



Why Has the Enron Crisis Taken So Long?

Robert McCullough
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McCullough Research
January 5, 2005



Do we still have to think
about all this?

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Oh, hell!

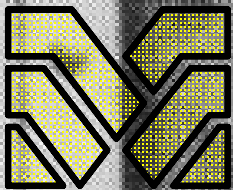


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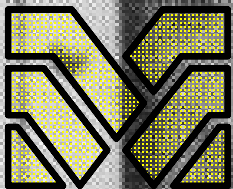
Motto of the Day

*Any mistake worth
making once is well
worth repeating.*



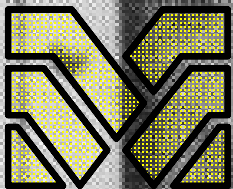
Back to the New Market Basics

- Evangelic Aphorisms
- Looking Backwards
- Advent of the Wholesale Power Market
- California's Romance With Centralized Markets
- Where Are We Now?
- What really happened at Enron?
- Whither competition?
- Enforcement?
- Recovery?
- Transparency?



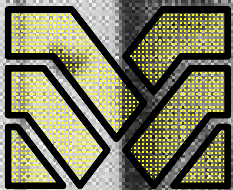
Seductive Aphorisms

- Each of these aphorisms came close to ruling the world
 - Turn the other cheek
 - Let a hundred blossoms bloom, let a hundred philosophies contend
 - To each according to his need, from each according to his ability
 - Price = Marginal Cost
- Our seductive aphorism luckily doesn't lead to setting our neighbor's house afire
- Unfortunately, when in an aphoristic daze, we can still do quite a bit of damage



Looking Backwards

- The electric business started with a battle between AC and DC
- At stake was the issue of central stations
- Central stations were too expensive -- so expensive that Tom Edison's firm went under
- His secretary, Sam Insull, left Wall Street and set up in Chicago -- like Henry Ford
- He was the Ken Lay of his time



2 CENTS
PAY NO MORE!

Chicago Daily Tribune

FINAL
EDITION

VOLUME LXXXI—NO. 221 C WEDNESDAY, SEPTEMBER 14, 1932—32 PAGES PRICE TWO CENTS

INSULL LOSS IS 226 MILLION

MAINE ELECTION RESULT DISMAYS G. O. P. AND DRYS

Democrats, Repeal Forces Jubilant.

NEWS SUMMARY of The Tribune

THE INSULL AFFAIR.
Insull's loss of \$226,000,000 is the largest in the history of the stock market. Page 1.
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MAYOR CERMAK LANDS IN N. Y. ON HOMEWARD TRIP

Told Europe Truth About Chicago.

SKETCHES OF THE NEWS



INSULL'S DIZZY DROP FROM \$100,000,000 TO 'EXILE' AND PENSION

ALTOGETHER Several hundred families received \$226,000,000 in the Insull stock market crash, according to the auditor's report. It was the common stock at a high of \$100 a share. At this price the holdings of the Insull family represented a net of \$100,000,000, according to the auditor's report. That was a dizzy height from which Insull's stock fell to a present position of \$15.00 a share and a net loss of \$226,000,000.

INVESTMENT CO. AND INVESTORS ARE WIPED OUT

Audit Report Filed in Federal Court.

TELLS PLANS TO AID THE FARMER

Charges Hoover Did Not Try To.

BY JOHN BOETTIGER.
Special Staff Writer.

NEWS SUMMARY of The Tribune

LOCAL.
Four legislators about, one without, an action after a meeting was held with representatives of the highest ranking in the public in the city. Page 1.
A measure aimed for state legislation in honor of Mayor Cermark's return today. Page 2.
Fourteen drivers have been fined for driving on the street after having been prohibited by the state highway department. Page 2.
State strength between state and federal government. Page 2.
Insull's loss of \$226,000,000 is the largest in the history of the stock market. Page 1.

Disclose Story of Insull's Ouster

LOAN TO RESCUE BROTHER LEADS TO RESIGNATION

Last Days as Utility

THE FIRST BOWLDER OF THE LANDSLIDE



Hoover Warns Bonus Would Wreck Nation

Legion Votes Today

The American Legion in its national convention in Portland reports to vote today on the bonus which some of the bill and immediate payment of the bonus. The legislative committee will meet at 10 o'clock tomorrow.

