

**Testimony of Norman C. Bay
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Federal Energy Regulatory Commission
Before the Committee on Banking
Financial Institutions and Consumer Protection Subcommittee
United States Senate
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Mr. Chairman, Ranking Member Toomey, and members of the Subcommittee:

Thank you for inviting me to testify today. My name is Norman Bay. I am the Director of the Office of Enforcement of the Federal Energy Regulatory Commission (FERC or the Commission). I appear before you as a staff witness, and the views I present are not necessarily those of the Commission or any individual Commissioner. In the testimony that follows, I provide an overview of the Commission's Office of Enforcement, focusing on our efforts to combat fraud and market manipulation, and in so doing will respond to the specific questions the Subcommittee asked me to address in its January 6, 2014 letter.

The Commission's core legal authority for investigating and enforcing Congress's prohibition on fraud and market manipulation in FERC-jurisdictional electric and natural gas markets is the Energy Policy Act of 2005 (EPAcT 2005) (which added a section prohibiting energy market manipulation to both the Federal Power Act and the Natural Gas Act). In this Act, passed in the wake of Enron's manipulation of Western energy markets, Congress gave the Commission broad authority to protect energy market consumers from any type of fraud or market manipulation affecting FERC-regulated wholesale physical natural gas and electric markets. Congress patterned EPAcT's fraud and manipulation prohibition on the similarly broad anti-fraud and manipulation provisions in the Securities and Exchange Act of 1934—which the Securities and

Exchange Commission (SEC) relies on to police misconduct in the securities markets. Shortly after EAct 2005 was passed, the Commission implemented this statute through its anti-manipulation regulations, codified at 18 C.F.R. § 1c. The Office of Enforcement relies on the anti-manipulation statute and regulations to investigate potential fraud or market manipulation and, when a matter cannot settle on terms favorable to the public interest, bring enforcement actions against companies or individuals who engage in fraud or manipulation affecting FERC-regulated markets.

Another key aspect of EAct 2005 is its enhanced civil penalty provisions. Before EAct 2005, maximum civil penalties for violations of many Commission rules, including acts of fraud and manipulation, were only \$10,000 per violation per day. EAct 2005 granted the Commission the authority to impose up to \$1 million per violation per day for fraud and market manipulation (and other violations). To date, the Commission has imposed and collected approximately \$873 million in civil penalties and disgorgement following EAct 2005. This consists of approximately \$577 million in civil penalties, which goes to the U.S. Treasury, and approximately \$296 million in disgorgement of unjust profits. (This amount does not include fines in electric market manipulation matters to be reviewed in federal court, for example, the approximately \$453 million civil penalties assessed by the Commission in the *Barclays* market manipulation matter.)

Now I would like to address the Subcommittee's request for an assessment of the Commission's ability to detect, investigate, and enforce violations of EAct 2005's fraud and anti-manipulation rules. My view is that with EAct 2005's anti-fraud and market

manipulation provisions and civil penalty authority, the Commission's implementing regulations, and the Office of Enforcement's enhanced surveillance and investigative capabilities (briefly summarized below), we do have the tools necessary to effectively police FERC-regulated markets to deter fraud and market manipulation. Of course, we continue to think about ways we can expand our capabilities. But we feel we are to up this important task that Congress has given us.

Over the past few years, the Commission's Office of Enforcement has substantially expanded its investigative and analytical capabilities and has developed extensive new surveillance tools. Among the most important achievements is the creation, in February 2012, of the Office of Enforcement's Division of Analytics and Surveillance (DAS). DAS develops surveillance tools, conducts surveillance, and analyzes transactional and market data to detect potential manipulation, anticompetitive behavior, and other anomalous activity in the wholesale electricity and natural gas markets. DAS staff includes approximately 45 professionals, including, for example, economists, energy industry analysts, former traders, and former risk managers.

