Enhancements to NYISO Creditworthiness Policies

Market Issues Working Group
Mary McGarvey, Vice President & CFO
Sheri Prevratil, Manager, Corporate Credit

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Credit Policy Enhancements – Status Update

- Summarize Market Participant meetings / activities occurring since most recent MIWG discussions on 4/1
- Discuss recent other ISO/RTO developments
- Discuss BOD feedback on weekly invoicing proposal
- Finalize remaining schedule/timeline

Background / Phased Approach

Background: Why modify credit policies?

Product-based Credit Requirements

- Over the last several years, NYISO has periodically reviewed and updated credit requirements by product/market (i.e. TCC bidding and holding requirements, etc.)
- With the automation of credit requirements via the Credit Management System, NYISO is revisiting all markets to seek opportunities to enhance current credit requirements via automation
  - TCC mark to market evaluation
  - Further stratification of Virtual Bidding
  - Energy market requirements currently under review

Entity-based Credit Requirements

- Since 2004, the NYISO has not revisited its policies for evaluating and monitoring Market Participant creditworthiness
- NYISO has reviewed its tariff provisions and determined several opportunities to enhance and improve current credit policies
  - Unsecured credit
  - Secured credit
  - Other enhancements

Background: Why modify credit policies?

- A Market Participant's creditworthiness can deteriorate quickly and severely, especially during times of financial uncertainty such as current unprecedented economic conditions

- Heightened concern regarding potential Market Participant defaults exists because of:
  - Diminished liquidity in capital markets
  - Increased borrowing costs
  - Challenges meeting pension funding requirements
  - Decreased overall profitability/liquidity
  - Potential increase in end-user defaults
  - Delayed issuance of earnings guidance adds additional difficulty in assessing the financial health of Market Participants

- NYISO has experienced "near misses", including Lehman Brothers and others, within the last year that easily could have resulted in significant socialized bad debt losses (NYISO and its Market Participants are fortunate to have avoided bad debt losses in recent economic conditions)

- NYISO's liquidity reserves (working capital and bank revolving credit facility) may not be sufficient to address magnitude of potential defaults.

Background: Meetings to Date

- NYISO, in conjunction with credit/risk management consultants, has developed a series of potential credit policy enhancements for Market Participant consideration. These enhancements have been grouped into phases and have been discussed to date at the following Market Participant meetings:

3/25/08 BAWG	[kickoff to weekly invoicing]
6/26/08 BPCTF	[weekly invoicing]
7/29/08 BPCTF	[weekly invoicing]
9/08/08 CPTF	[kickoff to credit policy enhancements]
9/29/08 BPCTF	[weekly invoicing]
11/21/08 CPTF	[credit policy enhancements]
1/16/09 CPTF/BPCTF	[weekly inv'g / credit policy enhancements]
1/28/09 CPTF	[credit policy enhancements]
2/17/09 CPTF/BPCTF	[weekly inv'g / credit policy enhancements]
3/20/09 MIWG	[weekly inv'g / credit policy enhancements]
3/26/09 BAWG	[weekly invoicing details]
3/27/09 CPTF	[credit scoring assessment]
4/01/09 MIWG	[weekly inv'g / credit policy enhancements]
4/20/09 CPTF	[credit scoring assessment]
4/22/09 BAWG	[weekly invoicing details]
5/01/09 CPTF	[credit scoring assessment]

- Additionally, credit policy enhancement #10 related to credit requirements for municipalities was approved by Market Participants at the 4/14/09 BIC and 4/23/09 MC meetings.

Phased Approach: Proposed Roadmap for Credit Policy Enhancements

Enhancement Number & Title		Phase A	Phase B	Phase C	Phase D
1	Eliminate Unsecured Credit in all Markets				X
2	Eliminate Unsecured Credit: TCC Market	X			
3	Eliminate Unsecured Credit: Virtual Transactions				X
4	Require Six-Month Payment History for Unsecured Credit		X		
5	Change Investment Grade Rating				X
6	Reduce Composite Rating			X	
7	Revalue % of Tangible Net Worth				X
8	Revise Concentration Cap	X			
9	Revised Credit Scoring for Unsecured Credit Reductions		X		
10	Revisions to Unsecured Credit for Municipalities	X			
11/11A	Revise Acceptable Providers for Letters of Credit			X	
12	Limit Concentration of each Market Participant's Letters of Credit by Bank			X	
13	Accelerated Cash Clearing (Weekly Invoicing)	X			
14	Reduce Payment Remittance Timeframe	X			
15	Reduce Cure Periods		X		
16	Authority to Issue Estimated Initial Invoices		X		
17	Conditions to Terminate: Default in another ISO/RTO		X		
18	Conditions to Terminate: Two Late Payments		X		
19	Evidence of Financial Support/Capitalization			X	
20	Penalties for Failure to Comply with Payment Terms or Creditworthiness Requirements			X	

Phase A: Represents enhancements intended to address highest-level risks (e.g. settlement timeframes, potential for significant defaults, etc.) & related items.

Phase B: Represents enhancements primarily proposed to provide NYISO with additional authority to address deteriorating creditworthiness, etc.

Phase C: Represents enhancements requiring additional NYISO data & analysis for stakeholder consideration.

Phase D: Represents enhancements to potentially consider for future policy development.

Background: Meetings to Date

- NYISO plans to utilize the following schedule for the remaining Phase A and B credit policy enhancements:
  - *MIWG:* *June 1 (if needed)*
  - *BIC:* *June 10*
  - *MC:* *June 24*
  - *BOD:* *July 21*
  - *FERC Filing:* *August*
  - *Implementation:* *Upon FERC approval (or timeline as noted for certain specific policy enhancements)*
- The timeline for the Phase C and D credit policy enhancements will be re-evaluated following the completion of the Phase A and B enhancements.

