



# **Energy Supply Purchasing at GSA's Public Buildings Service**

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## **Introduction: GSA Public Buildings Service**

- GSA acts as a Government asset owner
- GSA owns 1,600 buildings and leases 7,100 buildings totaling 339 million sq.ft.
- GSA PBS has approx. 5,500 employees
- GSA purchases natural gas and electricity on a competitive basis for GSA and other agencies as a non-mandatory source





As of July 2007

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<u>LOCATION</u>	<u>CONTRACTOR</u>	<u>TOTAL</u> <u>ANNUAL KWH</u>	<u>TOTAL</u> <u>ANNUAL \$</u>	<u>AVG.</u> <u>\$/KWH</u>
DC - PEPCO	Pepco Energy Svcs	1,900,000,000	\$181,735,000	\$0.0957
MD - PEPCO	Pepco Energy Svcs	500,000,000	\$46,900,000	\$0.0938
Baltimore	Pepco Energy Svcs	225,000,000	\$20,815,000	\$0.0925
MD - Allegheny	Integrys	21,709,000	\$1,726,000	\$0.0795
Pittsburgh	Duquesne Light Energy	57,000,000	\$3,648,000	\$0.0640
New Jersey	Pepco Energy Svcs	65,283,000	\$7,000,000	\$0.1072
New York City area	Hess Corp.	226,268,000	\$27,808,000	\$0.1229
New York City area	Pepco Energy Svcs	76,937,000	\$10,871,000	\$0.1413
New York City area	ConEdison Solutions	15,100,000	\$1,965,000	\$0.1301
New York City area	SUEZ Energy	174,000	\$24,000	\$0.1379
Upstate NY	Pepco Energy Svcs	2,548,000	\$219,000	\$0.0859
Upstate NY	ConstellationNewEnergy	36,000,000	\$3,035,000	\$0.0843
Upstate NY	Hess Corp.	73,400,000	\$7,248,000	\$0.0987
MA (large acct)	Hess Corp.	271,814,000	\$28,673,000	\$0.1055
Maine & Conn.	TransCanada Power Mkt	58,426,000	\$5,775,000	\$0.0988
Chicago Area	Pepco Energy Svcs	165,000,000	\$9,970,000	\$0.0604
Chicago Area	Exelon	10,485,000	\$658,000	\$0.0628
TX Oncor	SUEZ Energy	120,139,000	\$10,870,000	\$0.0905
TX Centerpoint	SUEZ Energy	74,284,000	\$6,860,000	\$0.0923
TX TXU	SUEZ Energy	40,175,000	\$3,535,000	\$0.0880
So Illinois	ConstellationNewEnergy	61,000,000	\$4,350,000	\$0.0713
	<b>TOTALS</b>	<b>4,000,742,000</b>	<b>\$383,685,000</b>	<b>\$0.0959</b>

A faint, light blue background image of the Statue of Liberty's head and crown, positioned in the upper right corner of the slide.

# Outline

- Energy Market Overview
- Electric supply purchasing
- Solicitation Features
- Conclusion



# Energy Market Overview

## Energy commodities

- Oil, natural gas, and electricity
- Commodity price movements
- Purchasing electricity





# Energy Market Overview

- Oil, natural gas and electricity are the 3 primary energy commodities in the U.S.
- These energy commodities are highly volatile
- Price movements in one commodity generally affect prices in other energy commodities



