Testimony before the Senate Policy Committee

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Thank you for the opportunity to testify this morning. Six years ago, market prices for electricity and natural gas in western markets literally exploded. Prices quickly increased to multiples of comparable prices elsewhere in the United States and Canada. Although it is the sole responsibility of California's Independent System Operator to declare any system-wide emergencies, the integrated nature of the energy markets rapidly communicated the enormity of the crisis from Alberta to West Texas.

Market manipulators – even today – blamed the economic catastrophe on a drought in the Pacific Northwest and a capacity shortage. In fact, the drought occurred after the crisis, while investigations have been unable to document the shortage. In reality, physical withholding in gas and electricity deprived California of needed – and readily available – capacity. Fraudulent schedules and trading schemes shipped power out of California until the state declared a crisis, and then miraculously returned it at far higher prices. Imaginary loads and resources congested critical transmission lines, and imaginary transactions established contractual prices.

Enron occupied a central role in this western crisis. Its boastful traders used recorded phone lines and email in a casual fashion, and created detailed instructional presentations about their fraudulent schemes. Demonstrating a keen understanding of the western markets' lack of regulation, attorneys retained by Enron to judge the legality of one of its schemes observed:

> The Contemplated Transaction, though questionable on business, political, and social grounds, does not appear to be prohibited under current law. Moreover, even if the Contemplated Transaction is illegal under current law, it is highly unlikely that any prosecution would be successful, for want of necessary evidence.[1]

This was a prescient insight. It has taken years to accumulate the market information to prosecute Enron schemes. Even today, much market information in California is still kept from regulators, policy makers, and consumers.

[1] July 29, 1999 memo RE: Legality of Proposed Energy Purchase-Sale Plan. This memorandum discusses the legal status of a proposed large scale Ricochet scheme to be performed on Enron's behalf by PGE. Eventually, PGE rejected the scheme.

We now have a clear sense of the origins of Enron's widespread fraud and deceit. Evidence from a complaint filed by Enron itself indicates that the firm was effectively insolvent by 1999.[2] As a result, Enron's traders, operating in myriad locations, began to test market manipulations on a large scale. On the west coast, its traders hatched the Silver Peak scheme using California as a proof of concept. Simultaneously, the Project Stanley scheme was launched in Alberta. Unchecked, Enron was on a course to implement manipulation schemes in electricity and gas markets across North America.

Before the Senate Energy and Natural Resources Committee directed the Federal Energy Regulatory Commission to investigate Enron in 2002, federal and state regulatory responses were mostly passive. A year into the crisis – April 2001 – Chairman Patrick Wood finally implemented price controls in California. While the price caps quickly brought the crisis to an end, FERC expended relatively few additional resources on understanding the crisis. In fact, FERC lacked access to the information which would have enabled it to make informed decisions.

The Commodity Futures Trading Commission was also a passive player, due to an unfortunate policy decision made in 1993. At the urging of Enron and other energy companies, CFTC relinquished control of energy-base forward transactions. The two commodity exchanges subject to its regulation, the Mid-Columbia and Palo Verde NYMEX exchanges effectively ended operations in late 2000.[3]

Today, we understand that 78% of Enron's West Desk earnings resulted from forward transactions. The purpose of Enron's various market manipulation schemes was to promote an increase in long term prices – an increase that returned over a billion dollars in earnings on an enormous forward position that Enron accumulated just before the onset of the Western Market Crisis.

Just before the onset of the energy crisis, Timothy Belden, the now-convicted chief of Enron's West Desk, brazenly stated in an email:

> We long. Pricing keep going up. So far so good.[4]

Enron's forward position returned over a billion dollars in earnings during the Western Market Crisis. Its significance was so great that Jeffrey Skilling willingly lied about it in his criminal trial in Houston last month, characterizing the forward position as the equivalent of a "100 megawatt" plant. We now know that Enron's speculative position was larger than 1,000 megawatts in the summer of 2000.