Credit Policy Enhancements (Phases A and B)

Phases A and B - Summary

Enhancement Number & Title		Phases A and B
2	Eliminate Unsecured Credit: TCC Market	X
4	Require Six-Month Payment History for Unsecured Credit	X
8	Revise Concentration Cap	X
9	Revised Credit Scoring for Unsecured Credit Reductions	X
10	Revisions to Unsecured Credit for Municipalities	X
13	Accelerated Cash Clearing (Weekly Invoicing)	X
14	Reduce Payment Remittance Timeframe	X
15	Reduce Cure Periods	X
16	Authority to Issue Estimated Initial Invoices	X
17	Conditions to Terminate: Default in another ISO/RTO	X
18	Conditions to Terminate: Two Late Payments	X

Enhancement 2 – Eliminate Unsecured Credit: TCC Market

- Current Policy
  - Market Participants can qualify for unsecured credit (includes affiliate guaranties) upon entry into the NYISO markets
  - Total amount of unsecured credit is limited by the amount of the annual market concentration cap (~$500M for 2009)

- Proposed Enhancement
  - Eliminate unsecured credit in the TCC market

- Rationale
  - The TCC market presents the most severe credit and default exposure risk since it is a financial market and covers lengthy time horizons
  - Some Market Participants expressed concern at the Billing and Price Correction Task Force about unsecured credit in the TCC market
  - NYISO plans to offer longer term (potentially up to 5 years) TCCs in future auctions which dramatically increases potential default exposure
  - Liabilities associated with long-term negatively-priced TCCs have features that are materially different than in other markets
    - If a holder of a TCC fails to pay, the NYISO could prevent further participation by the holder, but has no ability to liquidate the TCC

Enhancement 2 – Eliminate Unsecured Credit: TCC Market - Continued

- Rationale - continued
  - The financial strength of Market Participants that currently qualify for unsecured credit may deteriorate rapidly and result in bad debt losses when the Market Participant holds low positive, zero or negatively priced TCCs
    - Payments due the NYISO for the remaining life of the TCC could be severely jeopardized
    - <u>Market Participants not immediately recognized by the NYISO as having financial difficulties may purchase negative TCCs using unsecured credit for immediate cash flow</u>
  - In 2008, PJM Market Participants experienced a bad debt loss of >$60M from a default in PJM's TCC (FTR) markets
  - In late 2008, PJM members voted to eliminate unsecured credit in the FTR market. FERC has approved this policy change.

Enhancement 2 –
Eliminate Unsecured Credit: TCC Market - Continued

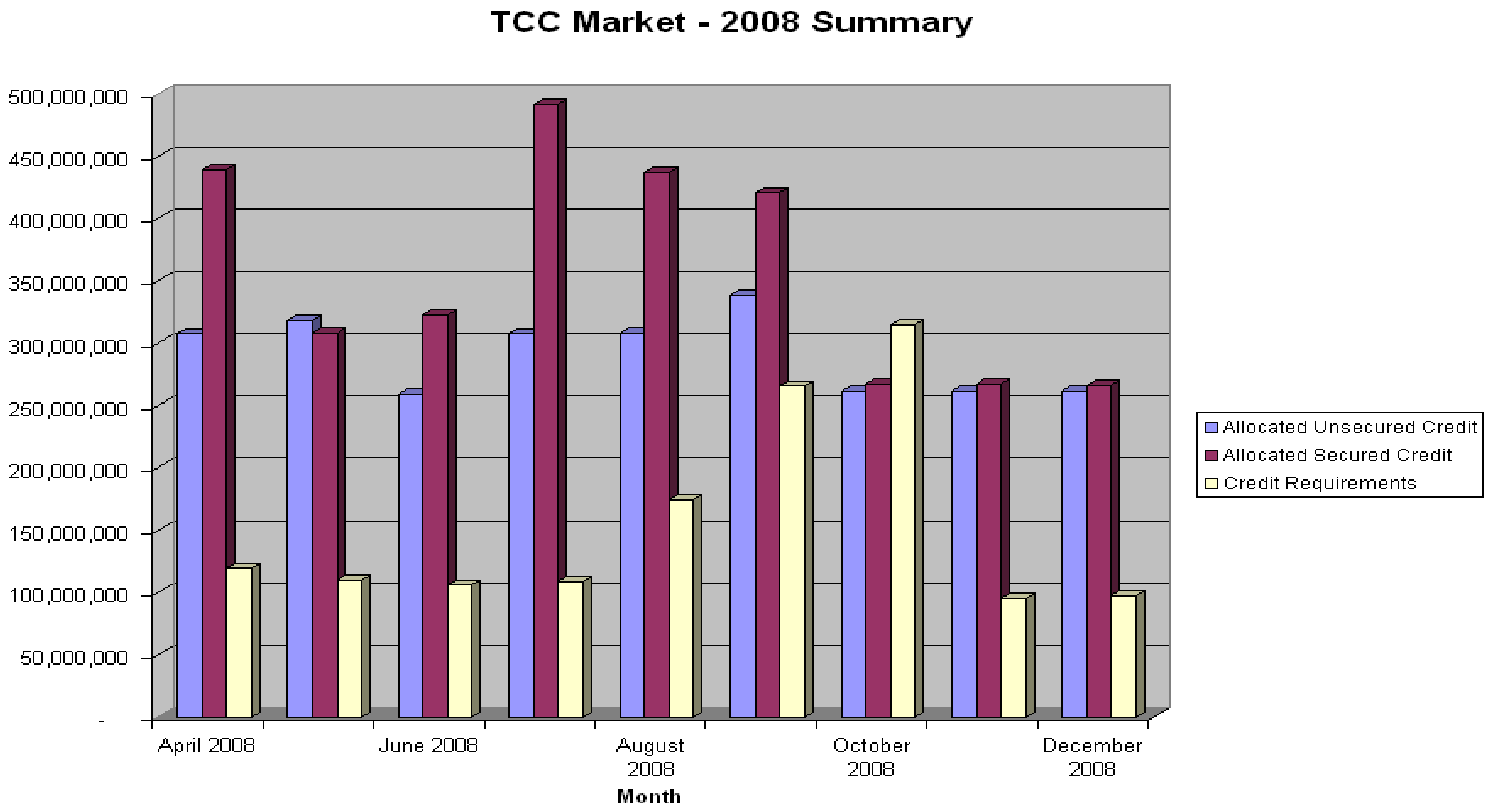
- Implications
  - If a defaulting Market Participant did not provide a form of collateral to support its future TCC payment obligations, then to minimize bad debt losses, the NYISO would need to develop a procedure to liquidate, where possible, the TCCs in future auctions.
  - On average, 23 Market Participants have been consistently active in the TCC market.
  - During October 2008, the month with the highest overall credit requirements in 2008, 14 Market Participants had $177M allocated in unsecured credit to cover $85M in TCC market credit requirements.
- Implementation Timeframe
  - NYISO recommends implementation of this proposal upon FERC approval, with an exclusion granted to the TCC credit holding requirement for TCCs purchased prior to FERC approval.