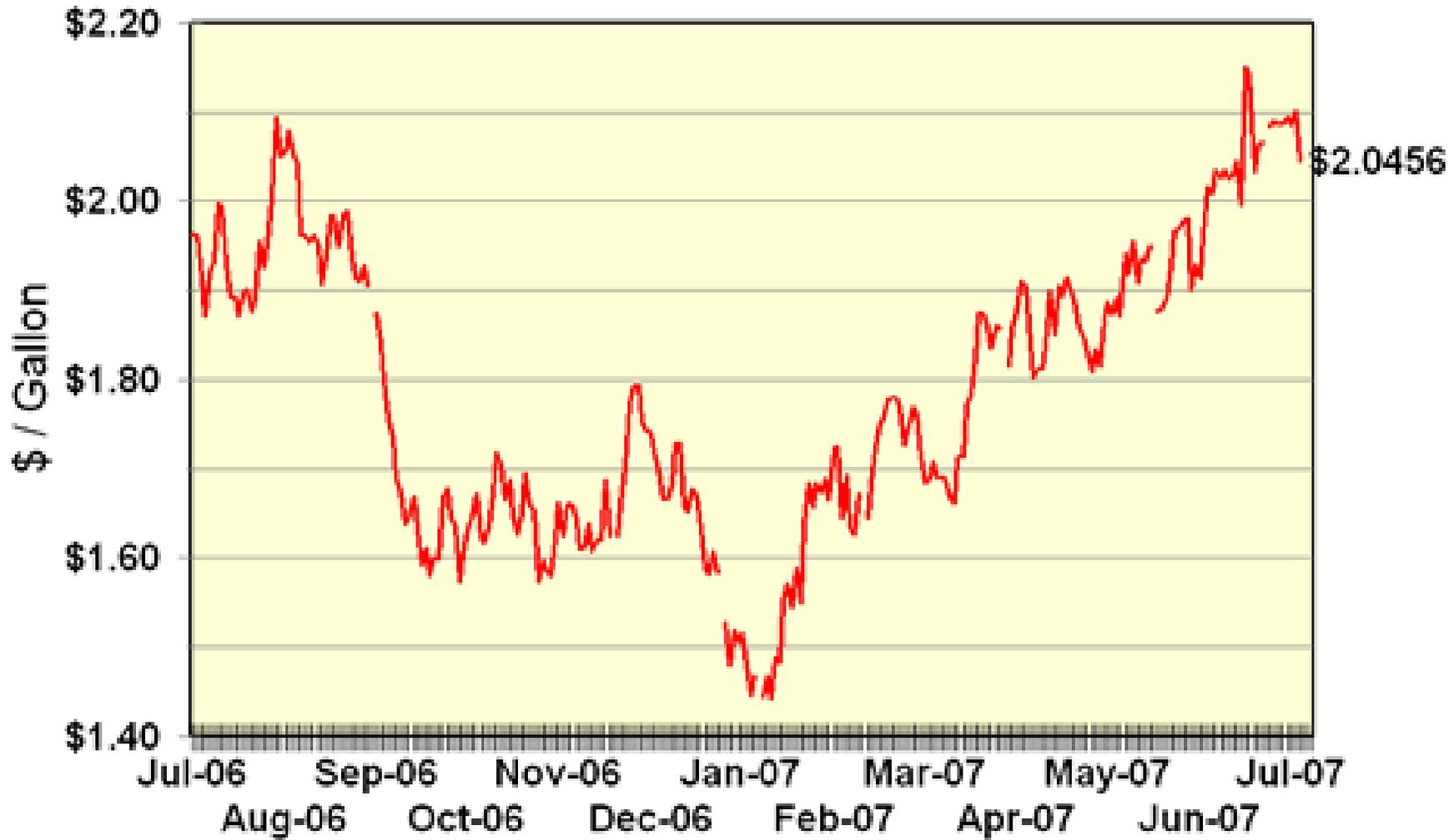


# Energy Market Overview

- Oil prices are affected by numerous factors including supply, international demand, weather, international political events, and increasingly speculators/hedge funds
- Oil is primarily a transportation fuel in the U.S.
- For large energy users, fuel oil is often an alternative energy choice to natural gas for heating
- Only 3% of U.S. electricity production is from oil



