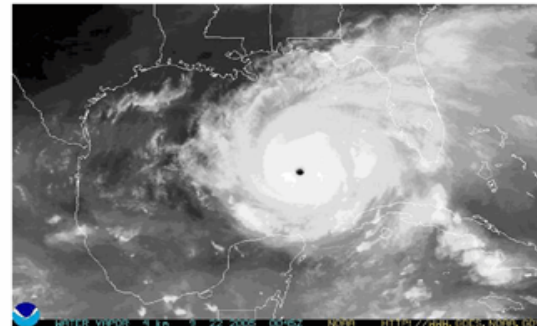


Energy Credit Risk

Risk Management Development



Energy MAS 

Energy Management Advisory Service: a consulting organization dedicated to improving an organization's bottom line through effective risk management tools and downstream marketing applications.

The Credit Dilemma within the Energy Industry

Risk Management Objectives



- Energy volatility is here to stay and in many cases growing at an alarming rate within seasonal cycle periods during a calendar year.
- Exposure to commodity and cash flow risk is greater than ever causing companies to rely more and more on the OTC market to execute trades and manage risk.
- The growth in the OTC market is causing an increased exposure to counterparty credit risk. Overall commodity risk is placing additional pressure to an organizations cash flow, banking collateral requirements, and external credit rating.
- Linking the initial risk exposure directly with on going commodity price movements and changes in an organization's overall working capital situation are key.
- The exposure and mismanagement of these various factors has caused some large investment grade companies to sell off assets at inopportune periods to raise cash. Some companies had no option but to eventually filed for bankruptcy protection and distribute losses to their counterparties.
- Today its more important than ever to implement an effective Real Time Credit monitoring and reporting process.



Natural Gas a Quick Look: Energy Volatility is Growing

Historical Natural Gas Volatility Yearly High – Low

Low Date	Low Price	High Date	High Price	Gain Delta	% Gain	Loss Delta	% Loss
08/01/90	1.396	11/26/90	2.650	1.254	89.8%	(1.590)	-60.0%
6/25/91	1.060	11/5/91	2.140	1.080	101.9%	(0.679)	-31.7%
6/24/92	1.461	9/23/92	2.790	1.329	91.0%	(0.950)	-34.1%
6/23/94	1.840	11/4/93	2.468	0.628	34.1%	(1.073)	-43.5%
9/23/94	1.395	10/25/94	2.040	0.645	46.2%	(0.705)	-34.6%
7/24/95	1.335	12/21/95	3.720	2.385	178.7%	(1.960)	-52.7%
9/4/96	1.760	12/17/96	4.600	2.840	161.4%	(2.549)	-55.4%
7/8/97	2.051	10/28/97	3.850	1.799	87.7%	(2.240)	-58.2%
8/27/98	1.610	11/9/98	2.640	1.030	64.0%	(0.540)	-20.5%
7/12/99	2.100	10/28/99	3.275	1.175	56.0%	(1.195)	-36.5%
11/22/99	2.080	6/26/00	4.718	2.638	126.8%	(1.108)	-23.5%
7/26/00	3.610	12/27/00	10.100	6.490	179.8%	(8.340)	-82.6%
9/26/01	1.760	10/31/01	3.440	1.680	95.5%	(0.800)	-23.3%
8/7/02	2.640	12/13/02	5.560	2.920	110.6%	(1.170)	-21.0%
9/22/03	4.390	12/10/03	7.550	3.160	72.0%	(3.030)	-40.1%
9/16/04	4.520	10/28/04	9.200	4.680	103.5%	(2.060)	-22.4%
7/25/05	7.140	12/13/05	15.780	8.640	121.0%	(11.730)	-74.3%
9/27/06	4.050	12/16/06	9.050	5.000	123.5%	(3.310)	-36.6%
1/31/07	5.740	5/17/07	8.230	2.490	43.4%	(3.038)	-36.9%
9/6/07	5.192	11/2/07	8.712	3.520	67.8%	(1.874)	-21.5%
12/27/07	6.838	3/13/08	10.294	3.456	50.5%	(1.630)	-15.8%
3/20/08	8.664	07/02/08	13.649	4.985	57.5%	OVER \$5.50 to date	

Three High - Low cycles within a one year period

Over \$21.065 in the absolute price movement from the cycle highs and lows.



