Noha Sidhom, CEO of TPC Energy, LLC on behalf of the Power Trading Institute

Subcommittee on Energy
Committee on Energy and Commerce
U.S. House of Representatives

Hearing: Examining the Role of Financial Trading in the Electricity Markets

November 29, 2017

I. INTRODUCTION

Good morning Chairman Upton, Ranking Member Rush, and members of the Subcommittee. My name is Noha Sidhom, and I am CEO of TPC Energy, a privately funded power trading firm with a focus on Financial Transmission Rights ("FTRs"). I am here representing the views of the Power Trading Institute ("PTI"). PTI represents a very diverse group of energy market participants, ranging from large load serving entities, suppliers, marketers, privately held commodity trading firms as well as hedge funds with investments in the power space. Our membership represents billions of dollars of investment in these markets, and a common thread for all of our companies is that we rely upon the financial products that are the subject of today's hearing in managing our day-to-day operations. PTI's mission is to advocate for markets that are open, transparent, competitive, and fair – all of which are necessary attributes for markets to ultimately benefit electricity consumers.

II. FINANCIAL PRODUCT OVERVIEW

Similar to other commodity markets, there are many types of financial products that are utilized by market participants within wholesale electricity markets. These products range from the familiar standard futures contracts and their derivatives to more tailored products that are specific to the power industry. There are financial products that were created specifically as part of the development and implementation of the organized wholesale electricity markets operated by the various Regional Transmission Operators

("RTOs") and the Independent System Operators ("ISOs"). All of these products are utilized by market participants to achieve diverse commercial objectives, which include, but are not limited to, securing revenue for an existing or future electricity supply resource, locking in electricity supply costs for consumers, or developing a portfolio of products in order to provide risk management and hedging services to other market participants. The trading of financial products results in a more competitive, liquid, and transparent overall wholesale electricity market, which benefits consumers at the retail level.[1]

The specific financial products that are part of the RTO/ISO markets are Financial Transmission Rights ("FTRs"), which are products with tenors ranging from 1 month to 3 years depending upon the RTO/ISO, and virtual transactions, which are products that are transacted in the next-day electricity market. This overview will focus on FTRs,[2] which are entitlements to receive or obligations to pay congestion revenues or charges on specified transmission paths on the power grid.

To provide some background in order to understand FTRs, the value of transmission congestion is determined in the day-ahead and real-time electricity markets through a complex optimization process of balancing electricity supply and demand while honoring the physical and reliability constraints of the power grid. Simply put, congestion reflects the increasing value of transmission as more and more power flows across the lines from power supply resources to the customers consuming electricity. A good analogy is a toll road where the tolls increase during rush hour; as road capacity becomes tighter with

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[1] *See, e.g.*, Thomas, et al., *Electricity Customer Choice in Ohio: How Competition Has Outperformed Traditional Monopoly Regulation*, Cleveland State University (2016), *available at* http://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?article=2420&context=urban_facpub; Compete Coalition, RTO and ISO Markets are Essential to Meeting our Nation's Economic, Energy and Environmental Challenges (2014).

[2] Long-term financial contracts are referred to by various names, Financial Transmission Rights, Congestion Revenue Right and Transmission Congestion Contracts, in the different organized markets but they operate in essentially the same manner.

more commuters driving to and from work, the price to use that road increases. The same is true for electricity flow across the power grid.

FTRs are directional; that is, a holder may purchase a right from point A to point B on the grid. If power flow originates at point A (think of this as a generator) and terminates at point B (think of this as a city), and there is congestion between point A and point B, the holder of the FTR is entitled to receive that congestion value.[3] However, if the holder owns an FTR in the opposite direction (from point B to point A), the holder is obligated to pay the congestion value that exists from point A to point B.

