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CRS Report for Congress

Regulation of Energy Derivatives

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Summary

After the collapse of Enron Corp. in late 2001, that company's activities came under intense scrutiny. Much of its business consisted of trading financial contracts whose value was derived from changes in energy prices. Enron's derivatives trading was largely "over-the-counter" (OTC) and unregulated: little information about transactions was available. Trading in energy derivatives rebounded after a post-Enron slump, and much of the market remains unregulated. This "regulatory gap" strikes some observers as dangerous for two reasons. First, the absence of government oversight may facilitate abusive trading or price manipulation. A June 2007 report by the Senate Permanent Subcommittee on Investigations concluded that excessive speculation by the Amaranth hedge fund, which collapsed in August 2006, had distorted natural gas prices. Second, the failure of a large derivatives dealer could conceivably trigger disruptions of supplies and prices in physical energy markets (though the effect was minor in the Enron case).

On the other hand, federal financial agencies have taken the position, in hearings and written statements, that market discipline and self-regulation are sufficient to deter price manipulation, and that new legislation is not required at this time. The Commodity Futures Trading Commission (CFTC) maintains that it already has statutory authority to pursue fraud and manipulation, even in otherwise unregulated markets.

H.R. 594 would give the CFTC more authority over the OTC energy market, allowing it to require reporting of trade data necessary to prevent price manipulation. H.R. 3009 applies similar reporting provisions to natural gas trading. S. 577 would require the reporting of large positions in energy commodities by certain traders in the OTC market and on foreign futures exchanges (when such markets are accessible via terminals located in the United States). S. 2058 would authorize the CFTC to regulate exempt electronic trading facilities where energy commodities are traded. This report summarizes energy derivatives regulation and proposed legislation. It will be updated as developments warrant.

Energy derivatives — financial contracts whose value is linked to changes in the price of some energy product — are traded in several kinds of markets: the futures exchanges and the off-exchange, or over-the-counter market. The New York Mercantile Exchange (Nymex) offers futures contracts based on prices of crude oil, natural gas,

heating oil, and gasoline. (Other futures exchanges offer energy-related contracts, but Nymex is by far the busiest.) Futures exchanges — called "designated contract markets" — are regulated by the Commodity Futures Trading Commission (CFTC) under the Commodity Exchange Act (CEA). The CEA imposes a range of mandates on the exchanges (and on futures industry personnel) regarding record keeping (including an audit trail for all trades), registration requirements, market surveillance, financial standards, sales practices, handling of customer funds, and so on.

The second trading venue for energy derivatives is the off-exchange, or over-the-counter (OTC) market. Unlike the futures market, there is no centralized marketplace for OTC derivatives. Instead, a number of firms act as dealers, offering to enter into contracts with others who wish to manage their risk exposure to energy prices. OTC contracts based on energy products are generally exempt from regulation under the CEA, so long as the contracts are offered only to "eligible contract participants," defined as financial institutions, professional traders, institutional investors, governmental units, and businesses or individuals with more than $10 million in assets. The law assumes that sophisticated parties such as these do not need the kind of investor protection that government regulation provides for public customers of the futures exchanges.

In recent years, a hybrid form of market has emerged, which resembles the exchanges in that multiple parties can trade on an electronic platform, but which is largely exempt from CFTC regulation. These markets are known as "exempt commercial markets." They must notify the CFTC before they begin operations, and provide certain basic information about themselves, but they are not required to monitor trading or enforce CEA prohibitions against fraud or manipulation. The CFTC has limited jurisdiction over these exempt markets: it can take action against fraud and price manipulation. In addition, if the exempt market plays a significant role in setting commodity prices, the CFTC can require public disclosure of certain price and volume data.

To traders, whether they are speculating on price changes in search of profit or using derivatives to protect themselves from the price risk associated with producing or purchasing physical energy commodities, these markets are basically interchangeable.