Enhancement 2 – Eliminate Unsecured Credit: TCC Market - Continued

- Notes regarding data on next slide
  - TCC credit data on next slide was compiled since April 2008 (effective date for revised TCC credit holding requirements)
  - Represents summary of credit allocated by Market Participants during 2008 for the TCC market
  - Represents each month's highest credit requirements during that month
  - Not all Market Participants who have allocated credit to the TCC market are active in that market

- Analysis Summary regarding data on next slide
  - TCC credit requirements ranged from $95M to $315M
  - Total allocated credit ranged from $526M to $798M
  - Total allocated unsecured credit ranged from $259M to $358M

Enhancement 2 – Eliminate Unsecured Credit: TCC Market - Continued



Enhancement 4 – Six-Month Payment History

- Current Policy
  - Market Participants can immediately qualify for unsecured credit upon entry into the NYISO markets
- Proposed Enhancement
  - The NYISO would require confirmation of a six-month payment history with NYISO or another ISO/RTO prior to allowing unsecured credit for any new Market Participant
- Rationale
  - For new Market Participants, provides payment history to the NYISO prior to granting unsecured credit
  - Similar to ISO-NE's existing credit policy
- Implications
  - No Market Participants who have joined the NYISO within the last six months have been granted unsecured credit
  - Any Market Participant granted unsecured credit prior to the effective date would be grandfathered in and the policy would be applied prospectively

Enhancement 8 – Revise Concentration Cap

- Current Policy
  - Market Participants' unsecured credit lines are currently capped at 20% of the highest month's receivables from the previous calendar year

HISTORICAL SUMMARY OF NYISO CONCENTRATION CAPS		
Effective Year	Related Month	Concentration Cap
2004	August 2003	$278M
2005	January 2004	$275M
2006	August 2005	$459M
2007	July 2006	$344M
2008	May 2007	$240M
2009	July 2008	$500M

Enhancement 8 – Revise Concentration Cap

Overall Credit Summary as of November 2008								
Type	Forms of Credit	Maximum Amount Available for Use (in millions)	% of Total Available for Use	Amount Allocated (in millions)	% of Amount Allocated	Amount Required (in millions)	% of Amount Required
Unsecured Credit	Unsecured Credit, Affiliate Guaranty	$ 7,030.9	87%	$ 1,870.3	65%	$ 817.3	56%
Secured Credit	Cash, Letter of Credit, Net Receivable, Surety Bond	$ 1,014.2	13%	$ 1,014.2	35%	$ 637.1	44%
		$ 8,045.1	**100%**	**$ 2,884.5**	**100%**	**$ 1,454.4**	**100%**

- During November 2008, the maximum amount of credit available for use exceeded $8B. Of this amount, Market Participants allocated approximately $3B to cover $1.5B in credit requirements.
- Market Participants used unsecured credit, including affiliate guaranties, to cover 56% of total credit requirements.
- While the amount of unsecured credit allocated by Market Participants in November 2008 totaled nearly $2B, it is important to note that Market Participants qualify for, **<u>and can receive up to ~$7B in unsecured credit.</u>**

Enhancement 8 – Revise Concentration Cap

ISO/RTO	$ Limit	Invoicing Cycle	Concentration Limit (%)
CAISO	$250M (proposed reduction to $150M with further reduction to $50M upon weekly invoicing)	Monthly (Proposed Weekly)	--
ERCOT	$100M	Weekly	--
ISO-NE	$75M $25M (Unrated entities)	Weekly	20%
MISO	$75M	Weekly	--
NYISO – Current	N/A	Monthly	20%
PJM	Ranges from $5M - $150M (proposed reduction to $50M - $75M upon weekly invoicing)	Migrating to Weekly	--
SPP	$25M	Weekly	--

Enhancement 8 – Revise Concentration Cap

- Proposed Enhancement
  - Replace concentration cap methodology with a fixed dollar amount of $150M *, which would be reduced to $50M * upon migration to weekly invoicing
  - Additionally, permit unsecured credit up to a maximum of $250M * (reduced to $85M * upon migration to weekly invoicing) for those Market Participants that qualify for unsecured credit based upon the NYISO tariffs, and also meet the following requirements:
    - Must meet investment grade qualifications (as defined in the tariffs).
    - Use unsecured credit only to meet credit requirements resulting from native load obligations (i.e. not available for the TCC or Virtual Transactions markets). For NYPA, native load would include all wholesale and retail power customers for which NYPA is under contract to provide electric service.
    - Provide evidence to the NYISO that the requesting Market Participant can recover end-user costs to supply energy and capacity
    - If any of the above criteria are not met, the Market Participant would not qualify for the limited increase in unsecured credit above the concentration cap

* Items with fixed dollar amounts would be updated for future years based on an index to current market prices. The index will be a weighted-average of the electric CPI for the NY metropolitan area and NYISO's annual total GWh.

Enhancement 8 – Revise Concentration Cap

- Rationale
  - Current concentration cap is based on historical prices, not current market activity
  - Current concentration cap methodology results in higher concentration cap than most Market Participant usage warrants
  - NYISO liquidity reserves (~$50M working capital and $50M LOC) total $100M, which is far less than the recent concentration caps under the current methodology
  - Flat dollar amount aligns NYISO policy with those of all other ISO/RTOs as depicted on the previous slide

Enhancement 8 – Revise Concentration Cap

- Implications
  - During the 2008 peak month (July), two Market Participants had market activity greater than the proposed concentration cap
  - 28 Market Participants qualify for unsecured credit greater than the proposed concentration cap

	Number of Market Participants	
Volume Level	July 2008 Market Activity	Max. Amount of Unsecured Credit
> $500M	0	13
$250M - $500M	1	9
$150M - $250M	1	6
$100M - $150M	2	7
< $100M	66	35
Total	**70**	**70**

2 vs. 28

Enhancement 8 – Revise Concentration Cap

- Implementation Timeframe
  - NYISO recommends a two-phased implementation timeframe as follows:

    Phase 1:

    - Replace concentration cap methodology with a fixed dollar amount of $150M ($250M for those Market Participants meeting the additional criteria outlined in the "Proposed Enhancement"):
      - Immediately upon FERC approval

    Phase 2:

    - Upon migration to weekly invoicing, reduce concentration cap to $50M ($85M for those Market Participants meeting the additional criteria outlined in the "Proposed Enhancement"):
      - Effective with weekly invoicing implementation

Enhancement 9 – Credit Scoring Changes

- Current Policy
  - A Market Participant with an investment grade rating may qualify for unsecured credit in an amount equal to a percentage of its tangible net worth. This amount is the "starting point" for determining the amount of unsecured credit granted to a Market Participant.
  - The NYISO may adjust a Market Participant's starting point upward or downward based upon a credit assessment of the Market Participant compared to industry peers. The starting point is also subject to the NYISO concentration cap.
  - The credit assessment methodology requires the NYISO to evaluate the following factors (weighted as indicated):

• Liquidity	55%
• Leverage and debt coverage	15%
• Performance and profitability	15%
• Qualitative Assessment	15%

Enhancement 9 – Credit Scoring Changes

- Proposed Enhancement
  - Revise the credit assessment methodology as follows:
    - Evaluate, where possible, leading indicators of financial performance instead of lagging indicators.
    - Eliminate peer comparison.
    - Develop separate credit assessment methodologies for public and private Market Participants.
    - Adjust the actual amount of unsecured credit granted to a Market Participant (up to a maximum of the NYISO concentration cap), as opposed to its starting point amount, upward or downward based upon the credit assessment.

