

146 FERC ¶ 61,072  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;  
Philip D. Moeller, John R. Norris,  
and Tony Clark.

MISO Virtual and FTR Trading

Docket No. IN12-6-000

ORDER APPROVING STIPULATION AND CONSENT AGREEMENT

(Issued February 7, 2014)

1. The Commission approves the attached Stipulation and Consent Agreement (Agreement) between the Office of Enforcement (Enforcement) and Louis Dreyfus Energy Services L.P. (LDES). This Order resolves Enforcement's investigation under Part 1b of the Commission's regulations, 18 C.F.R. Part 1b (2013), into whether LDES violated the Commission's Anti-Manipulation Rule, 18 C.F.R. § 1c.2 (2013), in connection with certain virtual trading within the Midcontinent Independent System Operator, Inc. (MISO)<sup>1</sup> footprint from November 2009 through February 2010. The Commission concludes that the Agreement is a fair and equitable resolution of the matter and is in the public interest. LDES stipulates to the facts set forth in the Agreement, but neither admits nor denies the violations. LDES has agreed to pay disgorgement of \$3,340,000 plus interest to MISO, and a civil penalty of \$4,072,257. In addition, one of the traders, Xu Cheng, will pay a civil penalty of \$310,000. LDES will also implement measures designed to ensure compliance in the future, and submit compliance reports to the Commission for a minimum of two years.

**I. Background and Investigation**

2. As described in the Agreement, pursuant to market-based rate authority granted by the Commission on June 29, 2007, LDES actively traded energy-related products in Commission-jurisdictional markets throughout the United States, including MISO, at the time the conduct under investigation occurred. One of LDES's trading desks, referred to as the "FTR Group," traded virtual supply (INCs), virtual demand (DECs) and Financial

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<sup>1</sup> At the time of the conduct under investigation, MISO was the "Midwest Independent System Operator, Inc."

Transmission Rights (FTRs) in MISO. After MISO's Independent Market Monitor observed and referred LDES' trading activity at a node in North Dakota known as "NSP.VELVAVELV" (Velva), Enforcement opened an investigation into trading by the FTR Group. The FTR Group's trading in MISO relied on two traders, Xu Cheng and Zhiyong Wu. Cheng joined LDES and the FTR Group in April 2009. Upon joining the FTR Group, Cheng assumed responsibility for FTR trading in the western portion of MISO. Wu held responsibility for virtual trading throughout all of MISO. Cheng and Wu sat near each other and consulted each other routinely on market conditions that could affect their trades. When Wu was absent, Cheng assumed responsibility for all virtual trading in MISO, including the trading at the Velva node described below.

3. The FTR Group knew how virtual trades could affect market congestion and thereby affect FTR values. Cheng had written a dissertation in support of his PhD that described in detail a strategy for using virtual trades to increase congestion in an area in a manner that would increase the value of FTR holdings.

4. After April 2009, the volume and number of LDES's FTR positions increased steadily. LDES increased its volume of virtual trading in MISO. In conjunction with these volumetric increases, virtual trading favorable to LDES's FTR positions occurred with greater frequency. From November 2009 through February 2010, a period that included losses on heavy virtual trading at Velva, the FTR Group's virtual trading favorably affected its FTR positions approximately eighty percent of the time. By contrast, on an average monthly basis, during the first five months of 2009, the FTR Group made virtual trades that favorably affected its FTR positions approximately fifty-one percent of the time.

5. When the FTR Group started trading FTRs near Velva, it earned little to no profit on those trades. Profits on those trades began to accrue in November 2009 when it started making DEC's at Velva. By the end of February 2010, the FTR Group had realized a profit of \$3,334,000 on its FTRs that was directly attributable to its DEC's at Velva. Over the same period, those DEC's produced losses. In March 2010, when LDES's FTR positions at Velva dropped substantially, the FTR Group stopped its virtual trading at Velva entirely.

