



Control Number: 24770



Item Number: 235

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Public Utility Commission of Texas

Memorandum

2003 MAY 16 AM 10:29

PUBLIC UTILITY COMMISSION
FILING CLERK

To: Tammy Cooper
Director, Policy Development Division

From: Keith Rogas 
Director
Legal And Enforcement Division, Electric Section

Date: May 16, 2003

Re: Docket No. 24770, Report of the Electric Reliability Council of Texas
(ERCOT) to the PUCT regarding Implementation of the ERCOT
Protocols

In my memo to you yesterday, the wrong presentation for Dr. Oren was attached.
Attached is the correct presentation.

Docket No. 24770
Memo to Tammy Cooper
5/16/03

CERTIFICATE OF SERVICE

I, Keith Rogas, certify that copies of this document will be served on all parties on May 16, 2003, in accordance with Public Utility Commission of Texas Procedural Rule 22.74.

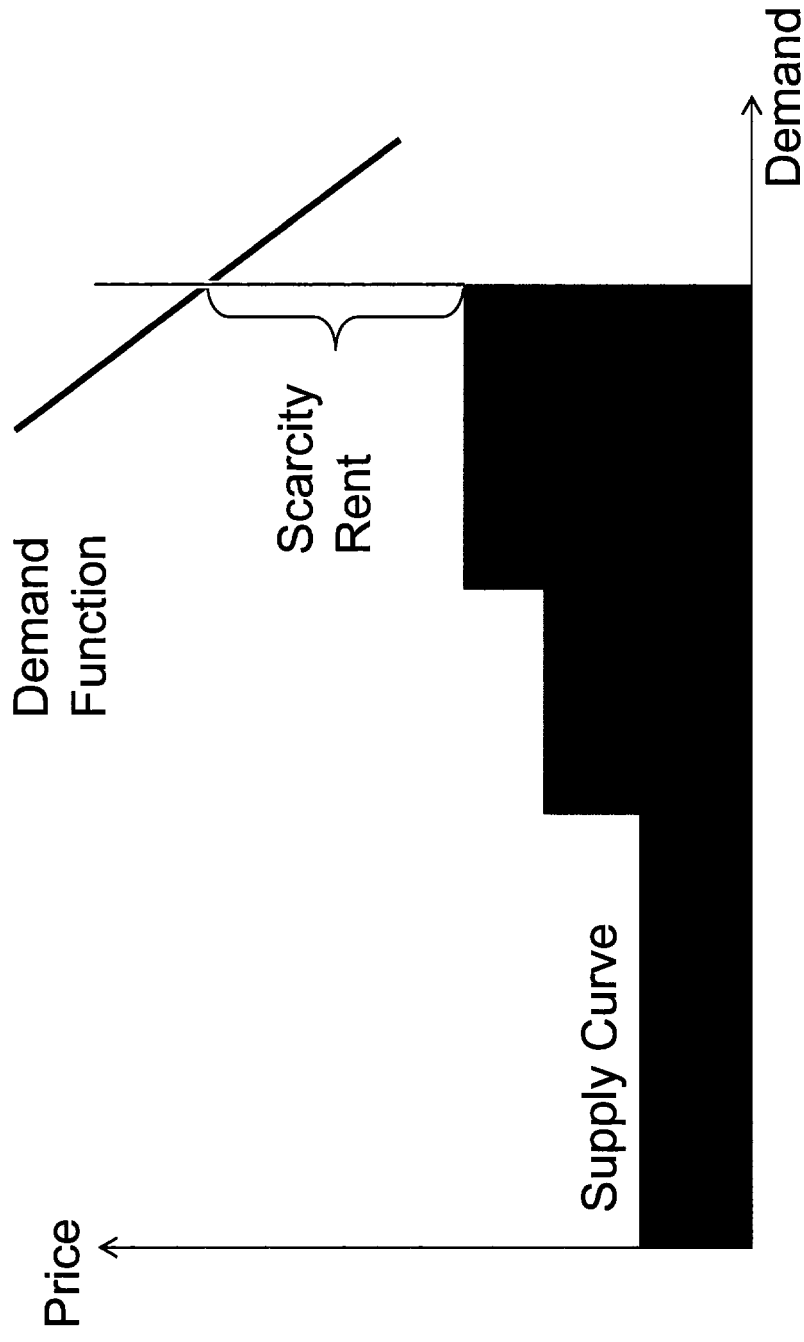

Keith Rogas

Market Failure Mitigation for Balancing Energy

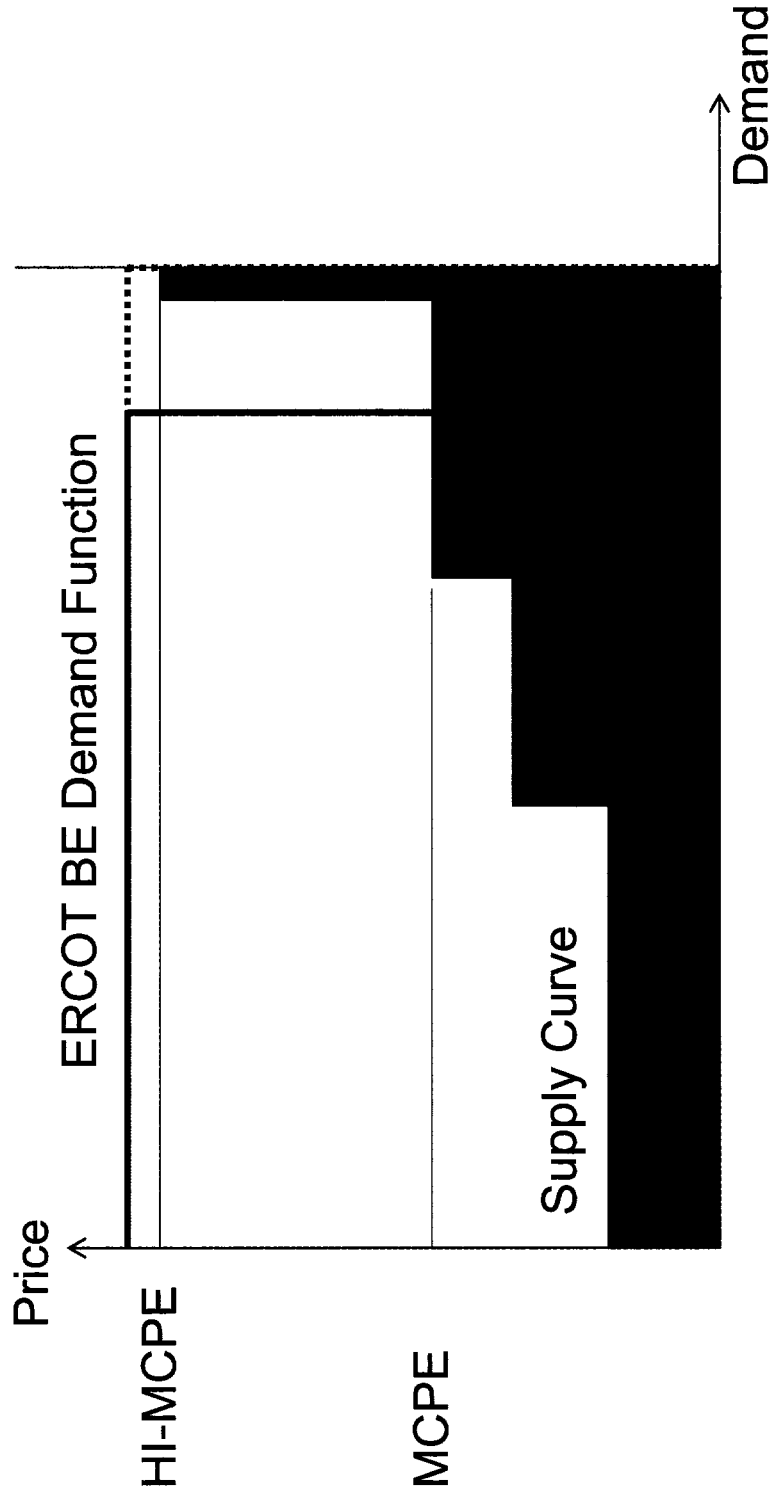
Shmuel Oren
Senior Adviser to MOD
and
Professor at UC Berkeley

