Risk Desk March 2004 Article on NECC

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Last year about this time we put together a 20-odd page special issue on clearing and clearing solutions. At the time, clearing was being ballyhooed as the latest saving grace for a flagging sector. No such luck. As we look around the market today, we note that it's short at least one electronic exchange, and about half of the upstart clearing solution providers have faded to black. One such provider, EnergyClear, seemed to disappear overnight. In any case, the market has marched on, often despite itself, with or without a clear favorite for cleared transactions. At exchanges that offer some form of clearing service – namely the ICE and NYMEX – volumes are indeed up for cleared contracts, but have not hit the lofty levels many had expected. There are a variety of reasons for this, which we will hash out in a future issue.

Recently we talked to Becky Kilbourne and John Flory, who represent an operation called North American Energy Credit & Clearing Corporation (NECC), a service Kilbourne describes as uniquely bridging physical and financial markets. Flory and Kilbourne say bridging those markets is the big problem with current clearing services. Is NECC the next big thing in clearing? Read on. The following is a commentary by Kilbourne on the state of the cleared markets and an introduction to NECC.
–the editor

North American Energy Credit & Clearing Corporation: Introducing a New Clearing Solution for Energy Markets that Bridges Physical and Financial Transactions

By Becky Kilbourne, North American Energy Credit & Clearing Corporation[1]

In a recent interview with *The Desk*, Tim Bourn of Epoch Energy Group aptly described the dynamics in today's energy markets:[2]

> "**I expect the financial side of the business to continue its shift from the energy merchants to the banks…The market will continue to be less efficient as physical participants continue to scale back or exit…This situation will continue to create significant liquidity concerns and inefficiencies… Credit and credit analysis will become an even bigger part of the business…These factors will continue the cycle of higher and higher credit requirements leading to higher barriers to entry.**"

Bourn defines a very real self-perpetuating problem in energy markets today of the growing gap between physical and financial markets. This problem is twofold: decreasing liquidity in forward financial markets and the migration of credit risk to power pools where individual companies have little power to monitor, mitigate or control it. The lack of information about and ability to control ITP pool risk presents a particular challenge to energy company CFOs and CEOs who now face fines, imprisonment or both for not disclosing material risks under the Sarbanes-Oxley Act of 2002.

To address the increasing difficulty of maintaining financial reliability without destroying liquidity in energy markets, the Committee of Chief Risk Officers (CCRO) recently described clearing as "far and away the greatest potential for advancement for the industry in terms of credit risk mitigation, improved liquidity and capital adequacy…"[3]

So, if clearing is so desperately needed in this sector, why exactly has no single solution managed to capture the market's attention? There is no simple answer. A few independent operations, such as EnergyClear, have come and gone. The few financial clearinghouses that are hanging in there have little or no activity on contracts slated for physical delivery.

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[1] Kilbourne can be reached at 626/445-0226.

[2] *The Desk*, Jan. 23, 2004, p. 4

[3] See pg. 25, CCRO White Paper Volume 4 of 6, "Credit Risk Management," Nov. 19, 2002 www.ccro.org/about.html.

The root of the problem is the lack of a clearing solution that bridges physical and financial markets.

This is where the NECC's proposition comes in. NECC offers a clearing solution that would be rooted in physical electricity markets as a means to overcome hurdles for physical market participants, thus expanding opportunities for clearing in both physical and financial markets. Specifically, NECC's clearing platform would provide a cost-effective means to remove essentially all the risk in pooled markets operated by Independent Transmission Providers (ITPs)[4], a multilateral netting platform that spans spot and OTC gas and electricity markets and a means to accelerate payment to energy sellers by a month while allowing energy buyers to maintain their current settlement cycle.

NECC's preliminary studies show that its proposed clearing platform would reduce credit (default) risk in energy markets cleared by as much as 90 percent. Further, depending upon the extent it is used for OTC and ITP markets, the platform could reduce cash collateral requirements by as much as 75 to 90 percent. Once it established a foothold in OTC and ITP markets, NECC's clearing platform could produce credible price information, which speaks to another current market need.

Who is NECC?

The NECC team is bringing together a unique combination of service providers, including The Clearing Corporation (formerly Board of Trade Clearing Corporation), to provide the engine and process for collateral management, and its clearing bank, Harris Bank, to provide the necessary cash clearing services for NECC; the Intercontinental Exchange (ICE), which provides the most extensively used over-the-counter electronic trading and confirmation platform for standardized forward energy contracts in North America, will receive and confirm trades; and Marsh& McLennan, the energy industry's leader in managing and brokering risk, will assist NECC in brokering credit risk to financial and insurance markets.