Enhancement 9 – Credit Scoring Changes

- Proposed Enhancement – Public Entities. Revise credit assessment methodology to account for leading indicators of credit risk as follows:

	Proposed Weight
Market Indicators	
• Absolute CDS Spread	21.3%
• Relative Stock Decline from 3 month high	4.3%
• Stock Return Volatility (3 mth std deviation)	12.7%
Performance	
• Revenue/Market Cap	12.7%
• Retained Earnings/Assets	8.5%
Debt Coverage	
• Total Debt/EBITDA	12.7%
Leverage	
• Debt/(Total Debt + Equity)	8.5%
Liquidity	
• Cash/Assets	4.3%
Qualitative Assessment	15.0%

(qualitative assessment includes, but not limited to, risk policies and procedures, management quality, historical relationship with NYISO – i.e. margin call and payment history, liquidity/performance – ability to access funding in difficult market conditions, industry characteristics, etc.)

Enhancement 9 – Credit Scoring Changes

- Proposed Enhancement – Private Entities. Revise credit assessment methodology to account for leading indicators of credit risk as follows:

	Proposed Weight
Performance	
• Return on Assets	17.5%
• Profit Margin	10.5%
Debt Coverage	
• Total Debt/EBITDA	17.5%
Leverage	
• Total Debt/Total Assets	17.5%
Liquidity	
• Cash/Assets	7.0%
Qualitative Assessment	30.0%

(qualitative assessment includes, but not limited to, risk policies and procedures, management quality, historical relationship with NYISO – i.e. margin call and payment history, liquidity/performance – ability to access funding in difficult market conditions, industry characteristics, etc.)

Enhancement 9 – Credit Scoring Changes

- Proposed Enhancement (continued):

Following a period of significant analysis regarding the credit scoring methodology, Oliver Wyman recommended adjustments to unsecured credit utilizing the tables below.

It should be noted that an alternate proposal was developed by Oliver Wyman with unsecured credit reductions of 0%, 40%, 60%, 80% and 100%. This was discussed with the Credit Policy Task Force members, who generally supported the initial credit assessment metrics rather than the alternate proposal.

Initial Adjustment

Score bucket	Public Score range	Private score Range	Unsecured Credit Adjustment
1	0.00 – 0.33	0.00 – 0.31	0%
2	0.34 – 0.40	0.32 – 0.39	-20%
3	0.41 – 0.45	0.40 – 0.43	-50%
4	0.46 – 0.50	0.44 – 0.48	-80%
5	0.51+	0.49+	-100%

Transition Adjustment

		Current score bucket				
		1	2	3	4	5
Previous score bucket	1	0%	-20%	-50%	-80%	-100%
	2	25%	0%	-38%	-75%	-100%
	3	100%	60%	0%	-60%	-100%
	4	400%	300%	150%	0%	-100%
	5	NA	NA	NA	NA	NA

Enhancement 9 – Credit Scoring Changes

- Proposed Enhancement (continued):
  When comparing the proposed policy enhancement to the current tariff methodology, the following points should be made with respect to Public Entities:
  - Approximately the same number of Market Participants would fall within the first tier of adjustments and have their unsecured credit adjusted by roughly the same amount (20% vs 25%)
  - Under the current methodology, no entity would have had their unsecured credit removed, whereas the proposed methodology does in fact remove or make significant adjustments to entities who are experiencing signs of significant financial distress.

Adjustments to Unsecured Credit per Current Tariff	Number of Entities affected under Current Tariff		% Adjustment – Initial Proposal	Number of Entities affected as of Feb. 2009	Number of Entities affected as of April 2009
0%	26		0%	10	15
25%	7		20%	11	6
50%	NA		50%	7	7
75%	0		80%	2	3
100%	0		100%	3	2

Enhancement 9 – Credit Scoring Changes

- Proposed Enhancement (continued):
  Number of entities by bucket using the initial Oliver Wyman proposal (qualitative assessment neutral)

Score Bucket	Score Range	Number of Entities Affected	Unsecured Credit Adjustment
1	0.00 – 0.31	17	0%
2	0.32 – 0.39	7	20%
3	0.40 – 0.43	1	50%
4	0.44 – 0.48	3	80%
5	0.49+	0	100%

- NYISO is currently evaluating the manner in which municipalities may be treated using the proposed credit assessment approach.

Enhancement 9 – Credit Scoring Changes

- Rationale
  - The current credit scoring methodology (along with the initial determination of unsecured credit) is based on severely lagging indicators – ratings and financial statements
  - The current credit scoring methodology does not consider real-time events and financial conditions, which is particularly problematic when a Market Participant is experiencing rapid deterioration in financial health
  - The current credit scoring methodology is based on annual financial statements, which can include data from well over 1+ year(s) ago
  - Peer data is not necessarily relevant and/or comparable (e.g., companies may have different reporting timelines)
  - The current credit scoring methodology does not consider the concentration cap limitations when making adjustments.
  - When applied to Lehman during summer 2008, current methodology did not result in a reduced unsecured credit allocation whereas the proposed methodology would have reduced and ultimately eliminated Lehman's unsecured credit.

- Implications
  - NYISO would possess a greater ability within the tariffs to address credit concerns on a real-time basis using leading indicators

Enhancement 10 – Revisions to Unsecured Credit for Municipalities

- Separately approved by Market Participants at the 4/14/09 Business Issues Committee and 4/23/09 Management Committee meetings.

- Will be included with other credit policy enhancements for discussion with the BOD during July. A filing with FERC and implementation of this policy change would occur subsequently.

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

- Current Policy
  - Invoices for initial settlements are cleared on a monthly basis, with payments due to NYISO on the first business day following the 15th of the month following month of service

- Proposed Enhancement
  - The NYISO would migrate to weekly invoicing, with invoices issued weekly on Wednesdays with payments due to NYISO within two business days and payments from NYISO made within four business days of invoice issuance (see following slides). A monthly invoice would continue to be generated at month-end, consisting of ICAP, true-ups, and any resettlements of that month's weekly billing data. Note: The potential exclusion of municipalities (excluding NYPA and LIPA) to continue to remit on a monthly vs. weekly monthly billing cycle remains a consideration.