For its surveillance efforts, DAS has created internal market screens—both for the electric and natural gas markets—that use behavioral and statistical measures and techniques to detect abnormal trading patterns. Statistical analyses are performed through automated market screens that employ disparate market data to detect anomalies and suspicious trading patterns. The data, both physical and financial, is gathered from numerous sources, and the Commission has taken significant steps in rulemakings over

the past few years to expand these sources. With more data, and experience learned from past and current investigations, DAS continues to enhance its surveillance screens.

DAS staff also works hand in hand with the Office of Enforcement's Division of Investigations—which houses the attorneys and other staff that conduct investigations, negotiate settlements, and bring enforcement actions. The Division of Investigations has strengthened its staff of attorneys in the past few years, and now has approximately 45 attorneys, including former federal prosecutors as well as civil litigators and energy regulatory lawyers from top law firms.

I know the Subcommittee is interested in learning more about fraud and market manipulation conduct by financial institutions that has occurred in FERC-regulated markets. As you have asked, let me provide a high-level description of the mechanics of potential manipulation involving the interplay between financial and physical energy markets. Although the mechanics of a manipulative scheme can be highly detailed and complex, and each investigation is different from the next, there is a general framework that cuts across many of the manipulation matters involving the trading of energy products that we have investigated and are currently investigating.

A fundamental point necessary to understanding many of our manipulation cases is that financial and physical energy markets are interrelated: physical natural gas or electric transactions can help set energy prices on which financial products are based, so that a manipulator can use physical trades (or other energy transactions that affect physical prices) to move prices in a way that benefits his overall financial position. One useful way of looking at manipulation is that the physical transaction is a “tool” that is

used to “target” a physical price. For example, the physical tool could be a physical power flow scheduled in a day ahead electricity market at a particular “node” and the target could be the day ahead price established by the market operator for that node. Or the physical tool could be a purchase of natural gas at a trading point located near a pipeline, and the target could be a published index price corresponding to that trading point. The purpose of using the tool to target a physical price is to raise or lower that price in a way that will increase the value of a “benefitting position” (like a Financial Transmission Right or FTR product in energy markets, a swap, a futures contract, or other derivative).

Increasing the value of the benefitting position is the goal or motive of the manipulative scheme. The manipulator may lose money in its physical trades, but the scheme is profitable because the financial positions are benefitted above and beyond the physical losses. Understanding the nature and scope of a manipulator’s benefitting financial positions—and how they relate to the physical positions—is a key focus of our manipulation cases. This is for the simple reason that our anti-fraud and manipulation rule (like the SEC’s) is an *intent*-based rule: a finding of manipulation requires proving that the manipulator intended (or in some cases, acted recklessly) to move prices or otherwise distort the proper functioning of the energy markets the Commission regulates. A company can put on a large physical trade that may affect market prices, but if the purpose of that trade is to hedge risk or speculate based on market fundamentals—rather than, for example, the intent to move prices to benefit a related financial position—this conduct, without more, would not violate our anti-fraud and manipulation rule.

Another key point is that the physical trading (the tool) may and usually does occur in FERC-regulated markets, but the benefitting financial position may be held in a non-FERC regulated market such as a futures or swaps market exchange regulated by the Commodity Futures Trading Commission (CFTC). This is not always the case: for example, we have investigated manipulation in which the financial benefitting position is within FERC markets. But, often, the physical trading occurs in FERC markets and the benefitting position is established outside of FERC markets.

We have numerous public examples of market manipulation that fit into this general description (and many others that remain non-public). The public matters are either in the form of settlements or “Order to Show Cause” proceedings in matters that have not settled and may be headed to trial. In either case, the settlement or other order sets forth a description of the facts and a discussion of why the Commission concludes that the facts support a finding of market manipulation. (In all instances, the settlement or order will be published on the Commission’s website, at www.ferc.gov.)