6. Enforcement concluded that LDES violated the Commission's Anti-Manipulation Rule, 18 C.F.R. § 1c.2 (2013). That rule prohibits any entity from using a fraudulent device, scheme or artifice, or engaging in any act, practice, or course of business, that operates or would operate as a fraud; with the requisite scienter; in connection with a transaction subject to the jurisdiction of the Commission.

7. Enforcement found that LDES inflated the value of their FTR positions through its virtual trading, and that this conduct manipulated the MISO market. Although LDES asserted that it used analysis of market fundamentals to determine where and how to trade virtual supply and demand at Velva, Enforcement found no support for this assertion.

## **II. Stipulation and Consent Agreement**

8. Enforcement staff, LDES, and Cheng resolved Enforcement's investigation by means of the attached Agreement.

9. LDES and Cheng each have stipulated to the facts recited in the Agreement. LDES and Cheng neither admit nor deny a violation of the Commission's Anti-Manipulation Rule, 18 C.F.R. § 1c.2 (2013).

10. LDES agrees to disgorge its unjust profits of \$3,334,000 plus interest to MISO. LDES also agrees to pay a civil penalty of \$4,072,257. In addition, LDES agrees to implement new compliance policies and processes and submit compliance monitoring reports to the Office of Enforcement for a minimum of two years. Cheng agrees to pay a penalty of \$310,000. Cheng no longer does virtual trading in any FERC markets and will not be doing so for the next two years.

## **III. Determination of the Appropriate Sanctions and Remedies**

11. In determining the appropriate remedy for LDES, Enforcement considered the factors described in the Revised Policy Statement on Penalty Guidelines.<sup>2</sup> Specifically, Enforcement considered that LDES had no prior history of violations of Commission regulations, and that the company fully cooperated with the investigation after it changed ownership and replaced management.

12. The Commission concludes that the Agreement is a fair and equitable resolution of the matters concerned and is in the public interest, as it reflects the nature and seriousness of LDES's conduct. The Commission also concludes that the civil penalty is consistent with the Revised Policy Statement on Penalty Guidelines. The Commission directs MISO to allocate the disgorged funds and interest for the benefit of its market participants. MISO may allocate such funds in its discretion and upon approval of its plan for doing so by Enforcement staff.

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<sup>2</sup> *Enforcement of Statutes, Orders, Rules and Regulations*, 132 FERC ¶ 61,216 (2010).

13. The Commission emphasizes that using virtual trades to create artificial congestion in the Day-Ahead market for the purpose of enhancing the value of FTR positions violates the Commission's Anti-Manipulation Rule.

The Commission orders:

The attached Stipulation and Consent Agreement is hereby approved without modification.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

MISO Virtual and FTR Trading

Docket No. IN12-6-000

**STIPULATION AND CONSENT AGREEMENT**

**I. Introduction**

1. The staff of the Office of Enforcement (Enforcement) of the Federal Energy Regulatory Commission (Commission), Louis Dreyfus Energy Services L.P. (LDES), and Xu Cheng enter into this Stipulation and Consent Agreement (Agreement) to resolve a non-public formal investigation of LDES's conduct under Part 1b of the Commission's regulations, 18 C.F.R. Part 1b (2013).
2. Staff initiated this investigation in April 2010 following receipt of a referral from the Independent Market Monitor ("IMM") of the regional transmission organization then known as the Midwest Independent System Operator, Inc. (MISO) regarding concerns with LDES's virtual trading in MISO's day-ahead energy market at a node in North Dakota known as "NSP.VELVAVELV" (Velva).
3. To settle Enforcement's findings of a violation of its prohibition of electric energy market manipulation, 18 C.F.R. § 1c.2 (2013), as described herein, Enforcement and LDES agree that LDES will do the following: (a) pay to MISO disgorgement of \$3,334,000 plus interest of \$383,743; (b) pay a civil penalty of \$4,072,257 to the United States Treasury; and (c) implement procedures to improve compliance going forward, subject to monitoring via submission of semi-annual reports for two years. In addition, Xu Cheng individually will pay a civil penalty of \$310,000 to the United States Treasury.

**II. Stipulations**

Enforcement and LDES hereby stipulate and agree to the following facts.

