

# Potential Enhancements to NYISO Creditworthiness Policies

**Credit Policy Task Force**  
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# Background / Phased Approach

# Why are we here today?

## 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

# Why are we here today?

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- ◆ A Market Participant's creditworthiness can deteriorate quickly and severely, especially during times of financial uncertainty
- ◆ Heightened concern regarding potential customer 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 issuances of earnings guidance adds additional difficulty in assessing the financial health of Market Participants

# Why are we here today?

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, **and can receive up to ~\$7B in unsecured credit.**

# Why are we here today?

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- ◆ NYISO has ~\$100M in reserves to ensure market liquidity (\$50M LOC and ~\$50M working capital fund)
- ◆ 2008 NYISO Market Volume was > \$11B
- ◆ Monthly Market Receivables due to NYISO:
  - *2008 peak occurred in July with \$1.1B due to NYISO*
  - *Recent activity from November 2008, a shoulder month with recent lower fuel prices, was still \$400M*

# Why are we here today?

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

March 25 BAWG	[kickoff to weekly invoicing]
June 26 BPCTF	[weekly invoicing]
July 29 BPCTF	[weekly invoicing]
Sept. 8 CPTF	[kickoff to credit policy enhancements]
Sept. 29 BPCTF	[weekly invoicing]
Nov. 21 CPTF	[credit policy enhancements]
Jan. 16 CPTF/BPCTF	[weekly inv'g / credit policy enhancements]
Jan. 28 CPTF	[credit policy enhancements]

# Why are we here today?

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- ◆ The NYISO strongly recommends the approval of the proposed credit policy enhancements on an expeditious basis through the governance process in order to mitigate potential risk of defaults.
- ◆ To balance input received from Market Participants with the ongoing risks posed by the current economic climate, NYISO has developed a phased approach toward implementation of these credit policy enhancements.

# Proposed Roadmap for Phased Approach to 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.

# Proposed Schedule for Phased Approach to Credit Policy Enhancements

<u>Timeline</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>	<u>Phase D</u>
Credit Policy Task Force	2/17/2009	March 2009	Q2 2009	TBD
Market Issues Working Group	3/20/2009	April 2009	Q2 2009	TBD
Business Issues Committee	4/14/2009	5/15/2009	Q2 2009	TBD
Management Committee	4/23/2009	5/27/2009	Q2 2009	TBD
Board of Directors	5/19/2009	6/16/2009	Q3 2009	TBD
FERC Filing	June 2009	July 2009	Q3 2009	TBD
Implementation	Phased	Immediately upon FERC approval	TBD	TBD
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.				

# Phase A

# Phase A - Summary

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<b>Enhancement Number &amp; Title</b>	
2	Eliminate Unsecured Credit: TCC Market
8	Revise Concentration Cap
10	Revisions to Unsecured Credit for Municipalities
13	Accelerated Cash Clearing (Weekly Invoicing)
14	Reduce Payment Remittance Timeframe

- ◆ These items represent enhancements intended to address highest-level risks (e.g. settlement timeframes, potential for significant defaults, etc.) as well as related items.
- ◆ Accelerated cash clearing via shorter settlement timeframes (weekly invoicing) continues to be a central focus of NYISO's proposed credit enhancements.
- ◆ These enhancements will likely require a phased implementation, as noted in following slides.

# Phase A - Proposed Schedule

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- ◆ CPTF/BPCTF meeting to discuss phased approach / implementation timeframes, etc. – February 17, 2009
- ◆ Present proposal to MIWG – March 20, 2009
- ◆ Present proposal to BIC – April 14, 2009
- ◆ Present proposal to MC – April 23, 2009
- ◆ Present proposal to NYISO Board – May 19, 2009
- ◆ Submit filing to FERC – June 2009
- ◆ Implementation – See proposals for phased implementation timeframes for each policy enhancement on next slides

## Enhancement 13 – Accelerated Cash Clearing (Weekly Invoicing)

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- ◆ **Current Policy**
  - Invoices for initial settlements are cleared on a monthly basis
- ◆ **Proposed Enhancement**
  - The NYISO would migrate to weekly invoicing, with invoices issued weekly on Thursdays with payment due the following Monday
- ◆ **Rationale**
  - Weekly invoicing provides the best opportunity to reduce default exposure and potential bad debt losses to the NYISO marketplace
  - Accelerating cash clearing would reduce credit requirements for many Market Participants
- ◆ **Implications**
  - Currently being discussed with Market Participants in the BPCTF process (refer to additional materials posted for that Task Force)
  - Refer to Market Reform presentation pertaining to cost/benefit analysis of weekly invoicing prepared for the January 16 CPTF meeting

# Weekly Invoicing: Rationale

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- ◆ 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."*

# Weekly Invoicing: Rationale

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- ◆ Best opportunity to reduce default exposure and potential socialized bad debt losses to the NYISO marketplace
- ◆ Provides for improved market efficiency and price certainty
  - Weekly payments to suppliers would reduce costs to most Market Participants and likely reduce LBMPs and other market prices
  - Improves market liquidity (net annual benefit to NYISO market of \$31M)
- ◆ Permits significant reduction (up to 66%) in credit requirements
  - Reduces or eliminates barriers to entry
- ◆ Allows consistent settlement timeframes for all ISOs/RTOs
  - NYISO avoids becoming a float for other ISOs
  - All other ISO/RTOs are currently issuing weekly invoices or are working on plans to migrate to weekly invoicing

# Weekly Invoicing: Rationale

<u>ISO</u>	<u>Cash Clearing Cycle for Initial Settlements</u>
California ISO	Weekly (proposed in multi-year plan)
ERCOT	Weekly
ISO New England	Weekly
Midwest ISO	Weekly
New York ISO	Monthly
PJM	Weekly (filing pending with FERC for June 1, 2009 implementation)
Southwest Power Pool	Weekly

# Weekly Invoicing: Rationale

- 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
<b>Total</b>	<b>12,254,646</b>	<b>11,083,485</b>	<b>3,558,292</b>	<b>5,028,105</b>	<b>31,924,529</b>

+ = Benefit;  
- = Cost

# Weekly Invoicing: Rationale

- ♦ 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
<b>Total</b>	<b>74</b>	<b>191</b>	<b>265</b>

# Weekly Invoicing: Rationale

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- ◆ 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

# Weekly Invoicing: Proposed Implementation

- ◆ NYISO is currently initiating a redesign of the invoicing systems (Con Invoice), which will occur during 2009-2010.
- ◆ Options for implementing weekly invoicing, with considerations to the method of facilitation, are listed below:

<u>Option</u>	<u>Method</u>	<u>Timeframe</u>
Accelerated cash clearing for amounts due to NYISO only	"Margin calls" from Credit department utilizing run-rate data	Immediately upon FERC approval
Weekly Invoicing	With changes to existing Con Invoice system	Q1 2010
Weekly Invoicing	Upon completion of Con Invoice redesign effort	Q1 2011

## Weekly Invoicing: Proposed Implementation

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- ◆ The following settlements would be invoiced weekly (see details on next slides):
  - Energy and Ancillary Services
  - TCC Rents
  - Virtual Bidding
  - Demand Response
  - Transmission Owners