Bridging the Gaps – ITP and OTC Markets

Current energy clearing services are limited to offerings by financial clearinghouses that clear the equivalent of futures contracts of various tenors. While such contracts can cover a large portion of gas markets, they have not been successful in establishing a foothold in electricity markets. This is primarily due to the unique features and physics of electricity production and consumption that complicate seamless financial delivery. In the absence of a platform to clear physical markets, these financial products provide little or no benefit to predominant participants in the wholesale electricity markets – those who actually buy and sell the physical commodity.

A primary tenet of NECC's solution for bridging the gap between physical and financial markets is its foundation in regional electricity markets operated by ITPs. Because of factors described above, and because collateral is generally cheaper for borderline investment-grade entities, increasing amounts of credit risk are migrating to ITP markets. In 2001, two PJM market participants defaulted on payments totaling $4.1 million. Similarly, in early 2003, a retail provider in Texas defaulted on payment in the ERCOT market, resulting in litigation of a $15 million settlement that will take many years to recover. At the extreme, a confluence of events in 2001 forced the two largest utilities in California to default on billions of dollars in payments and led one of them to declare bankruptcy.

NECC can significantly reduce this potential risk while also providing an immediate critical mass of participants (all ITP participants) that, because of the potential to net positions, will be inclined to use NECC's clearing platform for their OTC electricity and gas market transactions. By having the initial capability to clear physical and OTC markets for both gas and electricity, NECC will be poised to provide unprecedented netting, freeing up significant cash critical to future infrastructure development.

Clearing Trades and Eliminating Credit Risk

Through a process involving novation, accelerated settlement and accounts receivable financing, NECC will accept and manage the credit risk, manage underlying collateral and transfer cash between buyers and sellers. Unlike any other clearing mechanisms available today, NECC's services will accomplish weekly settlement in OTC and ITP spot markets to sellers while allowing buyers to maintain their current monthly settlement cycle.

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[4] Also known as Regional Transmission Operators (RTOs) andIndependent System Operators (ISOs).

Alternatively, in markets where weekly settlements are being established, NECC can provide buyers a cost-effective option to make a monthly net settlement.[5]

As novater, NECC will assume and manage default risk currently born by OTC and ITP market participants. A patent pending Cash Flow Contract (CFC) will provide the mechanism for novation as well as subsequent netting. The CFC facilitates a exchange monthly cash flows for weekly ones. As a standardized swap instrument, the CFC facilitates unprecedented levels of netting between OTC and ITP markets and provides the strongest creditor protections available under the Bankruptcy Code – in particular an exemption from the code's automatic stay provision, the ability to enforce contract termination rights and the ability to enforce rights to receive margin and/or settlement payments.

Once transactions have been novated, the CFC provides the mechanism by which NECC can accelerate payment to sellers (within three days of the conclusion of a trading week) while allowing buyers to remain on the current monthly settlement cycle.[6] Then, NECC will use the CFC to transfer the bulk of the receivable risk (all but non-investment-grade entities) associated with a monthly payment from net buyers, by essentially "factoring the receivables" in highly rated international credit and insurance markets. Below-investment-grade entities will still post 100 percent cash equivalent collateral against their net position, but will have the option to buy customized insurance and/or credit swaps through NECC to offset cash equivalent collateral or make payments on a weekly basis to reduce cash equivalent collateral requirements.

In this way, NECC's clearing platform would reduce default risk by 90 percent simply by accelerating payment to sellers by an average of four weeks, while simultaneously laying off the buyers' default risk to deep and liquid credit and insurance markets. (See figure 1.)