FTRs are purchased in an open and transparent auction that is conducted by each RTO/ISO. Market participants compete by submitting bids for a specific megawatt quantity of FTRs on the transmission paths made available in the auction. The auctions are conducted on a forward basis. For example, an auction for FTRs that span an entire year is run prior to the start of the year. There is a finite number of contracts that are auctioned off based upon the expected capability of the system. Each RTO/ISO uses an algorithmic model to determine who is awarded FTRs and at what price. The proceeds of the auction are distributed primarily to load serving entities, who supply electricity to consumers.

The competitive process of the auction provides the incentive for a market participant to bid economically in order to be granted FTRs. The results of each auction are made public to all stakeholders and what is unique to FTRs is that the owners of these contracts are also made public. Therefore, anyone can visit a particular RTO's/ISO's website to see which entities were awarded contracts and the prices associated with those contracts. These prices represent the forward price of congestion.

[3] RTOs/ISOs calculate prices at specific locations on the grid. The difference in prices between two locations on the grid, after adjusting for the value of electricity that is lost across transmission lines, is the value of congestion between those two locations.

From the inception of the organized markets, the Federal Energy Regulatory Commission ("FERC" or "Commission") directed the creation of FTRs as a means to provide open access to the transmission grid. The FTR product was approved nearly two decades ago by the Commission.[4] FERC found that FTRs "provide an effective method of protecting against incurrence of congestion costs when suppliers engage in transactions that use their firm transmission service reservations."[5]

Congress' recognition of the value of FTRs is most notable in Section 217 of the Energy Policy Act of 2005 (the "native load" provision). Through Section 217, Congress directed FERC to:

> *exercise the authority of the Commission under this Act in a manner that … enables load-serving entities to secure firm transmission rights (or equivalent tradable or financial transmission rights) on a long-term basis for long-term power supply arrangements made, or planned, to meet such needs.*

Further, Congress demonstrated its commitment to forward pricing in the organized markets by directing FERC to undertake a rulemaking to implement long-term FTR auctions, Order No.681,[6] and we think Congress was correct and forward thinking to support long-term auctions.

III. FINANCIAL TRANSMISSION RIGHTS ARE KEY FOR CONSUMERS

FTRs are inextricably linked to the underlying delivery of power to customers, and they are integral to shielding consumers from the price volatility that comes with having to perfectly balance the grid every minute of the day. Today, a variety of market participants utilize FTRs in a variety of different ways to the benefit of consumers.

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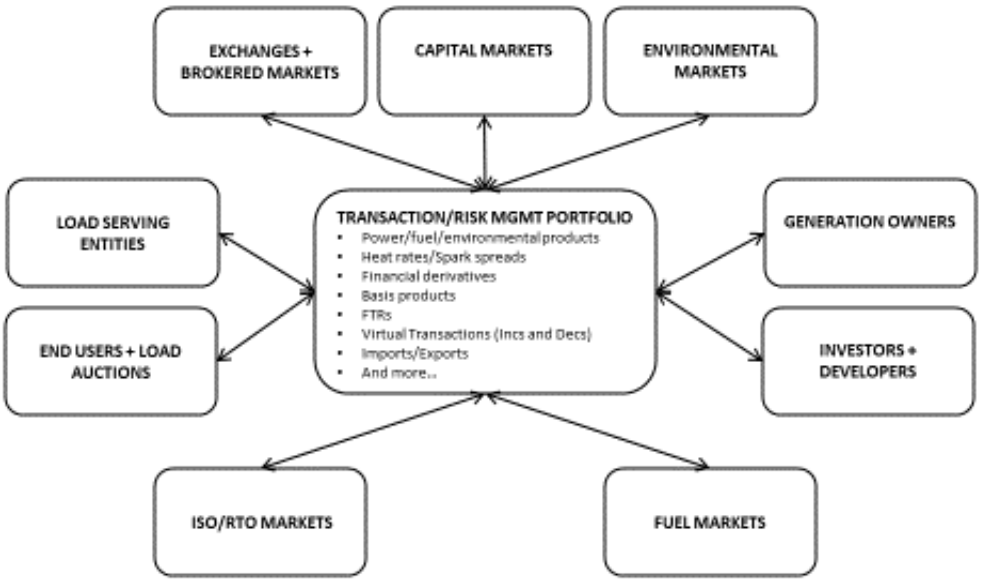
[4] Pennsylvania-New Jersey-Maryland Interconnection, 81 F.E.R.C. ¶ 61,257 (1997).
[5] Id. ¶¶ 62,257, 62,260.
[6] Long-Term Firm Transmission Rights in Organized Electricity Markets, Order No. 681, FERC Stats. and Regs. ¶ 31,226 (2006).