# Energy and Ancillary Services

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- ◆ Weekly Power Supplier Settlements
  - Day-Ahead Market Energy
  - Balancing Market Energy
  - Regulation Revenue Adjustment for Regulating Units
  - Day Ahead Market Bid Production Cost Guarantee (BPCG)
  - Real-Time Bid Production Cost Guarantee (BPCG)
  - Real-Time Guarantee Payment Mitigation
  - Real-Time Bid Production Cost Guarantee (BPCG) for Special Events
  - Day-Ahead Market (DAM) Margin Assurance
  - Regulation
  - Voltage Support Service
  - Black Start Service Payment
  - Local Black Start Service Payment
  - Operating Reserve
  - OATT Rate Schedule 1
  - Margin Restoration payment (Minimum Oil Burn)

# Energy and Ancillary Services

- Weekly Load-Serving Entity Settlements
  - Day-Ahead Market Energy
  - Balancing Market Energy
  - OATT Rate Schedule 1
  - Regulation
  - Voltage Support Service
  - Black Start Service Payment
  - Local Black Start Service Payment
  - Operating Reserve
  - Regulation Revenue Adjustment for Regulating Units
  - Load Serving Entity DAM Energy Residual
  - Load Serving Entity DAM Loss Residual
  - Load Serving Entity Balancing Market Energy Residual
  - Load Serving Entity Balancing Market Loss Residual
  - Load Serving Entity Balancing Market Congestion Residual
  - DAM BPCG Allocation (Transaction and Power Supplier)
  - DAM BPCG –LRR Allocation
  - RT BPCG Allocation (Transaction and Power Supplier)
  - RT BPCG –LRR Allocation
  - DAM Margin Assurance Allocation
  - DAM Margin Assurance –LRR Allocation
  - ELR DAM Margin Assurance Allocation
  - Import ECA Supplier Guarantee Allocation
  - DAM BPCG Under-Forecasted Load Allocation
  - RT BPCG for Special Events Allocation
  - Financial Impact Charge (note:credit to LSEs)
  - NTAC
  - DADRP Allocation
  - Margin Restoration payment (Minimum Oil Burn)
  - Ramapo PAR charges
  - Station 80 charges

# Energy and Ancillary Services

## ■ Weekly Transaction Customers Settlements

- Transaction Day-Ahead Market Energy – Import
- Transaction Day-Ahead Market Energy – Export
- Transaction Balancing Market Energy – Import
- Transaction Balancing Market Energy – Export
- Financial Impact Charge (FIC)
- Day-Ahead Market Transaction Bid Production Cost Guarantee
- Real-Time Transaction Bid Production Cost Guarantee
- Day Ahead Market Transmission Usage Charges (Import, Export, Wheel-Through, Internal)
- Transaction Day Ahead Market Replacement Energy
- Balancing Market Transmission Usage Charges (Import, Export, Wheel-Through, Internal)
- Transaction Balancing Market Replacement Energy
- Transaction Import Curtailment Supplier Guarantee
- Voltage Support Service
- Operating Reserve
- Transaction Customer DAM Energy Residual
- Transaction Customer DAM Loss Residual
- Transaction Customer Balancing Market Energy Residual
- Transaction Customer Balancing Market Loss Residual
- Transaction Customer Balancing Market Congestion Residual
- OATT Rate Schedule 1
- DAM BPCG Allocation (Transaction and Power Supplier)
- RT BPCG Allocation (Transaction and Power Supplier)
- DAM Margin Assurance Allocation
- ELR DAM Margin Assurance Allocation
- Import ECA Supplier Guarantee Allocation
- RT BPCG for Special Events Allocation
- Financial Impact Charge (note:credit to TCs)
- NTAC
- Ramapo PAR charges
- Station 80 charges

# Weekly Miscellaneous Charges

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- ◆ Virtual Market Customers
  - Day Ahead Market Virtual Supply
  - Balancing Market Virtual Supply
  - Day Ahead Market Virtual Load
  - Balancing Market Virtual Load
  
- ◆ Transmission Congestion Contract Customers
  - TCC Rent
  
- ◆ Demand Response Customers
  - Day Ahead Demand Response Program Incentive Settlement
  - Day Ahead Demand Response Program Reduction Settlement
  - Day Ahead Demand Response Program Load Balance Settlement
  - Day Ahead Demand Response Program Penalty for Demand Response Providers
  - Day Ahead Demand Response Program Penalty for Load Serving Entities
  - Day Ahead Demand Response Program Bid Cost Guarantee Settlement
  
- ◆ Transmission Owners
  - DAM Congestion Residual
  - TCC Rent
  - Ramapo PAR payments
  - Station 80 payments

# Monthly Settlements

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- ◆ Thunderstorm Alert Reallocation
- ◆ Quick Start Cost Charges and Credits
- ◆ Station Power Settlements
- ◆ NERC ERO Charges
- ◆ Attachment N Reallocations
- ◆ Disputes, DACs and Penalties
- ◆ ICAP and TCC Auction Charges and Credits
- ◆ True-Ups and Close-Outs

# **Weekly Invoicing: Proposed Implementation**

- ◆ Implementation of Weekly Invoicing
  - Sunday – Saturday
- ◆ Invoice issued by 1<sup>st</sup> business day following Wednesday
- ◆ Payments due to NYISO on 2<sup>nd</sup> business day following invoice issuance
- ◆ Payments made by NYISO on 4<sup>th</sup> business day following invoice issuance

# Weekly Invoicing: Proposed Implementation

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Week One*	Monthly Settlements (e.g., station power)
Week Two*	Four-month true-ups Close-out Settlements
Week Three*	TCC Auctions
Week Four*	ICAP Auctions

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

# Weekly Invoicing: Proposed Implementation

October 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
September 27	28	29	30	October 1	2	3
4	5	6	7	8 INVOICE ISSUED	9	10
11	12 Columbus Day	13 PAYMENTS DUE	14	15 INVOICE ISSUED PAYMENTS MADE	16	17
18	19 PAYMENTS DUE	20	21 PAYMENTS MADE	22 INVOICE ISSUED	23	24
25	26 PAYMENTS DUE	27	28 PAYMENTS MADE	29 INVOICE ISSUED	30	31

# 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 15<sup>th</sup> of the month following service (16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, or 19<sup>th</sup> 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 11<sup>th</sup> vs. September 16<sup>th</sup>; October 10<sup>th</sup> vs. October 16<sup>th</sup>, November 12<sup>th</sup> vs. November 17<sup>th</sup>)
  - 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 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	\$490M

## 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 \*
  - Upon migration to weekly invoicing, reduce concentration cap to \$50M \*
  - Open discussion item: Potential to permit unsecured credit in excess of concentration cap when specified parameters are met and unsecured credit is used only to meet credit requirements resulting from native load obligations (see next slides)
- ◆ 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 historical 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

\* Items with fixed dollar amounts could be updated for future years based on an index to current market prices.