Historical Development of Derivatives Regulation

In 1974, Congress observed that derivatives trading was about to expand from its traditional base in farm commodities into financial futures — contracts based on bonds, interest rates, currencies, and so on. To ensure that derivatives traders received the same protections whether they were trading pork bellies or T-bonds, P.L. 93-463 created the CFTC to oversee all derivatives trading, regardless of the nature of the underlying commodity. The CFTC was given exclusive jurisdiction: all contracts that were "in the character of" futures contracts had to be traded on a CFTC-regulated futures exchange.

There were two major exceptions to this exchange-trading requirement. Forward contracts, where actual delivery of the commodity would take place at the expiration of the contract, were considered cash sales and not subject to the CEA. Second, the so-called Treasury Amendment (part of the same law that created the CFTC) specified that

contracts based on foreign currencies or U.S. Treasury securities could be traded off-exchange. Existing markets in these instruments had long used futures-like contracts and appeared to function well without direct government regulation; Treasury saw no public interest in bringing them under the new CFTC.

During the 1980s, a market in OTC derivatives evolved, utilizing swap contracts that served exactly the same economic functions as futures. The first swaps were based on currencies and interest rates; later, OTC contracts based on commodity (including energy) prices were introduced. These OTC markets were well established before the CFTC made any move to assert its jurisdiction, despite the fact that swaps were clearly "in the character of" futures contracts. The potential CFTC jurisdiction, however, created legal uncertainty for the swaps industry: if a court had ruled that a swap was in fact an illegal, off-exchange futures contract, trillions of dollars in outstanding swaps could have been invalidated. This might have caused chaos in financial markets, as swaps users would suddenly be exposed to the risks they had used derivatives to avoid.

The CFTC issued a swaps exemption in 1989, stating that although it believed the CEA gave it authority to regulate swaps, it would not do so as long as they differed from futures contracts in certain enumerated respects. In 1992, Congress gave the CFTC additional authority to exempt OTC contracts (P.L. 102-546). In response, the CFTC modified the 1989 swaps exemption in 1993, and also issued a specific exemption for OTC derivatives based on energy products.[1]

Under the 1993 exemption, OTC energy derivatives would not be regulated if all trading was between principals whose business involved the physical energy commodities underlying the derivatives, if all contracts were negotiated as to their material terms (unlike futures contracts, where terms are standardized), and if all contracts were held to maturity (rather than traded rapidly, as futures are).

This exemption was a matter of regulation, not statute. In May 1998, the CFTC issued a "concept release" that indicated that it was considering the possibility of extending features of exchange regulation to the OTC market. The release solicited comments on whether regulation of OTC derivatives should be modified in light of developments in the marketplace. Among the questions were whether the existing prohibitions on fraud and manipulation were sufficient to protect the public, and whether the CFTC should consider additional terms and conditions relating to registration, capital, internal controls, sales practices, record keeping, or reporting.

The concept release drew strong opposition from the swaps industry and from other regulators, especially the Federal Reserve. In December 1998, Congress included in the Omnibus Appropriations Act (P.L. 105-277) a provision directing the CFTC not to propose or issue any new regulations affecting swap contracts before March 31, 1999. In November 1999, the President's Working Group on Financial Markets issued a report entitled "Over-the-Counter Derivatives Markets and the Commodity Exchange Act." The report recommended that, to remove uncertainty about the legal and regulatory status of the OTC market, bilateral transactions between sophisticated parties that do not involve

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[1] "Exemption for Certain Products Involving Energy Products," *Federal Register*, vol. 58, April 20, 1993, p. 21286.

physical commodities with finite supplies should be excluded from the Commodity Exchange Act; that is, the CFTC should have no jurisdiction. While the Working Group's report made a distinction between financial commodities and those with finite supplies, and suggested that continuing CEA jurisdiction was appropriate for the latter, the report did *not* recommend that the CFTC should rescind its exemption of OTC energy derivatives. In other words, the Working Group saw no immediate problem with the unregulated status of OTC markets in energy derivatives.