A recent settlement fitting the manipulation framework above is our January 2013 settlement with *Deutsche Bank*. See *Deutsche Bank Energy Trading, LLC*, 142 FERC ¶ 61,056 (2013). Let me briefly describe the mechanics of the manipulative scheme here. Deutsche Bank held a type of energy contract commonly used to hedge against, or profit from, the “congestion” on a transmission line that occurs when, for various technical reasons, the line cannot carry all the electricity needed at a particular supply or delivery point on the grid. These contracts are often called Financial Transmission Rights or FTRs—though in the California Independent System Operator (CAISO) market at issue

in the *Deutsche Bank* matter, they are called Congestion Revenue Rights (CRRs). In early 2010, Deutsche Bank began to lose money on its CRR contracts. The company initially sought to limit its losses by purchasing new CRRs in the CAISO market to reduce its exposure to congestion. But these new CRR purchases did not fully cover its losses. So Deutsche Bank energy traders devised and implemented a manipulative scheme that involved buying and selling physical electricity so as to alter congestion levels, and resulting market prices, at the same point corresponding to their CRR contracts. These physical transactions (in addition to violating the CAISO tariff) were unprofitable and inconsistent with market fundamentals, but did have the effect of increasing the value (*i.e.*, by limiting losses) of Deutsche Bank's CRRs.

In short, to use the framework above, Deutsche Bank used a “tool” of physical energy transactions to “target” congestion levels and corresponding energy prices within CAISO in order to increase the value of CRR “benefitting positions”—in violation of EAct 2005 and the Commission's anti-manipulation rule.

A recent order also fitting this framework is the Commission's July 2013 Order Assessing Civil Penalties in *Barclays*. See *Barclays Bank, PLC, et al.*, 144 FERC ¶ 61,041 (2013). The Commission's assessment of civil penalties and disgorgement in *Barclays* will be reviewed in federal district court, so the litigation is ongoing and my comments will have to be limited. That being said, I can nonetheless provide a brief description consistent with published Commission orders.

Barclays and its energy traders amassed substantial positions of physical electricity contracts through their transactions on the IntercontinentalExchange (ICE)

trading platform. Barclays and its traders also assembled a financial swaps position at four important trading points in Western energy markets, whose value was pegged to published electricity price indices set by the physical electric contracts Barclays traded. The Commission found that Barclays engaged in manipulative physical trades to “flatten out” the physical electricity positions it had amassed on its trading books in a manner designed to influence the index prices that determined the value of its swaps. Barclays’s physical trading was uneconomic and not based on market fundamentals; indeed, the company often lost money in the physical markets. But Barclays’s physical trading nonetheless profited the company overall because its trades helped move the index price that set the value of its larger financial swaps benefitting position.

Fraud and manipulation can take other forms, and many of our manipulation matters, including with financial institutions, do not neatly fit within the tool-target-benefit framework described above. A notable example is the Commission’s July 2013 settlement with a wholly-owned subsidiary of JP Morgan which, among other terms, required JP Morgan to pay a combined \$410 million in civil penalties and disgorgement to ratepayers. See *In Re Make-Whole Payments and Related Bidding Strategies*, 144 FERC ¶ 61,068 (2013).

This settlement resolved the Office of Enforcement’s investigation into 12 manipulative bidding strategies designed to make profits from power plants that were usually out of the money in the marketplace. In these manipulative strategies, which are described in greater detail in the settlement agreement and order approving it, the JP Morgan subsidiary defrauded market operators in California (CAISO) and Michigan

(MISO) by making bids into these markets that were not grounded in the normal forces of supply and demand, and were expected to, and did, lose money at market rates. The JP Morgan subsidiary's purpose in submitting these bids was not to make money based on market fundamentals, but to create artificial conditions that would cause the CAISO system to pay the company outside the market at premium rates. Enforcement staff also determined that JP Morgan knew that the CAISO and MISO markets received no benefit from making these inflated payments and, thus, the company defrauded these market operators by obtaining payments for benefits they did not deliver.

The Subcommittee has also asked whether there are regulatory limitations on the Commission's anti-fraud and manipulation oversight efforts. There are two such limitations I would like to highlight today. The first concerns our ability to obtain certain financial data that is of great importance to our surveillance and investigation efforts. I have noted above that financial and physical natural gas and electric markets are interrelated—and have also noted that our surveillance screens, among other features, seek to detect anomalies in both physical and financial trading. But our surveillance program has limitations because we do not have access at present to certain financial data from the related financial markets. This missing financial data creates a gap in the Commission's ability to conduct effective and comprehensive surveillance of the natural gas and electric markets.

