 MWh of electricity. Accordingly, a 6 point Violation Level increase is warranted for each Respondent under section 2B1.1(b)(2)(C) of the Penalty Guidelines.

162. *Base Penalty (Penalty Guidelines § 1C2.2)*. Based on the foregoing analysis, we find HEEP's and CU Fund's final Violation Levels are 24 and 28, respectively (calculated as the Base Violation Level of 6 points for fraud plus increases of 12 points for HEEP and 16 points for CU Fund based on the loss caused, and increases of 6 points to each for the volume involved in their violations). These final Violation Levels correspond to specific dollar amounts enumerated in a "Violation Level Penalty Table."[375] Referencing this table, HEEP's final violation level of 24 corresponds to $2,100,000 and CU Fund's final violation level of 28 corresponds to $6,300,000. We then use these figures to determine the Base Penalty, which is the greater of (1) these dollar amounts from the "Violation Level Penalty Table"; or (2) the pecuniary gain from the violations ($173,000 for HEEP and $1,080,576 for CU Fund); or (3) the pecuniary loss from the violations ($398,770 for HEEP and $1,784,145 for CU Fund). Accordingly, the Base Penalties are $2,100,000 for HEEP and $6,300,000 for CU Fund.

ii. <u>Aggravating and Mitigating Culpability Factors</u>

163. All violations start with a base culpability score of 5, which is then adjusted upward or downward depending on the various culpability factors.[376] The only

[374] OE Staff's use of the lower unjust profit figure of $173,100 for HEEP would result in an increase of 10 points, instead of the 12 point increase in our analysis. In contrast, OE Staff's use of the lower unjust profit figure of $1,080,576 for CU Fund does not make a difference because any loss between $1 million and $2.5 million generates a 16 point increase. As we explain below, despite this difference in our Penalty Guidelines' analysis, we accept OE Staff's proposed penalties.

[375] FERC Penalty Guidelines § 1C2.2(b).

[376] *Id.* § 1C2.3(a).

adjustment appropriately made here is a reduction of 1 point as OE Staff has stated that HEEP and CU Fund cooperated in the investigation. We find HEEP's and CU Fund's culpability scores are 4 (base score of 5 reduced by 1 point for cooperation) which corresponds to a minimum multiplier of 0.80 and maximum multiplier of 1.60. Applying these multipliers to their respective Base Penalties produces a penalty range of $1,680,000 to $3,360,000 for HEEP and $5,040,000 to $10,080,000 for CU Fund. The penalties proposed by OE Staff fall within these ranges.

iii. Appropriate Penalty for HEEP and CU Fund

164. Based on the foregoing analysis and the record in this proceeding, the Commission finds that OE Staff's recommended civil penalties of $1,920,000 for HEEP and $10,080,000 for CU Fund are fair and reasonable. Although we could assess a higher civil penalty for HEEP within the Penalty Guidelines range, we have discretion where within the range to set the ultimate penalty, and we accept OE Staff's recommended penalty as fair and reasonable. HEEP and CU Fund, acting through Dr. Chen, used high volume of round-trip UTC trades to extract millions of dollars in PJM MLSA payments that otherwise would have been allocated to market participants. We find OE Staff's recommended penalties appropriate under these circumstances. Therefore, we direct HEEP and CU Fund to pay civil penalties of $1,920,000 and $10,080,000, respectively, within 60 days of the date of this Order.

165. Also, we agree with OE Staff that Powhatan should be held jointly and severally liable with HEEP for the $1,920,000 penalty assessed against HEEP. HEEP, CU Fund, and Dr. Chen erroneously claim that the Commission declined to adopt joint and several liability in its Order to Show Cause in this matter. We made no such ruling and did not address the issue in that Order.[377] HEEP, CU Fund, and Dr. Chen also cite a 2003 Commission order in which we found that apportionment, if possible, is preferable for distribution of funds from refund liability.[378] That order's expression of a general preference for apportionment, however, does not compel us to reject joint and several liability here. Unlike that case, which involved refunds apportioned to various unconnected entities' electricity purchases based on our finding of market flaws in California, this case involves a finding of intentional manipulation by multiple entities that acted together to execute a fraudulent scheme. We find that it is appropriate to apply

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[377] *See Houlian Chen, et al*., 149 FERC ¶ 61,261 (2014), *revised*, 149 FERC ¶ 61,263 (2014).