In 2000, Congress passed the Commodity Futures Modernization Act of 2000 (P.L. 106-554, H.R. 5660). That legislation established three classes of commodities. First, financial variables (interest rates, stock indexes, currencies, etc.) are defined as "excluded commodities," and OTC contracts based on these are not subject to the CEA (provided that trading is restricted to "eligible contract participants," that is, not marketed to small investors). Second, derivative contracts based on agricultural commodities generally cannot be traded except on the futures exchanges; these remain under CFTC jurisdiction. Finally, there is an "all other" category — "exempt commodities" — which includes energy products. Contracts in exempt commodities can be traded in the OTC market without CFTC regulation provided that no small investors participate. However, certain antifraud and antimanipulation provisions of the CEA continue to apply. If an OTC exchange is created — defined in the legislation as an "electronic trading facility" where multiple buyers and sellers may post bids and trade with each other — the CFTC has some oversight jurisdiction and may require disclosure of certain market information.

In summary, the OTC energy derivatives market developed outside CFTC jurisdiction in the late 1980s and early 1990s, despite the CEA's apparent prohibition of such a market. As with financial OTC derivatives, however, the CFTC never challenged the legality of this off-exchange market. As concerns about legal uncertainty mounted, the CFTC in 1993 issued an exemption stating that certain OTC energy transactions did not fall under the CEA. In 2000, Congress essentially codified this exemption, by including energy in the category of "exempt commodities." This removed them from even the possibility of CFTC regulation, except for a limited antifraud and manipulation jurisdiction and some oversight if the market for OTC contracts should evolve into an exchange-like market. Thus, the 2000 legislation did not deregulate the OTC energy derivatives market; that market had been unregulated since its beginnings.

Manipulation in Energy Markets

Since the value of derivatives contracts is linked to the price of the underlying commodity, traders who can manipulate commodity prices can reap huge profits. Manipulative strategies may involve either physical (spot) or derivatives markets, or both. Since the Enron scandal, regulators have taken numerous actions against several types of manipulation in energy markets.

In 2003, the CFTC charged Enron with manipulation of natural gas prices. The strategy was simple: Enron purchased an unusual number of contracts for spot gas, driving up prices by simultaneously increasing demand in the marketplace and making other traders think that there was some fundamental factor that favored higher prices. Enron settled CFTC charges by agreeing to pay a $35 million fine in 2004.

Ten energy companies have paid a total of $180 million in fines to settle CFTC charges that they manipulated natural gas prices in 2001 and 2002 by providing false data about supply levels to Platts, a leading source of information on energy market conditions. The affected Platts reports sent false signals to other market participants that supplies were significantly tighter than expected, and prices rose (sharply, but briefly) as a result.

Enron and a number of other firms have admitted to "gaming" the marketing system for electrical power in California in 2000, exacerbating price increases and shortages. The strategies included deceptive reporting of energy supplies on hand (to create the impression of shortages to drive up prices), disguising the source of electricity (to take advantage of variable pricing for in-state and out-of-state power), and in some cases actually closing power plants during times of tight supplies to drive up prices. Numerous firms and traders faced civil and criminal charges as a result of these manipulations.

Enron and other energy dealers engaged in widespread "wash" or "round-trip" trading of energy derivatives. Such trades essentially consist of two firms buying and selling identical contracts simultaneously, so that the net economic effect is zero. These fictitious trades served two purposes: (1) to create the impression that the OTC derivatives market was deep and liquid (to boost confidence in the market and encourage real trading) and (2) to create fictitious revenues that could be reported on the firms' financial statements, to disguise their true financial condition.

In August 2006, the Amaranth hedge fund lost $2 billion in natural gas derivatives, and liquidated its entire $8 billion portfolio. A June 2007 staff report by the Senate Permanent Subcommittee on Investigations ("Excessive Speculation in the Natural gas Market") found that the fund's collapse triggered a steep, unexpected decline in prices, and that Amaranth's large positions had caused significant price movements in the months before it failed. The report concludes that Amaranth was able to evade limits on the size of speculative positions (a key feature of the futures exchanges' anti-manipulation program) by shifting its trading to exempt and unregulated markets.