### Heating Oil Spot New York Harbor

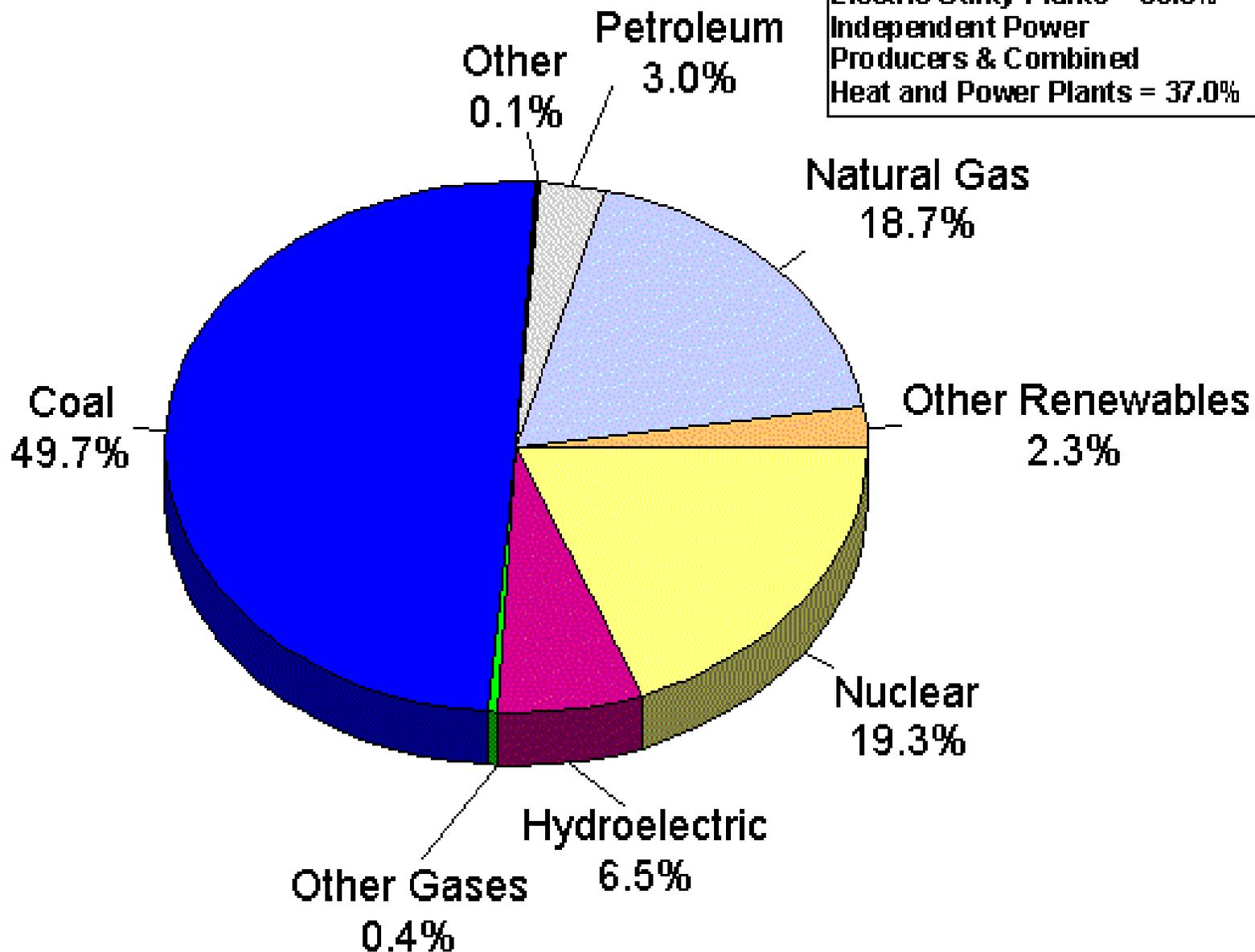


July 5, 2006 - July 16, 2007 WTRG Economics © 2007  
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# Energy Market Overview

- Compared to oil prices natural gas prices are much more affected by the weather and less by international events
- Natural gas is a significant heating and electric generation fuel (19% of U.S. generation)
- Natural gas is the marginal generation fuel for U.S. markets and therefore natural gas and electric prices are highly correlated