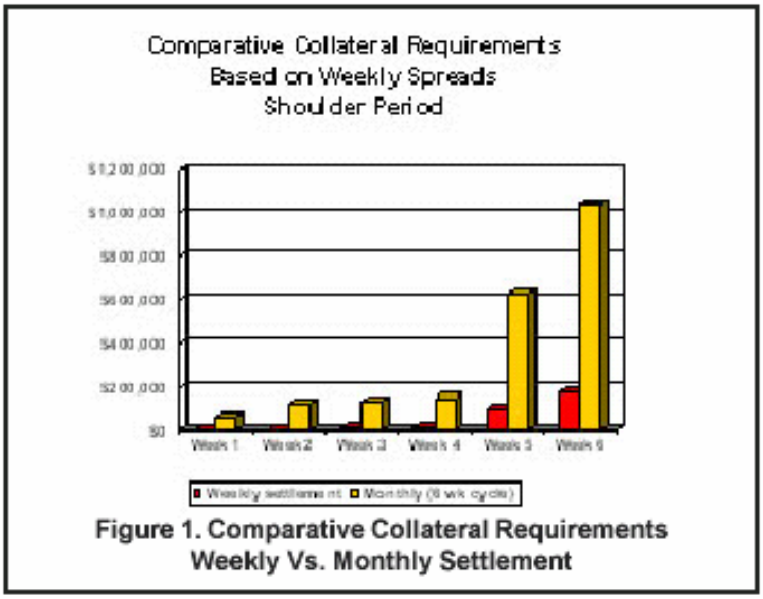

Figure 1. Comparative Collateral Requirements Weekly Vs. Monthly Settlement

Collateral Management/Physical Collateral

Having spun off the bulk of the default risk associated with a longer settlement period, NECC's default risk would be limited to one week for all investment-grade entities. During the delivery week, NECC will utilize

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[5] NEPOOL has recently approved measures to implement weekly settlement at ISO-NE.

[6] In the physical markets for energy, the purchaser under a spot or forward contract is normally required to pay for the commodity after it has taken delivery. If the purchaser receives the commodity within a given month under multiple spot and/or forward transactions with a single seller, as is often the case, the purchaser would make a single payment to the seller approximately 20 calendar days for electricity and 25 calendar days for natural gas after the month end for the total amount that it received from the seller that month. For electricity, for example, this means that the purchaser has approximately six weeks to pay for commodity it received during the first week of a given month, five weeks to pay for commodity received the second week, etc. Although gas pipelines and ITPs have similar payment cycles, the amount of exposure from non-payment is greater for ITPs than for pipelines due to the volatility and nature of ITP markets.

The Clearing Corporation's clearing platform to collateralize open receivable positions, those not covered by a physical position or netted against other gas and electric positions. Since the CFC would be settled weekly rather than daily, The Clearing Corporation's SPAN-based[7] clearing platform will incorporate CCRO best practices to account for credit risk in the collateral equation. Notably, The Clearing Corporation is the oldest clearinghouse in North American commodity markets. In its more than 75-year history as a clearinghouse, The Clearing Corporation has never had a default that negatively affected its non-defaulting clearing participants.

Because NECC will be rooted in ITP markets and have continuous access to scheduling, energy management and settlement information, it will be in the unique position to incorporate its participants' physical position in determining cash collateral requirements. In essence, a positive physical position (capacity in ITP bid stack, etc.) is like "physical collateral." The use of physical collateral provides two main benefits. It better values a participant's risk position (physical collateral increases and decreases in value with market price while cash does not), thus freeing up cash where appropriate; physical collateral also improves operating reliability should a credit default occur as the underlying fuel or power will still flow.

The NECC Value Proposition – Applying CCRO Criteria

In the earlier referenced white paper, the CCRO described the benefits of clearing, yet it acknowledged challenges for clearing OTC energy markets. At the time several entities claimed the capability to clear energy markets but none had traction, with the exception of NYMEX futures contracts and the London Clearinghouse behind the Intercontinental Exchange. While NYMEX continues to offer clearing for OTC contracts, there seems to be little use of this facility by physical market participants, particularly because they must post large sums of cash-equivalent collateral as the contract enters the delivery month.

The CCRO also concluded that the choice in front of the energy industry is to look to existing futures clearing infrastructure or look to new entrants to meet its current and future clearing needs.

The CCRO's white paper provided a list of criteria by which to assess a clearing platform. The table below compares the NECC clearing platform to CCRO's criteria.

Table 1. Comparison of Clearing Platforms—CCRO Attributes

CCRO Criteria	NECC
Stability/liquidity--legal enforceability	DCO status and unique bankruptcy protection allowing netting of ITP and OTC positions
Default protection	Financial markets and insurance absorb default for entire trading portfolio
Readiness	Seamless connection through ITP market; quick start-up capability
Costs including margin	No FCM requirement lowers total cost ; physical market transaction costs offset by time value of money to sellers; maximum netting potential to offset margin requirements based on the entire trading portfolio
Mark-to-market approach	Defined indexes for M-T-M
Member participation and control	Direct relationship with all participants
Open access	Unlimited trade sources; direct participation by ITP market participants, brokers and OTC trading platforms , enabling agreements available to non ITP participants
Proven ability	Extensive physical and financial experience in energy and other financial commodity markets; Clearing platform provided by The Clearing Corporation (formerly BOTCC)
Product offerings	A patent-pending standardized receivables contract provides unlimited product coverage and netting across ITP and OTC markets
Coverage of non-standard positions	Physical transactions incorporated as well as a variety of financial transactions

[7] SPAN is a registered trademark of the Chicago Mercantile Exchange.

What Chance Success?