# Enhancement 8 – Revise Concentration Cap

- ◆ Implications
  - During the 2008 peak month, 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
<b>Total</b>	<b>70</b>	<b>70</b>

2 vs. 28

## Enhancement 8 – Revise Concentration Cap

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- ◆ Implementation Timeframe
  - NYISO recommends a two-phased implementation timeframe as follows:
    - a. Replace concentration cap methodology with a fixed dollar amount of \$150M:
      - *Immediately upon FERC approval*
    - b. Upon migration to weekly invoicing, reduce concentration cap to \$50M:
      - *Effective with weekly invoicing implementation*

# Enhancement 8 – Revise Concentration Cap

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## **Open Item for Discussion:**

- ◆ Permit unsecured credit up to a maximum of \$250M for those Market Participants that qualify for unsecured credit based upon the NYISO tariffs, and also meet the following requirements:
  - Have a minimum rating in the “A” category from all rating agencies from which they are rated
  - Use unsecured credit only to meet credit requirements resulting from native load obligations (i.e. not available for the TCC or Virtual Transactions markets)
  - Provide evidence to the NYISO that the requesting Market Participant can recover end-user costs to supply energy and capacity
- ◆ Upon migration to weekly invoicing, reduce amount of unsecured credit available when above requirements have been met to \$85M
- ◆ 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

# Enhancement 10 – Revisions to Unsecured Credit for Municipalities

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## ◆ Current Policy

- All Investment Grade Market Participants may be eligible to receive unsecured credit in an amount equal to a percentage of the Market Participant's tangible net worth as described in the NYISO tariffs.
- The starting point for determining the amount of unsecured credit to be granted to a municipal electric system is \$1M, regardless of its tangible net worth.
- The NYISO may use working capital for LIPA or accumulated net revenues for NYPA as a substitute for tangible net worth in determining the amount of unsecured credit to be granted to LIPA or NYPA.
- Reporting requirements:
  - Audited financial statements for the most recent 3 years and most recent quarterly statement.
  - Government entities that do not normally prepare quarterly financial statements shall not be required to provide them to qualify for unsecured credit.

## Enhancement 10 – Revisions to Unsecured Credit for Municipalities

ISO/RTO	Current Policy	Maximum Amount of Unsecured Credit
CAISO	Automatic \$1M without regard to net assets or % of net assets based on credit rating	\$1 million or, Maximum 5% of net assets for unrated municipalities or, Maximum 7.5% of net assets for rated municipalities
ERCOT	% of TNW for rated municipalities with equity in excess of \$100M  % of unencumbered assets for unrated municipalities that meet minimum financial req	Maximum 3% of TNW  Maximum 5% of unencumbered assets
ISO-NE	Investment grade rating no financial assurance needed	\$75 Million cap (proposing to lower to \$25M and would only be allowed for use in physical markets)
MISO	Automatic \$250,000, or % of TNW based on credit score	\$250,000 or maximum 12% of TNW
<b>NYISO – Proposed</b>	<b>% of Tangible Net Worth or \$1M</b> <b>NYPA – TNW or Accumulated Net Revenue</b> <b>LIPA – TNW or Working Capital</b>	<b>% of Tangible Net Worth or \$1M or the lesser of \$50M or credit requirements resulting from native load obligations</b>
PJM	% of TNW based on customer credit rating No special provision for municipalities	Maximum 7.5% of TNW

# Enhancement 10 – Revisions to Unsecured Credit for Municipalities

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- ◆ Proposed Enhancement
  - Applicable to NYPA, LIPA, and all municipal electric systems
  - May continue to qualify for unsecured credit using the tangible net worth analysis as described in the NYISO tariffs;  
or
  - May continue to utilize the \$1M as a starting point for unsecured credit for a municipal electric system, regardless of its tangible net worth;  
or
  - May qualify for unsecured credit to meet native load requirements only, by meeting the following requirements
    - Credit limit will be equal to the lesser of:
      - \$50M\* – declining to \$16M\* upon implementation of weekly invoicing,  
or
      - Unsecured credit to cover native load in the energy and capacity markets only
    - Must have a minimum bond rating within the “A” category by all rating agencies from which they are rated
    - Additional Reporting Requirement - Must submit quarterly financial statements including an income statement, balance sheet and cash flow analysis within 60 days of quarter-end and must be certified for accuracy by a Senior Officer

\* Items with fixed dollar amounts could be updated for future years based on an index to current market prices.

## Enhancement 10 – Revisions to Unsecured Credit for Municipalities

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### ◆ Rationale

- Certain municipalities have informed the NYISO that legal restrictions may inhibit their ability to obtain letters of credit or surety bonds, thereby limiting options to provide collateral
- Energy prices have increased substantially in the past five years since the \$1M starting point for municipalities was established
- Municipalities represent minimal risk of default due to their ability to generate additional revenue via increasing taxation of constituents, electric rates, etc.
- Local finance and general business laws govern municipal financial transactions

### ◆ Implications

- During 2008, 3 municipalities participated in either the TCC or Virtual Transactions markets
- Termination of municipalities present special considerations because municipalities are the "providers of last resort" to end-users

## Enhancement 10 – Revisions to Unsecured Credit for Municipalities

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- ◆ Implementation Timeframe
  - NYISO recommends a two-phased implementation timeframe as follows:
    - a. Revise unsecured credit provisions for municipalities:
      - *Immediately upon FERC approval*
    - b. Upon migration to weekly invoicing, reduce credit limit (where applicable) to \$16M:
      - *Effective with weekly invoicing implementation*

## Enhancement 2 – Eliminate Unsecured Credit: TCC Market

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- ◆ **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 (~\$239M for 2008), but expected to increase to approximately \$500M in 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

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### ♦ 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
  - Market Participants not immediately recognized by the NYISO as having financial difficulties may purchase negative TCCs using unsecured credit for immediate cash flow
- 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
- See additional rationale listed with Enhancement 1

## **Enhancement 2 – Eliminate Unsecured Credit: TCC Market - Continued**

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- ◆ **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 are 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, which could be targeted for immediately prior to the Fall 2009 capability auction