Load serving entities, who supply electricity to consumers, utilize FTRs to hedge the risk of the price of congestion when serving their customers. Generation owners and developers utilize FTRs to hedge their risk to price volatility in the power markets. Financial participants provide liquidity and competition in the FTR market, which contributes to maximizing the value of the transmission system, a benefit to load serving entities. Financial participants also utilize FTRs by including them in portfolios of diverse products to provide competitive risk management and hedging services to load serving entities, generation owners, and generation developers. Lending institutions who finance generation and transmission facilities often require use of FTRs and other bilateral transactions in order to hedge the risk of their investment. Without a proper forward price curve that is developed by forward congestion values from FTR auctions, suppliers, load serving entities, financial participants, and financial institutions would have to build in substantial risk premiums in order to be able to take on such significant risk without any type of hedging opportunity. This would effectively be a dead weight tax on consumers. Therefore, without FTRs, electricity prices would undoubtedly increase for ratepayers.

Financial Participants Play an Important Role in the Markets

Financial participants are positioned to offer a variety of transaction structures and risk management services to other market participants and provide liquidity and competition, all of which facilitate a robust market place. A robust market place is key in ultimately driving value for consumers of electricity.



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Another critical point to note is that the forward price signal that FTRs provide to the market leads to more efficient infrastructure development. The organized markets have to balance the need for additional infrastructure development with the cost of congestion. Does it make sense to build a new transmission line or a new plant in a particular region or pay for the cost of congestion in that region, if that would overbuild the system to the detriment of consumers? The only way to answer that question is to have a forward price curve where willing buyers and sellers take on economic risk and provide a forward price

[7] This figure demonstrates the various ways financial participants can be positioned in the market.

signal to evaluate the need for such infrastructure. It is important to note that the organized markets have not seen load growth over the past several years.[8] Overbuilding the system thus would be an unnecessary cost that consumers would bear for decades to come. The inextricable link between FTRs and the grid and the nature of their locational pricing make them a necessary tool for providing that balance.

You may be asking yourself, where does the money come from? Are the funds being paid to these FTR holders coming out of my constituents' pockets? The answer is a resounding no. Let's take a step back. The organized markets allocate FTRs principally to utilities that serve retail customers. These rights in total reflect the expected physical capability of the transmission system to deliver electricity; they are finite and their number is determined through analyses conducted by the organized markets. These finite rights are allocated to the transmission customers representing consumers that have paid for the fixed investment in the transmission system and are thus entitled to rights to the electricity transfer capability of this system. Transmission customers are allocated a certain number of contracts. How do we determine the value of these contracts that are provided to the transmission customer? It is important to note that only a percentage of these contracts are actually auctioned off, the majority are allocated. In fact, only the excess capacity is auctioned off in the FTR auction. The value of the allocated rights is then determined in the open auction. Bilateral contracts are also priced off of the auction price. Basically, this is a public auction of excess capacity.

When there is no liquidity in the open auction or competition to arrive at an efficient price, the value of that contract diminishes because parties build in a risk premium.

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[8] *See, e.g.*, PJM Interconnection, L.L.C., Where has Electricity Demand Growth Gone in PJM and What are the Implications? (2014), *available at* https://www.eia.gov/conference/2014/pdf/presentations/sotkiewicz.pdf; *see also* Analysis Group, Electricity Markets, Reliability and the Evolving U.S. Power System 27–28 (2017), *available at* http://www.analysisgroup.com/uploadedfiles/content/insights/publishing/ag_markets_reliability_final_june_2017.pdf.