BULLETS FELL PEDESTRIANS IN GANG PURSUIT

Police and Gunmen in Thrilling Battle.

(Police in both parts.)
Four bystanders were shot and one killed in a thrilling battle between police and gunmen.

VOLUME LXXXI—NO. 221 C WEDNESDAY, SEPTEMBER 14, 1932—32 PAGES PRICE TWO CENTS

U. S. ORDERS INSULL INQUIRY

HOOVER WAGING UPHILL BATTLE, SIGNS INDICATE

Hostility Aid Roosevelt.

INSULL'S LOSS OF \$226,000,000 IS THE LARGEST IN THE HISTORY OF THE STOCK MARKET.

NEWS SUMMARY of The Tribune

LOCAL.
U. S. Senator Alben Barkley today urged investigation of the \$226 million loss of Insull's stock market crash. Page 1.
Police are investigating charges that Insull's loss of \$226,000,000 is the largest in the history of the stock market. Page 1.
A Texas girl says she refused to marry Insull. Page 2.
Police and food inspectors are reported to great success in the city. Page 2.
School officials report that the loss of \$226,000,000 is the largest in the history of the stock market. Page 1.

THE MAIN ISSUE OF 1932



ILLINOIS GETS \$5,000,000 FOR RELIEF TO NOV. 1

R. F. C. Loan Follows State, City Pleas.

Chicago Tribune Staff Writer.
Washington, D. C., Sept. 13.—The Reconstruction Finance Corporation today granted a relief loan of \$5,000,000 to Illinois for next year.

Gandhi Dying; Race Time to Save His Life

Work All Night

Chicago Tribune Staff Writer.
LONDON, Sept. 13.—The India office tonight said the agreement reached between the India Ministry and the government of Gandhara in the north of India, as a result of negotiations in regard to the arrest of Gandhara, although the Prime Minister has denied a report that he had not been disturbed at 11 p. m., British officials are reported to be waiting the question. The work will go on all night, it is believed.

EXPECT ACTION TO BRING BACK EX-UTILITY HEAD

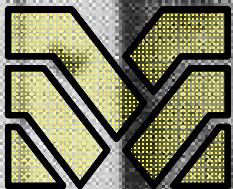
Prosecutor Tells Plans for Probe.

A sweeping federal investigation is being set on foot today behind the \$226 million loss of the Insull family.



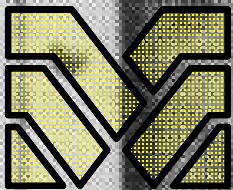
Sam Went Under in 1932

- Your grandparents lost their savings in the crash
- The reforms brought forth the Securities and Exchange Commission, the Public Utilities Holding Company Act, and the Federal Power Commission (also known as the Federal Energy Regulatory Commission)
- Insull's contribution to the industry was cost plus regulation
- He was so successful that goldpaling became the rule for the next forty years
- Sam died penniless on the Paris subway



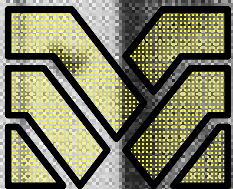
Goldplated Resources

- By the late 1970s and early 1980s, resources cost as much as \$4,000/kW
- As a backlash against these abuses, PURPA was passed
- Natural gas fired units proved reliable, inexpensive, and easily developed
- Resource prices fell to \$500/kW -- inexpensive enough to offset the price of natural gas



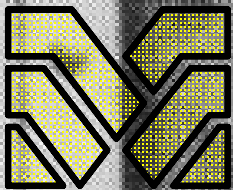
Advent of the Wholesale Power Market

- The wholesale power market was a mistake
- Peter Johnson, the BPA administrator at the beginning of the 1980s, decided to sell rather than allocated non-firm hydroelectricity
- We all knew it was a plot
- Instead it worked fabulously well
- In the late 1980s FERC even approved of the fait accompli and 1991 actually approved of market prices
- BPA provided open access transmission (semi-open access -- the price was low, but you had to spend weeks bonding with lonely bureaucrats)
- The markets elicited unused supplies -- mainly from PNW industrials -- and prices crashed