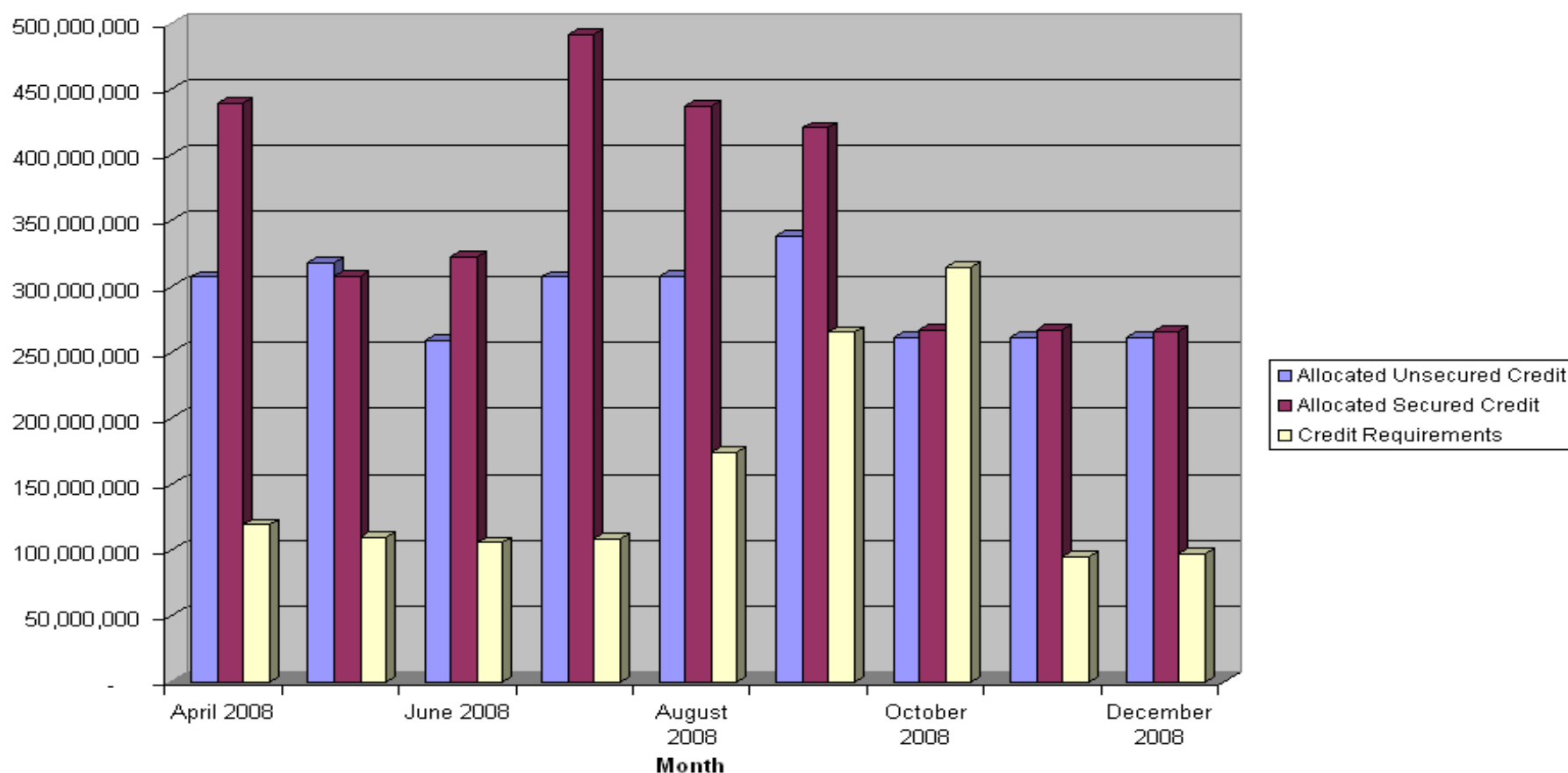
## Enhancement 2 – Eliminate Unsecured Credit: TCC Market - Continued

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- ◆ 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

**TCC Market - 2008 Summary**



# Phase B

# Phase B - Summary

Enhancement Number & Title	
4	Require Six-Month Payment History for Unsecured Credit
9	Revised Credit Scoring for Unsecured Credit Reductions
15	Reduce Cure Periods
16	Authority to Issue Estimated Initial Invoices
17	Conditions to Terminate: Default in another ISO/RTO
18	Conditions to Terminate: Two Late Payments

- **These items represent enhancements primarily proposed to provide NYISO with additional authority to address deteriorating Market Participant creditworthiness, etc.**
- **These enhancements were developed based on experiences over the past year, including “lessons learned” from Lehman Brothers default.**
- **During CPTF meetings to date, these enhancements have been largely supported by Market Participants.**

# Phase B - Proposed Schedule

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- ◆ CPTF meeting to discuss phased approach / implementation timeframe, etc. – March 2009
- ◆ Present proposal to MIWG – April 2009
- ◆ Present proposal to BIC – May 15, 2009
- ◆ Present proposal to MC – May 27, 2009
- ◆ Present proposal to NYISO Board – June 16, 2009
- ◆ Submit filing to FERC – July 2009
- ◆ Implementation – Immediately upon FERC approval

## 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 a six-month payment history 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 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 as the policy would be prospective

# Enhancement 9 – Credit Scoring Changes

- ◆ Current Policy
  - The NYISO may increase or decrease the amount of unsecured credit that would otherwise be granted to a Market Participant's on its base Tangible Net Worth by performing a credit assessment of the Market Participant compared to industry peers based on the following factors (weighted as indicated):
    - Liquidity 55%
    - Leverage and debt coverage 15%
    - Performance and profitability 15%
    - Qualitative Assessment 15%
- ◆ Proposed Enhancement
  - **Recommendation specifics are still under development**
  - NYISO is continuing to evaluate mechanisms for reducing a Market Participant's unsecured credit as a result of a decline in creditworthiness (i.e. based on what the Market Participant is approved for, reduction to TNW matrix vs % reductions in unsecured credit, etc.)
  - Segregate Market Participants into public vs. private vs. other entities
    - Public Entities – Those entities which are rated and issue public equity
    - Private Entities – Those entities that are not rated
    - Other Entities – (still evaluating)

## Enhancement 9 – Credit Scoring Changes

- ◆ Proposed Enhancement – Public Entities
  - For public entities, revise credit assessment methodology to account for leading indicators of credit risk as follows:

	Proposed Weight	Proposed Trigger	Proposed ↓ Uns. Cr.
• Rising EDF <ul style="list-style-type: none"> <li>• See definition on next slide</li> </ul>	x %	TBD	TBD
• Stock Volatility / Decline	y %	TBD	TBD
• Qualitative Assessment	z %	TBD	TBD

(qualitative assessment includes, but not limited to, recent ratings changes, evaluation of recent financial data, credit default swap activity, risk policies and procedures, management quality, historical relationship with NYISO – ie 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 – Public Entities cont'd
  - The NYISO utilizes Moody's CreditEdge which calculates Expected Default Frequency™ (EDF) — an objective, forward-looking probability of default measure—by compiling information about a firm's equity, leverage, industry, volatility, financial statement data, and historical defaults, and by performing an analysis using an advanced financial model. Additionally, it analyzes and computes credit spreads using a risk-neutral valuation methodology. The valuation framework compiles data from three markets to provide insight into what equity, bond, and CDS markets are implying about risk and return.
  - Find more information regarding Moody's CreditEdge at the following link:

[http://www.moodyskmv.com/products/sa\\_creditEdge.html](http://www.moodyskmv.com/products/sa_creditEdge.html)

## Enhancement 9 – Credit Scoring Changes

### ♦ Proposed Enhancement – Private Entities

- For private entities, revise credit assessment methodology to account for leading indicators of credit risk as follows:

	Proposed Weight	Proposed Trigger	Proposed ↓ Uns. Cr.
■ Performance and profitability			
• Return on Assets	17%	< 0	TBD
• Profit Margin	10%	< 0	TBD
■ Debt Coverage			
• Total Debt/EBITDA	18%	>10	TBD
■ Leverage			
• Total Debt/Total Assets	18%	> 60%	TBD
■ Liquidity			
• Cash/Assets	7%	< 2%	TBD
■ Qualitative Assessment	30%		