The OTC Derivative Market relationship to the Energy Industry is growing.

What are some of the issues that impact your risk?

Over-the-Counter Hedging - managing price risk off-exchange with a financial contract



- **Advantages per a Bank America Financial Desk presentation**

- OTC transactions are highly tailored (basis, volume, structure).
- Longer trading maturities are available in the OTC markets than are available on the futures market.
- The financial benchmarks available include NYMEX crude oil (WTI) as well as Brent crude and for natural gas include NYMEX natural gas as well as more than 60 other indexes.
- The OTC market may offer better liquidity in the medium and long term (beyond six months).
- Confidentiality can be assured.
- No additional commissions, fees, and potentially no initial/maintenance margining.
- Management of an OTC program can be much easier than an exchange-traded program.

- **Disadvantages per EnergyMAS** 

- You would be exposed to the credit quality of your counterparties.
- There is little price transparency (no screen) that limits your ability to receiving fair value and latter contributes to MTM verification and reporting limitations.
- Usually a market maker generates execution margins ranging from 3 – 6 percent from the counterparty thereby reducing your ultimate net back price
- Contractual rights and obligations as to credit assurances in the agreement are not standard.
- Market liquidity is limited during extreme volatility periods.
- Off balance sheet corporate obligation is not reported until material price changes set in.
- Planning and anticipating margin requirements to hold position open in the future.



Real Time Monitoring and Evaluation Process

Involves creating a formal policy and implementing procedures that takes information and analysis from different sources and consolidates the data into a discipline evaluation that provides daily insight to your ongoing credit exposure.

- Real time market information on counterparties
 - Credit swaps and bond market
 - Commodity volatility
 - Stock and Financial Markets
 - Counterparty networking & news
 - Internal Ranking system
 - Charting and portfolio analysis
 - Committee oversight and review
- Contractual Status and Rights
 - Financial assurances
 - Netting agreements
 - Financial obligations in the future MTM
 - Settlement rights

Traditional Monitoring

- Historical information
 - Account receivable balances
 - Account payable balance
 - Current activity
 - Financial MTM instruments
 - Netting agreements
 - Financial MTM obligations
 - Payment history
 - Financial statement review
- Internal Analysis
 - Establishment of credit limits
 - Change in trends or results
 - Counterparty setup and approval
 - Implementation of a Credit Policy and procedures
 - Credit modeling



Credit Policy and Procedures.

Getting paid what you have earned - the goal

- A goal of any policy should be to heighten the awareness of credit risk through documentation and formally linking the front, middle, and back offices in a effort to actively manage the exposure.
- Proper reporting to management provides effective oversight as to overall exposure.
- Incorporating real time information through an internal rating system reflects not only a current status but anticipated changes.
- Advance Modeling with a Credit Var calculation is neat but more important is the identification and documentation of real time information. The formal discussion of counterparty rankings between groups creates an open dialog and improves the sharing of information.
- Understanding your portfolio along with your contractual rights and how future marketplace volatility impacts your exposure is the ultimate goal.



SemGroup Case Study - Just a simple review

Accessing real time data with a focused and discipline approach is invaluable in identifying potential working capital items at risk with your counterparties.

Like with the development of a major storm, most credit casualties show early signs and clues of the troubling exposure that lies ahead. A discipline approach with consistent monitoring would have provided proper lead time to manage the SemGroup credit risk.

Crude Rallies to \$115.

Visit SemGroup Energy Partners Home Search

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- 6 Month Report
- 3 Month Report

2005

- 12 Month Report
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- 3 Month Report

2004

- 12 Month Report
- 9 Month Report
- 6 Month Report
- 3 Month Report

2003

- 12 Month Report
- 9 Month Report
- 6 Month Report

March 2008 a new CFO is brought in. SemGroup in the market for additional financing

August 2007 SemGroup discloses a large margin holding balance.