PUCT Technical Conference, May 14, 2003

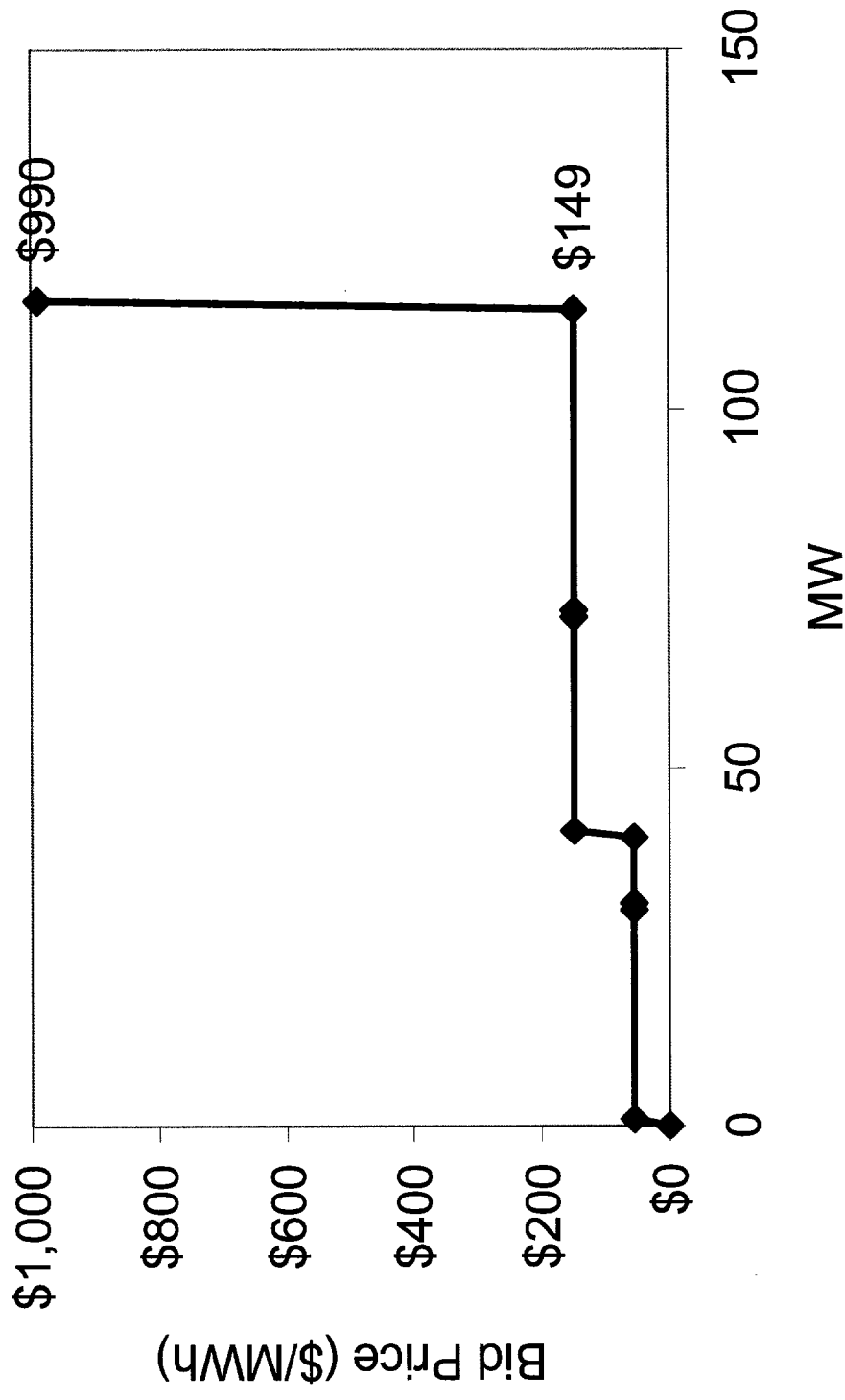
Scarcity Rents: Theory



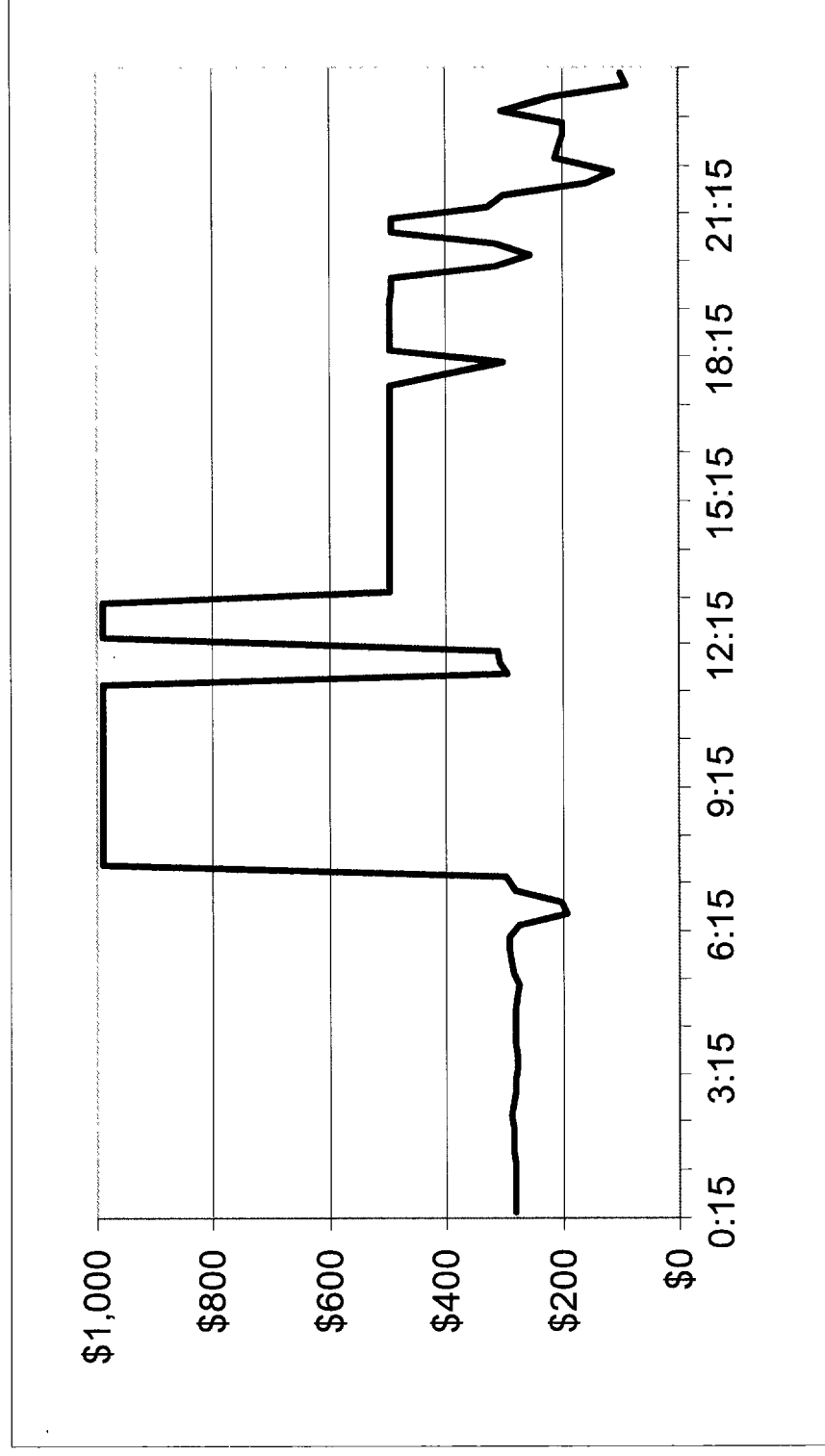
The ERCOT BES Demand Function



Price-Setting Bid Curve, 2/25

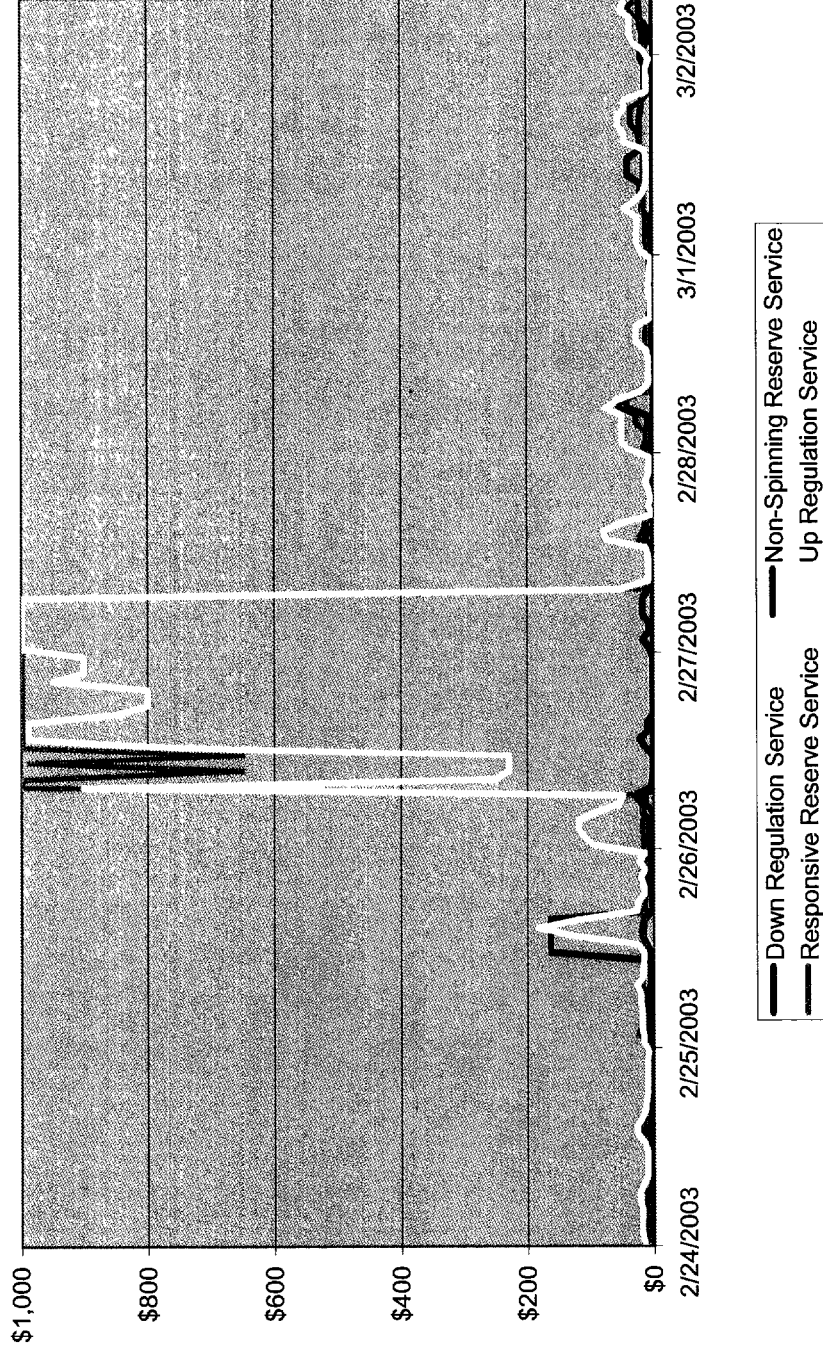