Total = 4,055 Billion KWh  
 Electric Utility Plants = 63.0%  
 Independent Power Producers & Combined Heat and Power Plants = 37.0%





# Energy Market Overview

- Spot gas prices are up significantly since 1999 with 2 notable price spikes
- More than 90% of all U.S. new power plants from 1992-2003 use natural gas
- 70% of new homes from 1995-2003 use natural gas

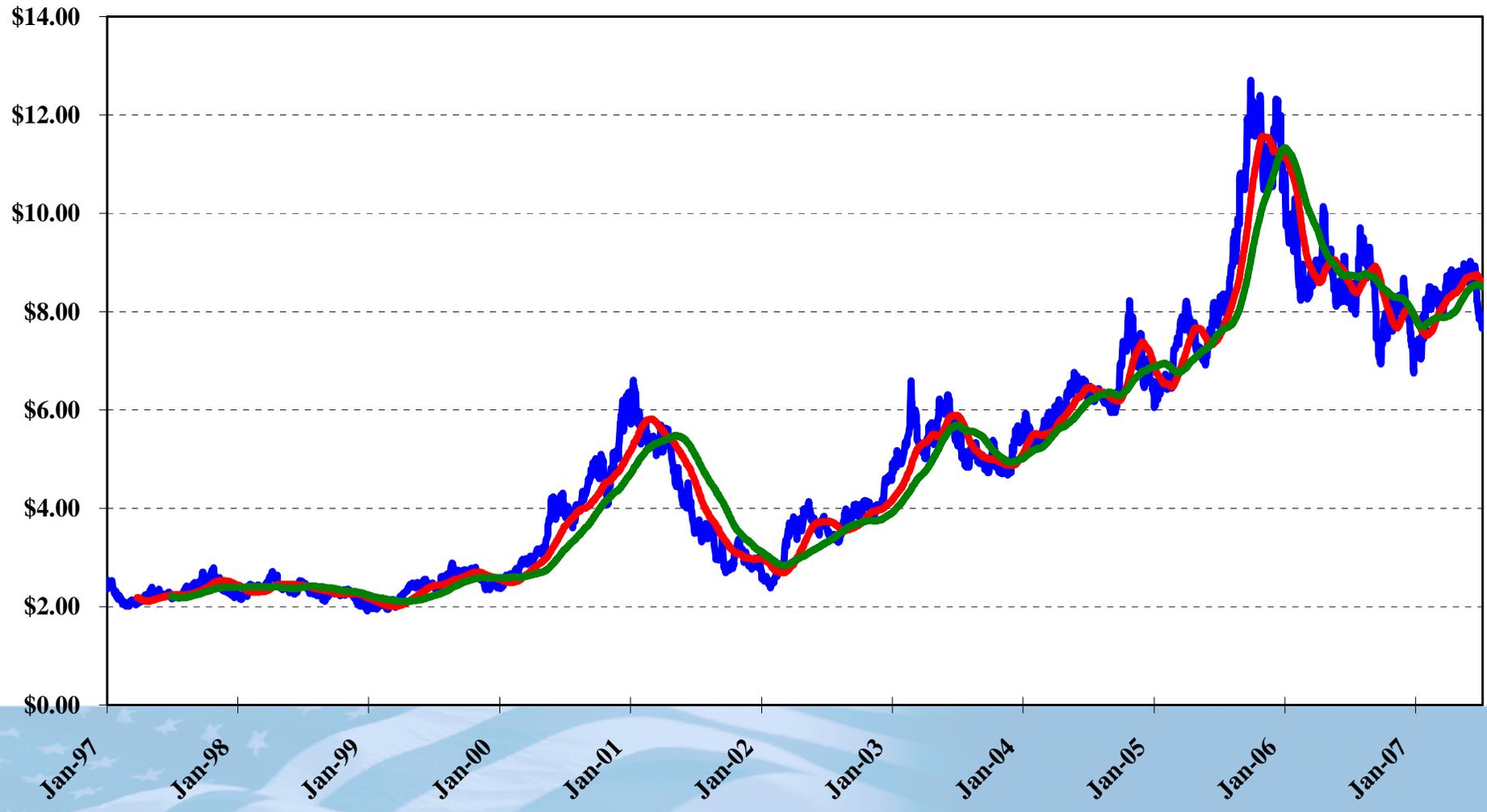


# Natural Gas, Henry Hub

## Forward Market (NYMEX) 12 month Strip

Report Date: 7/6/2007

\$/MMBtu





# Energy Market Overview

- Nationally, fundamental division between restructured (i.e. deregulated) and non-restructured states
- Retail customers in restructured states can select electric suppliers other than the local utility including renewable products