Legislative Proposals on Derivatives Regulation

Since Enron, the regulatory status of OTC energy derivatives has been much debated. In the 108th Congress, the Senate twice voted down proposals to increase the regulatory authority of the CFTC and the Federal Energy Regulatory Commission (FERC) over manipulative trading in energy markets, and to impose various reporting, registration, and record keeping requirements on exempt and OTC energy derivatives markets. These proposals were offered as amendments to a broad energy policy bill (S.Amdt. 876 to S. 14) and to an agriculture appropriations bill (S.Amdt. 2083 to H.R. 2673). Similar legislation was introduced in the 109th Congress (H.R. 1638 and S. 509).

In the 110th Congress, H.R. 594 would give the CFTC more authority to regulate the OTC energy market, including the power to require reporting of trade data necessary to prevent price manipulation. H.R. 3009 would impose reporting requirements on certain natural gas traders. S. 577 and S. 2058 would require the reporting of large positions in energy commodities by traders in the OTC market and on foreign futures exchanges that are accessible via terminals located in the United States. In addition, S. 2058 authorizes

the CFTC to establish core principles for exempt commercial markets like ICE, which would require them to monitor and enforce rules against manipulation.

To supporters of such legislation, the Enron scandal, the California electricity crisis, the Amaranth collapse, and other episodes of manipulation reveal a dangerous gap in regulation. They seek to fill the gap with enhanced CFTC or FERC enforcement authority, stiffer penalties for manipulation, enhanced regulation and self-regulation of exempt commercial markets, or new disclosure requirements for market participants.

Opponents argue that new legislation is unnecessary because regulators already have the enforcement tools they need to pursue fraud and manipulation. The consistent view of the CFTC and the President's Working Group on Financial Markets, expressed in testimony and written statements, has been that the rash of manipulations by Enron and other firms was an aberration that has been corrected by vigorous enforcement actions.

A key issue is whether the exempt status of OTC energy derivatives creates opportunities for manipulation. The charges brought by the CFTC, many of them involving several firms or traders acting in concert, suggest that manipulation is not a rare occurrence in energy markets. However, it is controversial whether manipulation (on the scale of what has been detected so far) has had a major impact on consumer prices. (An exception would be the California electricity case, but many believe that the half-deregulated market created in California was flawed and invited "gaming" of the system.)

It is worth noting that the OTC dealers like Enron and Dynegy — whose business was destroyed by scandal — have been replaced as market leaders not by other energy firms, but by financial institutions such as Morgan Stanley, Goldman Sachs, and ABN Amro. In addition, there has been growing use of clearing house mechanisms in the OTC market, providing another layer of market self-regulation.[2] A number of private firms, such as Optionable and ICE, have created electronic trading platforms to support transactions in both exchange and OTC markets, making OTC prices more transparent. Market forces, in other words, have swept away the OTC market that was evolving at the time of the Enron scandal. Of course, this change has not made energy prices more stable.

A second policy concern is that unregulated derivatives markets constitute a web of financial obligations that is invisible to regulators. If a major dealer defaulted, energy producers and users who had purchased derivative contracts to shield them from unfavorable price volatility could suddenly face higher than anticipated costs. In extreme cases, the failed dealers' trading partners could themselves default. The possibility of such a chain reaction is called systemic risk. However, Enron's failure had little impact on cash energy markets, despite the fact that it was the leader in the OTC energy market. As a result, there is no consensus as to the seriousness of the threat of systemic collapse, nor as to whether disclosure requirements and other regulation of OTC energy markets would make a crisis less likely to occur or allow regulators to deal with one more easily.

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[2] A clearing house, which guarantees payment on derivatives contracts, has an incentive to prevent manipulation and artificial price volatility, which increase the likelihood of customer default.