MCPE by Interval, 2/25



MCPC for Ancillary Services

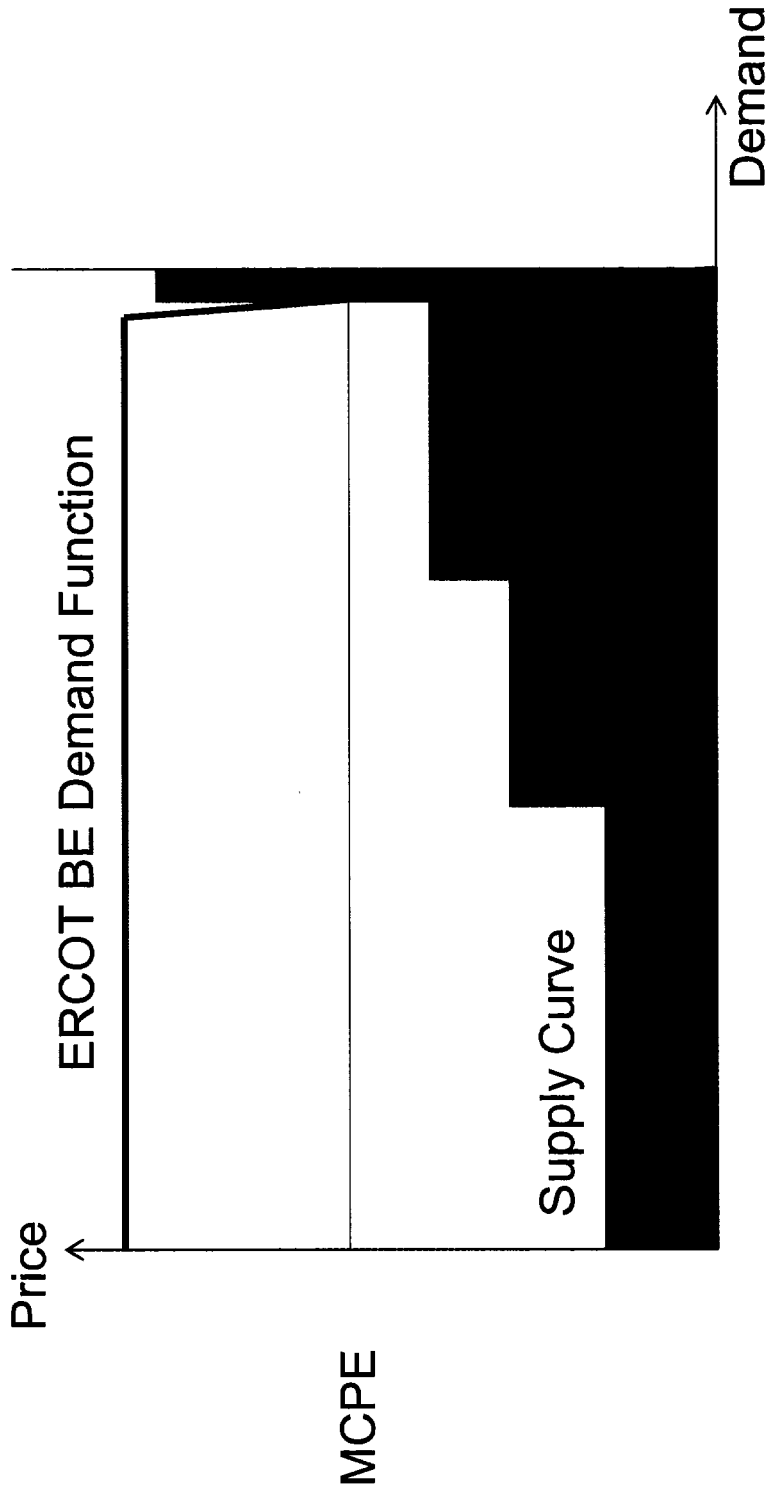
Hourly market clearing prices for ancillary services



Why Is Hockey Stick Bidding a Problem?

- The ERCOT Protocols do not allow price response in balancing energy procurement (not a two sided market, passive load response will not effect MCPE in same interval)
- Hockey Stick bidding is a no-risk strategy that capitalizes on ERCOT's inflexibility (not an economic mechanism for generating scarcity rents)
- Hockey Sticks do not relieve supply shortage (quantity too small to make a difference)
- Windfall from Hockey Stick bidding is not a reliable source of capacity payment that will incent investment