Simply put, without a locational FTR market construct, there is no mechanism to price bilateral contracts or allocated rights.

In short, FTR auctions save consumers money in three key ways:

- They provide an accurate price for the contracts that are allocated to transmission customers representing consumers.
- They provide a price for the congestion on the grid to determine whether or not the cost of congestion is a more appropriate investment than the build out of additional infrastructure.
- They provide a price signal to lenders financing infrastructure development and thus reduce the cost of financing.

Some have argued that FTRs should not remain part of the RTO/ISO paradigm and that they should be traded outside the electricity market construct on a separate exchange. As discussed above, however, these rights are inextricably linked to the transmission system. The pricing of these rights is utilized in the transmission planning process; the number of rights allocated shifts based on the physical capability of the grid in a manner only the RTO/ISO can model and alter. And only the RTO and ISO can reconfigure the actual right, meaning they can change the path from A to B to A to C, if that is the more appropriate configuration that needs to be priced and allocated. In fact, FERC recently opined on the reconfiguration and reallocation of rights in PJM. Historical rights that were not reflective of the current transmission system were being allocated and that was causing distortions in the modeling and pricing. FERC mandated that PJM update its allocation process to allocate rights based on the current system and clearly stated that there is no evidence that the FTR market warrants a redesign.[9] Only the RTOs/ISOs can model the physical system constraints that will be applicable for the period auctioned in order to determine an appropriate price based upon the preferences of willing buyers and

[9] PJM Interconnection, L.L.C., Order on Rehearing and Compliance, 158 F.E.R.C. ¶ 61,093 (2017).

sellers. In addition, FTRs are paid from day-ahead revenue that is not just an exchange of money between FTR traders but rather a blend of complex activity by all market participants, including generation owners and load serving entities. An exchange would not incorporate this activity. As a result, taking these products to an exchange separates rational congestion management activity from the economic activity to balance supply and demand on the transmission grid and would ultimately increase costs for consumers. From a legal perspective, such a divided structure would go against the core principles of Order No. 888,[10] the key FERC order instituting open access. Incidentally, this structure is being discussed in the California stakeholder process and stakeholders have voiced these very same concerns.

Lastly, a forward price curve increases innovation by providing a price signal for entrepreneurs to invest in new technologies. Without such a forward price signal, investors would find it difficult to develop R&D budgets to explore new technologies not knowing the potential future value of such an effort. The organized markets have demonstrated this consumer benefit because indeed they have been a breeding ground for innovation.[11] For example, the organized markets were key markets for developers of increasingly cost-effective renewable energy generation facilities; they were the test beds for pioneering storage technologies and customer distributed generation, efficiency and demand response resources. The structure of these markets was also a driving force behind companies supplying new and improved methods for measuring and tracking all aspects of the physical system providing increased transparency. Lastly, these markets, and these financial products specifically, have also promoted the emergence of a

[10] Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities and Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs. ¶ 31,036 (1996).

[11] PJM Interconnection, L.L.C., Resource Investment in Competitive Markets (May 5, 2016), *available at* http://www.pjm.com/~/media/library/reports-notices/special-reports/20160505-resource-investment-in-competitive-markets-paper.ashx ("PJM 2016 Resource Investment Whitepaper").

sophisticated financial sub-industry designed around the analysis of price and the forecasting of all major characteristics of variability and risk.

IV. BEST PRACTICES IN FTR MARKETS

Over the past two decades of implementing FTRs as a core component of RTO/ISO markets certain practices have proven to be successful and should be adopted in every market. We will address those best practices here but one thing we would like to stress to the Subcommittee is that at a broader level there needs to be a mandate for the RTOs and ISOs to evaluate and implement best practices, not just pertaining to FTRs but pertaining to overall market functions.

