

Market Power Monitoring and Mitigation in a World of Financial Transactions

Harvard Electricity Policy Group
Plenary Session

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The Balancing Act

- **Over-mitigating markets is bad for markets**
- **FERC originally approved demand curves in capacity markets in recognition that it was mitigating energy prices too much**
- **Political will to let energy prices send better price signals remains absent**
- **Failing to mitigate market power is bad for markets too**
- **Market power in physical energy markets can lead to decreased competition and liquidity in financial markets**
- **Bottom line—it's hard to get it right, but it's important to come as close as you can**

The Panel's Mission

- **The narrative for the panel has a bias which is readily corrected:**

“There are transactional arrangements other than ‘traditional’ physical load-serving or power sales obligations or transactions that can reduce or increase supplier incentives to exercise market power. These include various forms of ‘financial’ transactions, which do not physically transfer control over generation, but may nonetheless eliminate or increase the owner’s incentive to raise or lower market prices.”

- **It’s important to get it right in both cases. It is important to consumers. It is important for markets.**
- **The narrative also addresses incentives, but not market share calculations. This distinction is material.**

The Panel's Mission

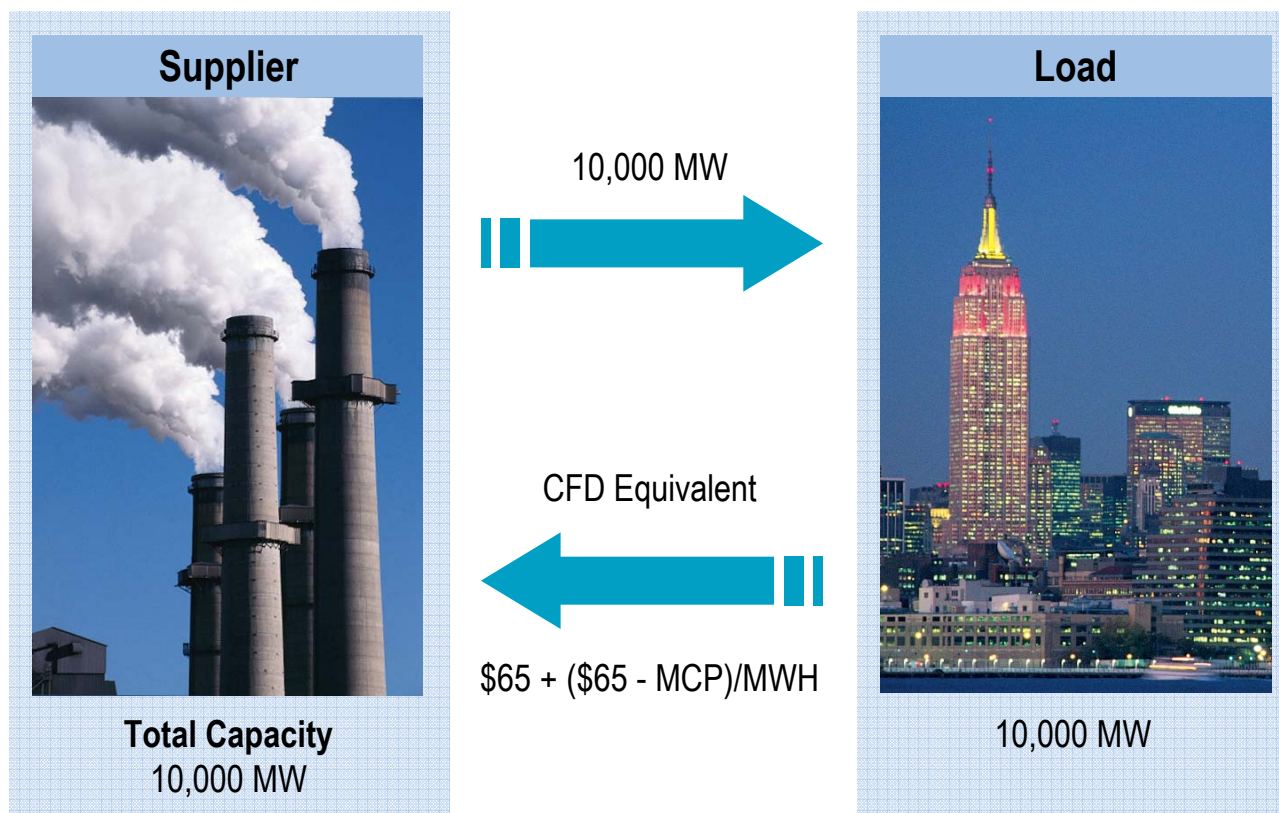
- **FERC's Uncommitted Pivotal Supplier and Uncommitted Capacity Screens used to determine whether to grant market-based rate authority does not recognize financial transactions as a "commitment" as it does for long-term physical supply commitments.**
- **One fundamental question for this panel is: If a utility enters a transaction that is the financial equivalent of serving load at a fixed price, but without a physical supply obligation, should this financial transaction reduce the utility's uncommitted capacity? (The transaction could be a contract for differences, a collar or some other financial instrument.)**
- **Take it one step at a time.**