  - The following settlements would initially occur on a weekly basis:
    - Energy and Ancillary Services
    - TCC Congestion Rents
    - Virtual Bidding
    - Demand Response
    - Transmission Owners

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

- Proposed Enhancement (continued)
  - The following settlements would initially remain on a monthly basis, but could be considered for subsequent migration to weekly invoicing:
    - ICAP Auction Settlements
    - Thunderstorm Alert Reallocation
    - Quick Start Cost Charges and Credits
    - Station Power Settlements
    - NERC ERO Charges
    - Attachment N Reallocations
    - Disputes, DACs and Penalties
  - Monthly Invoice would incorporate:
    - Six-Month True-Up
    - Close-Out Invoice (separately issued to account for posting requirement)
    - Reinvoicing of all prior weekly invoices (reflecting credits and charges settled prior)
    - Initial invoicing of partial weeks
  - Monthly Invoice dates:
    - Invoice Issued by 5th Business Day of the Month
    - Payment Due on 7th Business Day of the month
    - Payments Rendered by NYISO on 9th Business Day of the month
  - Timing of TCC Auction Settlements would be undisturbed from current process

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

Proposed Enhancement Details	
Week One*	Monthly Settlements (e.g., station power) Six-month true-ups Close-out Settlements Weekly Invoice (calendar-dependent)
Week Two*	Weekly invoice
Week Three*	Weekly Invoice
Week Four*	Weekly Invoice

* All Weekly Invoices will contain Energy, Ancillary Service, Day-Ahead Demand Response, Virtual Market and TCC Rent billings for prior week.

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

Sample Invoicing Cycle (reflecting BAWG requests to include Weekly Invoices with Month-End Invoice to Resettle Month

OCTOBER 2009

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
26	27	28	29	30	1	2
3	4	5	6	7 Invoice Issued (10/1-10/2) Monthly Invoice Issued (9/27-9/30)	8	9 Payments Due Payment Due
10	11	12 Columbus Day	13	14 Payments Made Invoice Issued (10/2-10/9) Payment Made	15	16 Payments Due
17	18	19	20 Payments Made	21 Invoice Issued (10/10-10/16)	22	23 Payments Due
24	25	26	27 Payments Made	28 Invoice Issued (10/17-10/23)	29	30 Payments Due
Saturday	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
31	1	2	3 Payments Made	4 Invoice Issued (10/24-10/30)	5	6 Monthly Invoice Issued (10/31) Payments Due
14	8	9	10 Payment Due Payments Made	11 Invoice Issued (11/2-11/6)	12 Payment Made	13

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Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

- Rationale *(see details on following slides)*

1. Consistent with directives from FERC
2. Provides comparable settlement timeframes with other ISOs/RTOs
3. Best opportunity to minimize default exposure and risk of bad debt losses
4. Permits significant reduction in collateral requirements
5. Improved market efficiency and liquidity
6. Permits significant reduction in working capital fund reserve

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

1. Consistent with directives from FERC

Weekly invoicing is consistent with directives from FERC's 2004 Credit Policy Statement, in which the Commission expressed its belief that,

"…shortened settlement periods and netting are cost-effective steps to reduce the exposure to risk among market participants (e.g., from a default by one of the participants), the amount of collateral required from market participants, and barriers to entry by minimizing collateral requirements. Thus, these measures should improve market conditions and provide for greater market participation and improved market liquidity. Furthermore, these measures should serve to reduce the security requirements for both small and non-credit rated entities, thus significantly enhancing their access to ISO/RTO markets."

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

2. *Provides comparable settlement timeframes with other ISOs/RTOs*

- By the end of 2009, all other ISO/RTOs except NYISO expect to be issuing initial invoices more frequently than monthly
- FERC recently approved PJM's petition to migrate to weekly invoicing on June 1 (migration to weekly invoicing largely precipitated by recent defaults)
- ISO-NE participants recently approved migration to invoicing 2x/week
- CAISO, which historically has had the longest ISO/RTO timeframe for initial settlements, expects to invoice 2x/month by October 2009
- NYISO avoids becoming a float for Market Participants in multiple ISOs/RTOs

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

ISO	Cash Clearing Cycle for Initial Settlements
California ISO	2x/month (Approved by BOD for October 1, 2009 transition from invoicing every 90 days)
ERCOT	Weekly
ISO New England	Weekly (stakeholders and BOD approved migration to 2x/week in 2010; filing with FERC planned for June)
Midwest ISO	Weekly
New York ISO	Monthly
PJM	Weekly (approved by FERC for June 1, 2009 implementation)
Southwest Power Pool	Weekly

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

3. Best opportunity to minimize default exposure and risk of bad debt losses

- NYISO's historical level of socialized bad debt losses should not be construed as normal, average, or at all indicative of future levels
- NYISO has experienced "near misses" within the last year that easily could have resulted in significant socialized bad debt losses (NYISO and its Market Participants are fortunate to have avoided bad debt losses in recent economic conditions)
- Market activity eligible for accelerated cash clearing via weekly invoicing (i.e., energy & ancillary services, virtual transactions, etc.) represents ~90% of dollars flowing through NYISO markets (over $10B for 2008)
- Optimal trigger to evaluate a potential default is a non-payment

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

4. Permits significant reduction in collateral requirements

Reductions in NYISO collateral requirements would minimize or eliminate barriers to market entry

- Current Maximum Credit Exposure: **50 days**
- Proposed weekly payment cycle:

Saturday through Friday billing cycle	7 days
Weekly invoice issued each Wednesday	5 days
Payment due to NYISO each Friday	2 days
Various holiday scenarios	2 days
Maximum credit exposure	**16 days**

- Up to a 68% reduction in market exposure and credit requirements (*50 days to 16 days*)