(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

## ◆ Rationale Continued

- Use of the current credit scoring methodology for non-public companies is problematic
- Peer data is not necessarily comparable (e.g. companies may have different reporting timelines)
- 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
- When applied to Lehman during summer 2008, current methodology did not result in a reduced unsecured credit allocation

## ◆ Implications

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

# Enhancement 15 – Reduce Cure Periods

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- ◆ **Current Policy**
  - NYISO may terminate a Market Participant immediately, upon notification to the Commission, for failing to cure payment defaults after 2 business days or failing to cure creditworthiness defaults after 3 business days
- ◆ **Proposed Enhancement**
  - Reduce default periods by 1 business day
  - NYISO may terminate a Market Participant immediately, upon notification to the Commission, for failing to cure payment defaults after 1 business day or failing to cure creditworthiness defaults after 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 Invoice

---

- ◆ Current Policy
  - NYISO does not issue an estimated invoices for initial settlements
- ◆ Proposed Enhancement
  - Revise the tariffs to explicitly permit the NYISO to issue an estimated invoice for initial settlements for financially distressed entities (i.e. entities that have experienced material adverse changes as determined in accordance with the credit assessment methodology set forth in Enhancement 9) with payment due three business days from date of issuance
- ◆ Rationale
  - 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 month'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 –

## Conditions to Terminate: Default in another ISO/RTO

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- ◆ **Current Policy**
  - The NYISO may 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 may result in an immediate demand for payment of any amounts owed as of the date of default and automatic removal of unsecured credit privileges
  - Other ramifications may include suspension from the NYISO markets, which could ultimately result in termination from the NYISO markets
- ◆ **Rationale**
  - Most other ISOs/RTOs have shorter initial settlement cycles than NYISO, which may trigger a Market Participant default in those regions prior to NYISO
  - 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 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 – Conditions to Terminate: Two Late Payments

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- ◆ **Current Policy**
  - The NYISO may 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 NYISO 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
- ◆ **Proposed Enhancement**
  - Permit NYISO to immediately revoke unsecured credit privileges of a Market Participant upon the second payment default within a 12-month period (i.e. unsecured credit revoked even if Market Participant ultimately cures default)
  - Other ramifications may include 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 terminations

# Phase C

# Phase C - Summary

<b>Enhancement Number &amp; Title</b>	
6	Reduce Composite Rating
11/11A	Revise Acceptable Providers for Letters of Credit
12	Limit Concentration of each Market Participant's Letters of Credit by Bank
19	Evidence of Financial Support/Capitalization
20	Penalties for Failure to Comply with Payment Terms or Creditworthiness Requirements

- ◆ These items represent enhancements requiring additional NYISO data & analysis for stakeholder consideration.
- ◆ Following Phases A and B, NYISO plans to provide Market Participants with information requested on these enhancements.

# Phase C - Proposed Schedule

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- ◆ CPTF meeting to discuss remaining data / analysis, implementation timeframes, etc. – Q2, 2009
- ◆ Present proposal to MIWG – Q2, 2009
- ◆ Present proposal to BIC – Q2, 2009
- ◆ Present proposal to MC – Q2, 2009
- ◆ Present proposal to NYISO Board – Q3, 2009
- ◆ Submit filing to FERC – Q3, 2009
- ◆ Implementation – TBD

## **Enhancement 6 – Reduce Composite Rating**

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### ◆ Current Policy

- The tariffs currently state the following related to composite ratings:
  - If rated by all three agencies and two are the same – take the rating that is the same
  - If rated by all three agencies and all three are different – take the middle rating
  - If rated by two agencies – take the lower rating
  - If any agency rating is below investment grade, no unsecured credit is granted

### ◆ Proposed Enhancement

- Utilize the lowest available rating from any of the three rating agencies to determine the composite rating

## Enhancement 6 – Reduce Composite Rating - Continued

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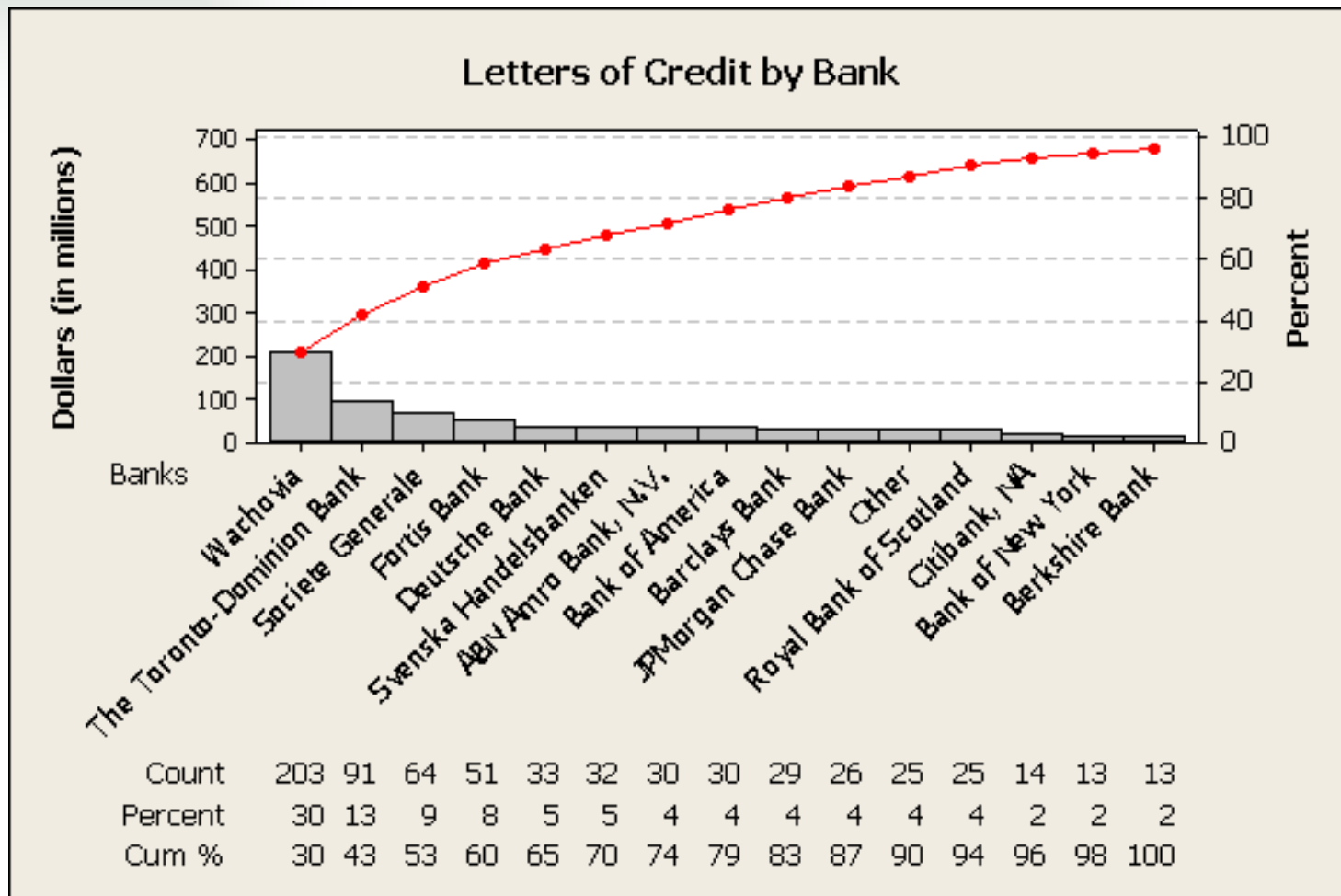
### ◆ Rationale

