

# AOBA Utility Committee

*October 19, 2011*

*In Comparatively Stable Energy Markets  
Legislative and Regulatory Decisions  
Makes Budgeting for Energy Services  
A Real Challenge*

Presented By

**Bruce R. Oliver**

*President, Revilo Hill Associates, Inc.*

This publication is intended as an information source for members of the Apartment and Office Building Association of Metropolitan Washington ("AOBA") and participants in the AOBA Alliance, Inc. The content should not be construed as legal or other professional advice, and readers should not act upon information in this publication without professional advice. Copyright © 2011 AOBA. All rights reserved.

*October 19, 2011*

# Outline of Presentation

## \* Utility Pricing and Services

### ➤ Pending Rate Proceedings

- ✓ Virginia
- ✓ Maryland
- ✓ District of Columbia

### ➤ Budgeting for Utilities 2012

- ✓ Pepco – District of Columbia
- ✓ Pepco – Maryland
- ✓ Dominion Virginia Power - Virginia
- ✓ WGL – District of Columbia
- ✓ WGL – Maryland
- ✓ WGL – Virginia

### ➤ DC WASA - Water & Sewer Rates

- ✓ Water & Sewerage Charges
- ✓ Impervious Surface Charges

## \* Energy Market Developments

### ➤ Electric Markets

- ✓ Volatile Generation Capacity Markets – Implications for Your Energy Purchasing
- ✓ Earthquakes in the Nuclear Industry – the North Anna Outage and its Impacts
- ✓ Understanding Transmission Rate Adjustments

### ➤ Evolving U.S. Natural Gas Markets

- ✓ Continued Growth in Electric Generation Demands for Natural Gas
- ✓ “Fracking” and the Development of Marcellus Shale Deposits in Appalachia
- ✓ Should the U.S. Become a Major Exporter of Natural Gas

# Utility Rates and Regulation

*Utilities Are Generally Seeking Streamlined  
Regulatory Processes for Recovery of  
Costs for Infrastructure Investments*

# Current Rate Case Status Report

## *for Washington Area Utilities*

### \* Dominion Virginia Power (DVP)

#### ➤ Biennial Rate Review

- ✓ Hearing Completed. Case is in Briefing Stage
- ✓ Staff and other intervenors generally believe that DVP had excess earnings during 2009 and 2010 that should be shared with ratepayers
- ✓ DVP denies any excess earnings
- ✓ A Commission decision is expected in November

#### ➤ New Warren County Power Plant Surcharge Case (Rider W)

- ✓ This case involves the establishment of a new rate rider for another natural gas fired power plant DVP is constructing
- ✓ Rider will likely be implemented with initial rider charges close to the level DVP has requested.

#### ➤ Scheduled Surcharge Proceedings – Rate Riders A, R, S, T, C1 and C2.

### \* Washington Gas - Virginia

#### ➤ Pending Base Rate Case

- ✓ **\$30 million** rate increase request;
- ✓ WG elects to **terminate current Performance Based Ratemaking Plan** under which **excess earnings** are **shared with ratepayers**.
- ✓ Hearings scheduled for mid-November 2011
- ✓ Decision anticipated by early 2012

#### ➤ **SAVE Program:** rate adjustment must be anticipated, but timing and costs are not known.

# Rate Case Status Report *(Cont.)*

- \* **Pepco – Maryland**
  - Base Rate Case expected to be filed before the end of this year.
- \* **Washington Gas – Maryland**
  - Pending Base Rate Case (*Case No. 9267*)
  - Hearings completed, Initial Briefs filed
  - Decision expected by mid-November with new rates effective shortly thereafter.
  - All parties other than WGL have argued for substantial reductions in the Company's revenue increase request, the Commission Staff has recommended an overall revenue reduction.
  - It appears likely that WGL will get at least \$10-\$15 million less than its initial revenue increase request.
- \* **Pepco – District of Columbia**
  - Pending Base Rate Case (*Formal Case No. 1087*)
  - Pepco has requested a \$42.1 million increase
  - New rate not expected to be approved prior to May 2012.
- \* **Washington Gas – District of Columbia**
  - No currently pending rate case

# Budgeting for Utilities 2012

*In Comparatively Stable Energy Markets  
Legislative and Regulatory Decisions  
Make Budgeting for Utility Services  
A Real Challenge*