[378] Chen Answer at 69 (citing *San Diego Gas & Elec. Co. v. Sellers of Energy and Ancillary Servs*., 105 FERC ¶ 61,066, at P 170 n.101 (2003)).

joint and several liability under these circumstances.[379] Were we not to adopt joint and several liability, entities engaged in the intentional act of fraud could potentially avoid paying the full penalty and disgorgement amounts.[380] This would be improper.

b. Assessment of Civil Penalty Against Powhatan

166. OE Staff recommends a civil penalty of $16,800,000 for Powhatan.[381] Applying the Penalty Guidelines, OE Staff's recommendation accounts for the following factors: (1) Powhatan earned $3,465,108 in unjust profits; (2) the manipulative trades involved more than 100,000 MWh of electricity; (3) Powhatan cooperated with OE Staff's investigation; (4) Powhatan has not accepted responsibility for its conduct; (5) Powhatan did not self-report the violations; and (6) Powhatan lacked a compliance program at the time of the violations.[382]

167. Powhatan disputes the recommended penalty on the grounds that no other market participants could be harmed by Dr. Chen's trades because no entity is entitled to MLSA payments.[383]

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[379] *See SEC v. Levine*, 517 F. Supp. 2d 121, 147 (D.D.C. 2007) (finding multiple defendants jointly and severally liable for civil penalty where they worked together to fraudulently overstate assets and falsify records in violation of federal securities laws); *SEC v. Haligiannis*, 470 F. Supp. 2d 373, 386 n.13 (holding all four defendants in securities fraud case "to be joint and severally liable for civil penalties, as there is no meaningful difference in their culpability"). *Accord* Restatement (Third) of Torts: Apportionment of Liability § 12 (2007) ("Each person who commits a tort that requires intent is jointly and severally liable for any indivisible injury legally caused by the tortious conduct."); *Paper Sys. Inc. v. Nippon Paper Indust. Co., Ltd.*, 281 F.3d 629, 632 (7th Cir. 2002) (holding that "each member of a conspiracy is liable for all damages caused by the conspiracy's entire output").

[380] *See, e.g.*, Email from Kevin Gates to Richard Gates (March 21, 2010, 7:55 AM) (POW00007990) (noting that if PJM sought to claw back MLSA payments "we'd bankrupt our company and not pay PJM").

[381] Staff Report at 84.

[382] *Id.* at 81, 84.

[383] Powhatan Answer at 48.

168. We agree with OE Staff that Powhatan's violations were serious and warrant a civil penalty. Similar to its analysis for HEEP, we find that OE Staff erred by using unjust profits instead of loss to determine the Violation Level under the Penalty Guidelines. However, as explained below we again exercise our discretion and accept OE Staff's proposed penalty, which falls within the applicable Penalty Guidelines range. Our Penalty Guidelines analysis for Powhatan largely mirrors the HEEP and CU Fund analyses, differing only slightly to account for Powhatan's role and the market harm caused by its participation.

i. Seriousness of the Violations

169. *Manipulation, Deceit, Fraud, and Recklessness or Indifference to Results of Actions (Penalty Guidelines § 2B1.1)*. With full knowledge of and support for Dr. Chen's fraudulent round-trip UTC trades executed on its behalf, Powhatan participated in the manipulative scheme and a course of business to defraud PJM and other market participants in violation of FPA section 222(a) and section 1c.2 of the Commission's regulations.[384] Powhatan's Penalty Guidelines analysis thus begins with a Base Violation Level of 6.

170. *Loss Caused by the Violation (Penalty Guidelines § 2B1.1(b)(1))*. As with HEEP and CU Fund, OE Staff's penalty recommendation considered Powhatan's unjust profits (after netting out transactions costs) instead of the loss that resulted from the violations.[385] We again find that OE Staff erred in applying unjust profits instead of loss to calculate the Violation Level under the Penalty Guidelines. The loss caused by Powhatan's conduct is the total amount of MLSA payments (without netting out any costs) Powhatan received ($7,975,403) which would have been distributed to other market participants but for Respondents' fraudulent round-trip UTC trades.[386] Accordingly, we use this loss amount rather than OE Staff's lesser, unjust profits figure, thereby increasing Powhatan's Base Violation Level by 20 points.[387]

[384] *See* discussion *supra* PP 137-140.