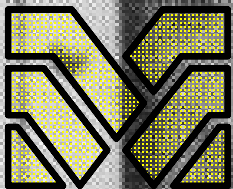
Competition Blossomed

- Many buyers/many sellers
- Few barriers to entry
- Easy mechanics
- Open cry negotiations



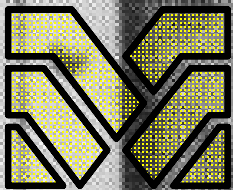
California's Romance With Centralized Markets

- After the Second World War, Britain decided to protect employment and nationalized the electric industry
- By the 1980s they had succeeded brilliantly:
 - prices were high
 - reliability was low
 - employment was astronomical
- Britain "liberalized" their industry by establishing a centralized market with mandatory rules
- The market has been successful, but only compared to its alternative
- Amazingly, California decided that this was the appropriate solution
- Of course, the result was less open than the existing markets with rules prohibiting most transactions, high barriers to entry, massive complexity and bureaucracy



Where Are We Now?

- Opportunity cost is dominating the open markets from the centralized administered markets
- Entry is difficult -- even exit isn't all that easy
- Paula Green once estimated that administrative overhead contributed 10% to total costs at the California ISO
- Transparency is low, complexity is high



Holden Salisbury Clarifies the Situation

Holden Salisbury: "TXU, this is Holden"

Norm Bertheson: "Hey Holden, Norm Bertheson at Cirro?"

Holden Salisbury: "Yes sir."

Norm Bertheson: "Anything happening here in some of the short term power?"

Holden Salisbury: "Um, it's not looking too good right now. I don't think I'm going to have anything to offer."

Norm Bertheson: "Nothing available?"

Holden Salisbury: "I just don't have anything..."

Norm Bertheson: "Where's all the energy going?"

Holden Salisbury: "It's cold man."

Norm Bertheson: "I mean, it is, but hell, nobody's at work. Very few people. I mean..."

Holden Salisbury: "I don't know."

Norm Bertheson: "Strange. Strange how we can have 56,000 available in the summertime and we can't get 40 together in the wintertime."

Holden Salisbury: "Yea. I don't know. I mean there's units that are down in the state."

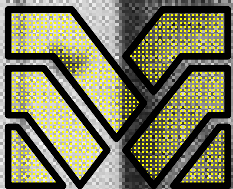
Norm Bertheson: "What units are down?"

Holden Salisbury: "I don't know but I know there are some. Look, I've gotta go man."

Norm Bertheson: "Alright." 2

What really happened at Enron?

- Enron was a high class Ponzi scheme from the early 1990s until the end.
- The general consensus is that they were technically dead by 1999.
- At that point SPE "trigger events" needed over \$2 billion in cash earnings by the end of 2001.
- As far as we can reconstruct, Enron management sent their traders out to rape and main in mid-1999.