- Ratings agencies are not necessarily reflecting the true financial health of a company (often lag real-time events)
  - Slow response to leading indicators including deteriorating stock prices and increases in expected default frequencies
- ISO-NE also proposed to change the governing rating to the lowest single rating
- Refer to Oliver Wyman presentation on ratings prepared for the January 16 CPTF meeting

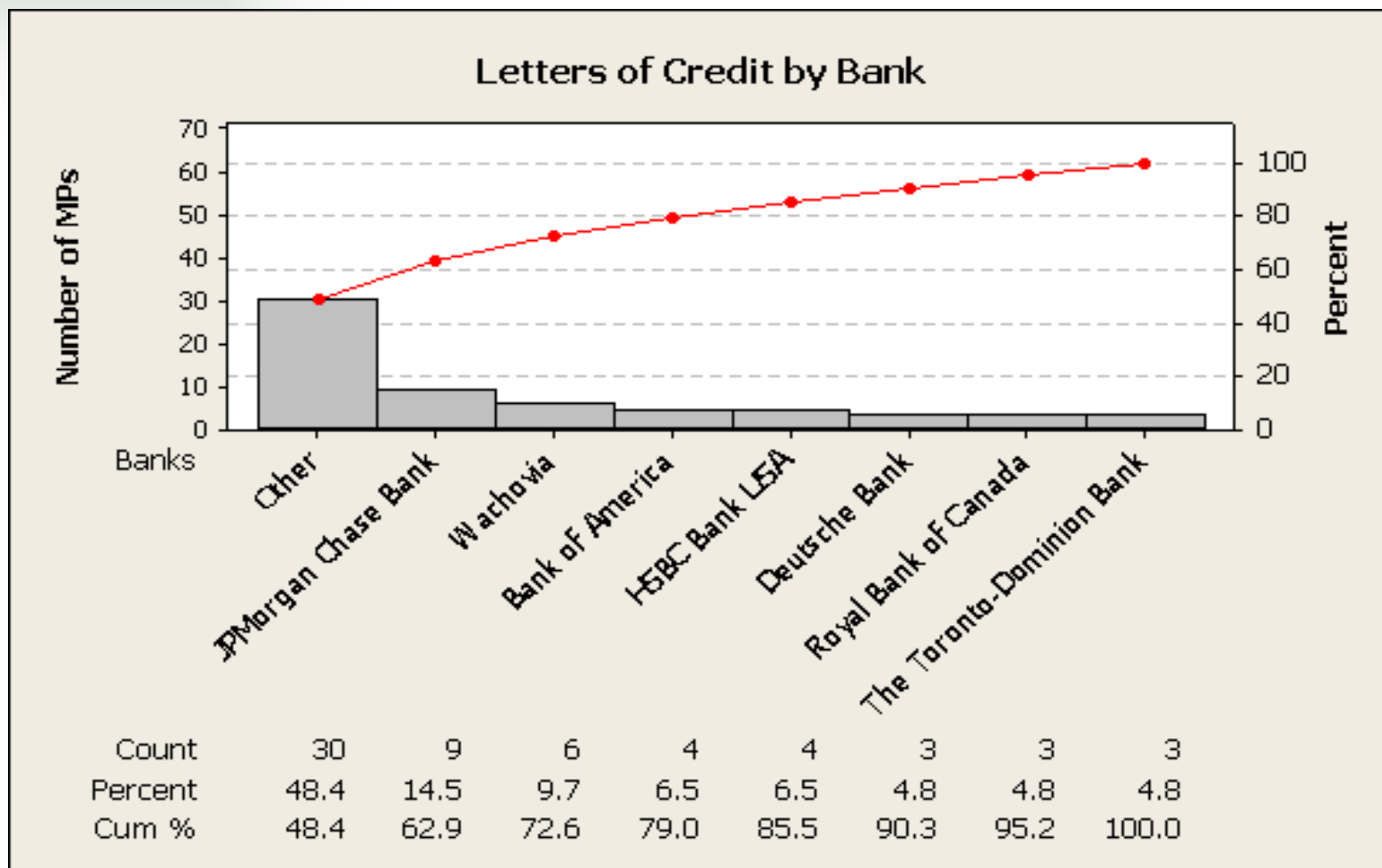
### ◆ Implications (as of 1/09)

- 14 Market Participants would have downgraded composite ratings
- Of those 14, 1 Market Participant would currently be required to post an additional \$8M in collateral
- Total potential reduction in the maximum amount of unsecured credit available for use approximates \$382M or 5% of the ~\$7B currently available for use

## Letters of Credit by Bank – in \$ (as of Nov 2008)



## Letters of Credit by Bank – in number (as of Nov 2008)



## Summary of Ratings for Banks Providing Letters of Credit (as of December 19, 2008)

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Number of Banks	Lowest Rating from any of 3 Agencies	Amount Held (in millions)
0	AAA	\$ -
0	AA+	\$ -
5	AA	\$ 47.6
10	AA-	\$ 287.7
10	A+	\$ 311.6
3	A	\$ 57.1
<b>28</b>		<b>\$ 704.0</b>

## Enhancement 11 – Increase Bank Minimum Rating

---

### ◆ Current Policy

- The tariff currently states that a letter of credit shall be in a form acceptable to the ISO and issued or guaranteed by an approved US or Canadian commercial bank with a minimum “A” rating

### ◆ Proposed Enhancement

- Increase the minimum rating from “A” to “AA-”
- Utilize the lowest available rating from any of the three rating agencies to determine the governing rating
- Add explicit tariff language clarifying that if *any* rating agency rates below the minimum, a letter of credit from that bank is not acceptable

## Enhancement 11 – Increase Bank Minimum Rating - Continued

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### ◆ Rationale

- Ratings agencies are not necessarily reflecting the true financial health of a company (often lag real-time events)
  - Slow response to leading indicators including deteriorating stock prices and increases in expected default frequencies

### ◆ Implications (as of 1/09)

- 13 banks would become ineligible to provide letters of credit for NYISO Market Participants

- ABM Amro Bank, NV
- CIBC
- Citibank, NA
- Comerica Bank
- Deutsche Bank AG, New York Branch
- Fortis Bank
- Harris Trust and Savings Bank

Key Bank, NA  
M&T Bank  
National Bank of Canada  
Royal Bank of Scotland  
Union Bank of California  
Wachovia Bank, NA