Much of the relevant financial data we seek is traded on markets regulated by the CFTC. Despite negotiations over several years, the CFTC has not yet provided FERC with access to the financial information and data our Office of Enforcement needs, except

on an *ad hoc* case-by-case basis. This obstacle prevents Commission staff from seeing the complete picture of what is occurring in its jurisdictional markets and from fully integrating the financial information into its automated screens. Although the Commission's screening program is robust and has enabled Commission staff to detect potential manipulation, this program would be improved with access to the CFTC data. However, earlier this month, FERC and the CFTC signed a Memorandum of Understanding that is intended to result in broader information sharing than currently occurs and is, therefore, a first step toward sharing appropriate data in a timely manner. It will be essential for the agencies to work together and to make an institutional commitment to, as well as the resources necessary for, the day-to-day, nuts-and-bolts implementation of the concepts established in this Memorandum of Understanding.

A second limitation follows from the decision by the U.S. Court of Appeals for the District of Columbia Circuit last year in *Hunter v. FERC*, 711 F.3d 155 (D.C. Cir. 2013). In *Hunter*, the court ruled that the CFTC's exclusive jurisdiction over futures contracts deprives FERC of authority to bring an action based on manipulation in the futures market, even if the activity affected prices in the physical markets for which FERC has exclusive jurisdiction. Although the Commission reads the *Hunter* decision as narrow in scope, some market participants interpret the decision more broadly to cover not only manipulation in the futures market, but also many additional transactions and products, including those squarely within FERC's jurisdictional markets. Accordingly, a legislative fix to eliminate uncertainty on this matter could ensure that FERC has the full

authority needed to police manipulation of wholesale physical natural gas and electric markets.

The Subcommittee has also asked about the potential market risks and economic consequences of financial holding companies' direct involvement in FERC-jurisdictional markets. The Commission has not taken any view on the participation in its regulated markets by financial holding companies (or any trading firm, bank, or other financial institution) versus more traditional energy companies like generators, utilities, or natural gas pipeline owners. Instead, the Commission's general view has been that financial institutions of all kinds, as well as energy companies of all kinds, can benefit markets in numerous ways, for example, by providing liquidity to market participants who may want to hedge their risk. However, the Commission expects financial institutions, like all other participants in FERC-regulated markets, to have good compliance programs, transact in a manner that follows market rules in letter and spirit, work cooperatively with grid operators and the Commission when there are concerns, and self-report potential violations. The Subcommittee has asked for information about written guidance the Commission has issued internally or otherwise regarding the direct activities of financial institutions in the energy market. I am not aware of any specific rules under our Federal Power Act ratemaking authority that would apply uniquely to financial institutions that participate in Commission-jurisdictional markets. However, any rules that govern those markets would apply equally to financial institutions as well, such as the rules governing the eligibility for market-based rate authority, rules prohibiting market manipulation, creditworthiness rules in the organized markets, and any tariff rules governing the

organized markets, including those regarding bidding into the markets. Further, financial institutions that are public utilities by virtue of their ownership or operation of jurisdictional facilities are subject to the requirements of section 203 of the FPA concerning the acquisition or disposition of jurisdictional facilities.

With respect to whether there are emerging trends, including fraud and manipulation associated with financial institutions' operations in the energy market, I note that banks and financial holding companies have generally played a role in the physical wholesale electric market. Based on year-to-date electric industry reports to the Commission, sales by banks and financial holdings companies represent 13 percent of total revenues for energy and "booked out power" (energy or capacity contractually committed for delivery but not actually delivered because of an offsetting trade). Moreover, full year electric sales by financial institutions were approximately \$15 billion in 2012, down from \$45 billion in 2008 for those companies, when sales represented approximately 20 percent of the market. Combined bank and financial institution revenues from electricity sales have declined during this time by tens of billions of dollars; Commission electric sales data, however, do not include sales in the Electric Reliability Council of Texas, which are non-jurisdictional.