# Pepco DC Rates

*October 19, 2011*

# Pepco: District of Columbia Rates

## \* Pending Pepco Base Rate Increase Request (*Formal Case No. 1087*)

- Case Filed 7/8/2011
- Company Seeks Base Rate Increase of \$42.1 Million
- Company Also Asks for Approval of a “Reliability Investment Recovery Mechanism (“RIM”)
- Anticipated Effective Date for New Rates – May 2012

## \* Pepco Proposed Rate Increases by Class are heavily tilted toward increasing Residential rates

	<u>Distribution Rate Increase</u>
<b>Residential (R) (MMA)</b>	<b>33.3%</b>
<b>Res All Electric (AE) (MMA)</b>	<b>68.0%</b>
<b>GS Non-Demand</b>	<b>7.1%</b>
<b>GS Demand</b>	<b>7.1%</b>
<b>GS Primary (GS-3A)</b>	<b>5.3%</b>
<b>GT-LV</b>	<b>10.9%</b>
<b>GT-3A</b>	<b>2.9%</b>
<b>OVERALL</b>	<b>14.9%</b>



# Pepco: District of Columbia Rates

## *Other Anticipated Pepco DC Rate Changes*

- \* **Public Space Occupancy Surcharge (PSOS)**
  - Current PSOS charge became effective March 1, 2011.
  - Pepco must request, and DC PSC must approve, any changes to this surcharge
  - Pepco is not seeking a further increases in its PSOS surcharge at this time.
- \* **Delivery Tax Surcharge**
  - Current charge became effective January 1, 2005.
  - This tax is set by the DC City Council and is imposed on Pepco.
  - Pepco passes the tax through to customers.
- \* **Residential Aid Surcharge (RAD)**
  - Effective for service on and after June 1, 2011.
  - Changes to this surcharge must be approved by the DC PSC.
  - Pepco is not seeking a RAD surcharge increase at this time.
- \* **Sustainable Energy Trust Fund Surcharge (SETF)**
  - Charge became effective October 1, 2010.
  - This charge can only be changed by statute by the DC Government.
- \* **Energy Assistance Trust Fund (EATF)**
  - Surcharge became effective with October 2010 bills.
  - This charge can only be adjusted by the DC Mayor.

# Pepco: District of Columbia Rates

## Computed GT-LV Customer Rate Increase Example

- Example GT-LV customer has:
  - ✓ Annual **peak demand** of 2,747 kW
  - ✓ Annual **consumption** of 11,787,116 kWh
  
- Fully priced Pepco DC Rates based on recent 12 months of usage yields an rate increase of **9%** on the distribution portion of the customer's electric bill.<sup>1</sup>

<sup>1</sup> Assumes consumption remains the same on an annual basis.  
Assume summer and winter distribution rates are identical  
Assume BSA adjustment is not factored into distribution rate  
Assume 6% DC sales tax

# Pepco DC Rider BSA

- \* “Bill Stabilization Adjustment” - Rider “BSA”
- \* Rider “BSA” does **NOT** Stabilize customer’s bills; only stabilizes Pepco’s Revenue
- \* Became effective 11/1/2009 with **first rate adjustments** applied in **January 2010**
- \* Adjustments calculated on a monthly basis and applied with a **two month lag** (i.e., revenue collected in January forms the basis of the adjustment billed in March)
- \* A “Cap” on monthly rate adjustments is set at 10% of average base revenue per kWh.
- \* **Rate Schedules GSD, GS-3A and GT-LV** have frequently been subject to maximum monthly (10%) rate adjustments.
- \* **Residential** customers, including Master Metered Apartments, have often received rate **credits**.

# Pepco Maryland Rates

# Pepco Maryland Rates

- ✧ Major Components of Pepco's Maryland Rates
  - Base Distribution Service Rates
  - Retail Transmission Rate
  - Rider BSA – Bill Stabilization Adjustment
  - Montgomery County and Prince Georges County Surcharges
  - Other Maryland Taxes and Surcharges

# Pepco's Last Maryland Distribution Rate Case in Maryland

- ✦ Last Base Rate Increase became **effective Aug. 19, 2010**.
- ✦ Pepco initially requested a \$40 million rate increase.
- ✦ MDPSC granted Pepco an increase of **\$7.5 million** (i.e., less than **20%** of the Company's initial request).