a. Long-Term Auctions Need To Be Implemented

We applaud PJM, New York and ERCOT for implementing a long-term FTR auction construct. PJM, New York and ERCOT are the only markets that have an FTR auction with a duration longer than one year. PJM and ERCOT have auctions going out as far as three years and New York has a two-year auction. This forward-looking price signal enables better price formation, more cost-effective infrastructure development, more efficient pricing of hedges and, as a result, consumer savings. However, none of the ISOs are in compliance with Order No. 681, which mandated auctions that cover at least a 10-year period. The logic behind the 10-year period mandate was to cover the planning horizon that is utilized in the transmission planning process. Specifically, Order No. 681 stated that:

> Long-term firm transmission rights must be made available with term lengths (and/or rights to renewal) that are sufficient to meet the needs of load serving entities to hedge long-term power supply arrangements made or planned to satisfy a service obligation. The length of term of renewals may be different from the original term. Transmission organizations may propose rules specifying the length of terms and use of renewal rights to provide long-term coverage, but must be able to offer firm coverage for at least a 10-year period.[12]

[12] Order No. 681, at 255.

While the RTOs and ISOs allocate rights to transmission customers for a 10-year period, they do not auction off FTRs for a 10-year period. The flaw with this paradigm is that there is no long-term forward price for that allocated right. This is akin to my giving you 10 shares of a stock and telling you I will tell you what it is worth in seven years. All of the FERC jurisdictional RTOs/ISOs should be mandated to come into compliance with Order No. 681 and implement long-term auctions. One to three year terms are simply not sufficient to provide liquidity for longer-term hedging or price discovery.

b. Allocation Of Congestion Costs Caused By Unplanned Outages Should be Evaluated

The New York ISO allocates congestion costs incurred due to unplanned transmission outages back to the transmission owner. As a result of this practice, New York ISO has far fewer unplanned outages and the transmission owners are diligent in communicating system maintenance to system operators. For example, as of November 26, 2017, PJM had 2,208 active and planned outages in total for the month; 1,178 were forced outages. New York, on the other hand, had 908 total planned or active outages for the month and only 243 forced outages.[13]

Market participants build a premium into their price for FTR contracts to manage the risk of these unplanned outages. New York ISO's approach to make those in control of the outage schedule accountable for the cost incurred to the system creates the right incentives, and based on the data, that economic incentive works. This practice also helps maintain reliability of the grid by communicating outages to the RTO/ISO in a timely manner. Every other RTO/ISO should be encouraged to follow a similar practice.

c. Options Contracts Should Be Made Available As A Risk Management Tool

[13] This outage information was obtained from Yes Energy, a third-party vendor, and only pertains to lines over 69 kV.

ERCOT is the only market that allows for the purchase of an FTR options contract at every path that is available for a traditional FTR contract. Options allow a market participant to limit their exposure by paying a premium for the option and locking in their downside to the transaction. Other markets have options for FTR contracts, but the availability of paths is very limited. Options are heavily utilized in ERCOT because they are an effective risk management tool. If all of the potential FTR paths were made available as an options contract, this tool would be utilized by market participants in every RTO/ISO to balance portfolios. A good way to think about this is comparing it to options in the equities market. Imagine if you were only able to purchase options of certain stocks but not others. In other words, the equities market would allow you to pay a premium for certain stocks but not others. This biases price discovery and limits a market participant's ability to manage risk by paying a premium to better manage downside risk.

V. CHALLENGES FACING MARKET PARTICIPANTS IN THE FTR MARKETS

The FTR markets are robust and there is increased liquidity year over year. To reiterate, the Commission recently noted that there is zero evidence that a redesign of the FTR markets is warranted.[14] That being said, there are challenges both in the FTR markets and in the markets in general that impact the way the FTR markets function. We address those challenges below.

a. Lack of Transparency in Outage Scheduling

[14] *See* PJM Interconnection, L.L.C., Order on Rehearing and Compliance, 158 F.E.R.C. ¶ 61,093 (2017) ("[T]he Market Monitor and Joint State Commissions reiterate the proposal . . . that the Commission should support a market redesign to ensure loads receive all congestion revenues. We reject the arguments that the sole purpose of FTRs is to return congestion revenue to load and the market should therefore be redesigned to accomplish that directive.").