Crude Rallies to \$99 before falling back to the low \$80.

Consistent reporting of the quarterly results by the SemGroup on their web site came to an end on November 2007.



SemGroup Financial Statement Review

Balance Sheet August 2007

SemGroup, L.P. Consolidated Balance Sheets*

(Unaudited)

	June 30, 2007	December 31, 2006
<i>(Dollars in Thousands Except Units)</i>		
Assets		
Current Assets		
Cash and cash equivalents	\$ 41,859	\$ 78,774
Trade receivables, less allowances of \$2,095 and \$1,653 at June 30, 2007, and December 31, 2006, respectively	1,934,958	1,371,407
Inventories	708,593	697,524
Derivative assets	140,099	51,446
Margin deposits	784,417	659,260
Other current assets	45,549	31,057
Total Current Assets	3,655,475	2,889,468
Property, Plant and Equipment, net of accumulated depreciation of \$173,059 and \$128,440 at June 30, 2007, and December 31, 2006, respectively	1,242,557	1,063,855
Goodwill, net	130,453	126,080
Long-term derivative assets	24,592	20,915
Other assets, net	375,961	348,287
Total Assets	\$ 5,429,038	\$ 4,448,605
Liabilities and Partners' Capital		
Current Liabilities		
Trade accounts payable	\$ 1,664,956	\$ 1,300,380
Accrued liabilities	165,988	185,193
Deferred income taxes	8,291	745
Derivative liabilities	1,013,068	714,673
Current portion of long-term obligations	8,652	9,974
Total Current Liabilities	2,860,955	2,210,965
Long-term debt	1,967,819	1,671,614
Minority Interest	2,000	-
Other long-term liabilities	202,440	206,537
Total Liabilities	5,033,214	4,089,116
Partners' Capital:		
22,632,185 and 20,945,756 units outstanding at June 30, 2007, and December 31, 2006, respectively		
Limited partners' capital	325,298	307,824
General partner's capital	9,482	9,252
Accumulated other comprehensive income	61,044	42,413
Total Partners' Capital	395,824	359,489
Total Liabilities and Partners' Capital	\$ 5,429,038	\$ 4,448,605



SemGroup Financial Statement Review

Income Statement August 2007

SemGroup, L.P. Consolidated Income Statements*

(Unaudited and abbreviated)

(Dollars in Thousands)	Six Months Ended June 30,	
	2007	2006
Sales	\$ 6,484,534	\$ 8,706,755
Cost of sales	5,927,524	8,197,142
Gross margin	557,010	509,613
Operating and G&A expenses	278,607	227,738
Other (income) expense	(42,427)	(104,474)
EBITDA**	320,830	386,349
Unrealized (gain)/loss on derivative instruments	121,912	192,975
Depreciation expense	56,199	41,737
Interest expense	82,849	49,980
Income before income taxes	59,870	101,657
Income tax expense (benefit)	8,240	(22,410)
Net income (loss)	51,630	124,067

*The information contained in these statements has been obtained from the unaudited six months ended June 30, 2007, and June 30, 2006, financial statements and the audited and restated December 31, 2006, financial statements of SemGroup L.P.

**Earnings before interest, taxes, depreciation, amortization and before the effects of SFAS 133 and consistent with the Company's bond indenture.