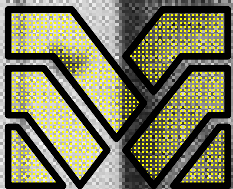


God and Man at Enron

March 9, 2001

Asset Liability Management Special Purpose Vehicles Underperforming Assets

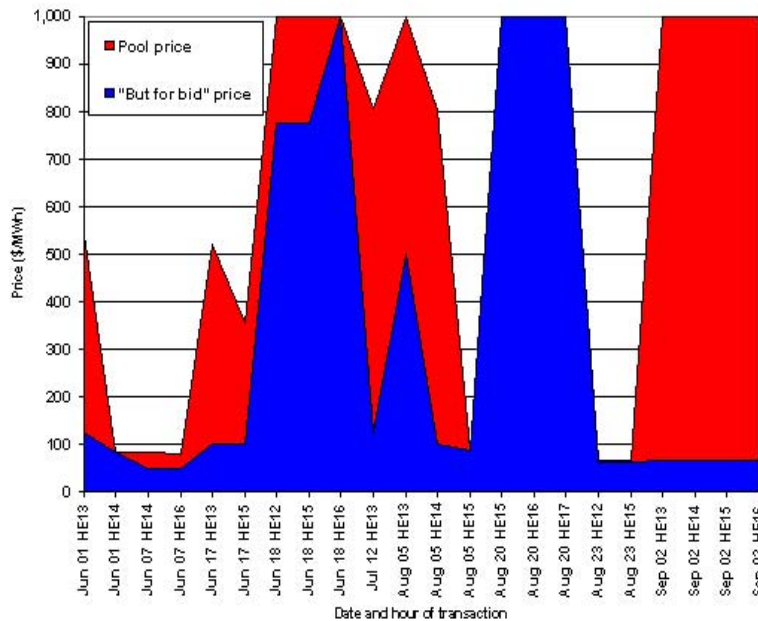
- Many of the assets contained in the SPVs are distressed
- Difficult to obtain data, but we have some information regarding the Raptor vehicle
 - *Unrealized* losses total in the hundreds of millions of dollars
 - It appears that the actual cash flows occur when Enron realizes the gain or loss
- Net effect of the SPVs is to create significant future liabilities
- Aggregate exposure from unrealized losses remains unknown
- It is conceivable that a disclosure of a loss event may precipitate a Trigger Event
- One scenario would be...



Project Stanley



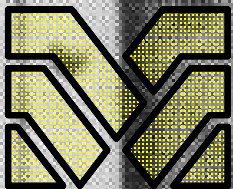
Conclusions - Impact on Pool prices



- ◆ Based on a simplified initial analysis, there was an impact on Pool prices:

- ✦ raised Pool revs by ~ \$45 million in 22 hours on total Pool volume
- ✦ actual financial impact would likely be under \$7million after accounting for legislated hedges

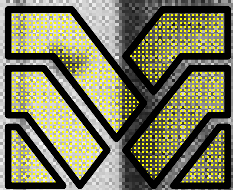
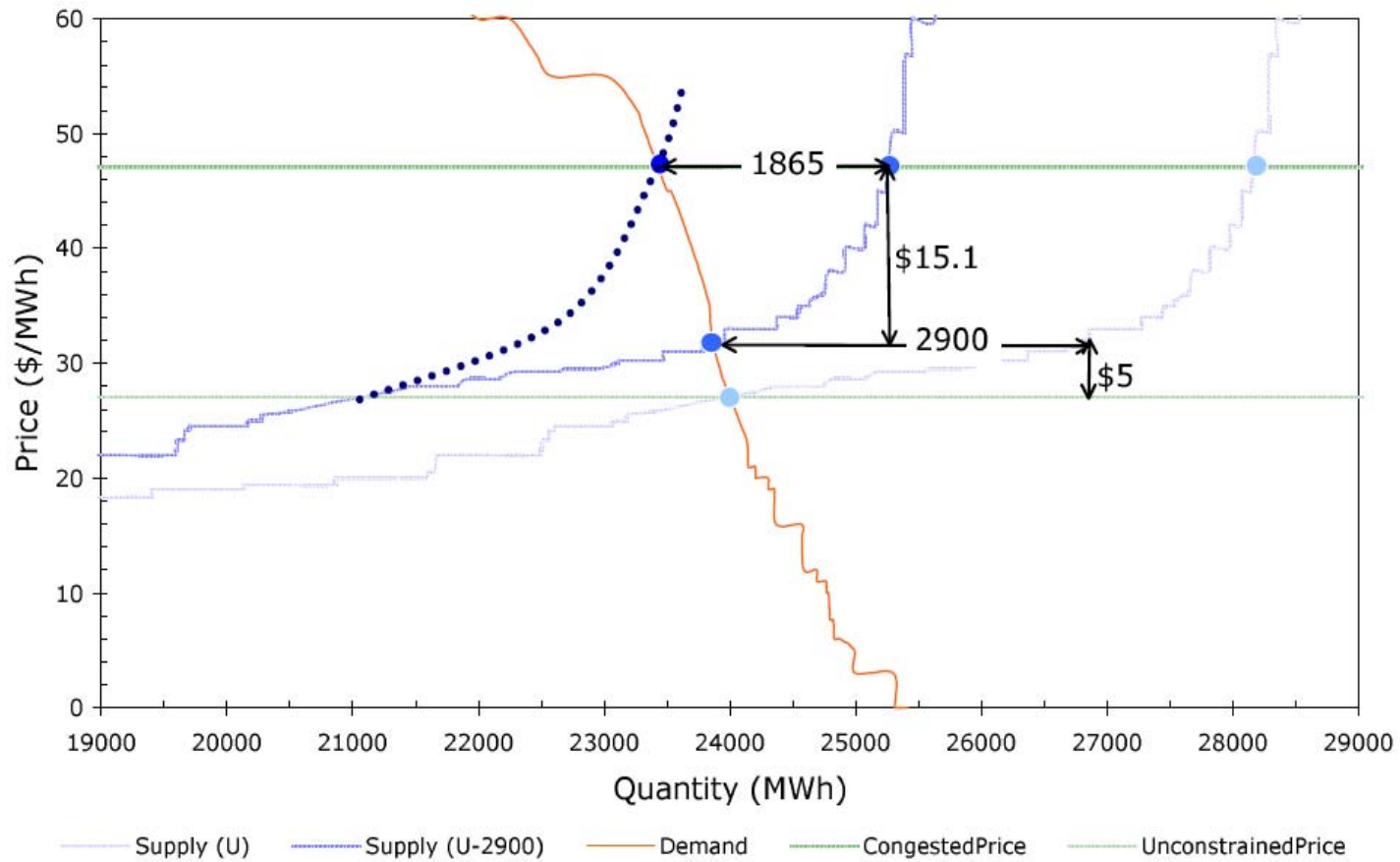
- ◆ Need to model legislated hedge and price impacts more precisely