4. For the time period relevant to this investigation, LDES was a wholly-owned subsidiary of Louis Dreyfus Highbridge Energy LLC (LDH Energy), which in turn was owned by various entities and individuals not subject to this investigation.
5. LDES did not own or control any generation or transmission facilities in the United States during the relevant time period, but actively traded energy-related products in FERC-jurisdictional markets throughout the United States, including MISO, pursuant to market-based rate authority granted by the Commission on June 29, 2007.

6. LDES was organized into several trading desks, each with responsibilities for particular products and/or certain markets. One such desk, known as the “FTR Group,” traded virtual supply (INCs), virtual demand (DECs), and Financial Transmission Rights (FTRs) in MISO. Xu Cheng and Zhiyong Wu were the primary traders in MISO. Xijian Sun was their immediate supervisor. Sun and Wu began building the desk in late 2007 and 2008. Cheng joined the desk in April 2009.

7. Upon joining the FTR Group, Cheng assumed responsibility for FTR trading in the western portion of MISO. At that time, Wu held responsibility for virtual trading throughout all of MISO and was in the process of assuming from Sun responsibility for FTR trading in the eastern portion of MISO. Cheng and Wu sat near each other – for a time their desks were adjacent – so there was little need to email, instant message or leave voicemails for each other. They usually spoke in person. Operationally, they consulted each other routinely on market conditions that could affect their trades. Cheng sometimes recommended specific virtual bids for Wu to consider. When Wu was absent, Cheng assumed responsibility for all virtual trading in MISO including at the Velva node described below. Cheng no longer does virtual trading in any FERC markets and, according to LDES, will not be doing so for the next two years.

8. The FTR Group traded INCs and DECs throughout MISO. INCs and DECs are bid and cleared in the day-ahead market and are settled in the real-time market. There is no obligation to buy or sell physical power with an INC or DEC; the trade’s profits or losses come from settlement of the difference between the day-ahead price and the real-time price.

9. During the relevant period, MISO assessed a Revenue Sufficiency Guarantee (RSG) charge on all virtual supply transactions to compensate generators who supplied real-time supply beyond that which was scheduled in the day-ahead market. Thus, to accurately determine the profitability of one’s virtual trades, one had to account for the associated RSG costs.

10. During the relevant period, the FTR Group also actively traded FTRs, financial instruments that settle off of the value of congestion between two nodes in the day-ahead market. In MISO, a market participant could buy and sell FTRs in an annual auction, as well as subsequent monthly auctions. While there was a secondary market for buying and selling FTRs between auctions, it was not highly liquid. Thus, after the monthly auction, LDES did not have a meaningful opportunity to trade FTRs.

11. INCs and DECs have the potential to affect day-ahead congestion at a given node because they are bid and cleared in the day-ahead market. A large volume of INCs and DECs, therefore, could decrease or increase nearby day-ahead congestion enough to affect the value of FTRs that “source” or “sink” at that same node or other nearby nodes.

12. Cheng knew that virtual trades could affect day-ahead market congestion and thereby affect FTR values. Before joining LDES, in support of his candidacy for a PhD at the University of Illinois, Cheng wrote a dissertation in which he described with specificity the interaction between virtual trades and FTRs, and the potential for manipulation. He wrote: “It is possible for an FTR holder with [a] relatively large amount of FTR to make extra profit by creating nonreal congestion or aggravating real congestion by submitting virtual transactions.” Cheng observed that, “[f]or the FTR holder, bidding an appropriate amount of virtual transactions on the target congestion is risk-free because of the FTR position.”

13. Shortly after Cheng’s arrival at LDES, the FTR Group’s trading levels in MISO increased. The volume and number of LDES’s FTR positions increased steadily throughout 2009. For example, in March 2009, the month before Cheng’s arrival, LDES took FTR positions averaging approximately 118,000 MWh per day across 378 nodes. By the end of that year, in December 2009, LDES was trading more than 309,000 MWh per day across 627 nodes. During the same period, LDES increased its volume of virtual trading in MISO, as reflected by a four-fold increase in its daily virtual trading limit, from 10,000 MWh to 40,000 MWh by January 2010. In conjunction with these volumetric increases, virtual trading favorable to LDES’s FTR positions occurred with greater frequency. On an average monthly basis, during the first five months of 2009, the FTR Group traded virtuals into its FTR positions 51 percent of the time. From November 2009 through February 2010, a period in which there was heavy trading at Velva, that rate reached 80 percent.

