Weekly Billing for TCCs

And Associated Changes to Holding Collateral Requirements

Michael Kramek
Edison Mission Marketing and Trading

Overview

If the market design stays as presently constituted the only product in the NYISO markets that will not be settled weekly are TCCs:

- Congestion rents payable to TCC holders will be paid on a weekly basis
- Payments for TCCs purchased in annual, six-month and monthly auctions must be paid in full at the time of the award
- Payments to TCC sellers or purchasers of negatively valued TCCs occur on roughly the same schedule
- The net auction revenues are paid out to the owners of the transmission grid at the time of the auction – TCC owners are effectively providing a 6 to 12 month float to the entities receiving the TCC auction revenues

Overview

Historically, this is a function of the fact that there was no balance of period auction so there was no way to value, or liquidate if necessary, positions that had been bought:

- The only way to ensure payment was to extract payment up front for all positions
- Positively valued TCCs would receive holding collateral offsets or credits to reflect the fact that the positions were by and large fully collateralized in advance of maturity
  - These holding collateral credits are only useable to offset holding collateral on other TCCs positions
  - They cannot be used as bidding collateral or to meet collateral obligations for other products in the NYISO administered markets
- Likewise, the holding collateral for negatively priced TCCs had a component that effectively returned the money paid in cash to the short positions as a holding collateral requirement
- Indeed the recently proposed changes to the collateral formulas formalize this more explicitly where the adjustment to the holding collateral is exactly the clearing price

TCC Credit Policy Update – May 23, 2011

NEW YORK INDEPENDENT SYSTEM OPERATOR

Proposed Updates to Part A

- Proposed enhancements to the formulas are as follows:
  - *Monthly*
    - $+2.221 \sqrt{e^{\,11.2682 + 0.3221(\ln(|P_{ijt}|+e)) + 1.3734 * Zone\ J + 2.001 * Zone\ K + Month}} \; -1\ P_{ijt}$
    - Where the month values equal the following:

January	0	July	0.5201
February	-0.0201	August	0.7221
March	0	September	0
April	0	October	0.32
May	0.8181	November	-0.7681
June	0.2835	December	0

  - *Six-Month*
    - $+2.565 \sqrt{e^{\,11.6866+0.4749(\ln(|P_{ijt}|+e))+.4856*Zone\ J - .0373\ Summer}} \; -1\ P_{ijt}$
  - *Annual*
    - $+1.909 \sqrt{e^{\,10.9729 + 0.6514(\ln(|P_{ijt}|+e))+.6633 * Zone\ J}} \; -1\ P_{ijt}$

17

Separation of Risk and Payment Obligation

Going forward with a balance of period auction in place it is possible to separate the payment obligation from the underlying volatility risks:

- The payment obligation, and payment schedule can be established in advance e.g. 1/365th of the total value each day (1/366th for a period with a leap year)
- The residual value of the portfolio can be assessed each time an auction is run and to the extent that the mark to market value of the portfolio is less than the payment obligation additional collateral can be collected to cover that differential
- This approach can be used for the entire portfolio not just individual positions

Example 1

The following example illustrates how this would work:

- Imagine an annual TCC for May through April bought for $365
- In the first monthly auction of that annual period the first month is valued by the auction at $10 and the balance of period value is $320.
- This would create a $35 collateral adjustment as the mark to market value falls to $330 ($320 + 10 against a $365 payment obligation)
- In the second month auction the monthly value is $25 and the balance of period value (for 10 remaining months) is $300
- The payment obligation has fallen to $334 as the payment obligation for May has been satisfied ($365 – ($1 * 31 days))
- The residual value of the position is $325 so $9 of collateral is still required and $26 of the $35 collateral held by the NYISO is returned to the TCC holder.

Example 2

This approach works equally well for short positions within a portfolio as well :

- Imagine an annual TCC for May through April “bought” for -$365
- In the first monthly auction of that annual period the first month is valued by the auction at -$20 and the balance of period value is -$400.
- This would create a $55 collateral adjustment as the mark to market value falls to -$420 (-$400 + -$20 against a -$365 payment obligation)
- In the second monthly auction the monthly value is -$20 and the balance of period value (for 10 remaining months) is -$340
- The payment obligation has fallen to -$334 as the payment obligation for May has been satisfied (-$365 – (-$1 * 31 days))
- The residual value of the position is -$360 so $26 of collateral is still required and $29 of the $55 collateral held by the NYISO is returned to the TCC holder.

Some Important Advantages

There are some important advantages of this approach:

- Aligns TCC auction settlements with payment of congestion rents
- Reduces transaction costs (single invoice) for TCC holders

- It looks at the entire portfolio so that mark to market gains in one part of the portfolio can offset losses in other parts of the portfolio

- If a constraint flips and the balance of period auction changes value it immediately impacts the collateral requirement

- The volatility risk that remains is the extent to which balance of period prices change, the original auction price that is used in all the collateral calculations is no longer particularly relevant

Some Important Questions

We would like the NYISO to take a look at this proposal and evaluate what other changes to the credit policy for TCCs may be prudent:

- If the portfolio is being marked to market each month is the same level of holding collateral required for six month and annual TCCs?
  - Our sense is that it could and should be significantly lower than the current levels for annual and six-month TCCs which assume no ability to re-value, no ability to liquidate, and are driven entirely by individual position auction clearing prices
- Should the new minimum participation criteria change the holding requirement?
- How to set up criteria to trigger liquidation of positions?