## Approved Distribution Rate Increases by Rate Class

<b>Residential (R)</b>	<b>3.07%</b>
<b>Residential (TOU)</b>	<b>3.07%</b>
<b>GS LV</b>	<b>3.07%</b>
<b>MGT-LV</b>	<b>1.15%</b>
<b>MGT-3A</b>	<b>1.15%</b>
<b>GT-LV</b>	<b>1.15%</b>
<b>GT-3A</b>	<b>1.15%</b>

# New Pepco Distribution Rate Case

*Expected in Maryland in Fourth Quarter 2011*

- ✧ Company has publicly announced plans for a filing in Maryland in the 4th Quarter of 2011. New rates should be effective 7/1/2012
  
- ✧ Key elements of expected Pepco rate increase request:
  - Recovery of costs for improving distribution system reliability
  - Recovery of costs associated with the Company's deployment of AMI equipment (i.e., so called "Smart Meters")
  - Increased Executive Compensation and Employee Benefits costs
  - Increased return on equity (ROE)
  - Recovery of Other Capital Expenditures

# Pepco MD: Other Rate Changes

## ✧ Monthly BSA Charges

- Since first implementation in 2007, Commercial classes frequently subject to **Maximum Monthly 10%** Adjustment
- Large Deferred Balances have accumulated for **MGT-3A, GT-LV, and MGT-LV** classes
- Those **Large Deferred Balances** ensure that identified classes will continue to pay Maximum Monthly (10%) rate adjustments well into the future

## ✧ Montgomery County Energy Tax – **Legislated Electric Increase**

- Tax Rate as of 6-30-10 \$0.01384 per kWh
- Tax Rate Eff 7-1-10 through 6-30-11 **\$0.02210 per kWh**
- Tax Rate Eff 7-1-11 through 6-30-12 **\$0.02259 per kWh**
- Increase in Rate \$0.00049 per kWh
- Percentage Increase 2.2%
- Tax is scheduled to sunset at the end of FY 2012



# WGL Rates

*By Jurisdiction*

# WGL: Virginia Rates

- \* Base Distribution Rate Increase Request Filed January 31, 2011, Case PUE 2010-00139.
- \* WGL requested an overall increase of \$29.6 million, which was reduced to \$28.5 million due to a May 2011 depreciation study.
- \* Rates became effective **October 1, 2011**, subject to refund of any amount not ultimately approved by the Commission.
- \* WGL's proposed base rate increases by customer class for Northern Virginia customers are:

Residential	5.9%
Commercial & Industrial	3.1%
Group Metered Apartments	1.5%

- \* WGL also seeks:
  - To establish new rate classifications for large **C&I** and **GMA** customers
  - Increased charges for **interruptible gas service** customers,
  - Approval of a **hexane** cost recovery mechanism (*where hexane is purported used to reduce leaks associated with the drying of seals that can result from increased use of LNG*).
  - A new earnings sharing arrangement for Gas Asset Management activities.
  - Termination of its current Performance Based Ratemaking ("PBR") mechanism.

# WGL: Virginia Rates

- ✧ WGL's proposals would result in most firm C&I and GMA customers experiencing:
  - 22-25% increases in system charges
  - 9.4% increases in distribution charges.
  - Overall gas distribution rate increases of 10% or more will be experienced by large numbers of C&I and GMA customers if WGL rate increase request is not reduced.
  
- ✧ Interruptible Service customers face the potential for:
  - A 25% increase in the Interruptible System Charge; and
  - Increases of 13-15% in Distribution Charges per therm of gas used.

# WGL: District of Columbia

- ✦ Company has not announced plans to file a new Base Rate increase request before the end of 2011 in DC.
- ✦ Revenue Normalization Adjustment (“RNA”) proposed in the Company’s last base rate case, but **not approved**.
  - Company seeks assurance of revenue
  - Commission has accepted RNA in concept, but implementation problems identified by AOBA have blocked approval of the Company’s proposal so far.
- ✦ Any new rate case filed is expected to include a request for a new rate rider to provide recovery of infrastructure investment costs as WGL has proposed in Maryland.
- ✦ Additional Surcharges
  - EATF \$0.006/therm
  - SETF \$0.014/therm