Silver Peak II

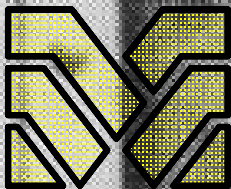
Actual Market Solution

Hour 18 on May 25, 1999

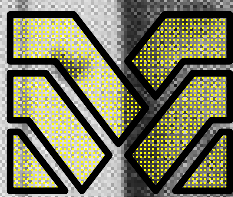
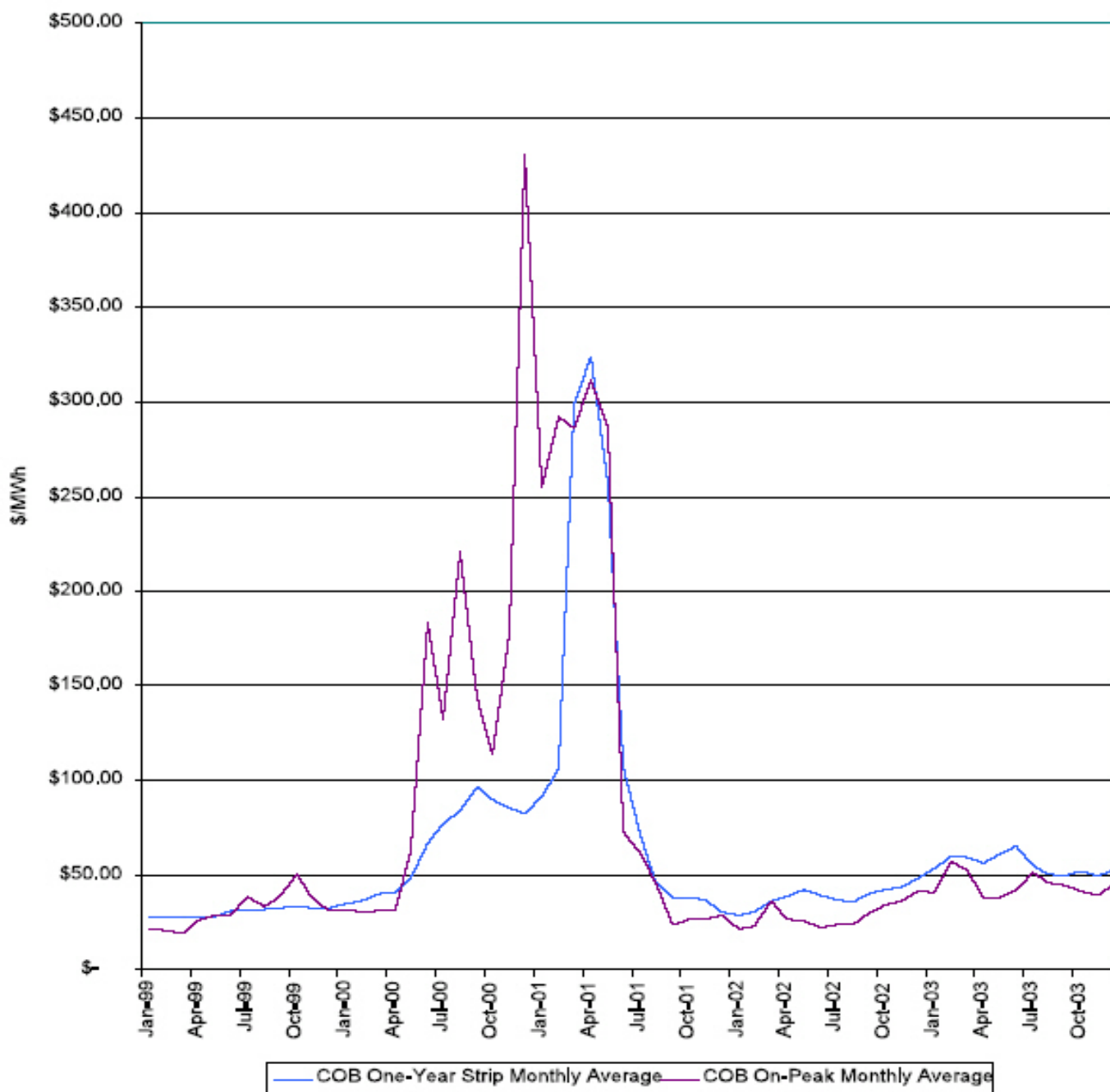