[385] Staff Report at 84.

[386] We reject Powhatan's argument that there is no harm because other market participants were not entitled to MLSA payments. *See* discussion *supra* at P 98.

[387] OE Staff's use of the lower unjust profit figure of $3,465,108 would result in an increase of 18 points, instead of the 20 point increase used in our analysis.

171. *Scope of* Violations *as Measured by Volume and Duration (Penalty Guidelines § 2B1.1(b)(2))*. Powhatan's volume and duration factors are the same as those of HEEP and CU Fund. The relevant conduct persisted for nearly three months and involved more than 100,000 MWh of electricity. Accordingly, a 6 point increase is warranted.

172. *Base* Penalty *(Penalty Guidelines § 1C2.2)*. Based on the foregoing analysis, we find Powhatan's final Violation Level is 32 (calculated as the Base Violation Level of 6 points for fraud plus increases of 20 points for the loss caused, and 6 points for the volume involved in the violations). A final Violation Level of 32 corresponds to $17,500,000 from the "Violation Level Penalty Table."[388] Powhatan's Base Penalty then becomes the greater of (1) $17,500,000; or (2) Powhatan's pecuniary gain from the violations ($3,465,108); or (3) the pecuniary loss caused by Powhatan's violations ($7,975,403). Accordingly, Powhatan's Base Penalty is $17,500,000.

ii. Aggravating and Mitigating Culpability Factors

173. Again, the only appropriate adjustment we find to the culpability score is a reduction of 1 point based on OE Staff's representation that Powhatan cooperated with the investigation. Thus, we find Powhatan's culpability score is 4 (base score of 5 reduced by 1 point for cooperation). A culpability score of 4 corresponds to a minimum multiplier of 0.80 and maximum multiplier of 1.60.[389] Applying these multipliers to Powhatan's Base Penalty of $17,500,000 produces a penalty range of $14,000,000 to $28,000,000. OE Staff's recommended penalty of $16,800,000 falls within this range.

iii. Appropriate Penalty for Powhatan

174. Based on the foregoing analysis, the pleadings in this case, and the OE Staff Report, the Commission finds that a $16,800,000 civil penalty for Powhatan is warranted and is fair and reasonable. This civil penalty amount is within the Penalty Guidelines range. Similar to our penalty assessment for HEEP, although we could assess a higher civil penalty for Powhatan within the Penalty Guidelines range, we have discretion where within the range to set the ultimate penalty, and we accept OE Staff's recommended penalty as fair and reasonable. With full knowledge of Dr. Chen's trading conduct, Powhatan supported and encouraged the scheme and course of business to move forward. The scheme was central to Powhatan's business—indeed, one purpose of Powhatan's creation was to protect its investors in case PJM sought to claw back the MLSA

[388] FERC Penalty Guidelines § 1C2.2(b).

[389] *Id.* § 1C2.4.

payments.[390] Given Powhatan's integral role in the manipulative scheme and course of business, we find OE Staff's proposed penalty appropriate and direct Powhatan to pay a civil penalty of $16,800,000 within 60 days of the date of this Order.

175. As with HEEP's civil penalty, we agree with OE Staff that Powhatan and HEEP should be held jointly and severally liable for the $16,800,000 penalty assessed against Powhatan, given the collusion between them.[391]

c. Assessment of Penalty Against Dr. Chen

176. OE Staff recommends a total civil penalty of $1,000,000 for Dr. Chen—$500,000 for his acts on behalf of HEEP and Powhatan and $500,000 for his acts on behalf of CU Fund.[392] OE Staff's recommendation accounts for the following factors: (1) Dr. Chen knowingly devised and implemented the manipulative scheme; (2) Dr. Chen carried out the scheme over several months and stopped only after being contacted by PJM's IMM; (3) Dr. Chen's deliberate conduct harmed the integrity of the regulatory process and PJM's market without regard to deleterious market impacts; and (4) Dr. Chen cooperated with OE Staff's investigation, but did not self-report the violations and took no efforts to mitigate the harm his conduct caused.[393]

177. Dr. Chen raises five arguments against assessment of the penalty OE Staff recommends. First, he argues that the Commission lacks statutory authority to penalize individuals.[394] Second, he contends that we must look at the seriousness factor in context, which, he alleges, involved trading in a way contemplated by the Commission and never prohibited or even labeled as manipulation.[395] Third, Dr. Chen argues that his trades did not cause any harm because market participants are not entitled to MLSA payments.[396] Fourth, Dr. Chen asks the Commission to consider that he stopped the relevant conduct in a timely manner after being contacted by the PJM IMM and that he

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[390] Staff Report at 22, n.128.