- Retail customers in fully regulated states are required to purchase electric supply from the local utility





# Energy Market Impacts

- Whether you are in a restructured state or not, retail electric markets are affected by global/national energy markets
- Prices for generation fuels affect retail customers in all situations
- Pricing has been extremely volatile



# Energy Market Overview

- Average electricity prices are affected primarily by coal which is up 20% from 2004-2006
- Peak power prices are affected primarily by natural gas prices which are up significantly since 1999
- Nuclear and hydro resources generally do not set power prices at the wholesale level





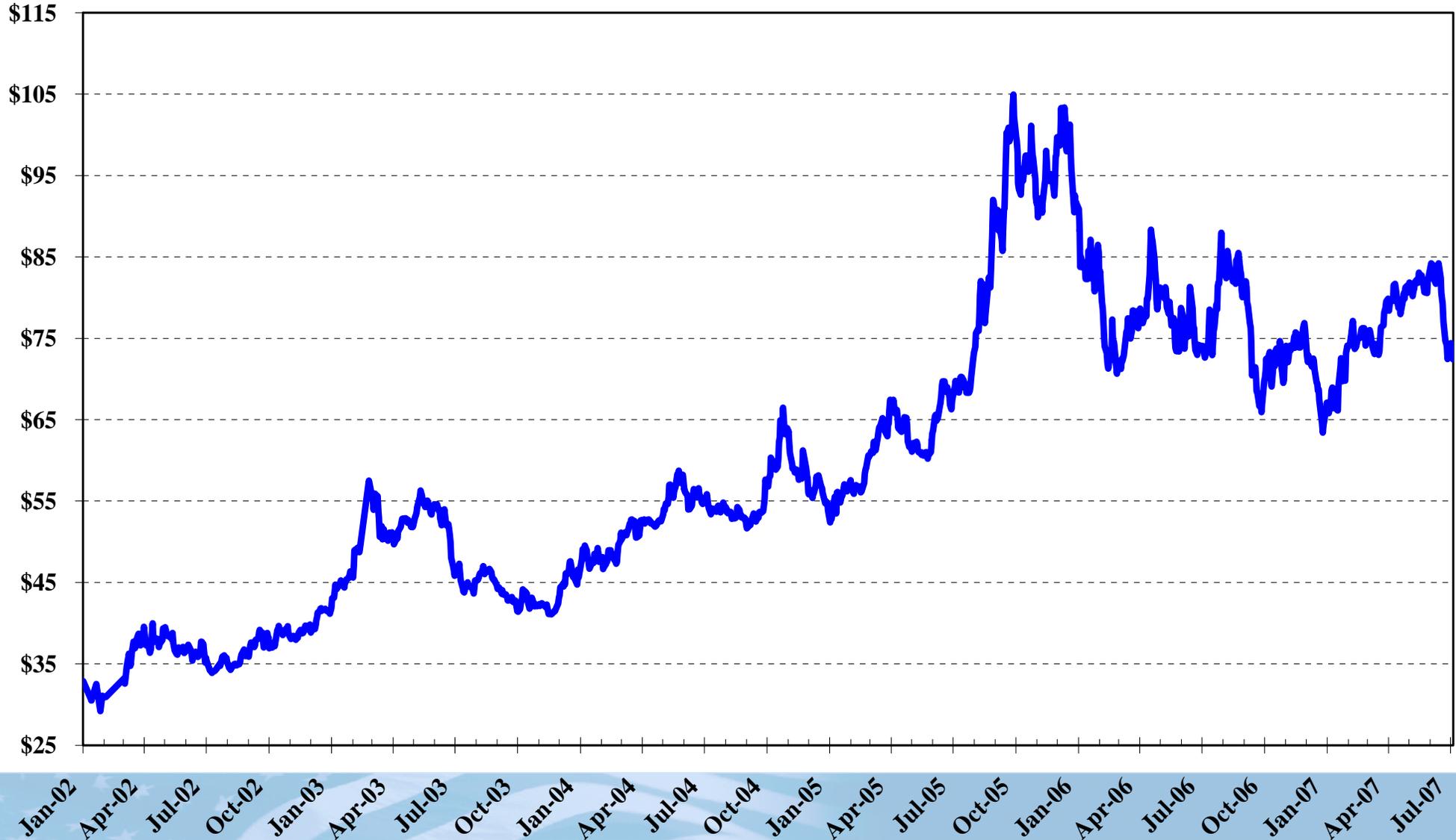
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# Electric Forward Market Report