So What Really Happened On May 22, 2000

HR END	TIME	TOT.	DEL.	SUPPLY	MW PER	TOT.	CONG/ZONAL	MARKET	PRI
	ZONE	HRS.	PT.		HOUR	MW	PRICE		
1	PDT	1	NP15	Redding	25	25	\$ 75.00	Cal lmb	\$ 2
2	PDT	1	NP15	Redding	25	25	\$ 75.00	Cal lmb	\$ 6
3	PDT	1	NP15	Redding	25	25	\$ 75.00	Cal lmb	\$ 5
4	PDT	1	NP15	Redding	25	25	\$ 75.00	Cal lmb	\$ 4
5	PDT	1	NP15	Redding	25	25	\$ 75.00	Cal lmb	\$
6	PDT	1	NP15	Redding	25	25	\$ 75.00	Cal lmb	\$ 4
					0	0	\$ -		\$
1	PDT	1	SP15	Reliant	50	50	\$ 45.00	Cal lmb	\$ 2
2	PDT	1	SP15	Reliant	50	50	\$ 45.00	Cal lmb	\$ 6
3	PDT	1	SP15	Reliant	50	50	\$ 45.00	Cal lmb	\$ 5
4	PDT	1	SP15	Reliant	50	50	\$ 45.00	Cal lmb	\$ 4
5	PDT	1	SP15	Reliant	50	50	\$ 45.00	Cal lmb	\$
6	PDT	1	SP15	Reliant	50	50	\$ 45.00	Cal lmb	\$ 4
HE1-6	PDT	6	NP15	Redding	25	150	\$ 75.00	Sempra	\$ 7
					0	0	\$ -		\$
14	PDT	1	Malin	Cal lmb	51	51	\$ 689.52	Cal PX	\$ 49
15	PDT	1	Malin	TRANSalta	30	30	\$ 350.00	Cal PX	\$ 57
15	PDT	1	Malin	Cal lmb	4	4	\$ 750.00	Cal PX	\$ 57
16	PDT	1	Malin	SCL	34	34	\$ 500.00	Cal PX	\$ 65
					0	0	\$ -		\$
13	PDT	1	SP 15	KOCH	25	25	\$ 320.00	Cal lmb	\$ 37
13	PDT	1	SP 15	AQUILA	50	50	\$ 300.00	Cal lmb	\$ 37
14	PDT	1	SP 15	AQUILA	50	50	\$ 300.00	Cal lmb	\$ 68
15	PDT	1	SP 15	AQUILA	50	50	\$ 300.00	Cal lmb	\$ 75
non firm export for HE14, 25mw's ISO CUT									
						0	\$ -		\$
22	PDT	1	SP 15	AQUILA	50	50	\$ 200.00	Cal lmb	\$ 36
						0	\$ -		\$
ENRON FLOOR POSITION sold to ISO out of market bounced it off PAC for \$5 (B 80 @ S 75)									
17	PDT	1	SP / Malin / ISO	Cal lmb	100	100	\$ -	ISO (out mkt)	\$ 75
18	PDT	1	SP / Malin / ISO	Cal lmb	100	100	\$ -	ISO (out mkt)	\$ 75
19	PDT	1	SP / Malin / ISO	Cal lmb	100	100	\$ -	ISO (out mkt)	\$ 75
sale inputed zero price because Heather will get the money even though it is out of market per Stokely									
					0	0	\$ -		\$