SemGroup, L.P. Consolidated Statements of Cash Flows*

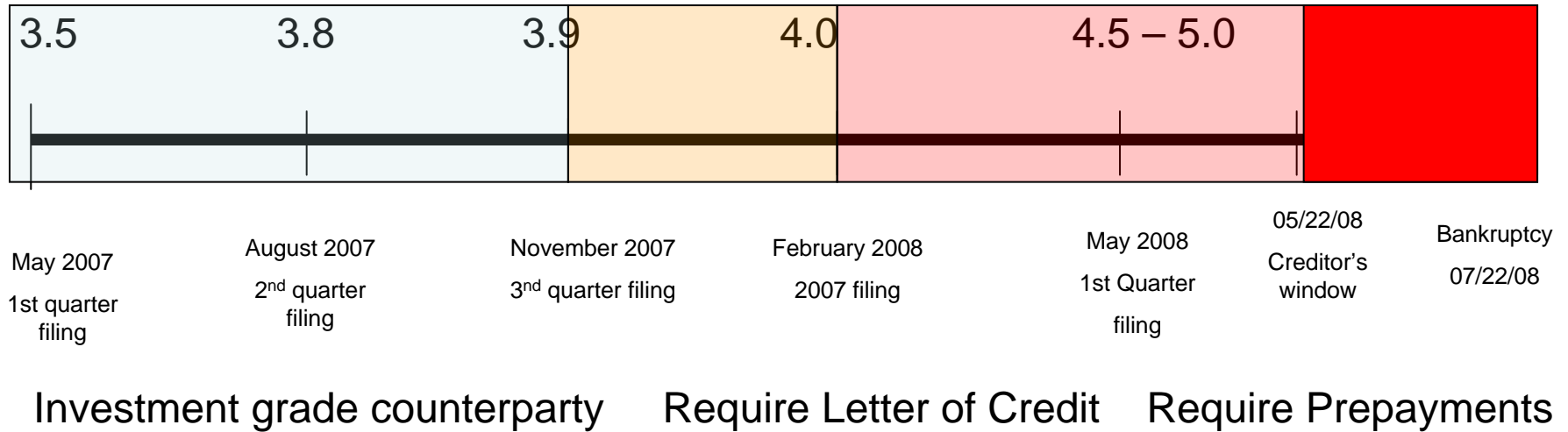
(Unaudited and abbreviated)

(Dollars in Thousands)	Six Months Ended June 30,	
	2007	2006
Net income (loss)	\$ 51,630	\$ 124,067
Non-cash items in operating activities	64,093	(94,622)
Changes in working capital	(176,033)	(22,487)
Net cash provided by/(used in) operating activities	(60,310)	6,958
Acquisitions	(86,845)	(154,915)
Capital expenditures	(117,680)	(127,026)
Other investing activities	(19,791)	(47,134)
Net cash used in investing activities	(224,316)	(329,075)
Cash flows from financing activities	264,920	285,733
Effect of exchange rate changes in cash	(17,209)	(9,066)
Net increase/(decrease) in cash	(36,915)	(45,450)
Cash and cash equivalents at beginning of period	78,774	56,968
Cash and cash equivalents at end of period	\$ 41,859	\$ 11,518



SemGroup Credit Rating Situation

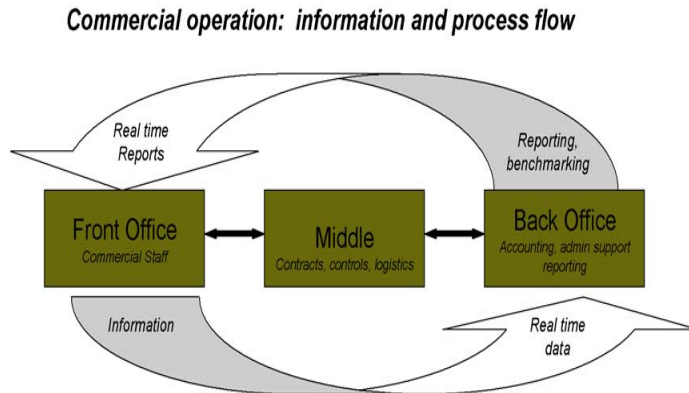
Changing of the credit score develops over time.



Risk Management Credit Implementation

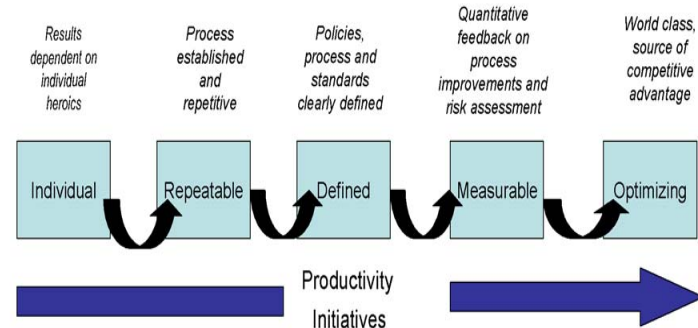
The goal is to develop formal steps that empowers employees to work together in building a repeatable process that eventually becomes a competitive asset advantage.