## Front Year On-Peak (5x16) - PJM Western Hub

Report Date: 7/6/07

\$/MWh



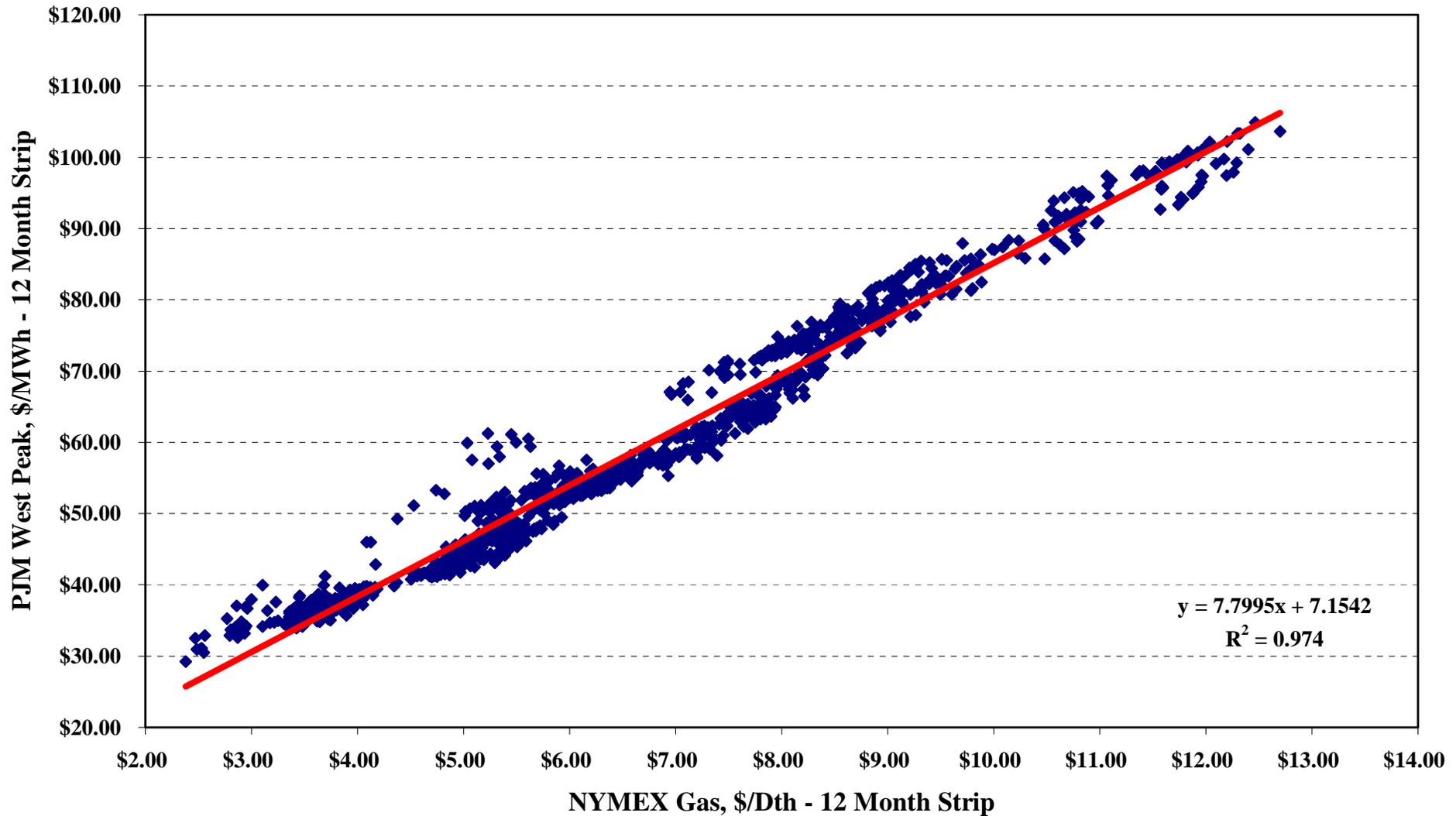


# 5 Year Regression Analysis - Forward Gas vs Electric

## PJM-West / NYMEX 12 Month Strip

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Report Date: 12/8/2006





# Purchasing – Market Research

- Federal Govt. must purchase electricity in accordance with state laws governing provision of electric service (FAR 41.201(d)(1))
- Analysis of state's electric regulations is key
- Most states do not allow the purchase of electric supply from other than the regulated utility (see previous map)
- Every state that allows competition has somewhat different rules and terms





# GSA Solicitation Features

- Indefinite quantity indefinite delivery requirements contract
- Generally some form of fixed price
- Exploring a block and index pricing approach
- A supply (not a service)
- Delivery to local utility's system
- Bandwidth language (plus or minus 10-15% typical)
- Change in regulation and taxes addressed



# GSA Solicitation Features

- Term – 1 to 5 years
- Billing – consolidated bill or dual bill
- Difficult to price option years
- Must provide suppliers with complete account usage info
- Minimum renewable power percentage



# GSA Pricing

- Price an aggregate group of accounts under a single price that applies to all (aggregate price)
- Pricing on an individual account basis
- Tend to obtain aggregate pricing on rate schedule/rate class basis but individual account pricing can be effective as well

# GSA Pricing

- Several forms of firm, fixed price
- Mimic the utility's pricing structure (makes for easy comparison) for your rate class
- Flat \$/kWh price
- Time of use pricing
- Fixed margins in block and index approach
- Must act on prices quickly – within trading day

# GSA Pricing

- GSA uses 2 ways of obtaining prices
- “Old Fashioned” method where firms fax in prices to GSA for evaluation
- Reverse Auction Process - internet based interactive platform where suppliers bid against each other to offer lowest price
- Prices remain good for about 4 hours in each approach
- Both pricing approaches have proven effective for GSA