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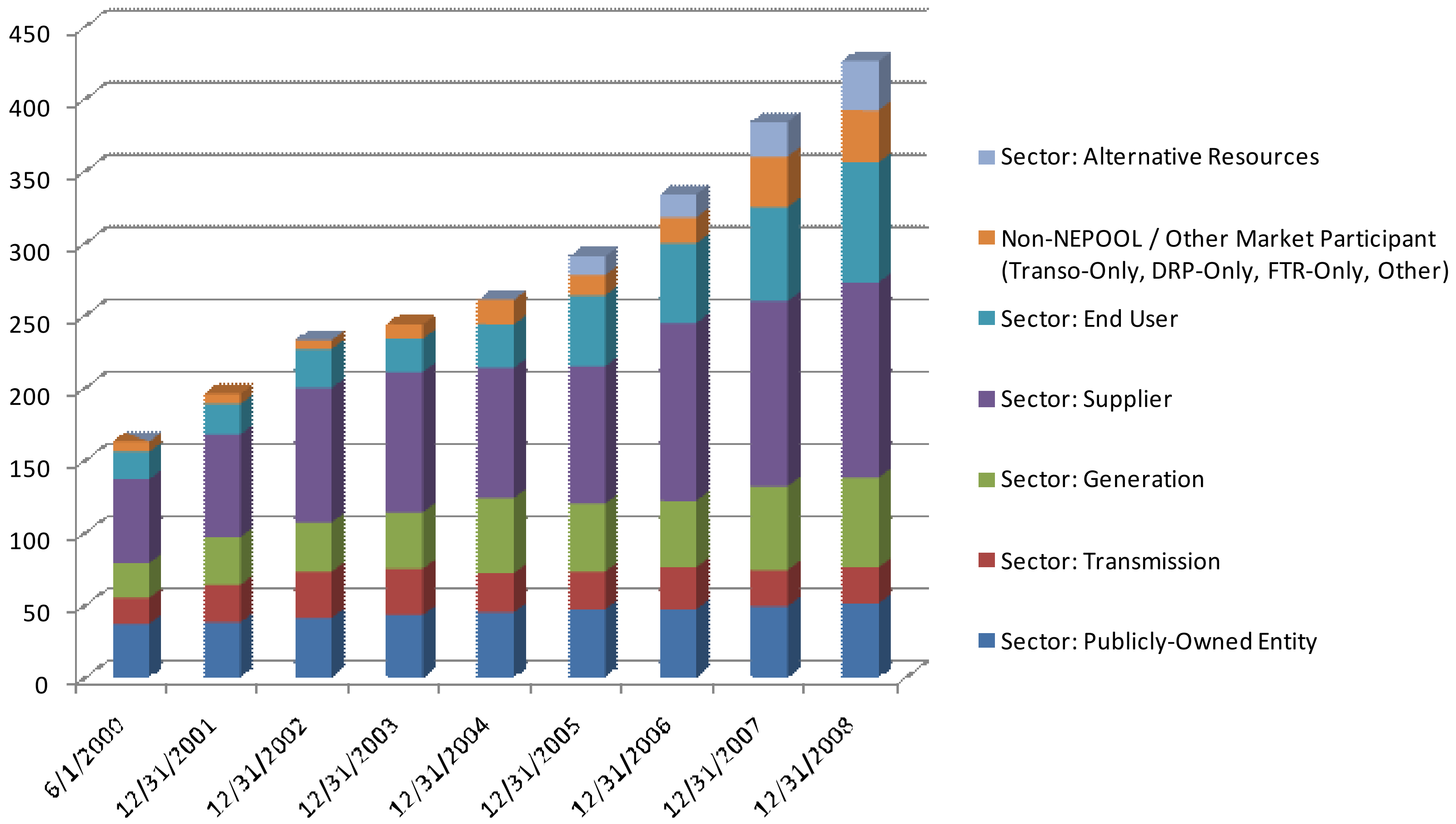
Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

5. ***Improved market efficiency and liquidity***

- Weekly invoicing would reduce costs to most Market Participants, and, in turn, likely reduce LBMPs and other market prices
- ISO-NE's experience with weekly invoicing since July 2004 has demonstrated favorable results (see next slides):
  - Increase in total number of Market Participants by > 60%
  - Increase in number of Market Participants for all market sectors
  - Per ISO-NE, Market Participants have not exited ISO-NE markets since implementation of weekly invoicing
- ERCOT settles initial invoices on a weekly basis and has robust retail access program
- Improves market liquidity
  - Net annual benefit to overall NYISO market of $32M ($23M in cash flow benefits and $9M in risk avoidance benefits)
  - Over 70% of all Market Participants with net annual benefit
  - For remaining 30% of all Market Participants with net annual cost, the average annual cost is $170K

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

ISO-NE Annual Historical Market Participation, by Type of Participant



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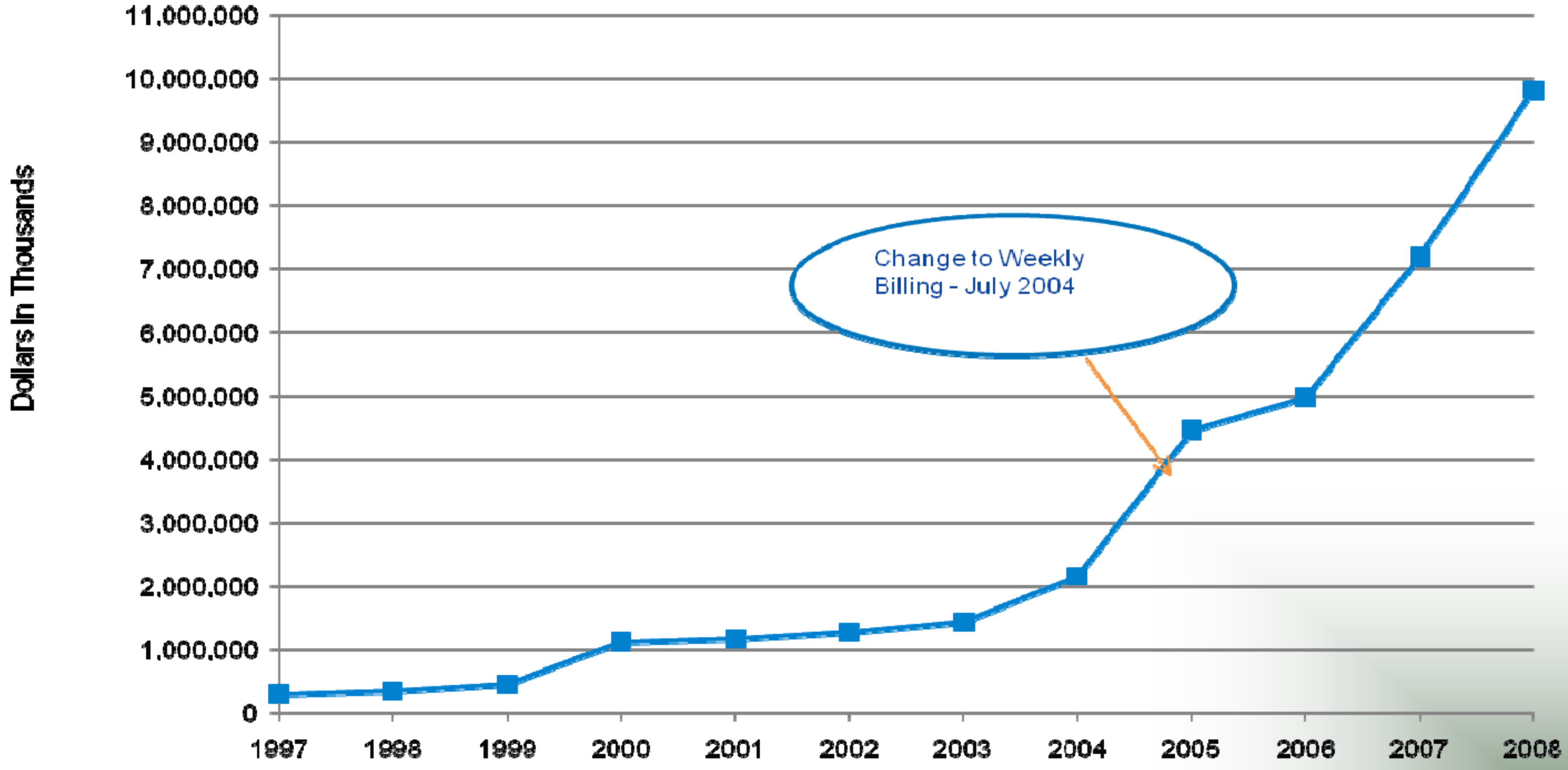
Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