Organizational Overview Study



Process Evolution

An Organization's Maturity Progression



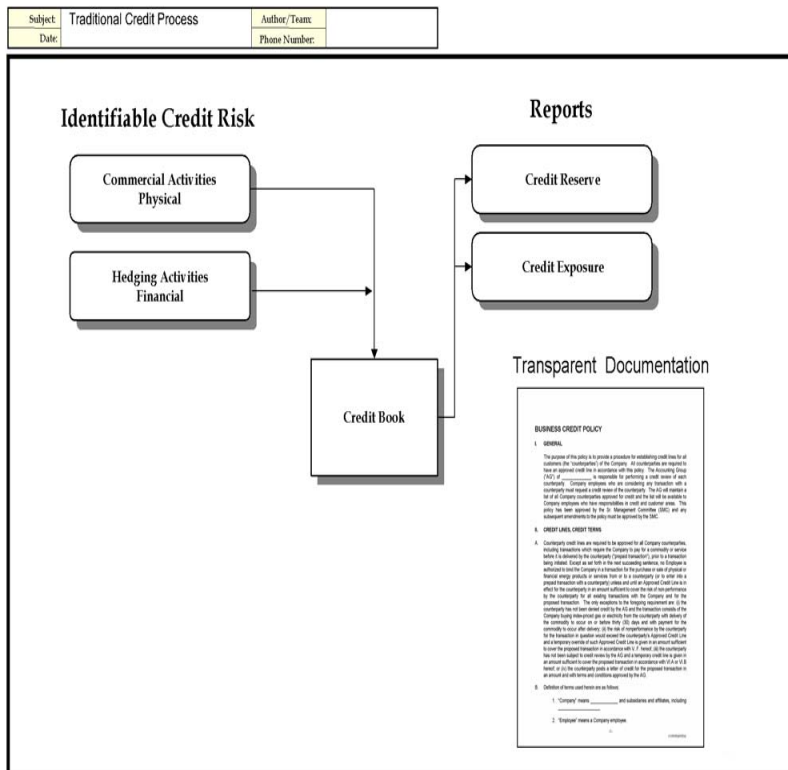
A focus on process management creates efficiencies and measurable quantitative feedback.



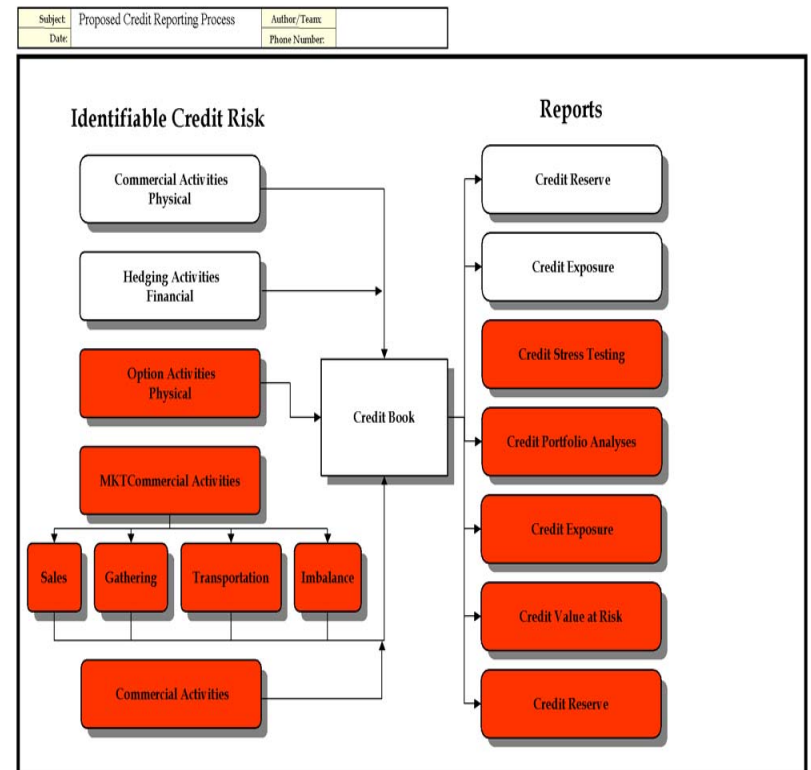
Enhanced Credit review is a real time process

Proper process designed is key in order to successfully link several aspects of the back office accounting and cash flow management systems.