As demonstrated above, there is a lack of transparency regarding the scheduling of outages. This lack of transparency costs consumers money because market participants have to build in a risk premium into their transactions to account for this prevalent practice of unplanned transmission outages. The New York ISO's practice of allocating costs caused by an unplanned outage back to the transmission owner and thus decreasing the number of unplanned outages clearly demonstrates that this problem can and should be solved.

b. Network Model Updates Are Not Consistent or Transparent

Market participants have very little transparency into updates to the network model that significantly impact the pricing of FTR contracts. Each ISO has a different practice for releasing model updates and they are often not released in a timely manner. Furthermore, often the amount of capacity that is auctioned off is drastically different from the prior auction with no notice and no transparency into the changes being made to the model. A consistent schedule for all of the RTOs/ISOs to release network model updates prior to FTR auctions would: (1) assist with more accurate price formation of the forward curve; (2) reduce any risk premium incurred by consumers due to this uncertainty; and (3) reduce pricing issues at the seams caused by disclosure of information in one market but not the other.

c. Revenue Adequacy Issues Have Been A Concern

The majority of the capacity on the system is allocated to load serving entities and excess capacity is auctioned off in FTR auctions to value both the allocated rights and the auctioned rights. The process of allocating the right-sized amount of capacity is not an easy one to get one hundred percent right, one hundred percent of the time. When too much capacity is allocated or auctioned off, there can be a revenue shortfall. In other words, there may not be enough day-ahead revenue to pay all of the holders of the transmission rights. At the outset, this is an issue a minority of the time. PJM experienced revenue adequacy issues from 2011 to 2014, but over the past 12 years, only three years

have presented significant revenue concerns.[15] In PJM from 2005 to 2012, total net congestion costs were $11.3 billion, while auction revenues were $11.5 billion, resulting in excess funding. This demonstrates that the current market structure provides an efficient means to entitle holders of the allocated rights to the full economic value of the whole transmission system. The Commission closely evaluated this issue and was clear in stating that a redesign was not necessary. The FTR market is operating as intended and returns value back to consumers.

That being said, a lesson can be learned from the revenue adequacy concerns voiced by state regulators and others. Unplanned transmission outages and modeling issues have been the primary causes of underfunding.[16] Revenue inadequacy is not caused by the FTR product but rather by market design flaws that need to be resolved. Without the FTR product you would lose the transparency that highlights these market design issues. And there is no other way to value the allocated rights without the FTR product. It is the only fair and transparent way to price congestion and provide open access. The open auction process is integral for consumers because it is transparent as to ownership and competitive as to price. However, these market design flaws do cost consumers money because they force investors to build in a risk premium. The more confident market participants are in the design of the market, the better value consumers will get for the allocated rights. This revenue adequacy issue presents an opportunity for both FERC and this Subcommittee to take a critical look at improvements that can be made to RTO/ISO processes to ensure that consumers are in fact protected from revenue shortfalls caused by market design flaws.

d. Price Formation Efforts At FERC Should Be Expanded And Expedited

[15] The planning periods of 2011-2012, 2012-2013 and 2013-2014 were revenue inadequate by over 15 percent.

[16] *See* PJM Interconnection, L.L.C., Proposed Modifications to ARR and FTR Provisions, Docket No. EL16-6-000, at 7 (Oct. 18, 2015).

FERC has initiated several rulemakings over the past two years to improve price formation in the organized markets. The rulemaking regarding uplift allocation, which is essentially an out of market payment made to a unit that is called on in real-time to meet system needs, has not been finalized. In addition, the price formation docket was started in 2014, and the discussion regarding price formation has evolved significantly since that time. Today, we are discussing pricing attributes, not just environmental attributes but ramping capability and other functions that have become more integral as technology improvements have been made. These elements need to be folded into the discussion at FERC. In 2012, FERC held a technical conference on capacity markets and all of the economists called on to testify at that conference stated that the Commission should focus on getting the prices right in the energy markets. At that time, approximately ninety percent of the revenue in the wholesale market was earned in the energy markets. Today, approximately seventy percent of the revenue is earned in the energy market.[17] FERC has not taken speedy action on price formation issues and that has exacerbated some of the concerns voiced by generators that they cannot recover their costs. Expediting efforts to improve price formation in the wholesale market to provide a more transparent cost of delivering power would greatly benefit consumers and market participants.