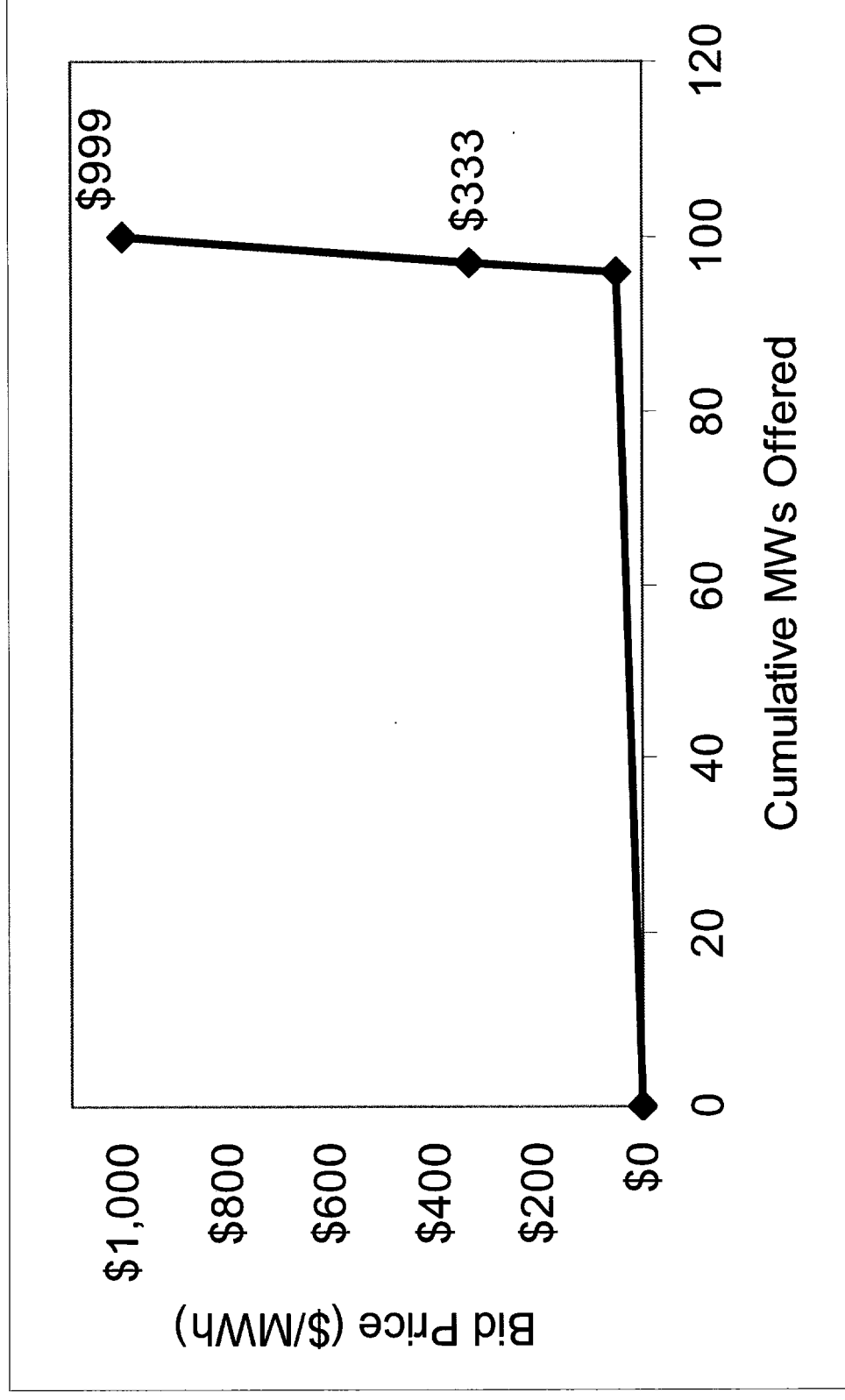
What if ERCOT Demand was Slightly Price Responsive



How Big Should Scarcity Rents Be?

	<i>Prices week before weather event</i>	<i>Peak price during weather event</i>	<i>% increase</i>
Natural gas (Henry Hub)	\$5- \$6/MMBtu	\$18.85/MMBtu	214%- 277%
Standard 16-Hour Daily Products in Eastern Electricity Markets (<i>Megawatt Daily</i>)	\$45- \$90/MWh	\$200/MWh (Ontario)	122%- 344%
Standard 16-Hour Daily Products in ERCOT North Zone (<i>Megawatt Daily</i>)	\$49	\$340	594%
MCPE for balancing energy in ERCOT	\$47- \$63/MWh	\$990/MWh	1,471%- 2,006%
What MCPE for balancing energy in ERCOT would have been without the hockey stick bid		\$500	694%- 964%

Reliant's Acceptable Bid Curve



Problem with Reliant's Proposal

- Provides an instruction guide how to bid Hockey Sticks and stay under the radar screen
- Open invitation to tacit collusion
- Easy and inexpensive to bid “legitimate hockey sticks”
- Possible Modifications (MRRRI):
 - Change Hockey Stick definition to 3% or less at 3 times or more of the average stack price (harder to game)
 - Eliminate RRI's last condition allowing Hockey Stick bids if submitted by more than two bidders (reduce incentive for tacit collusion)
 - Do not suspend mitigation during ERCOT emergencies