# WGL: Maryland Rates

- ✧ Base Rate Increase Request Filed April 15, 2011, Case No. 9267
  - Company Seeks \$30 Million of Additional Base Revenue
  - Company also Seeks new Rate Rider for Recovery of \$115 Million of Pipe Replacement Costs over 30 Years
  - Effective date for new rate is 11/14/2011
- ✧ RNA Adjustments – Applied monthly and most often result in additional charges for large commercial customer classes
- ✧ Montgomery County Energy Tax
  - Tax Rate as of 6-30-10 \$0.11921 per therm
  - Tax Rate Effective 7-1-10 through 6-30-12 \$0.19025 per therm
  - Increase in Rate \$0.07104 per therm
  - Percentage Increase 59.6%
  - Tax is scheduled to sunset at the end of FY 2012

# WGL: Maryland Rates

- ✧ WGL represents its rate increase request as a **5.6% increase** in its **total operating revenue**.
- ✧ However, WGL's **total operating revenue** includes purchase gas cost revenue not billed to customers that obtain their gas supplies from Competitive Service Providers ("CSPs").
- ✧ For **Firm Service C&I** and **GMA** customers obtain their gas supplies from Competitive Service Providers ("CSPs") the effective increase in base distribution rates will **average 13.7%**.
- ✧ WGL indicates that the average increase in **base rates** for **Interruptible Service** customers in **Maryland** will be **23.7%**.

# Energy Market Developments

*October 19, 2011*

# Electric Markets

- ✦ Generation Capacity Markets
- ✦ Transmission Rate Adjustments
- ✦ Earthquake in the Nuclear Industry



# PJM Generation Capacity Pricing

- ✧ When initiated, RPM Capacity Pricing was intended to:
  1. Ensure the availability of adequate generation capacity to support the provision of reliable generation services.
  2. Provide owners of existing capacity and developers new capacity of demand-response alternatives appropriate price signals.
  3. Produce more predictable capacity pricing for future periods.