Banks and financial institutions also play a role in the direct ownership of physical electric assets—owning less than 4 percent of total U.S. generator nameplate capacity (basically, the maximum rated output of a generator) as of June 2013. (Banks and financial institutions may have greater economic rights to revenues from generators

through leasing arrangements called tolling agreements; but the percentage of direct ownership has been relatively small.)

Banks also play a role in the ownership of U.S. natural gas storage facilities and pipelines. For example, financial institutions own less than 1 percent of total U.S. natural gas storage capacity and about 14 percent of total U.S. natural gas pipeline miles (both intrastate and interstate).

With respect to natural gas, FERC data shows that physical natural gas sales by banks represented about 6 percent of total U.S. reported sales in 2012, down from 8 percent in 2011. This decrease may be due to a combination of low volatility and low prices in natural gas markets, which has caused banks and other financial institutions to shift their capital to more profitable opportunities in other markets. Sales by non-bank financial institutions represented only 2 percent of total reported sales in both 2011 and 2012.

I would also like to note, because it is especially relevant to manipulative conduct, that the market share of a given bank or financial institution at a particular natural gas trading hub or electric market trading point could nonetheless be high and have a significant effect on the price formed at that hub or point. That is, banks and financial institutions as a whole may have a relatively lower percentage of sales and generation ownership interest compared to more traditional energy companies, but, as we have seen in our investigations, they may retain the ability to move prices in a manipulative manner.

In response to the Subcommittee's question about trends, I would also like to note that although the Commission has recently approved settlements and orders assessing

civil penalties against banks and financial institutions, in a few of these matters the manipulative conduct occurred several years ago, including as far back as 2006-2007. Also, now that the Office of Enforcement has had several years to implement a robust enforcement regime following EPOA 2005, the Commission is in a better position to promptly detect, investigate, and seek sanctions against fraudulent and manipulative conduct. In particular, I would highlight the surveillance efforts and sophisticated staff we have developed, as discussed earlier in my testimony. Given that the Commission's enhanced enforcement capabilities are relatively new, it is difficult for me to draw conclusions that there are emerging trends associated with financial institutions' potential misconduct in FERC-jurisdictional markets. Our recently announced manipulation matters, in other words, may be as much a product of our enhanced detection and enforcement abilities over the past few years rather than any uptick in manipulative conduct by financial institutions or other market participants.

The Subcommittee has asked for a description of our coordination efforts with other U.S. banking or financial market regulators. With respect to investigations, the Commission's Office of Enforcement has coordinated or shared information regarding various matters with other federal government agencies, in particular, the Department of Justice and United States Attorneys' Offices, the CFTC, the SEC, the Federal Trade Commission, the Federal Reserve, and the Environmental Protection Agency. Our coordination on investigations with the CFTC has been routine given the relationship between electricity and natural gas products traded on CFTC-regulated futures and derivatives markets and FERC-jurisdictional physical markets. Notwithstanding the

above-noted concerns over the need for greater information sharing, FERC and CFTC enforcement staff have worked together on manipulation investigations involving improper trading conduct. We have also worked with the Department of Justice and the Federal Reserve in providing information about investigations involving financial institutions. And we have consulted with the SEC enforcement office, particularly relating to “best practices” in market surveillance and investigative techniques and procedures. The details of our coordination between FERC and these agencies, including the information we have provided, is non-public under Commission regulations, but we are happy to report to the Subcommittee that we have worked with these other federal government regulators and will continue to do so as a matter of good government and for the good of our nation’s energy markets.

We are also happy to report that we are working with international regulators. In our discussions with them, they have commented on our innovation and leadership in market surveillance and oversight and in our use of sophisticated algorithmic screens to sift through vast amounts of trade data to detect potential manipulation in the wholesale gas and power markets. We have consulted with or provided technical assistance to regulators from a number of different countries, and we are exploring information sharing MOUs with international regulators. That being said, we are always looking for ways to upgrade our capabilities and to do our best to protect and to advance the public interest.

In conclusion, I want to thank the Subcommittee again for this opportunity to testify today.