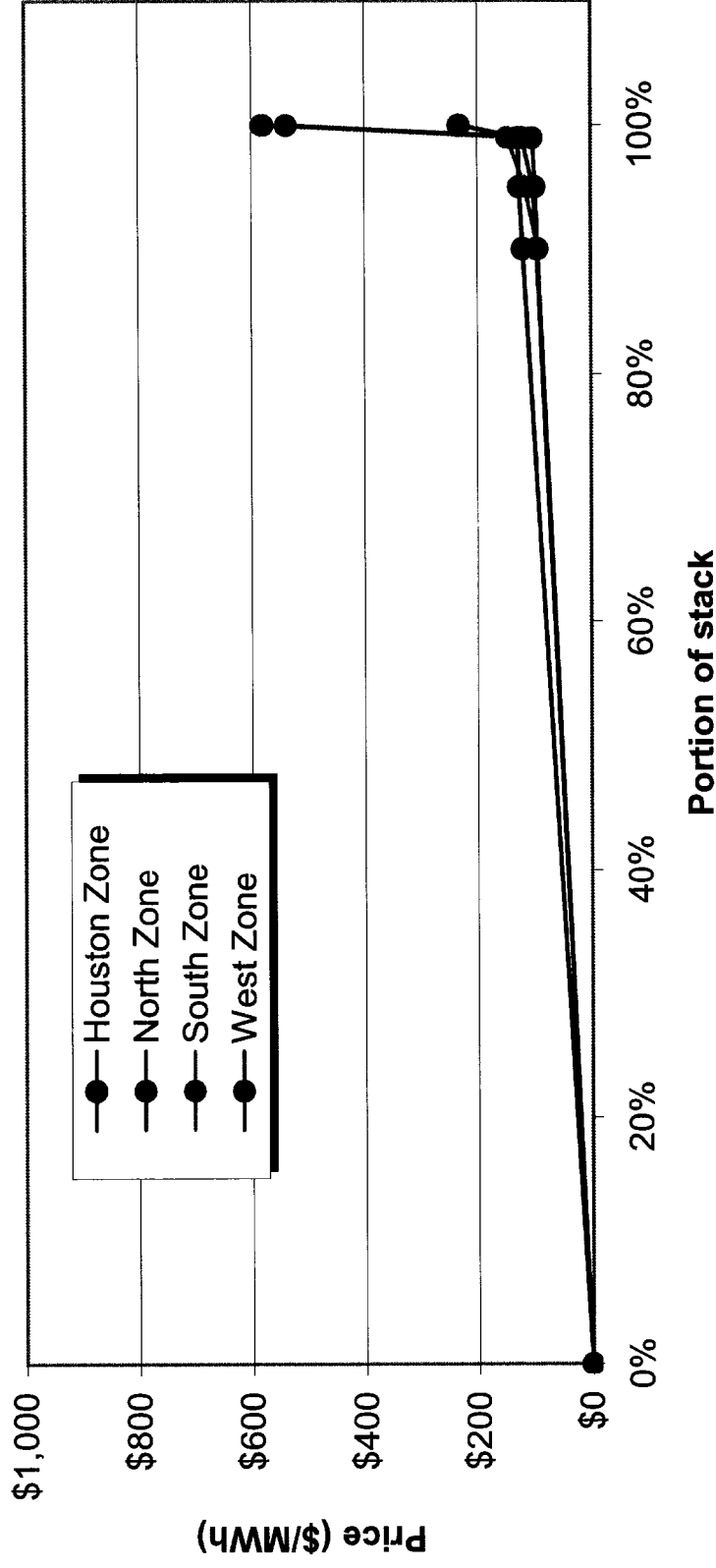
Key Elements

<i>Proposal</i>	<i>When Effective</i>	<i>Mitigation Level</i>	<i>Payment Above Mitigation Level</i>
MCSM	100% of stack is deployed	Price corresponding to deployment of 95% of bid stack	Verifiable cost
CPS	95% or more of stack is deployed	(Option: lowest of 95% price times 1.5 or unmitigated MCPE)	As bid

Retrospective Impact Analysis

July 1, 2002 through March 31, 2003

**All Bid Curves:
Average 90%, 95% 99% and 100% Points**



Retrospective Impact Analysis

July 1, 2002 through March 31, 2003

**Bid Curves above \$900:
Average 90%, 95% 99% and 100% Points**