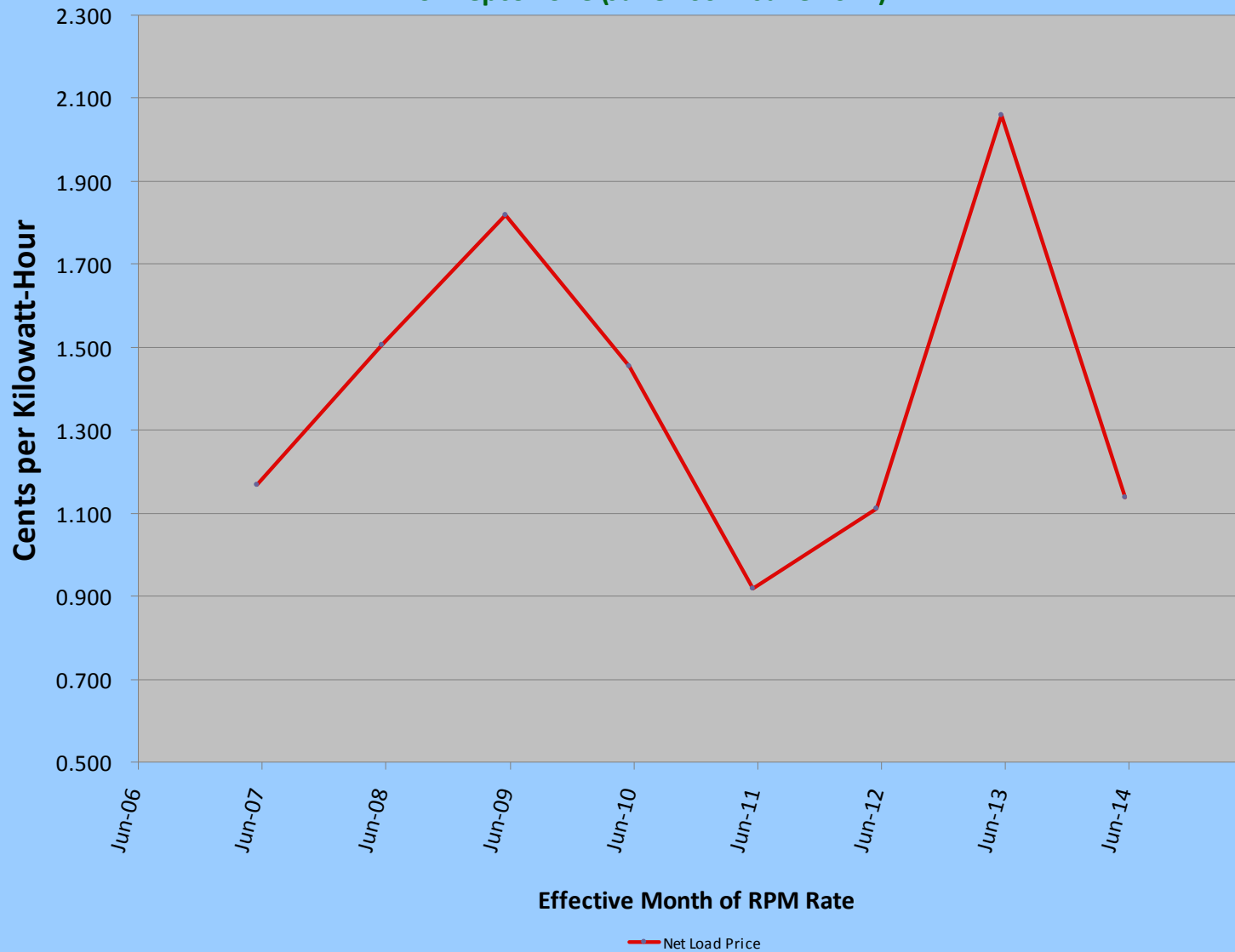
# PJM Generation Capacity Pricing

- ✦ PJM RPM Pricing to Date Fails the Retail Market in two ways:
  - Year-to-year changes in RPM Capacity prices have been highly volatile
  - Capacity prices are known for only about three years into the future
  
- ✦ Volatile capacity prices:
  - Impede long-term contracting
  - Limit customers' ability to evaluate longer-term benefits of Demand Response programs and energy efficiency investments

# Reliability Pricing Model Results

## *Locational Generation Capacity Prices*

For Pepco Zone (June 2007 - June 2014)



# Reliability Pricing Model (RPM)

## Locational Generation Capacity Costs

### For Pepco Service Territory

### Through the PJM 2015-16 Planning Year

Year	Capacity			Capacity		
	Clearing Price	Transfer Credit	Net Load Price	Clearing Price	Transfer Credit	Net Load Price
	(Dollars per Megawatt Day)			(Cents per Kilowatt-Hour)		
2007-08	\$188.54	\$48.38	\$140.16	1.571	0.403	1.168
2008-09	\$210.11	\$29.53	\$180.58	1.751	0.246	1.505
2009-10	\$237.33	\$19.21	\$218.12	1.978	0.160	1.818
2010-11	\$174.29		\$174.29	1.453		1.453
2011-12	\$110.00		\$110.00	0.917		0.917
2012-13	\$133.37		\$133.37	1.111		1.111
2013-14	\$247.14		\$247.14	2.060		2.060
2014-15	\$136.50		\$136.50	1.138		1.138

Note: Each RPM Pricing Year runs from June 1 through the following May 31.

# Transmission Rate Adjustments

*Growth in Utility Transmission  
Investment and Rate Adjustments  
May Ebb with Slowing of Electricity  
Demand Growth*

# Transmission Rate Adjustments

- ✧ **The Federal Energy Regulatory Commission Now Permits Utilities to Use **Formula Rates**.**
- ✧ **Formula Rates Allow Utilities to Adjust Their Charges for Wholesale Transmission Services Annually Through a Streamlined Ratemaking Process.**
- ✧ **Annual Increases in Wholesale Transmission Service Charges are Passed Directly to Retail Customers by LDCs and most Competitive Service Providers (“CSPs”).**

# Transmission Rate Adjustments

*(Continued)*

- ✧ **Two Types of Annual Transmission Rate Adjustments Are Permitted.**
  - **Transmission Adjustment Charges**
  - **Transmission Enhancement Charges**
  
- ✧ **Transmission Adjustment Charges** *are charges applicable to customers located in the service territories of electric distribution companies, such as Pepco and BGE.*
  
- ✧ **Transmission Enhancement Charges** *are charges associated with the construction, maintenance and upgrade of the transmission infrastructure within the PJM.*

# Transmission Rate Adjustments

*(Continued)*

- ✧ Most suppliers of power to retail customers are subject to Transmission Rate Adjustments from *multiple* Transmission owning utilities:
  - **Transmission Adjustment Charges** *are billed to LDCs and CSPs by each Transmission Company providing service to areas in which the LDC or CSP serves retail customers.*
  - **Transmission Enhancement Charges** *are billed to LDCs and CSPs by each Transmission Company from whom they must purchase services as they move power through PJM.*
- ✧ With the Washington-Baltimore area being a **net importer** of electric power, LDCs and CSPs serving retail customers in this area are typically subject to charges from an array of Transmission owners.