Data Management Requirements - Current Credit Reporting Process



Management Requires an **Enhanced** Credit Reporting Process



Executive Summary page



Developing a Internal Rating System is the first step towards evaluating your credit risk in a portfolio

Standard & Poor's Credit Rating	Moody's Credit Rating	Fitch IBCA Credit Rating	Internal Credit Rating
AAA	Aaa	AAA	1
AA+	Aa1	AA+	1.2
AA	Aa2	AA	1.4
AA-	Aa3	AA-	1.6
A+	A1	A+	1.8
A	A2	A	2
A-	A3	A-	2.2
BBB+	Baa1	BBB+	2.4
BBB	Baa2	BBB	2.6
BBB-	Baa3	BBB-	2.8
BB+	Ba1	BB+	3
BB	Ba2	BB	3.2
BB-	Ba3	BB-	3.4
B+	B1	B+	3.6
B	B2	B	3.8
B-	B3	B-	4
CCC+	Caa1	CCC+	4.2
CCC	Caa2	CCC	4.4
CCC-	Caa3	CCC-	4.6
CC	Ca	CC	4.8
C	C	C	
D		D	5

Source: BIS (April 30,2001)



Real time reporting improves results

Your credit counterparties cash flow position can change in a very short period of time. Linking your current receivable balance to your contractual right is critical in minimizing any future default exposure.

We can assist you in creating a proprietary process and reporting structure in order to avoid surprises.

Page 1

Counter-Party Credit Exposure

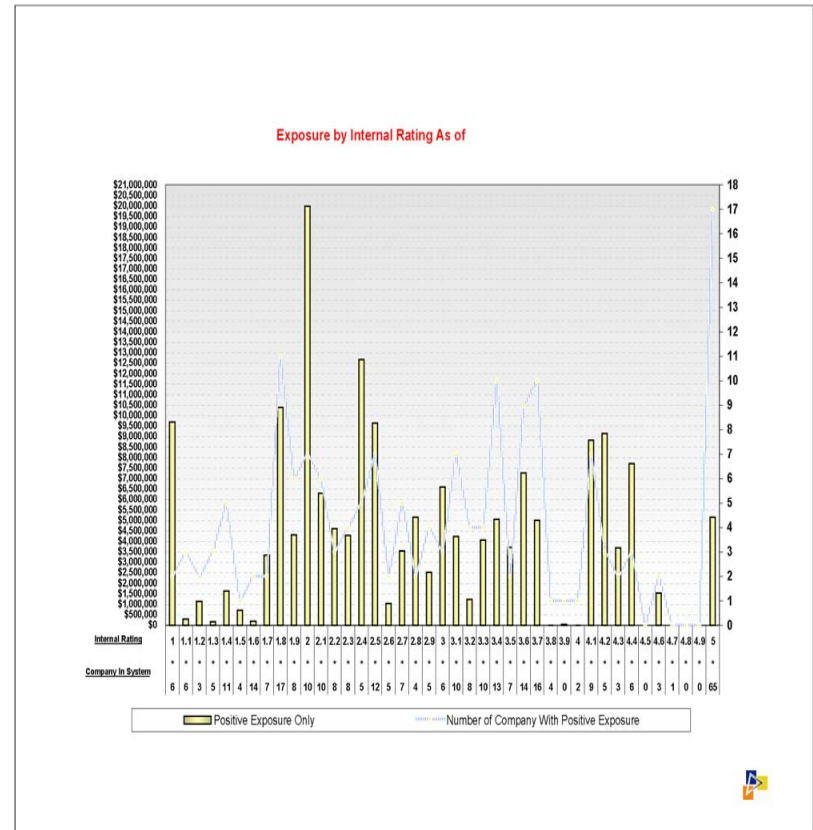
RMS Process Date: Rnddate:

Company: ALL
Lower Percent: 3
Upper Percent: 100
Internal Rating: ALL
Company Type: ALL

Report to: **EXCEL CSV**

Long Name	Short Name	Trans- actions	Int Credit Rating	Net RP?	Margin	Guarantee	Unsecured Line	AR Balance	Unbilled AR	Unbilled AP	Forward Gain (Loss)	Available Credit (Exposure)
AEC Storage and Hub Services, Inc.	AEC STO	G	1.8	N	\$0	\$0	\$4,000,000	\$0	\$0	\$0	\$0	\$4,000,000
AEP Energy Services, Inc.	AEP ES	G F	4.8	Y	\$0	\$0	\$0,000,000	\$11,191	\$7,251,810	\$6,886,977	\$3,191,530	\$5,242,335
AG Processing Inc.	AS	G	2.2	N	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$499,896
AKR Pipeline Company	AKR PIPE	G	2.5	N	\$0	\$0	\$500,000	\$0	\$0	\$55,000	\$0	\$500,000
APC, Inc.	APC	G	1.5	N	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$150,000
Adams Resources Marketing, Ltd.	ADAMS	G	1.8	Y	\$0	\$0	\$500,000	\$48,238	\$0	\$0	\$0	\$453,763
Agri-Energy, L.L.C.	AGR EN	G	1.0	N	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$500,000
Altogether Energy Supply Company, LLC	AETS	G P F	5.0	N	\$0	\$0	\$0	\$0	\$0	\$0	(\$119,355)	\$0
Alliance Energy Services Partners	ALLIANCE	G	5.0	N	\$0	\$0	\$0	\$25,105	\$2,298,858	\$0	\$26,963	\$2,351,809
Ametek Energy Generating Company	AMEN ESG	G	4.1	N	\$0	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000
Ampco/OPS aka Central Illinois Public Service Co.	AMP/OPS	G	3.2	N	\$0	\$0	\$4,000,000	\$0	\$83,802	\$0	\$17,108	\$3,916,192
Ampco/Utica Union Electric Company	AMUN	G P	2.3	N	\$0	\$0	\$0,000,000	\$0	\$183,383	\$0	\$0	\$4,816,617
American Central East Texas Gas Company L.P.	AKCENTX	G	1.2	N	\$0	\$0	\$1,000,000	\$384,098	\$719,315	\$307,345	\$0	\$595,429
American Central Western Oklahoma Gas Company, L.L.C.	AKCENTWG	G	1.9	Y	\$0	\$0	\$1,000,000	\$0	\$2,880,774	\$6,383,589	\$0	\$1,000,000
American Electric Power Service Corporation	AEP	P	4.8	N	\$0	\$0	\$5,000,000	\$0	\$483,340	\$1,500,000	\$38,410	\$4,238,500
Andalco Energy Services Company	ANDALCO E	G	1.8	Y	\$0	\$0	\$5,000,000	\$30,888	\$4,284,744	\$4,798,819	\$65,870	\$5,000,000
Andalco Petroleum Corporation	ANDALCO P	F	1.8	N	\$0	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000
Agua Darian Marketing, L.P.	AQUA DAL	G	3.8	N	\$0	\$0	\$0	(\$43,254)	\$0	\$0	\$0	\$0
Aqua Merchant Services, Inc.	AMS	G P	3.8	Y	\$0	\$0	\$0	\$43,114	\$2,254,200	\$2,285,260	\$423,108	(\$215,483)
Aqua, Inc. dba Aqua Networks	AQUA AN	G P	3.8	N	\$0	\$0	\$0	(\$1,251)	\$1,288,282	\$0	\$0	(\$1,255,031)
Arcadisone of Oklahoma City	ARC OKC	G	1.8	N	\$0	\$0	\$20,000	\$0	\$1,005	\$0	\$0	\$18,485
Aster Daniels Midland Company	ADM	G	2.7	N	\$0	\$0	\$5,000,000	\$0	\$1,576,805	\$0	\$0	\$3,423,195
Arizona Public Service Company	APS	G	2.8	N	\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$5,000,000
Arkansas Electric Cooperative Corporation	AEOC	G P	3.4	N	\$0	\$0	\$1,000,000	\$0	\$17,205	\$0	\$0	\$2,982,795
Arkansas Oklahoma Gas Corporation	COG	G	3.5	N	\$0	\$0	\$1,000,000	\$0	\$0	\$0	\$56,715	\$104,225
Arkansas Western Gas Company	AWG	G	2.7	N	\$0	\$0	\$5,000,000	(\$5,371)	\$84,399	\$0	\$15,128	\$4,715,544
Arkansas Western Gas Co. - Northeast Region	ARW NE	G	2.7	Y	\$0	\$0	\$0	\$0	\$0	\$0	\$15,128	\$15,128
Associated Electric Cooperatives, Inc.	AECI	P	4.1	Y	\$0	\$0	\$1,000,000	(\$2,795)	\$0	\$0	\$0	\$1,000,000
Atlanta, L.L.C.	ASTARS	G	5.0	N	\$0	\$0	\$0	\$45,750	\$0	\$0	\$0	(\$45,750)
Alto Energy Corporation	ATHCS	G	3.7	N	\$0	\$0	\$1,000,000	\$75	\$11,829	\$0	\$0	\$87,335
Grealey Gas Company, a Division of Alto Energy Corp.	GREALEY	G	3.7	N	\$0	\$0	\$0	\$187	\$11,829	\$0	\$0	(\$12,116)
United Cities Gas Company Division of Alto Energy Corp	UCGC	G	3.7	N	\$0	\$0	\$0	\$548	\$0	\$0	\$0	(\$548)
Autocraft Industries, Inc.	AUTOCRAFT	G	3.7	N	\$0	\$0	\$25,000	(\$436)	\$71,209	\$0	\$0	\$4,229