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[2] Reorganized Debtors' Fourth Amended Complaint For The Avoidance And Return Of Preferential Payments And Fraudulent Transfers, Equitable Subordination, And Damages, Together With Objections And Counterclaims To Creditor Defendants' Claims, January 10, 2005.
[3] Exemption for Certain Swap Agreements, 58 FR 5587, January 22, 1993.
[4] Email from Timothy Belden to Greg Piper, May 12, 2000.

The central policy question to ask in today's hearing is whether proactive regulation could have avoided the market crisis or mitigated the impacts on the west coast.

McCullough Research has compiled a report entitled, "Regulation and Forward Markets: Lessons from Enron and the Western Market Crisis of 2000-2001," copies of which have been provided to committee staff for review. This report addresses this question in some detail.

After a detailed evaluation, I believe the answer to the question is "yes." The CFTC had ceded much of its jurisdiction over energy trading in 1993. While retaining some authority over the two NYMEX forward markets at Mid-Columbia and Palo Verde, the commission issued a "no action" letter for the California PX's Block Forward Market. All three of these markets were eliminated in the course of the Western Market Crisis.

CFTC rules would have required Enron to first establish its solvency at the forward market exchange. In hindsight we know that its financial situation had become so severe by 2000 that Enron was involved in a multitude of criminal financial maneuvers from outright accounting fraud to arcane imaginary transactions in dark fiber, Brazilian power plants, and Nigerian barges. Any attempt to gloss over its financial predicament would have constituted explicit fraud under CFTC regulations and subjected Enron to CFTC sanctions. Contracts executed under fraudulent conditions would have been subject to CFTC regulatory review and recapture.

CFTC oversight would have subjected Enron to both the Large Trader Reporting and Speculative Limits market oversight programs. Enron's market share during the crisis ranged between 10% and 40% of markets across the west coast. Recently, in Texas, John Arnold, Enron's most profitable trader, chose to plead the Fifth Amendment concerning the details of a single forward gas contract. Of course, Enron traders frequently take the Fifth Amendment. In this case, this is vastly more significant since Mr. Arnold was responsible for forward gas transactions and contributed 21% of Enron North America's earnings in 2001.

CFTC oversight would have required Enron to register its electronic trading platform. EnronOnline was the largest such program in North America. Unlike competitors such as NYMEX, EnronOnline lacked the impartial computerized auctioneer that matched purchases and sales. Instead, the platform functioned simply as a graphical user interface between Enron's clients and its traders. A trader could unilaterally change quantities and prices, and even close the market entirely at his/her discretion.

EnronOnline's instructional manual is very explicit:

> The Enron trader maintains a Stack, so that if a transaction is completed by the customer, the next bid or offer in the Stack list will immediately appear to take its place. Different techniques can be used in building the Stack, depending on market objectives. It is possible, for instance, to have an entire Stack in which all of the prices and quantities are the same.

> Therefore, the "market" will not move, regardless of whether or not a customer "takes out" the entire bid or offer which is visible on their screen at any one time. An alternate strategy might be to build the stack with the same volume entries, but with prices moving up or down in defined increments. With this kind of stack, as customers complete transactions, the market will appear to move up or down, as appropriate.[5]

The anonymous author of this manual put the word "market" in quotes, indicating that while EnronOnline users saw a "market," in reality they interacted only with an arbitrary trader entry.

EnronOnline also included an unusual feature known as a "stop limit." This was equivalent to the maximum bid that a consumer enters on eBay but with one essential difference. On eBay the seller does not know the bid limit. On EnronOnline this critical customer information was made available to the trader.