[391] *See* discussion *supra* P 165.

[392] Staff Report at 82.

[393] *Id.*

[394] Chen Answer at 64-66.

[395] *Id.* at 67.

[396] *Id.*

did not remedy the violations sooner because he did not think he was acting unlawfully.[397] Finally, Dr. Chen asks us to consider the toll this proceeding has taken on him and that OE Staff's recommended sanctions would drive him into bankruptcy.[398]

178. As a threshold matter, we reject Dr. Chen's argument that the Commission lacks statutory authority to penalize individuals. We find that section 1c.2 of our regulations reaches Dr. Chen's conduct in this case, and that we have jurisdiction over Dr. Chen for purposes of enforcing this law. Section 1c.2 makes it unlawful for "any entity, directly or indirectly" to engage in fraudulent activities "in connection with" a transaction subject to the Commission's jurisdiction.[399] As we explained in Order No. 670, and have applied in multiple cases since, "'[a]ny entity'" is a deliberately inclusive term. . . . [that] include[s] any person or form of organization, regardless of its legal status, function or activities."[400] The phrase "any entity" is broad, and applies to natural persons, such as Dr. Chen, who have direct involvement in manipulative schemes.[401] The United States District Court for the Eastern District of California recently adopted this position in the *Barclays* matter, holding that "a meaning of 'entity' that includes natural persons appears more consistent with the goals of FPA section 222 and the surrounding statutory scheme."[402]

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[397] *Id.* at 67-68.

[398] *Id.* at 68.

[399] 18 C.F.R. § 1c.2 (2014); *see also* 16 U.S.C. § 824v(a) (2012) ("It shall be unlawful for any entity . . . directly or indirectly, to use or employ, in connection with the purchase or sale of electric energy . . . subject to the jurisdiction of the Commission, any manipulative or deceptive device or contrivance.").

[400] Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 18. The Commission previously has assessed civil penalties to individuals, for example, see *Maxim Power Corp., et al*., 151 FERC ¶ 61,094, at P 66 (2015); *Richard Silkman*, 144 FERC ¶ 61,164 at P 93; *Barclays*, 144 FERC ¶ 61,041 at PP 135-146; *Moussa I. Kourouma d/b/a Quntum Energy LLC*, 135 FERC ¶ 61,245, at P 53 (2011).

[401] As we stated in Order No. 670, "Congress could have used the existing defined terms in the NGA and FPA of 'person,' 'natural-gas company,' or 'electric utility,' but instead chose to use a broader term without providing a specific definition." Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 18.

[402] *FERC v. Barclays Bank PLC, et al*., No. 2:13-cv-2093-TLN-DAD, at 32 (E.D. Cal. May 20, 2015) (rejecting argument that claims against individual Barclays' traders

(continued...)

179. Having determined that we have authority to penalize Dr. Chen, we now turn to consider whether OE Staff's recommended penalty is appropriate. For individuals who are not subject to the Penalty Guidelines, the Commission has previously considered five factors in determining the amount of any civil penalty assessed pursuant to section 316A of the FPA: (1) seriousness of the violation; (2) commitment to compliance; (3) self-reporting, (4) cooperation; and (5) reliance on OE Staff guidance.[403]

i. <u>Seriousness of the Violations</u>

180. The Commission's Revised Policy Statement on Enforcement identifies several factors to consider in our analysis of the seriousness of the violations.[404] We discuss these factors below to the extent that they are relevant to Dr. Chen's conduct.