e. The Technology Utilized By The RTOs/ISOs Needs Significant Improvement

Another significant challenge faced by market participants is the inadequate technology utilized by the RTOs/ISOs. Many of the systems utilized by these organized markets have not had a significant upgrade in over a decade. PJM, MISO, and CAISO have all experienced significant issues in solving their FTR models over the past several years. Most notably, PJM was recently a week late in solving its auction and did not solve until the settlement month began. In other words, market participants were incurring

[17] Monitoring Analytics, LLC, State of the Market Report for PJM, Vol. 2: Introduction, at 16-17 (Mar. 9, 2017), *available at* *http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2016/2016-som-pjm-volume1.pdf*.

profits and losses but did not know which positions they had been granted in the auction until several days into the settlement month. This does not occur in any other commodity market.

Some RTOs/ISOs have suggested eliminating products, reducing transaction volume of certain products or have not implemented products suggested by their market monitors due to technology constraints. What this really means is that we are hindering price formation and liquidity in the market in the name of inadequate technology. This practice cannot continue. Large financial institutions as well as our intelligence community all process significantly larger sets of data in a small fraction of the time demanded of the RTO/ISO markets. The technology is out there and given the critical nature of our energy infrastructure to the United States economy, we should be deploying the most advanced technology practicable. In addition, there should be some level of transparency as to hardware and software upgrades made by the RTOs/ISOs to ensure that upgrades are occurring as necessary and that funds are being deployed in a manner that benefits consumers. Several years ago, the Department of Energy ("DOE") provided a $3 million grant to MISO to improve its day-ahead solution time as part of an effort to improve gas and electric market coordination. The goal was to allow for improvements so that MISO can release commitment results earlier and allow market participants to have that information prior to the close of the gas nomination cycle. Stakeholders have not been informed of how those funds were utilized and what improvements have been made to the day ahead engine. PTI is aware that PJM was also involved in that effort, but to our knowledge, a set of best practices or potential improvements has not been shared. It is our belief that more transparency regarding technology upgrades as well as additional information sharing between the RTOs/ISOs would result in better operation of the markets and save consumers significant dollars.

f. Procedural Changes Could Improve An Already Robust Enforcement Program

PTI strongly believes that FERC must have a robust enforcement program that has the tools necessary to prosecute bad actors in the market. None of our members want to engage in and deploy significant capital in a market that is not rigorously policed. And indeed, these markets are adequately policed with multiple layers of protection. First, the Market Monitor in each RTO/ISO has a wide latitude of discretion to request information regarding a market participant's transactions, provide guidance, make recommendations and refer cases to the Office of Enforcement. Second, FERC's Office of Enforcement has more than doubled in size over the past eight years and has been extremely active in policing the markets. Lastly, while the CFTC exempted financial transactions in the RTO/ISO markets from most of its statutory requirements, the CFTC made clear that it was not exempting these transactions from its enforcement authority.

Noting all those layers of protection, we think it is important to look at the number of investigations that do not result in any action by FERC. In 2017, while the Commission closed 16 investigations, 11 were closed without further action because staff concluded that the evidence did not support finding a violation. The 2016 Enforcement Report noted that the Commission closed 11 investigations with about half concluding no action was necessary.[18]

The 2017 Enforcement Report also noted two items of particular interest. First, the Commission conducted a full audit of a financial trading firm and concluded that no changes were necessary. Second, surveillance screens identified large, loss making virtual increment offers (INCs) at an RTO Hub placed by a market participant who held a leveraged FTR path sourcing at that same hub. The Division of Investigations contacted