Financial Transactions of Physical Suppliers: Incentives Versus Market Share

- **If a supplier has entered a financial transaction that places it in the same economic position it would occupy if it sold all of its capacity at a fixed price, then it would have no incentive to exercise market power.**

Financial Transactions of Physical Suppliers: Incentives Versus Market Share

Figure 1



Financial Transactions of Physical Suppliers: Incentives Versus Market Share

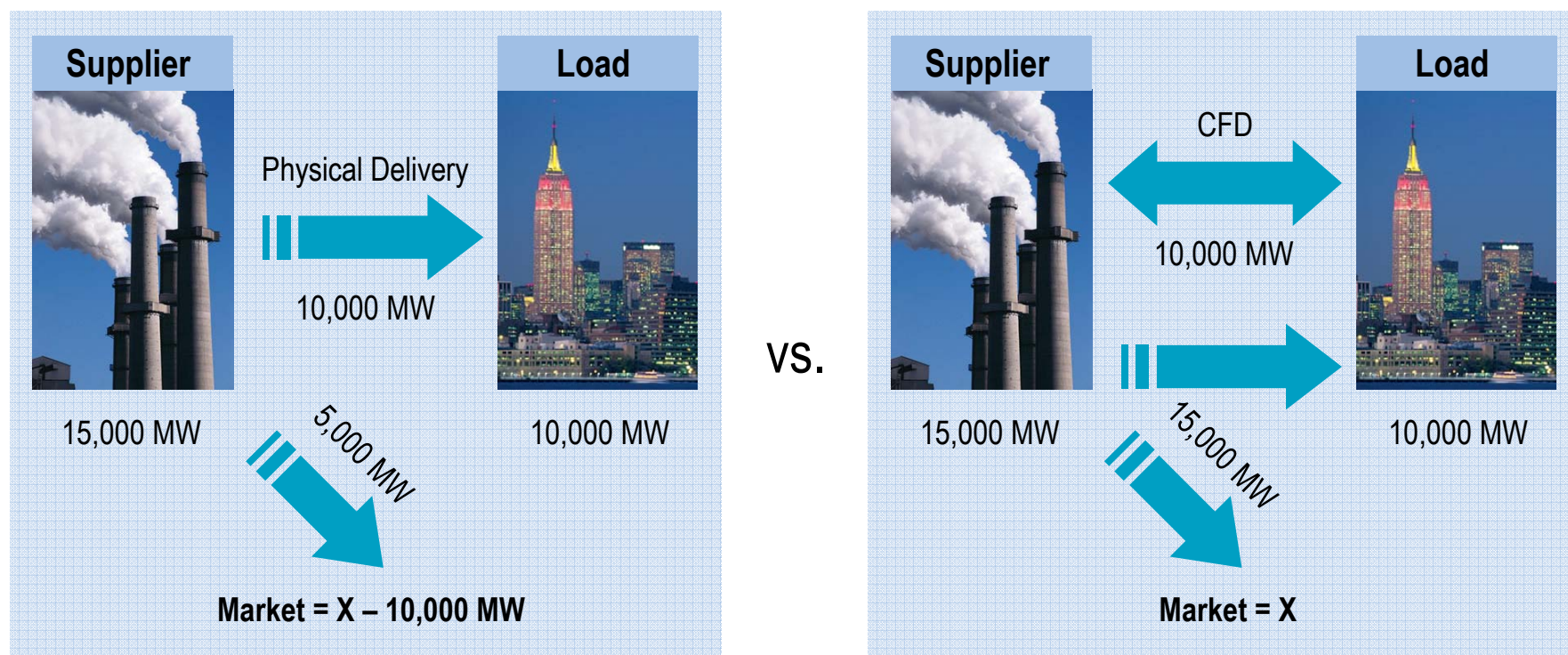
- **Whether physical or financial, the supplier has no incentive to raise prices. To the extent it raises prices, all of the “supra-competitive” margins go to the customer (Load) to bring the customer’s effective price back to \$65/MWH.**
- **The incentive to exercise market power associated with the 10,000 MW committed financially has been neutralized.**
- **If the supplier were a net purchaser or hedge purchaser to satisfy native load, and if the supplier had some economic skin in the game—market price risk, then it may be perfectly appropriate to treat the financial transaction as equal to a physical commitment.**