181. *Harm Caused by the Violation*. Dr. Chen's round-trip UTC trades financially harmed PJM and its customers by extracting more than $10 million in MLSA payments that otherwise would have gone to other market participants engaging in UTC transactions.[405] Also, Dr. Chen's scheme and course of business to defraud persisted for nearly three months and has affected some transmission service in PJM. In sum, Dr. Chen's scheme and course of business to defraud, executed on behalf of three separate entities, caused widespread harm to PJM, other market participants, and the integrity of the market, warranting a significant penalty.

182. *Manipulation, Deceit, Fraud, and Recklessness or Indifference to Results of Actions*. Dr. Chen's scheme operated as a fraud and deceit on PJM. Specifically, and as described above, Dr. Chen deceived PJM into disbursing MLSA payments by creating the false impression that he was trading to arbitrage price differentials when, in fact, he was engaging in round-trip UTC trades solely to collect MLSA.

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should be dismissed because "entity" under FPA section 222 does not include natural persons).

[403] *Moussa I. Kourouma d/b/a Quntum Energy LLC*, 135 FERC ¶ 61,245 at P 42. These factors stem from guidance we provided in our Revised Policy Statement on Enforcement. *See* Revised Policy Statement on Enforcement, 123 FERC ¶ 61,156 at P 54.

[404] Revised Policy Statement on Enforcement, 123 FERC ¶ 61,156 at P 55.

[405] For the same reasons expressed in our penalty determination for Powhatan, we reject Dr. Chen's argument that these other market participants were not entitled to MLSA payments and, thus, were not harmed. *See* discussion *supra* P 98.

183. *Willful Action or in Concert with Others*. Dr. Chen's scheme was willful and conducted in concert with, and on behalf of, others. Despite his understanding that the purpose of UTC trading was to try to arbitrage price differentials, Dr. Chen affirmatively implemented his scheme.[406] Dr. Chen also acted in concert with others, detailing his scheme to Powhatan and then executing trades on their behalf.

184. *Isolated Instance or Recurring Problem; Systematic and Persistent Wrongdoing and Duration*. Dr. Chen executed his scheme on behalf of all Respondents, systematically and persistently for a continuous period of close to three months. He stopped only after being contacted by PJM's IMM.

185. Based on the foregoing seriousness factors, we find that Dr. Chen's conduct was serious and warrants a substantial penalty. Moreover, we reject Dr. Chen's contention that we should view the seriousness of his conduct in the context of the Commission having contemplated and never prohibiting the behavior at issue. As we discussed above, we never approved the conduct at issue and have provided ample notice that wash trades and similar fraudulent transactions are unlawful.[407]

ii. <u>Mitigating Factors Relating to Culpability</u>

186. *Commitment to Compliance, Self-Reporting, Cooperation, and Reliance on Staff Guidance*. Only one mitigating factor, cooperation, serves to mitigate Dr. Chen's violations. Because he lacked a compliance program at the time of his violations, did not self-report the violations, and never sought guidance from staff, he is not eligible for a credit based on these factors.[408]

iii. <u>Appropriate Penalty for Dr. Chen</u>

187. Based on the foregoing factors, the pleadings in this case, and the OE Staff Report, the Commission finds that there is a critical need to discourage and deter the fraudulent

[406] Chen Test. Vol. I Tr. 31:14-18.

[407] *See* discussion *supra* PP 103-107, 115-123.

[408] Regarding Dr. Chen's efforts to remedy the violations, we reject his contention that he stopped the conduct in a timely manner and that he did not make efforts to remedy the violations sooner only because he did not think he was acting unlawfully. Dr. Chen is a sophisticated, experienced trader. He reasonably knew or should have known that his round-trip trading scheme raised potential compliance concerns and, at a minimum, should have inquired further into the lawfulness of his behavior.

conduct at issue and that a civil penalty of $1,000,000 is fair and reasonable. We find this civil penalty to be particularly appropriate given that Dr. Chen designed and implemented the fraudulent scheme and course of business to defraud on behalf of multiple entities, and given the widespread scope of and harm caused by his violations. Also, Dr. Chen never made efforts to remedy or cease his violations and stopped trading only after being contacted by PJM's IMM. Therefore, we direct Dr. Chen to pay the $1,000,000 civil penalty within 60 days of the date of this Order.[409]