Databases: NUCP RMSREFRDRMSFSX1YD4



Executive Summary page



How does EnergyMAS add value?

- Fee based consulting service willing to under take projects on a turn key basis to completion.
- Improve your monitoring, reporting and management effort through a three phase process review and implementation schedule.
 - Phase I Review, Documentation, Compliance, Contractual Review and Bench Marking.
 - Phase II Implementation, Over sight, Compliance, Monitoring, Reporting and Training.
 - Phase III Enhance Reporting, stress testing and report automation.
- Eliminate the surprise effect if not the outright impact of a major credit loss.
- Implement processes that reviews and improves your contractual rights and lessens your outright credit exposure.
- Link the front, middle, and back offices into a team effort in managing ongoing credit exposure through real time information flow.
- Additional training and follow up service review under a discount fee structure with a long term retainer agreement.



Improve the flow of information

Real Time Monitoring

Energy Credit Risk Review - Preliminary Plan

	Phase I	Phase II	Phase III	Totals
	Review	Implementation	Monitor/Report	
	Benchmarks	Documentation	Optimization	
Sign Confidentiality Agreement	-			
Sign Retainer agreement	-			
Review Current Policy - Procedures	8			8
Validate Procedures w/ Employees	8			8
Review Commercial Contracts - credit rights	4			4
Analysis of Accounts Receivables/Payables	8			8
Review OTC Derivative Agreements	4			4
Information access - flow Front/Middle/Back	8			8
Risk management Recommendations-EnergyMAS	16			16
Review with management	4			4
Implement - Develop formal credit policy		16		16
Implement - Develop/modify job manuals		12		12
Implement - Develop formal Ranking Sytem and rating process		24		24
Implement Basic - Develop Reporting structure w/MIS		24		24
Review with management		4		4
Training and monitoring		20		20
Develop Enhance Credit Modeling w/MIS			80	80
Develop Enhance reporting			80	80
Review with management			4	4
Training			20	20
Total Hours	60	100	184	344



EnergyMAS



ENERGYMANAGEMENT ADVISORY

Service LLC