ISO-NE Annual Historical Market Clearing Activity



Note: 1997 & 1998 are estimated data

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

- Summary benefit-cost analysis by participant type

Participant Type	Change in Collateral Cost ($)	Float Change ($)	Change in Expected Loss Allocation ($)	Change in Cost of Equity to Cover P99 Loss ($)	Total by Type ($)
TO	1,271,460	- 1,673,662	395,989	428,364	422,150
LSE	9,212,090	- 19,300,950	1,337,231	1,752,789	- 6,998,839
GEN	205,851	30,779,537	1,405,181	2,297,627	34,688,196
PM	1,565,246	1,278,559	419,891	549,326	3,813,022
Total	**12,254,646**	**11,083,485**	**3,558,292**	**5,028,105**	**31,924,529**

+ = Benefit;
- = Cost

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

- Summary benefit-cost analysis by number of Market Participants:

Participant Type	Participants with Net Cost	Participants with Net Benefit	Total Participants
TO	3	5	8
LSE	50	20	70
GEN	5	65	70
PM	17	100	117
Total	74	191	265

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

- Additional Analysis Findings

Sum of participants with net benefit:	$	44,708,227
Sum of participants with net cost:	$	- 12,783,699
Average of participants with net benefit:	$	253,306
Average of participants with net cost:	$	- 170,449
Largest single participant benefit:	$	4,499,122
Largest single participant cost:	$	- 1,718,202

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

6. Permits significant reduction in working capital fund reserve

- It will likely be possible to reduce the amount of the working capital reserve upon migration to a weekly invoicing cycle.
- Certain factors need to be considered in context of any such recommendation:
  - NYISO's ability to maintain bank lines of credit as a component of overall liquidity reserves?
  - Growth in overall volume of market activity since establishment of working capital reserve?
  - Appropriate amount of working capital reserve to maintain?
  - Timing/method of refunding any reductions?

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

Working Capital - Historical Data:

- The NYISO working capital reserve was established in 2001, when overall annual market volumes were ~$5.5B.
- The working capital reserve target was set at $50M, although actual working capital recoveries were (and have remained constant at) $46.5M.
- Overall NYISO market volume for 2008 was > $11B.
- Working capital is reallocated annually among all Market Participants based on the prior year's activity in all markets (see Attachment V of OATT).
- The current allocation of working capital (based on 2008 market activity) is as follows:

TOs and LSEs	$27.5M	59%
Gens and PMs	$19.0M	41%
Total	$46.5M	100%

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

Working Capital – Proposal to Reduce:

- $50M — Working capital target established based on annual market volumes of ~$5.5B.
- Times 2 — Increase in annual market volumes (~$5.5B → $11B)
- $100M — Increased working capital target based on doubled annual market volumes from 2000-01 to 2008.
- Div. by 2/3 — Reduction in billing cycle from monthly to weekly
- $33M — Proposed working capital level upon migration to weekly invoicing

Enhancement 13 –
Accelerated Cash Clearing (Weekly Invoicing)

Working Capital – Proposal to Reduce:

- With a migration from monthly to weekly invoicing, the working capital fund could be reduced from the current $46.5M balance to $33.0M to reflect lower risk associated with a shorter initial settlement period.

	Current Allocation		Proposed Reduction *		Revised Allocation	
MP Types	**In $**	**As %**	**In $**	**As %**	**In $**	**As %**
TOs and LSEs	$27.5M	59%	($8.0M)	59%	$19.5M	59%
Gens and PMs	$19.0M	41%	($5.5M)	41%	$13.5M	41%
Total	$46.5M	100%	($13.5M)	100%	$33.0M	100%

* Note: Discussions have occurred whereby certain Gens and PMs have proposed to permit the entire $13.5M reduction in Working Capital to be returned to TOs and LSEs as a one-time liquidity injection to be applied over a two-year period beginning with the first year in which a weekly invoicing cycle is implemented.

Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

Implementation Timeframes

- NYISO is currently initiating a redesign of the invoicing systems (Con Invoice), which will occur during 2009-2011.
- Options for implementing weekly invoicing, with considerations to the method of facilitation, are listed below:

Option	Method	Timeframe	Notes
1. Accelerated cash clearing for amounts due to NYISO only	"Margin calls" from Credit department utilizing run-rate data	Immediately upon FERC approval	Not recommended due to manual nature of administration
2. Weekly Invoicing	With changes to existing Con Invoice system	Mid-2010	Recommended option to permit sufficient lead times for NYISO and MPs to modify systems and processes in similar fashion to other ISO timeframes
3. Weekly Invoicing	Upon completion of Con Invoice redesign effort	Mid-2011	Not recommended due to extended timeframe to implement

Enhancement 14 –
Reduce Payment Remittance Timeframe

- Current Policy
  - Market Participants are required to remit payment for monthly invoices on the first business day after the 15th of the month following service (16th, 17th, 18th, or 19th depending on calendar month)
  - Results in up to 50 days of exposure for the settlement period
- Proposed Enhancement
  - Market Participants would be required to remit payment for monthly invoices on the third business day after the issuance of the monthly invoice (examples: September 11th vs. September 16th; October 10th vs. October 16th, November 12th vs. November 17th)
  - Payments to suppliers could be remitted three business days following this date
- Rationale
  - Provides an additional leading indicator of potentially distressed Market Participants
  - By receiving payment ~5 days sooner, the NYISO can reduce potential additional exposure to distressed Market Participants
  - Can reduce collateral by a similar number of days
- Implications
  - Improves market liquidity for overall NYISO markets

NYISO would eliminate this enhancement proposal if NYISO's settlements migrate to a weekly cycle as part of the Phase A group of enhancements.