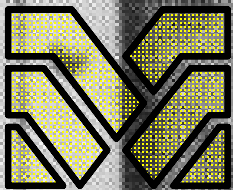


Spot Prices and One Year Strips at the California Oregon Border



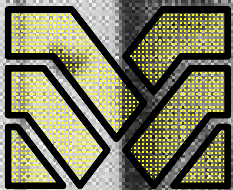
Per Se Anti-Trust

- Why could Enron gamble such huge amounts on these arcane schemes?
- Clearly, only precognition would explain that their willingness to take this risk
- Internal Enron presentations did not show any evidence of the impending crisis

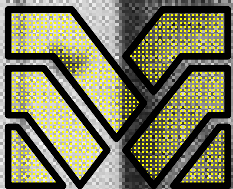
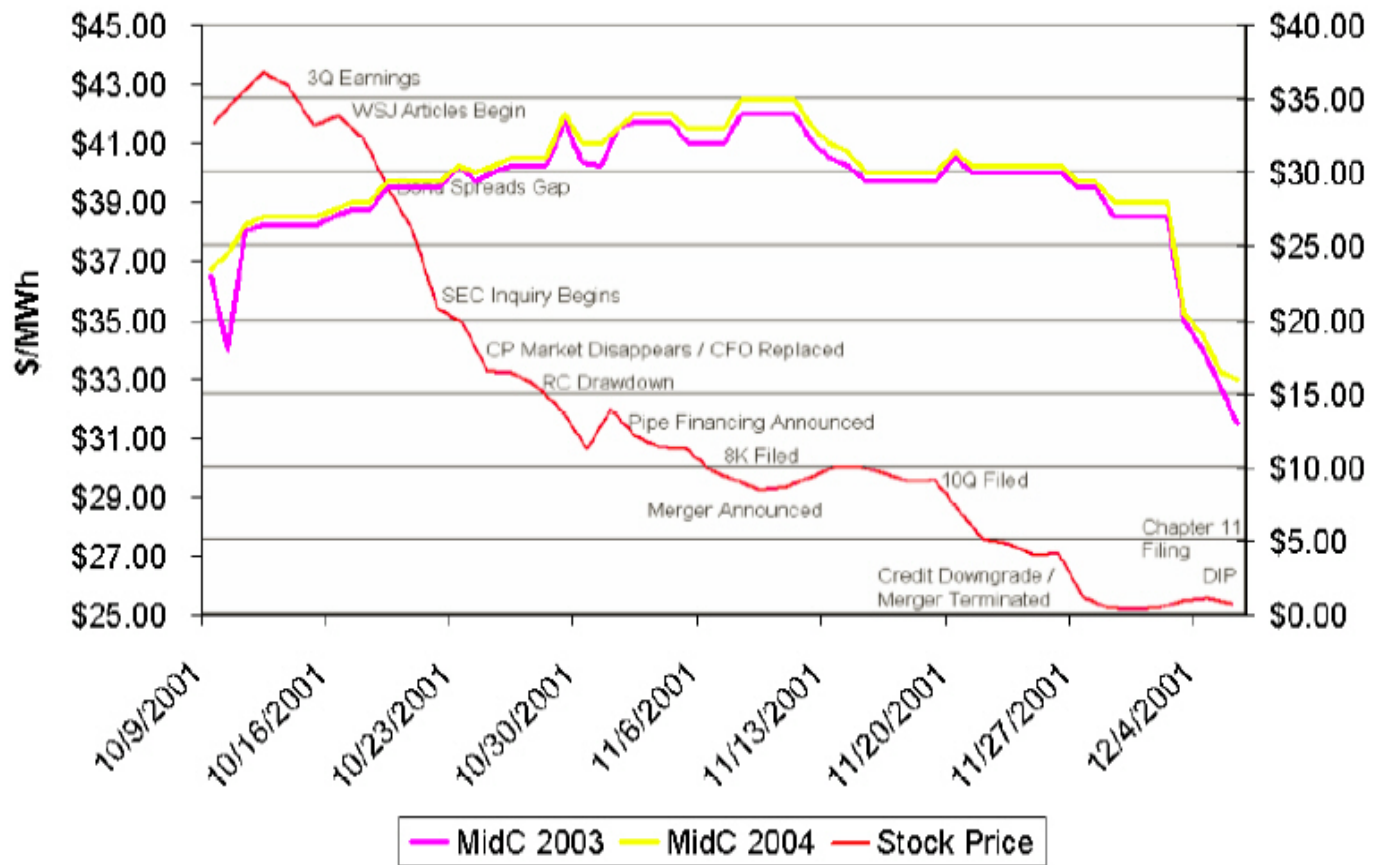