14. During 2009, the FTR Group acquired FTR positions at Velva, a node representing a North Dakota wind farm with a capacity rating of 12 MW. The FTR Group incurred modest losses on those positions through October, but continued to hold FTR positions at Velva. In November, it began making virtual trades there as well. The group’s FTR holdings at Velva yielded a profit of \$873,209 in November. That pattern continued in December, January, and February; the virtual trading produced a net loss over that three month period while the FTR positions produced profits in those months of \$2,274,924, \$2,404,848, and \$465,881 respectively. In March, at the same time that the FTR Group dramatically reduced its FTR position at Velva to 23 MW off peak and 37.5 on peak (down from highs of 105 MW on peak and more than 97.3 MW off peak), it stopped virtual trading at that location altogether.

15. Cheng testified in deposition that the FTR Group’s virtual trading was based on market fundamentals. Market fundamentals include criteria such as generator outages, transmission outages, and weather patterns. Beginning in November 2009, there was observed, unpredictable real-time congestion at Velva. Cheng testified that after observing that congestion he had a general expectation that cold winter weather would lead to chronic congestion in the Velva area as the basis for his trading pattern. However, Cheng also admitted that the real-time congestion near Velva was unpredictable.

16. The FTR Group's virtual trading at Velva and other nearby nodes from November 2009 through February 2010 incurred a net loss of \$76,193 after taking account of RSG costs. This was attributable to a \$390,353 loss on the virtual positions taken at Velva itself; the FTR Group had made a profit of approximately \$314,159 at other nodes in the area.

17. From November 2009 through February 2010, the FTR Group earned approximately \$6 million in profits on its FTR trades at Velva. However, Staff concluded that not all of those profits were attributable to LDES's virtual trading. Staff estimates that LDES's trading at Velva added \$3,334,000 to the value of its FTR positions during this same period.

### **III. Violations**

18. Enforcement determined that LDES violated the Commission's Anti-Manipulation Rule, 18 C.F.R. § 1c.2 (2013). That rule prohibits any entity from using a fraudulent device, scheme or artifice, or engaging in any act, practice, or course of business, that operates or would operate as a fraud; with the requisite scienter; in connection with a transaction subject to the jurisdiction of the Commission.

19. Enforcement concluded that the FTR Group engaged in virtual trading at Velva from November 2009 to February 2010 which enhanced the value of its nearby FTR positions. When the FTR Group began acquiring FTRs near Velva, it earned little to no profit on the positions. Only after it began placing DEC's at Velva did the FTR Group turn a profit on its FTR positions. When the FTR Group's FTR positions dropped by nearly two-thirds, the FTR Group contemporaneously stopped trading virtuals at Velva. The FTR Group lost \$390,353 on its virtual trades at Velva from November 2009 to February 2010, but those trades increased the profits on its nearby FTR positions by \$3,344,000. Enforcement found that this trading pattern violated the Anti-Manipulation Rule.

20. The FTR Group was aware that while virtual trading may not by itself yield any profits, congestion created or exacerbated through virtual trading could inflate the value of FTR positions to a degree that would more than offset low yields or losses that the virtual trading itself might incur – i.e. the “risk free” trading strategy that Cheng described in his dissertation. Enforcement found that the potential to inflate the value of their FTR positions influenced the FTR Group's trading strategies at Velva between November 2009 and February 2010. Enforcement finds that the FTR Group's strategy manifested as manipulation in its virtual trades at Velva in late 2009 and early 2010.

21. Enforcement found that LDES offered no persuasive explanation for the FTR Group's virtual trading pattern at Velva from November 2009 through February 2010.