Enhancement 15 – Reduce Cure Periods

- Current Policy
  - The NYISO may suspend and/or terminate a Market Participant immediately, upon notification to the Commission, for failing to cure payment defaults within 2 business days or failing to cure creditworthiness defaults within 3 business days
- Proposed Enhancement
  - Reduce default periods by 1 business day
  - The NYISO may suspend and/or terminate a Market Participant immediately, upon notification to the Commission, for failing to cure payment defaults within 1 business day or failing to cure creditworthiness defaults within 2 business days
- Rationale
  - Longer cure periods increase a Market Participant's exposure and potential bad debt loss to all NYISO Market Participants
  - Reduction in breach cure period by 1 business day in PJM would have reduced the Lehman socialized bad debt loss by $200K
  - Similar to recent changes at other ISO/RTOs
- Implications
  - Potential increase in Market Participant terminations

Enhancement 16 – Authority to Issue Estimated Initial Invoices

- Current Policy
  - The NYISO does not have tariff authority to issue estimated invoices for initial settlements
- Proposed Enhancement
  - Revise the tariffs to explicitly permit the NYISO to issue estimated invoice(s) for initial settlements for financially distressed entities (i.e. entities that have experienced a material adverse change as noted in the tariffs or have had 50% or more of that Market Participant's unsecured credit privileges reduced as determined in accordance with the credit assessment methodology set forth in Enhancement 9) with payment due two business days from date of issuance
  - Similarly, revise the tariffs to provide NYISO with the option to require such Market Participants to prepay estimated charges for up to 12 months (for up to 4 months following migration to a weekly invoicing cycle).
- Rationale
  - The NYISO should have an explicit right to take timely action to demand payment from financially-distressed entities to limit the amount of potential default exposure to all NYISO Market Participants
- Implications
  - Estimated initial invoices would represent the sum of that billing period's daily billing data available to date
  - Amounts collected would be held, invested, and reflected on Market Participant invoices in a similar fashion to prepayments/paydowns

Enhancement 17 –
Additional Tariff Authority: Default in another ISO/RTO

- Current Policy
  - The NYISO may suspend and/or terminate a Market Participant from the NYISO markets if that Market Participant fails to make payment or comply with the NYISO's creditworthiness requirements

- Proposed Enhancement
  - An uncured default in another ISO/RTO market (by the same legal entity) may result in an immediate demand for payment by NYISO of any amounts owed as of the date of default, and automatic removal of unsecured credit privileges in the NYISO markets,
  - Similarly, revise the tariffs to provide NYISO with the option to require such Market Participants to prepay estimated charges for up to 12 months (for up to 4 months following migration to a weekly invoicing cycle).
  - Other ramifications may include suspension from the NYISO markets, which could ultimately result in termination from the NYISO markets

- Rationale
  - Most other ISOs/RTOs currently have shorter initial settlement cycles than the NYISO, which may trigger a Market Participant default in those regions prior to a default in the NYISO markets.
  - The tariffs should explicitly provide the NYISO with the flexibility to terminate or suspend participation in the NYISO markets once a default has occurred in another ISO/RTO market

- Implications
  - Permits more timely action by the NYISO to limit exposure to bad debt losses
  - Lehman default exposure could have been approximately 59% less (~$2.4M)
  - May require additional coordination with other ISOs/RTOs for implementation

Enhancement 18 – Additional Tariff Authority: Two Late Payments

- Current Policy
  - The NYISO may suspend and/or terminate a Market Participant from the NYISO markets if that Market Participant fails to make payment or comply with the NYISO's creditworthiness requirements.
  - Market Participants may have a two-day right to cure payment defaults, with the only ramification being the assessment of finance charges.
  - If a Market Participant pays late on two occasions within a 12-month period, the NYISO may immediately revoke unsecured credit privileges and require posting of collateral for up to 12 months.

- Proposed Enhancement
  - Expand NYISO's current tariff authority related to Market Participants who remit two late payments to the NYISO within a 12-month period to provide NYISO with the option to require such Market Participants to prepay estimated charges for up to 12 months (for up to 4 months following migration to a weekly invoicing cycle).
  - Failure to remit timely prepayments could result in immediate suspension from the NYISO markets, which could ultimately result in termination from the NYISO markets.

- Rationale
  - If a Market Participant pays late on multiple occasions, this provides indication that the Market Participant may be financially distressed.
  - NYISO should not permit Market Participants to routinely remit late payments, thereby potentially affecting the liquidity of the overall NYISO marketplace.

- Implications
  - Potential increased likelihood of Market Participant suspensions, etc.

Appendix

Lehman Brothers Commodity Services, Inc.

Case Study

Lehman Brothers Commodity Services, Inc. – Case Study

- Lehman Brothers Commodities Services, Inc. (“LBCS”) joined the NYISO as a Market Participant in 2006.
- LBCS provided credit support via an affiliate guaranty from its parent, Lehman Brothers Holdings, Inc. (“Lehman”)
- LBCS was credit-approved for participation in the energy, virtual transactions, and TCC markets.
- LBCS subsequently became a Financially Responsible Party for an LSE, with credit requirements for the energy and capacity markets.

Lehman Brothers Commodity Services, Inc. – Case Study

- Based on Lehman's Senior Long Term Unsecured Debt (SLTUD) ratings and 2007 financial data, Lehman qualified for over $1 billion in unsecured credit for the NYISO markets.
- For 2008, this amount was limited to the NYISO concentration cap of approximately $239 million.

Tangible Net Worth Unsecured Credit Analysis		
Year-End 12/2007		
		(In Millions)
Total Assets	$	691,063
Total Liabilities	$	668,573
Intangible Assets	$	4,127
Tangible Net Worth	$	18,363
Applicable Rating		A
Percentage		6.5%
		(Whole Dollars)
Unsecured Baseline	**$**	**1,193,595,000**
Approved at Concentration Cap of	**$**	**239,535,352**

Lehman Brothers Commodity Services, Inc. – Case Study

- During 2008, Lehman began exhibiting signs of deteriorating financial health
  - Stock price decrease of over 70% in a year
  - Rapidly rising EDF (Expected Default Frequency)
  - Increased cost of credit default swaps – up 86% in less than 7 months with no trading activity for more than 1 year
  - Two senior executives replaced in June 2008
- The NYISO utilized the credit scoring methodology defined in the tariffs, rating Lehman's qualitative assessment at 6 (the worst of its peers)
- Lehman's SLTUD rating remained at "A"
- ***Nonetheless… Lehman's debt ratings and financial data still qualified Lehman for over $1 billion in unsecured credit privileges (limited in 2008 by the concentration cap of approximately $239 million)***

Lehman Brothers Commodity Services, Inc. – Case Study

- Given the rapid financial deterioration of Lehman, the NYISO requested collateral from LBCS in late June
- The credit scoring assessment methodology did not give the NYISO authority to remove <u>or even reduce</u> Lehman's unsecured credit privileges
- The NYISO did not have specific tariff authority, other than via utilization of the Material Adverse Change clause, to eliminate Lehman's unsecured credit based on leading indicators of financial distress
- The Material Adverse Change clause provides flexibility to NYISO in monitoring credit for deteriorating Market Participants, however, it can be time-consuming and challenging to effectuate
- ***NYISO requires greater ability within the tariffs to address credit concerns on a real-time basis using leading indicators***