Why did Enron go bankrupt?

- The rapid disappearance of the crisis after westside price controls were imposed took Enron by surprise
- Cash deposits were a major part of their cash flow
- As prices fell, the deposits had to be returned
- Cash -- always a vulnerability of Ponzi schemes -- became scarce

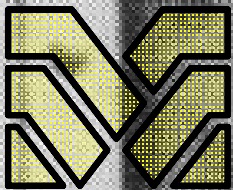


Enron Bankruptcy Events and Mid-Columbia Futures Prices



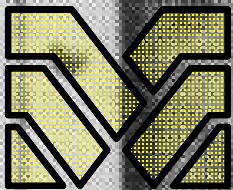
Where is Enron now?

- Class A office space on the top of Houston Center -- looking down at the Four Seasons
- Five hundred employees -- at least one hundred involved in litigation
- Additional outside counsel on major cases
- Two large data bases of documents -- Livelink and CDMS
- Several square block warehouses of documents
- A square block server farm



Whither competition?

- Very, very, very little has changed from 2000
- No additional reporting standards
- No oversight changes
- Muddled rules and disoriented regulators
- FERC trial staff have been ordered to "keep it simple"
- Judge critical of Enron was mysteriously replaced two months ago



Enforcement?



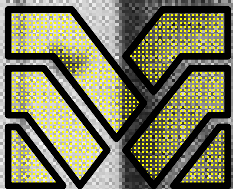
State of Energy Markets

January 1, 2002–June 30, 2003:
Staff Report to the Commission



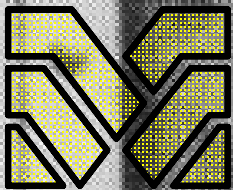
January 22, 2004

Office of Market Oversight and Investigations
Federal Energy Regulatory Commission



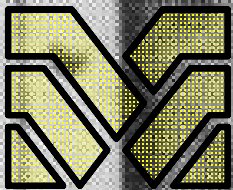
Overcharge Recovery?

- Awaiting at FERC and in the courts
- Preliminary evidence is that the Niners are not impressed by FERC's go slow approach
- Don't expect a windfall before 2006 (2006!)
- Why do we even care?



Transparency?

- The unemployed brother in law rule: If you can't explain the market to your unemployed brother in law, you can't expect to survive
- No real reforms have prevailed.
- None are expected.
- We have never discovered a single "trading strategy" that did not involve fraud.



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