LDES stressed that the FTR Group's trading philosophy was based on the use of market fundamentals to determine where and how to trade virtual supply and demand. Yet, the FTR Group did not identify a reasonable fundamental basis for trading virtuals the way that it had at Velva. As Cheng admitted, real-time congestion at Velva was unpredictable, and there is no evidence that the FTR Group developed a means or basis to anticipate when it would occur.

22. Although LDES claims that the FTR Group's virtual trading in the Velva area generated profits, Enforcement believes that the traders would have realized well before the end of February 2010 that the RSG charges were eradicating any profit from the congestion price differentials. That the FTR Group did not include RSG charges when assessing the success of their trading patterns at Velva is not a defense.

23. Enforcement further found that by trading at Velva, the FTR Group continually undermined the profits that it otherwise would have realized from its overall trading in the area. The traders purportedly placed the virtual trades in the Velva area to capture real-time congestion, and thereby profit from it. But the trading at Velva consistently lost money over the course of more than three months of trading.

#### **IV. Remedies and Sanctions**

24. For purposes of settling any and all civil and administrative disputes arising from Enforcement's investigation, LDES agrees with the facts as stipulated in Section II of this Agreement, but neither admits nor denies the violations described in Section III of this Agreement. LDES further agrees to undertake obligations set forth in the following paragraphs.

##### **A. Disgorgement**

25. LDES shall pay disgorgement of \$3,334,000 plus interest (calculated pursuant to 18 C.F.R. § 35.19a) of \$383,743 to MISO, to be used or distributed in MISO's discretion and upon approval of its plan for doing so by Enforcement.

##### **B. Civil Penalty**

26. LDES shall pay a civil penalty of \$4,072,257 to the United States Treasury, by wire transfer, within ten days after the Effective Date of this Agreement, as defined herein.

27. Cheng shall pay a civil penalty of \$310,000 to the United States Treasury, by wire transfer, within ten days after the Effective Date of this Agreement, as defined herein.

## **C. Compliance**

28. LDES shall institute new policies and associated processes to review and document the purpose of each virtual transaction it executes in MISO, including the following:

- (a) incorporate into its trading software a log that for each virtual trade the FTR Group makes, identifies and retains for at least three years: (i) the trader that submitted the trade to MISO; and (ii) the primary congestion that the FTR group was attempting to capture with the trade or other reason for the trade; and
- (b) identify a single computer that for at least three years LDES shall use for conducting all its virtual trades in MISO, on which there is software that automatically records key strokes and screen shots.

29. LDES shall make semi-annual compliance monitoring reports to Enforcement for two years following the Effective Date of this Agreement. The first semi-annual compliance monitoring report shall be submitted on July 31, 2014. The second, third and fourth reports shall be submitted at six month intervals thereafter. Each report shall cover the six-month period that ends one month before the report's submission date. After the receipt of the fourth semi-annual report, Enforcement may, at its sole discretion, require LDES to submit semi-annual reports for one additional year.

30. Each compliance monitoring report shall: (1) identify any known violations of Commission regulations that occurred during the applicable period, including a description of the nature of the violation and what steps were taken to rectify the situation; (2) describe all compliance measures and procedures related to compliance with Commission regulations that LDES instituted or modified during the applicable period; (3) describe all FERC-related compliance training that LDES administered concerning such products during the applicable period, including the dates such training occurred, the topics covered, and the procedures used to confirm which personnel attended.

31. Each compliance monitoring report shall also include an affidavit stating that it is true and accurate to the best of his/her knowledge, executed by one of LDES's officers.

32. Upon request by Enforcement, LDES shall provide to Enforcement documentation to reasonably support its reports.

## **V. Terms**

33. The Effective Date of this Agreement shall be the date on which the Commission issues an order approving this Agreement in its entirety and without material

modification or condition.

34. When effective, this Agreement shall resolve the matters addressed herein as to LDES and its affiliates, including any successors and assigns, and their respective agents, officers, directors, shareholders and employees, both past and present, including Xu Cheng (collectively, the “Released Parties”).