Financial Transactions of Physical Suppliers: Incentives Versus Market Share

- **What about the real world for a utility that is long?**
- **If the supplier has additional capacity, then the incentives to exercise market power may be present, and the manner in which the supplier sells all of its capacity may influence its ability to exercise market power.**

Financial Transactions of Physical Suppliers: Incentives Versus Market Share

Figure 2



Financial Transactions of Physical Suppliers: Incentives Versus Market Share

- It is true that the CFD or other similar financial transaction neutralizes the incentive to raise prices to the extent of the volume covered by the CFD. However, some questions remain.
- Will the supplier earn a return on all supplies not committed at fixed cost to the extent it can raise prices through market power?
- Will the supplier have more capacity to serve more load and more opportunity to engage in subtle withholding as a result of the financial transaction?
- Will the supplier have an easier time exercising market power if the 10,000 MW of load is not the subject of the supplier's physical delivery?

Implementation Issues

- **Assuming these questions are satisfactorily addressed, there are implementation issues which are important.**
 - **Should all other suppliers' financial transactions be deducted from their available capacity?**
 - **The denominators would shrink. How do you know this information for the other suppliers?**
 - **These questions would have to be addressed unless the financial transactions were tantamount to completely negating the financial incentives.**

Implementation Issues

- **Additionally, a fixed price commitment may be the subject of a secondary financial transaction which partially restores the incentive to exercise market power.**
- **Until these issues are addressed, it would not necessarily be appropriate to reduce a supplier's available capacity by the amounts of its forward financial commitments.**
- **In sum, there are many case-specific issues that should be addressed.**

Financial Transactions Can Increase the Profitability of Market Power

- Financial Transactions can be used in combination with physical transactions to enhance profits from the exercise of market power.
- A supplier that has market power in a particular region can raise the price of energy in that region. If it has purchased FTRs into that region, it will know that the FTRs will have increased value. If it purchases the FTRs after a period of lower congestion, which the supplier controlled, then it is guaranteeing itself the rewards of market power in energy and market power in congestion rents through FTRs.
- A supplier with market power may also impede competition and guarantee profits through lowering prices.
- Two cases currently pending before FERC involve such dynamics. One case involved natural gas markets and basis swaps and the other electric energy and TCCs/FTRs.

Financial Transactions Can Increase the Profitability of Market Power

- In *Energy Trading Partners* FERC found:

“...when a firm uses some combination of market power and trading activity, against its economic interest in one market, in order to benefit its position in another market by artificially moving the market price, the firm likely crosses the line into the realm of manipulation.”

Energy Trading Partners, L.P.,
120 FERC ¶ 61,086 at P 41 (2007) (“ETP”).

Financial Transactions Can Increase the Profitability of Market Power

- **FERC found that:**
 - **Intentionally selling substantial volumes of natural gas at low prices to depress prices at one location to guarantee returns in derivatives that were based on basis differentials (differentials in price between locations) raised troubling questions for FERC.**
 - **The Commission concluded:**
 - “Consumers are harmed when prices are set by manipulation. The harm from upward manipulation is immediate. The harm from downward manipulation is more long-term....Manipulated markets discourage trading, rendering them less efficient and raising costs to consumers....ETP wrongfully deprived counterparties of revenues they should have received but for ETP’s manipulations. Market manipulation is necessarily inconsistent with competitive markets.” [P 15]
 - **Of course, ETP vehemently denied any wrongdoing, and the matter was recently set for hearing.**

Financial Transactions Can Increase the Profitability of Market Power

- The second case, *DC Energy v. HQ*, involves use of market power to lower prices at one location that raised the value of TCCs (FTR equivalents) from that location to another higher-priced location.
- The incentive to cause prices to drop precipitously was the acquisition of a substantial number of TCCs in an amount equal to the limit of the congested interface.
- Competitors were harmed by the reduction in price while only the supplier with market power had sufficient financial positions in place (TCCs) to profit from the lowered prices.
- Consumers did not benefit from the lower prices because they had to pay the congestion component to the TCC holder.

Financial Transactions Can Increase the Profitability of Market Power

- HQ has vehemently denied wrongdoing and the matter is in investigation.
- Normally, TCCs that have substantial value in the form of forward congestion rent payments would bring substantial auction revenues, which benefit consumers.
- Not so when one party can turn congestion on or off. If other TCC purchasers bid more and win appreciable TCC positions, then the supplier with market power has no incentive to cause congestion. This creates a *heads I win; tails you lose* equation.