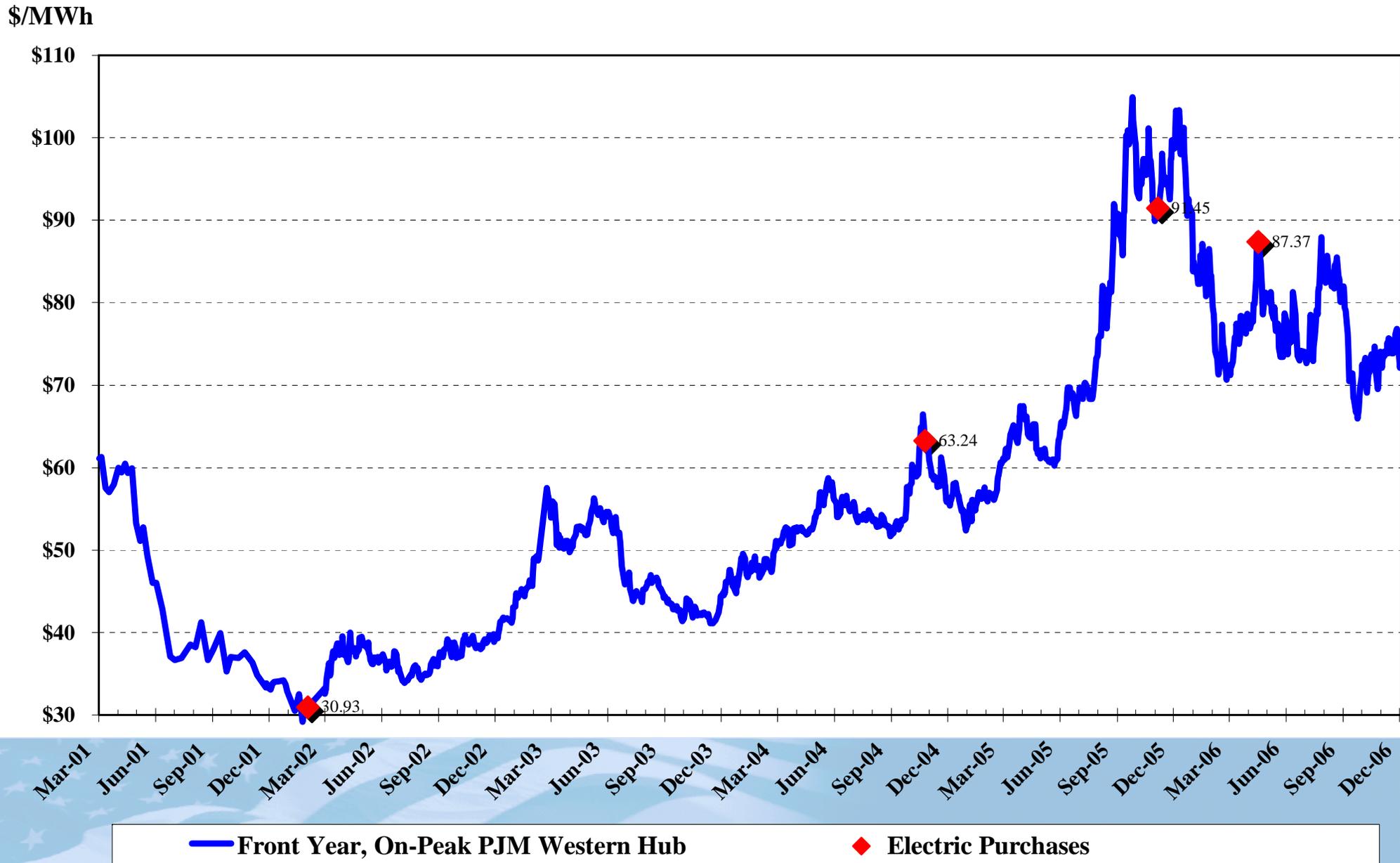
# Market Timing

- When you buy is probably the largest factor in the price you obtain because the market price changes significantly over time
- As pointed out earlier, electricity pricing is highly correlated with natural gas pricing
- The following slide provides an example of our timing for our Baltimore area clients

# GSA-BGE Zone Contract Electric Commitment Timing

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As of 12/8/06



# Goals

- Make sure you know what your goals are right up front
- To beat the utility price?
- Budget stability over time that the utility does not offer?
- Lowest price?
- How much price risk you are willing to assume?
- Renewable/environmental goals you may want to meet?

# Conclusions

- Every state/utility is a different market so a “one size fits all” approach is difficult
- High prices make saving energy at all times more important than ever but especially during summer peaks
- Let us know what you need



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