- 24 Market Participants with letters of credit totaling ~\$369M would need to provide another form of credit support or a letter of credit from an approved bank

# Enhancement 11A – Utilize CME Group Banks (A CME/Chicago Board of Trade/NYMEX Company)

---

## ♦ Current Policy

- The tariff currently states that a letter of credit shall be in a form acceptable to the ISO and issued or guaranteed by an approved US or Canadian commercial bank with a minimum “A” rating

## ♦ Proposed Enhancement

- NYISO would continue to require the institution to be a U.S. or Canadian commercial bank
- Utilize approved bank list (banks must apply to be placed on list) from CME Group Banks where approved issuers of letters of credit must meet the following criteria:
  - Must have a Bank Financial Rating of a “C” or higher
  - Must have a Tier 1 Ratio of 6% or higher
    - Tier 1 Ratio is the preferred measure of capital adequacy. It measures a firm's core capital relative to its risk-weighted assets
    - Tier 1 Ratio: Tier 1 Capital / Risk-weighted Assets
      - Well-Capitalized = 6% or more
      - Adequately Capitalized = greater than or equal to 4%
      - Undercapitalized= below 4%
      - Significantly Undercapitalized = below 3%
  - Must have capital of \$10 billion or higher

# Enhancement 11A – Utilize CME Group Banks (A CME/Chicago Board of Trade/NYMEX Company)

## ♦ Rationale

- Ratings agencies are not necessarily reflecting the true financial health of a company (often lag real-time events)
  - Slow response to leading indicators including deteriorating stock prices and increases in expected default frequencies
- CME Group Banks' risk assessment group performs quarterly reviews of all approved banks
- CME Group Banks have approximately 50 analysts evaluate risk of banks issuing letters of credit
- CME Group Banks limit clearing members use of letters of credit to 50% of their margin requirement

## ♦ Implications (as of 1/09)

- 11 banks would become ineligible to provide letters of credit for NYISO Market Participants
  - Bank of North Dakota
  - Barclays Bank, New York Branch
  - CIBC
  - Comerica Bank
  - Key Bank, NA
  - M&T Bank
  - National Bank of Canada
  - Royal Bank of Scotland
  - Societe Generale
  - Union Bank of California
  - Wachovia Bank, NA
- 18 Market Participants with letters of credit totaling ~\$352M would need to provide another form of credit support or a letter of credit from an approved bank

# Enhancement 11A – Utilize CME Group Banks (A CME/Chicago Board of Trade/NYMEX Company)

Bank Name	Current NYISO LOC Issuers
ABN AMRO Bank	X
Australia and New Zealand Banking Grp. Ltd.	
Banco Santander Central Hispano, S.A.	
Bank of America, NT&SA	X
Bank of Montreal	
Bank of New York	X
Bank of Nova Scotia	X
Commerzbank	
Mitsubishi UFJ Trust and Banking Corp.	
Bank of Tokyo-Mitsubishi UFJ	
BNP Paribas	X
Caixa Geral de Depositos	
Calyon	
Citibank N.A.	X
CoBank	
DBS Bank Ltd.	
Deutsche Bank AG	X
Fifth Third Bank	

Bank Name	Current NYISO LOC Issuers
Fortis Bank S.A./N.V.	X
Harris Trust & Savings	X
HSBC Bank USA	X
Intesa Sanpaolo S.p.A.	
JP Morgan Chase Bank	X
KBC Bank	
Lloyds Bank TSB	
Natixis	
Norddeutsche Landesbank	
The Northern Trust Company	
OCBC Bank	
Royal Bank of Canada	X
Standard Chartered Bank	
Svenska Handelsbanken	X
Toronto-Dominion Bank	X
United Overseas Bank Ltd.	
U.S. Bank National Association	X
Wells Fargo Bank, N.A.	X

## Enhancement 12 – Bank Concentration by Market Participant

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- ◆ Current Policy
  - Market Participants can utilize a letter of credit that is in a form acceptable to the ISO and issued or guaranteed by an approved US or Canadian commercial bank with a minimum “A” rating with no limit on the amount per bank
- ◆ Proposed Enhancement
  - Limit the amount of concentration a Market Participant can have at any one bank to \$100,000,000 per bank
- ◆ Rationale
  - Minimizes concentration of NYISO’s and Market Participant’s exposure to one bank
  - Provides Market Participants with ability to react in more timely fashion if a bank is no longer deemed acceptable to provide letters of credit to NYISO
  - Similar to other ISO/RTO proposals
- ◆ Implications (as of 1/09)
  - No Market Participants would be affected by this change

## Enhancement 19 – Evidence of Financial Support / Capitalization

---

- ◆ Current Policy
  - The NYISO does not require evidence of financial stability and/or company capitalization from prospective Market Participants that meet the NYISO's credit requirements
- ◆ Proposed Enhancement
  - Require new applicants to provide evidence of cash flow and capitalization upon entry into the NYISO markets including but not limited to disclosing all affiliate relationships to the NYISO Credit Department
  - Permit the NYISO to request and receive updated financial information/projections from existing Market Participants, upon request
- ◆ Rationale
  - Very thinly-capitalized players can enter the ISO-administered markets with limited or no transparency to NYISO
  - NYISO's ability to obtain additional financial data on potentially distressed existing Market Participants can be beneficial in evaluating financial health
- ◆ Implications
  - Provides additional tools for NYISO Credit department to evaluate financial stability of Market Participants

## Enhancement 20 – Penalties for Failure to Comply with Payment Terms or Creditworthiness Requirements

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- ◆ Current Policy
  - Market Participants are assessed interest on unpaid balances due to the NYISO using an interest rate linked to the prime rate.
  - Additionally, failing to meet NYISO's creditworthiness requirements may permit NYISO to suspend a Market Participant.
- ◆ Proposed Enhancement
  - TBD
- ◆ Rationale
  - The interest on unpaid balances may not represent a significant deterrent to certain Market Participants.
  - The practical considerations for suspending certain Market Participants may be problematic.
- ◆ Implications
  - Provides additional incentive for Market Participants to comply with tariff requirements for timely payments and adherence to creditworthiness requirements, thereby improving market liquidity and/or minimizing risk of defaults.

# Phase D

# Phase D - Summary

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Enhancement Number & Title	
1	Eliminate Unsecured Credit in all Markets
3	Eliminate Unsecured Credit: Virtual Transactions
5	Change Investment Grade Rating
7	Revalue % of Tangible Net Worth

- ◆ These items represent enhancements to consider for future policy development.