[18] Staff of the Office of Enforcement, Fed. Energy Regulatory Comm'n, 2017 Report on Enforcement, Docket No. AD07-13-011, at 7 (2017); Staff of The Office of Enforcement, Fed. Energy Regulatory Comm'n, 2016 Report on Enforcement, Docket No. AD07-13-010, at 7 (2016).

the market participant and was informed that the entity held a tolling agreement with a generation facility in the RTO and that the contract priced against the real time locational marginal price. The market participant explained that the observed INCs covered a period of a planned outage, and that the virtual position shifted a non-leveraged real-time position to the day ahead market where the market participant hedged commodity risk. After verifying the information, the Commission closed the case. We note these examples to highlight that the nature of these transactions is complex, and thus they may lead to more of a dialogue with the Office of Enforcement, but this does not translate into ill-intended behavior in the market by financial participants.

Enforcement efforts come at a cost to market participants and ratepayers. Over the past five years, the Commission has gone from a compliance approach to its enforcement program to a surveillance approach. This change in dynamic has chilled the open dialogue that once existed between enforcement staff and industry. We believe simple procedural changes could be made to FERC's enforcement program to make it more effective for both the Commission and market participants. The first procedural change is requiring FERC staff to request the data prior to requesting the speaking documents (i.e., emails, IMs, employment contracts, etc.). The statute is a fraud-based statute with an intent element. One must establish fraud first and then go to the intent element. The speaking documents go to the intent portion and thus are not necessary until an analysis of the data has been completed to determine whether in fact bad behavior occurred. The speaking documents are also incredibly expensive to produce. There are many occasions where market participants have incurred millions of dollars of expenses producing speaking documents, only for enforcement staff to find no manipulative behavior in their review of the transactional data. These are unnecessary dollars spent.

The second procedural change is to allow for a non-public no-action letter process, similar to that available at other federal market regulators like the Securities and Exchange Commission and the Commodity Futures Trading Commission. Currently, FERC only has a public no-action letter process. The key issue here is that if a market

participant wants to vet a strategy with the Commission, the market participant must then share its proprietary trading strategy with all of industry. FERC has stated that it would like to share its insight on these strategies to benefit all of industry and provide more transparency. However, an easy solution for this would be to only make public information regarding strategies where the Commission declines to issue a no-action letter. In other words, if the Commission thinks the transaction is in a gray area and would not issue the no-action letter, then it should make the details of that transaction (not the market participant) public to place others on notice that it views that particular strategy as potentially manipulative market behavior. If the Commission grants a no-action letter, it should keep the details of that market participant's proprietary strategy confidential.

Third, the Commission runs financial screens across positions and when those screens are triggered, an investigation can be initiated. The Office of Enforcement should make those screens public. There should not be an effort to hide the ball. Getting access to such screens would help companies build out better compliance programs, facilitate discussion between enforcement staff and market participants regarding the transactional data, and shed light as to Enforcement's views on what is considered market manipulation.

Fourth, the Commission should be encouraged by Congress to resolve enforcement actions as soon as practicable. Investigations sit idle for years making discovery more cumbersome and impacting businesses in a negative manner.

VI. CONCLUSION

Innovation and competitive prices for consumers are the core of our American economy. The Commission has spent the last two decades promoting these markets and the financial products that lie at the core of their creation. And these economic concepts have worked to the benefit of your constituents. The way they think about electricity has fundamentally changed, particularly over the last decade. Now we have to go the extra mile by:

- Ensuring market design flaws are fixed in short order.
- Maintaining competition by expediting price formation efforts and long-term auctions.
- Pushing the RTOs and ISOs to take on a much-needed upgrades of their hardware and software systems.
- Ensuring ISO/RTOs are implementing best practices and not delaying to the detriment of consumers.
- Maintaining a robust enforcement program at the Commission by making necessary procedural changes to re-open the dialogue between enforcement staff and industry to the benefit of consumers.

It is our responsibility as industry members to work with you and FERC to ensure that these markets remain competitive, liquid, and fair to continue to benefit consumers. We look forward to working on future improvements and thank you for the opportunity to testify here today.