The Benefits of Financial Transactions

- **A word about financial traders**
 - **“Speculation” has unjustifiably come under fire.**
 - **Financial traders with no or minimal physical resources:**
 - Cannot exercise market power in the real-time energy markets; it takes physical resources to do this,
 - Have no ability to sustain market power in financial markets, such as the FTR market, because financial participants must compete with each other on a level playing field

The Benefits of Financial Transactions

- **Financial traders in the FTR markets add liquidity, competition and revenues to the markets**
 - Every time a financial trader wins an FTR, it does so by bidding more than others for an FTR. Absent these bids, there would be less competition for the FTRs and the auction revenues would be lower.
 - Lower auction revenues mean lower payments back to load serving entities or utilities—ultimately, this means lower revenue credits for customers
 - See e.g., NYISO Attachment H—an automatic revenue-crediting mechanism for TCC auction revenues to reduce the Transmission Service Charge
 - The NYPSC can reflect similar credits in establishing retail rates
 - **Cumulatively, financial traders add liquidity and competition to the market.**
 - **When FTRs are longer-term, this liquidity and competition will help to send more robust and accurate long-term price signals to help stimulate investment where and when needed.**

The Benefits of Financial Transactions

- **Virtual energy transactions arbitrage the difference between day-ahead and real-time prices and bring convergence between these markets**
 - **Virtual transactions add liquidity**
 - **Resulting convergence helps to reduce the day-ahead energy premium**
- **Virtual transactions effect prices, but cannot be the basis for exercising market power**
 - **Virtual transactions are not profitable unless they bring convergence between the day-ahead and real-time markets**
 - **Virtual trading which would cause divergence opens up profitable arbitrage opportunities for other market participants which will arbitrage the divergence away**
 - **The financial market is returned to a competitive state**

The Benefits of Financial Transactions

- **Virtual trading enhances efficient market outcomes**
 - **Convergence results in more efficient commitment and dispatch**
 - **In the MISO, when virtual supplies became potentially subject to uplift costs, virtual trading diminished substantially, and the day-ahead energy premium rose on the order of \$1 billion per year.**
 - Matter pending before FERC in Docket EL07-86

The Benefits of Financial Transactions

- **Why is market power bad for consumers and financial traders alike?**
 - Everyone knows the answer with respect to consumers.
 - An FTR investor arbitrages congestion differentials or LMPs at two discreet locations in the day-ahead market.
 - A virtual trader arbitrages the difference in price between the day-ahead and real-time markets at a single location.
 - These forms of arbitrage help the markets function more efficiently.
 - Any variable which imparts exogenous, unpredictable risk where competitive results do not occur, harms both forms of arbitrage, making the activity less predictable and riskier.

The Benefits of Financial Transactions

- Financial traders are the “*canary in a coal mine*” and can be a market monitor’s parallel warning system
 - They are interested in efficient results and monitor prices closely.
 - They tend to be sophisticated.
 - When inexplicable results occur, they are likely to have a financial interest in the outcome and raise issues before many others see anomalies.
 - When financial markets are thriving, it is a sign of the competitiveness, efficiency and transparency of the markets to which they relate; but when related financial markets are not robust, it is an indication of a serious problem – such as market power, structural issues, defective market rules and/or a lack of transparency.

Advice to Market Monitors

- **Market power is bad for competitive markets, including financial market participants.**
- **Transparency and the sufficiency of timely information will facilitate detection of faulty market rules, market power and market manipulation.**
- **Consistent application of market rules is critical to efficient markets.**
- **In FERC's proceeding on improving organized electric markets (Docket No. RM07-19), all of these points are in play.**

Advice to Market Monitors

- **Encourage transparency where there are no meaningful risks of price signaling.**
- **Foster consistent application of market rules.**
- **Consider the impacts of market power on FTR markets and consider the incentives that FTRs may create for substantial physical suppliers.**
- **Be receptive to financial positions serving to ameliorate the incentives to exercise market power, but scrutinize closely the ability to exercise market power and the potential for residual incentives which may complement the forward financial positions.**
- **Do not allow financial markets that you administer to become the profit-enhancing tool of those with market power.**

About Your Presenter

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Stu Caplan has over 20 years of experience in the energy sector and advises clients on all aspects of energy markets and regulation. He has worked extensively with leading financial institutions in their energy-related business, including strategic counseling and litigation before the Federal Energy Regulatory Commission concerning organized energy markets. Mr. Caplan holds leadership positions within the energy bar (board member of the Energy Bar Association; former chair and current member of the Energy Committee of the New York City Bar Association) and has written and spoken extensively on energy market issues.

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