Given the existing graveyard of energy clearing solutions, many will ask if this is just another bright idea with an ill-fated future. The NECC solution is different from the others in three major ways:

(1) **Bridging the gap between physical and financial markets.** Utilizing the Cash Flow Contract and rooting itself in physical ITP markets will allow NECC to net multilateral, multi-tenor and multi-commodity transactions to achieve greater capital and risk-management efficiencies than any existing or previous clearing platforms.

(2) **A unique team**. NECC is not starting from scratch with a new idea. It is creating a hybrid solution that draws from the best-of-breed operating partners in credit insurance, credit derivatives and commodity clearinghouses who already have substantial business in energy and financial markets.

(3) **Instant critical mass.** Because of its roots in physical markets, rather than forward or financial markets, NECC will achieve a critical mass of market participants at inception, a feat that other energy clearing platforms have not been able to accomplish. The main reason that NECC's solution will succeed lies in its design to fit the energy industry, embodying its uniqueness, rather than requiring the energy industry to reinvent itself to fit a preexistent commodity market model.

Capital Adequacy and ITP Pool Risk

In the Event of a Default Within an ITP Market, the loss is typically spread to the ITP participants through an allocation methodology prescribed in FERC-approved tariffs. But, while participants may know the percentage of loss they would be allocated in the event of a default, they do not know the amount of current and potential exposure in the risk pool of the ITP at any point in time.

This exposure presents a real problem – particularly for CEOs and CFOs of companies participating in ITP markets – in light of the Sarbanes-Oxley Act of 2002. The law essentially requires full disclosure of any risks that may have a material current or future impact on the financial condition of the company. Title IX of the Sarbanes-Oxley Act states:

> **"Each… financial statement filed…with the with the Securities & Exchange Commission…pursuant to [this Act] shall be accompanied by a written statement by the chief executive officer and chief financial officer… [which] shall certify that the…statements fully complies with [this Act]…and that information contained… fairly presents, in all material respects, the financial condition and results of operations… Whoever… certifies any statement…knowing that… the statement does not comport with all requirements set forth in this section shall be fined…or imprisoned… or both."** ***Sarbanes-Oxley Act of 2002, Title IX, White-Collar Crime Penalty Enhancements, Section 906, subsection 1350, Failure of corporate officers to certify financial statements, HR 3763***

CCRO provides guidance as to how credit risk should be considered and treated for financial reporting purposes consistent with methods deployed in the banking industry.[8] In its white paper the CCRO states: "To address the risk that losses could significantly exceed the expected loss in case of default, the company must allocate enough capital credit [on its balance sheet] to absorb the unexpected portfolio credit losses at some high confidence level."[9]

Figure 1. Application of Capital Adequacy for Credit Risk

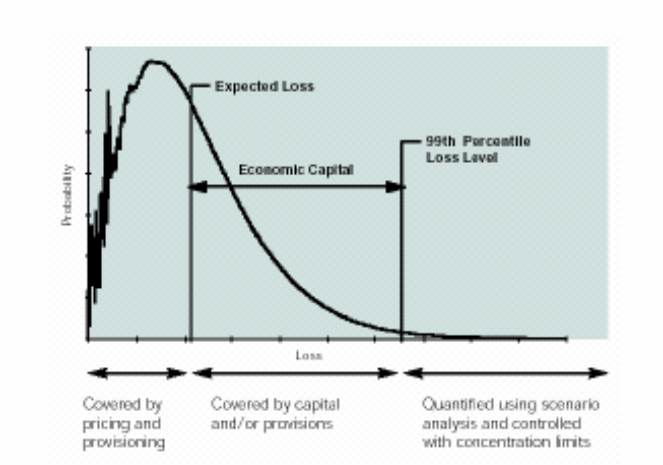

Figure 1 depicts capital adequacy implied by the CCRO whereby portfolio expected losses should be built into pricing decisions and potential loss or 'economic capital' reflects the need to hold capital (equity) against risk at a decided capital adequacy standard consistent with the Company's corporate debt rating.

To whatever extent the CCRO provisions are fully adopted by individual companies, participants in ITP markets have no way of knowing the ITP expected loss or economic capital for purposes of disclosure and controls. As seen in the California market, credit default at an ITP can have material impacts on all participants.

NECC's proposed approach to clearing the physical ITP markets would not only result in constant monitoring of the pooled risk in ITP markets, it would eliminate more than 90 percent of the risk through accelerated payment to sellers in conjunction with financing of the net receivables in "A" or better rated credit and insurance markets.

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[8] See Bank for International Settlements , The New Basel Capital Accord, visit their Web site: www.bis.org/bcbs/aboutbcbs.htm for additional information.

[9] Committee of Chief Risk Officers, "Credit Risk Management" White Paper, Nov. 19, 2002, p.16