Greg Whalley, President of Enron after Jeffrey Skilling's abrupt departure in August, 2001, made the expansion of EnronOnline a top priority. He envisaged using EnronOnline data to reverse engineer customer information and market intentions. The executive summary for this project states:

> EOL is a principal based trading platform, meaning Enron is the buyer (seller) when there is seller (buyer) who wants to transact on EOL. EOL provides market liquidity by making the bid-ask spread. However making the spread is not the only revenue source for running EOL. There is certain information asymmetry beneficial to Enron as the market maker:
> • Enron owns EOL trading database that contains detailed information about each transactions; trades can be aggregated according to different categories, for example, by commodity, by contract maturity, by counter party, by trading time interval, just to name a few. The informational advantage will allow us to explore market inefficiency and arbitrage across different products.
> • The time series recorded in EOL data base contains valuable information about supply-demand balance, market directions and volatilities, market correlations and cross-market correlations, trading habits and patterns.
> The EOL Data Mining project is aimed at taking the advantage of the information asymmetry and market inefficiency so as to predict the market conditions. The benefit of predictability is obvious, especially in the following aspects:
> • Predictability means profit. The ability to predict (even in a statistical sense) will give us an edge in trading and risk management.
> • Predictability will enable us to control and reduce the risk of market making.[6]

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[5] Enron Online Trader Manual, as submitted by Enron in response to FERC's March 15, April 23, and April 25, 2002 Requests.
[6] Executive Summary: EOL Data Mining Project, September 17, 2001.

Ominously, this project was part of a larger project known as the "Enron Perdition Model." I am undecided whether this was simply a spelling error or a tongue-in-cheek effort to describe this project that would lead to doom and destruction for Enron's clients.

Clearly, if Enron's forward transactions would have been subject to CFTC review, these ominous plans would have been checked as well.

Until spring 2002, FERC was forced to rely on anecdotal information and information supplied by market participants, including Enron.

The accuracy of the marketers' presentations varied considerably. For example, on August 22, Mary Hain, Enron's attorney stationed at its Portland, Oregon trading floor, gave a detailed presentation to FERC staff that blamed the crisis on both a drought and a resource shortage.[7] Meanwhile, her colleagues on the same trading floor were implementing Death Stars, Load Shifts, Fat Boys, Get Shorties, and Ricochets in an attempt to create the illusion of scarcity.

Manipulation of our natural gas and electricity markets is still an ongoing threat. For instance, in preparing our report, we uncovered a market anomaly concerning oil and gas futures. Last winter, the twelve month forward prices for natural gas increased while the twelve month forward prices for oil decreased. Since oil and gas are close substitutes, the divergence in forward prices should have provided an incentive for consumers to switch between the two fuels. However, the forward price differential continued for several months, and the divergence may even have proven costly for consumers who were attempting to mitigate their risk at the time.

Our report makes three recommendations:

1. **Transaction reporting on regulated exchanges must match the specificity and breadth of reporting in the Electric Quarterly Reports required by FERC.** Reporting half of the energy markets is not likely to forestall market manipulation nor enable detection once the manipulation has occurred. The CFTC's Large Trader Reporting program is a good first step, but smaller market participants can also engage in significant manipulations.

2. **The CFTC must be granted jurisdiction in order to make sure that electronic trading platforms must also be registered and regulated.** Absent consistent regulation, malefactors will pursue trades on unregulated platforms, effectively eliminating the protections that market participants require. Regulating only a few electronic trading platforms is similar to allowing some travelers to skip security checks. Everyone becomes less secure if obvious shortcuts around regulation exist. Moreover, evidence exists that suggests one form of market manipulation scheme prevalent during the Western crisis—known as wash trading—has already occurred on electronic trading platforms currently exempt from CFTC jurisdiction. Without consistent reporting and

[7] FERC Presentation on California/West Wholesale Market, Mary Hain, August 29, 2001.

transparency requirements, it is impossible for regulators to assess whether this activity has continued or spread to other commodity markets, which have recently shown substantial increases in trading volume and price volatility.

3. **The best insurance against manipulation and fraud is a transparent, open marketplace of information and ideas.** All evidence indicates that the regulatory actions taken after the Western Market Crisis were largely anecdotal. Enforcement occurred based on the revelations in PA02-2-000 and subsequent investigations by FERC. Open information would allow identification of trading schemes when they occur, and would diminish the often lengthy wait for enforcement.

Thank you for the opportunity to offer these recommendations to you today.