# Phase D - Proposed Schedule

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- ◆ CPTF meeting to discuss future policy development – TBD
- ◆ Present proposal to MIWG – TBD
- ◆ Present proposal to BIC – TBD
- ◆ Present proposal to MC – TBD
- ◆ Present proposal to NYISO Board – TBD
- ◆ Submit filing to FERC – TBD
- ◆ Implementation – TBD

# Enhancement 1 – Eliminate Unsecured Credit in all Markets

---

- ◆ **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 (~\$239M for 2008), but expected to increase to approximately \$500M in 2009
- ◆ **Proposed Enhancement**
  - Eliminate unsecured credit in all markets
- ◆ **Rationale**
  - Most established markets (i.e., commodities markets) do not permit unsecured credit
  - Unsecured credit significantly increases default risk and potential bad debt loss to the NYISO marketplace
  - Unsecured credit privileges can encourage inappropriate risk-taking
  - Unsecured credit is granted in NYISO markets on basis of extremely lagging data (ratings and prior financial statements)
  - Significant failures in global economy have triggered rapid deterioration in entities who appeared creditworthy and qualified for unsecured credit
  - Entities that obtain unsecured credit privileges have the ability to enter into positions in forward markets that may subsequently become problematic
  - Significant challenges exist to determine appropriate granting and monitoring of unsecured credit levels
  - A large default for a Market Participant with unsecured credit could potentially lead to catastrophic implications to the NYISO markets

# Enhancement 1 – Eliminate Unsecured Credit in all Markets - Continued

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- ◆ Rationale Continued<sup>1</sup>
  - The extension of unsecured credit involves an assumption that an entity will not fail (Lehman failed)
  - Managing the risk that an entity will not fail is inherently more subjective than managing the risk of a position as credit assessments performed by the NYISO are unaware of the Market Participant's transactions with other entities and markets
  - Goal of risk management is to guard against what might happen, not to substitute the belief that nothing will
  - Full collateralization reduces market-wide credit risk and as such, directly decreases each Market Participant's individual credit exposure
  - Full collateralization ensures that the collapse of any one Market Participant does not result in a cascading credit default, massive loss of liquidity or compromise the integrity of the market as a whole
  - Full collateralization effectively levels the playing field so that all entities can participate on an equal basis regardless of credit standing or financial strength
- ◆ Implications (as of 1/09)
  - 59 Market Participants would need to post collateral up to \$817 million, or 56% of overall credit requirements

<sup>1</sup> Rationale listed on this page comes from Market Reform's "PJM Credit and Clearing Analysis Project - Findings and Recommendations," June 2008 (pgs 9-10)

## Enhancement 3 – Eliminate Unsecured Credit: Virtual Trans. Market

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- ◆ **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 (~\$239M for 2008), but expected to increase to approximately \$500M in 2009
- ◆ **Proposed Enhancement**
  - Eliminate unsecured credit in the Virtual Transactions market
- ◆ **Rationale**
  - When NYISO's Virtual Transactions market was introduced, Market Participants were required to post collateral to meet their credit requirements
  - Volatility within the Virtual Transactions market can result in a Market Participant having substantial losses in any given hour or within a 24-hour period which would increase potential defaults
  - See additional rationale listed with Enhancement 1
- ◆ **Implications (as of 1/09)**
  - 22 Market Participants have unsecured credit or guaranties supporting Virtual Transactions market activity totaling \$62 million (likely to be decreased following FERC approval of proposed Virtual Transactions credit requirement changes)

## Enhancement 5 – Change Investment Grade Rating

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### ◆ Current Policy

- The tariff currently states that a Market Participant with a Senior Unsecured Debt rating of BBB- or above or an Issuer or Equivalency rating of BBB or above is considered investment grade

### ◆ Proposed Enhancement

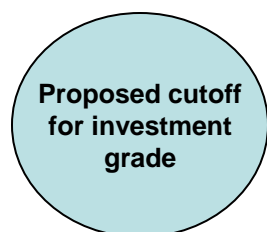
- Change minimum ratings to BBB+ for Senior Unsecured Debt rating and A- for Issuer and Equivalency ratings

### ◆ Rationale

- Ratings agencies are not necessarily reflecting the true financial health of a company (often lag real-time events)
  - Slow response to leading indicators including deteriorating stock prices and increases in expected default frequencies
- Refer to Oliver Wyman presentation on ratings prepared for the January 16 CPTF meeting

## Enhancement 5 – Change Investment Grade Rating - Continued

- ◆ Implications (as of 1/09)
  - 17 Market Participants would be required to post \$187M (secured credit already posted for these MPs is taken into account)
  - Reduction in unsecured credit would approximate \$955M or 13% of the ~\$7B currently available for use



*Draft – For Discussion On*

Number of Market Participants	Rating		Maximum Amount Available for Use (in millions)	% of Total Unsecured Allowed
	SLTUD	Issuer		
1	AAA	----	\$ 110.4	2%
1	AA+	AAA	\$ 26.2	0%
6	AA	AA+	\$ 1,252.8	18%
6	AA-	AA	\$ 1,240.9	18%
5	A+	AA-	\$ 586.6	8%
3	A	A+	\$ 290.5	4%
5	A-	A	\$ 804.0	11%
15	BBB+	A-	\$ 1,764.9	25%
8	BBB	BBB+	\$ 789.0	11%
9	BBB-	BBB	\$ 165.6	2%
<b>59</b>			<b>\$ 7,030.9</b>	

## Enhancement 7 – Revalue % of Tangible Net Worth

- ◆ Current Policy
  - The tariff currently provides a matrix depicting the starting point for determining unsecured credit for investment grade customers as a percentage of the Market Participant's tangible net worth

Rating		Current % of TNW
SLTUD	Issuer	
AAA	----	7.5%
AA+	AAA	7.5%
AA	AA+	7.5%
AA-	AA	7.5%
A+	AA-	7.5%
A	A+	6.5%
A-	A	5.0%
BBB+	A-	4.0%
BBB	BBB+	2.5%
BBB-	BBB	1.5%

## Enhancement 7 – Revalue % of Tangible Net Worth - Continued

- ◆ Proposed Enhancement
  - Change percentage values for determining the starting point for unsecured credit

Rating		Proposed % of TNW
SLTUD	Issuer	
AAA	----	7.5%
AA+	AAA	6.5%
AA	AA+	5.5%
AA-	AA	4.5%
A+	AA-	3.5%
A	A+	2.5%
A-	A	2.0%
BBB+	A-	1.0%
BBB	BBB+	0.0%
BBB-	BBB	0.0%

## Enhancement 7 – Revalue % of Tangible Net Worth - Continued

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- ◆ Rationale
  - Ratings agencies are not necessarily reflecting the true financial health of a company (often lag real-time events)
    - Slow response to leading indicators including deteriorating stock prices and increases in expected default frequencies
    - Defined notches indicate a differentiation in financial health and stability of a company
  - Refer to Oliver Wyman presentation on ratings prepared for the January 16 CPTF meeting
- ◆ Implications (as of 1/09)
  - 58 Market Participants would be affected by this change
  - 16 Market Participants would need to post \$245M to cover credit requirements (secured credit already posted for these MPs is taken into account)
  - Total potential reduction in maximum amount of unsecured credit available for use in the NYISO markets approximates \$3 billion or 41% (from ~\$7 billion to ~\$4 billion).

# Questions ??

## Appendix

# Lehman Brothers Commodity Services, Inc.

## Case Study

# Lehman Brothers Commodity Services, Inc. – Case Study

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- ◆ 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

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- ◆ 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

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- ◆ 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 or even reduce 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***