35. When effective, this Agreement shall terminate all inquiries and investigations of LDES or its successors and all proceedings currently pending in Docket No. IN12-6-000, except with respect to the obligations set forth in this Agreement.

36. The Released Parties agree that the Commission’s order approving this Agreement in its entirety and without material modification shall be a final and non-appealable order assessing a civil penalty and that it shall not be subject to rehearing by the Commission or to appeal and judicial review by any court.

37. Upon its Effective Date, this Agreement shall release the Released Parties from, and forever bar the Commission from holding the Released Parties liable for, any and all administrative or civil claims, remedies, or penalties arising out of or related to virtual trading violations either alleged in this Agreement or occurring in MISO on or before the Effective Date of this Agreement and arising under the regulations promulgated by the Commission.

38. This agreement binds the Released Parties. This Agreement does not impose any additional or independent obligations on the Released Parties, other than the obligations identified in this Agreement. This agreement is not intended to create any benefits for any third parties and is without prejudice to the Released Parties with respect to third parties.

39. Unless the Commission issues an order approving this Agreement in its entirety and without material modification or conditions, this Agreement shall be null and void and of no effect, and neither Enforcement nor the Released Parties shall be bound by any provision or term of this Agreement, unless otherwise agreed to in a separate writing by Enforcement and LDES.

40. Failure to make a timely civil penalty payment or to comply with the other obligations of this Agreement shall be deemed a violation of a final order of the Commission issued pursuant to the Federal Power Act, 16 U.S.C. § 792, *et seq.*, and may subject one or more of the Released Parties to additional action under the enforcement and penalty provisions of the Federal Power Act.

41. If LDES fails to make the civil penalty payment specified in this Agreement within the times identified specified to do so, interest payable to the United States Treasury, calculated pursuant to the Commission’s regulations at 18 C.F.R. § 35.19a(a)(2)(iii)(A) (2013), will accrue on that amount from the date the payment is

due. Interest will be payable in addition to the underlying penalty and in addition to any penalty or other enforcement action that Enforcement may take in relation to violation of the Order approving this Agreement.

42. Enforcement, LDES and Mr. Cheng acknowledge and agree that this Agreement is a compromise and settlement of disputed claims by Enforcement arising from Enforcement's investigation pursuant to the Commission's authority. This Agreement and any Commission order approving this Agreement shall not be deemed or construed as an admission or as evidence of any violation or law or regulation, or any Commission rule, regulation, or order.

43. The signatories to this Agreement stipulate that they enter into the Agreement voluntarily and that, other than the recitations contained in the Agreement, no employee, officer, director, agent, or representative of Enforcement has made any tender, offer, or promise of any kind to induce the signatories to enter this Agreement.

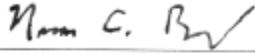
44. Each of the undersigned warrants that he is an authorized representative of the entity designated or its successor, is authorized to bind such entity, and accepts this Agreement on the entity's behalf.

45. Xu Cheng, for himself, and the undersigned representative of LDES, for itself and on behalf of the Released Parties except for Xu Cheng, each affirm that he has read this Agreement, that all matters set forth in Section II hereof are true and correct to the best of his knowledge, information and belief, that he understands that this Agreement is entered into by Enforcement in reliance on these representations, and that he or she has had the opportunity to consult with counsel.

46. This Agreement is executed in duplicate, each of which so executed may be deemed to be an original. This Agreement may also be signed in counterparts.

47. This Agreement may not be modified except in a writing signed by LDES or its successor in interest, Xu Cheng and Enforcement. No waiver or any provision of this Agreement or departure from any term of this Agreement shall be effective unless in writing and signed by the parties, and approved by the Commission.

Agreed to and Accepted:



Norman Bay  
Director  
Office of Enforcement  
Federal Energy Regulatory Commission

~~Date: December~~ January 8, 2014



Michael P. Carroll  
General Counsel *as authorized*  
Louis Dreyfus Energy Services L.P.

Date: December 27, 2013



Xu Cheng

Date: December 27, 2013