2. **Disgorgement**

188. OE Staff recommends that the Commission require Respondents to disgorge the full amount of their gain, plus applicable interest, resulting from Dr. Chen's manipulative trading scheme. Specifically, OE Staff asserts that after netting out the transaction costs, the fraudulent trades resulted in gains of $1,080,576 to CU Fund, $173,100 to HEEP, and $3,465,108 to Powhatan, and that these gains should be disgorged.[410] We agree. It is a long-standing Commission practice to require disgorgement of unjust profits.[411] In cases where pecuniary gain results from a violation, "the Commission enters a disgorgement order for the full amount of the gain plus interest."[412] Pecuniary gain includes "the additional before tax profit to the entity resulting from the relevant conduct of the violation."[413]

189. The disgorgement amount "need only be a reasonable approximation of profits causally connected to the violation,"[414] and we find that OE Staff correctly calculated "a reasonable approximation of the profits" by taking the MLSA payments Respondents collected as a result of the scheme and deducting the transaction costs of their trades.

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[409] Furthermore, we are not persuaded by Dr. Chen's request that we consider the toll this proceeding has taken on him. Dr. Chen willingly engaged in a fraudulent trading scheme that had a deleterious impact on the PJM market and other market participants.

[410] Staff Report at 82-83.

[411] Revised Policy Statement on Enforcement, 123 FERC ¶ 61,156 at P 43.

[412] FERC Penalty Guidelines § 1B1.1(a).

[413] *Id.* § 1A1.1, Application Note 3(g).

[414] *SEC v. Whittemore*, 659 F.3d 1, 7 (D.C. Cir. 2011).

190. Therefore, in addition to the civil penalties, we direct disgorgement payments, plus applicable interest, of (1) $1,080,576 for CU Fund; (2) $173,100 for HEEP; and (3) $3,465,108 for Powhatan. Such payments shall be made within 60 days of the date of this Order. We will require the interest on these sums to be calculated in accordance with 18 C.F.R. § 35.19a for the full period of time since Respondents received their MLSA payments from PJM.

191. Finally, we agree with OE Staff's recommendation to hold HEEP, CU Fund and Dr. Chen jointly and severally liable for HEEP's and CU Fund's required disgorgement payments, and to hold Powhatan, HEEP, and Dr. Chen jointly and severally liable for Powhatan's required disgorgement payment. We find that applying joint and several liability is appropriate where, as occurred here, multiple respondents collaborate or have a close relationship in executing the fraud.[415]

D. <u>Request for Oral Argument</u>

192. Dr. Chen requests oral argument related to the Order to Show Cause.[416] We do not agree with Dr. Chen's assessment that oral argument in this matter would be helpful to the Commission.[417] The record before the Commission and the arguments made by the parties provide us sufficient basis to make our findings, and there is no need for an oral

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[415] *Id*. at 1, 10-11 (affirming finding that multiple defendants are jointly and severally liable for disgorgement of unjust profits because of their collaboration in a fraudulent securities scheme). Holding Dr. Chen jointly and severally liable for the disgorgement against HEEP and CU Fund is appropriate because as the sole employee of HEEP and CU Fund, he would have the power to shut these companies down. *See Capital Tel. Co., Inc. v. FCC*, 498 F.2d 734, 738 (D.C. Cir. 1974) (holding that "[t]he courts have consistently recognized that a corporate entity may be disregarded in the interest of public convenience, fairness and equity . . . . [W]hen the notion of legal entity is used to defeat public convenience, justify wrong, protect fraud, or defend crime, the law will regard the corporation as an association of persons") (internal citations and quotations omitted)).

[416] *See, e.g.*, Chen Answer at 11-12.

[417] The Commission has not in the past held oral argument on Orders to Show Cause which have originated from OE Staff Reports. Thus, in denying Dr. Chen's request, he is being treated consistently with parties in other similar proceedings. *See, e.g.*, *Barclays*, 144 FERC ¶ 61,141; *Competitive Energy Services, LLC*, 144 FERC ¶ 61,163; *Richard Silkman*, 144 FERC ¶ 61,164; *Lincoln Paper and Tissue,* 144 FERC ¶ 61,162.

argument. We therefore decline Dr. Chen's invitation to allow oral argument in this matter.[418]

E. Rehearing

193. Given Respondents' election under section 31(d)(3)(A) of the FPA, this Order will not be subject to rehearing.[419] If a person elects the procedure under section 31(d)(3) of the FPA, the statute provides for (i) prompt assessment of a penalty by Commission order; (ii) if the penalty is unpaid within 60 days, the Commission shall institute a proceeding in the appropriate district court seeking an order affirming the assessment of a civil penalty and that court shall have the authority to review *de novo* the law and facts involved; and (iii) the district court shall have the jurisdiction to enforce, modify, or set aside, in whole or in part, such penalty assessment. Following this process, a person can appeal to a United States Court of Appeals within the appropriate time for review of the district court order.[420]

<u>The Commission orders</u>:

(A) The Commission hereby directs Dr. Chen to pay to the United States Treasury by a wire transfer a sum of $1 million in civil penalties within 60 days of the issuance of this order, as discussed in the body of this order. If Dr. Chen does not make this civil penalty payment within the stated time period, interest payable to the United States Treasury will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. § 35.19a (2012) from the date that payment is due.

(B) The Commission hereby directs HEEP to pay to the United States Treasury by a wire transfer a sum of $1,920,000 in civil penalties within 60 days of the issuance of this order, as discussed in the body of this order. If HEEP does not make this civil penalty payment within the stated time period, interest payable to the United States

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[418] *See, e.g., Perez v. Mortgage Bankers Ass'n.*, No. 13-1041, *slip op.* at 8 (S. Ct. March 9, 2015) ("that the very basic tenet of administrative law [is] that agencies should be free to fashion their own rules of procedure," quoting *Vermont Yankee*, 435 U.S., 519, 544 (1978)).

[419] *See Process for Assessing Civil Penalties*, 117 FERC ¶ 61,317, at P 5 (2006); *see also Barclays*, 144 FERC ¶ 61,041 at P 152; *Competitive Energy Services, LLC*, 144 FERC ¶ 61,163 at P 104; *Richard Silkman*, 144 FERC ¶ 61,164 at P 96; *Lincoln Paper and Tissue, LLC*, 144 FERC ¶ 61,162 at P 80.

[420] 16 U.S.C §823b(d)(3) (2012).

Treasury will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. § 35.19a from the date that payment is late.

(C) The Commission hereby directs CU Fund to pay to the United States Treasury by a wire transfer a sum of $ 10,080,000 in civil penalties within 60 days of the issuance of this order, as discussed in the body of this order. If CU Fund does not make this civil penalty payment within the stated time period, interest payable to the United States Treasury will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. § 35.19a from the date that payment is due.

(D) The Commission hereby directs Powhatan to pay to the United States Treasury by a wire transfer a sum of $16,800,000 in civil penalties within 60 days of the issuance of this order, as discussed in the body of this order. If Powhatan does not make this civil penalty payment within the stated time period, interest payable to the United States Treasury will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. § 35.19a from the date that payment is due.

(E) The Commission hereby directs HEEP, within 60 days of the issuance of this order, to distribute its unjust profits, plus interest, to PJM, as discussed in the body of this order.

(F) The Commission hereby directs CU Fund, within 60 days of the issuance of this order, to distribute its unjust profits, plus interest, to PJM, as discussed in the body of this order.

(G) The Commission hereby directs Powhatan, within 60 days of the issuance of this order, to distribute its unjust profits, plus interest, to PJM, as discussed in the body of this order.

(H) The Commission directs PJM to establish a method to resettle and distribute the resettled MLSA payments in a manner which identifies: (i) the market participants that would have received higher MLSA payments in the absence of Respondents' activity during the Manipulation Period; and (ii) the amounts of those higher payments. The Commission directs PJM to use the disgorgement funds and interest it receives pursuant to this Order from HEEP, CU Fund, and Powhatan to provide reimbursement of MLSA payments, and any available interest, to those entities identified as a result of PJM's proposed methodology. PJM shall provide its proposed methodology to resettle and distribute the MLSA payments to the Director of OE within 45 days of receipt of all of the disgorgement and interest funds from HEEP, CU Fund and Powhatan for the Director's approval. PJM shall distribute the funds to the entities it has identified promptly after receiving the Director of OE's approval of the resettlement and distribution methodology.

By the Commission. Chairman Bay is not participating.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Document Content(s)