# Transmission Rate Adjustments

## (Continued)

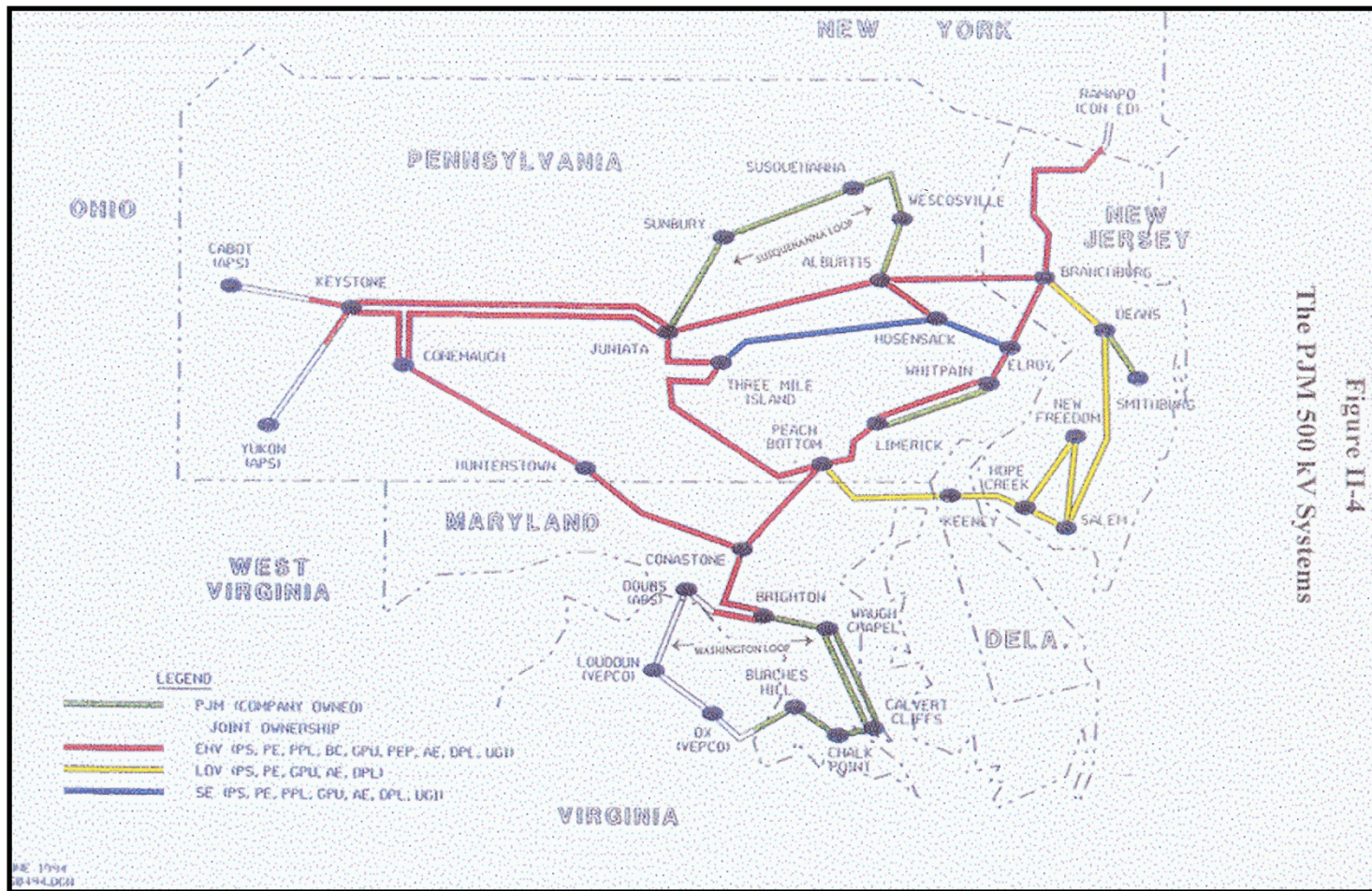


Figure II-4  
The PJM 500 kV Systems

# Transmission Rate Adjustments

*(Continued)*

- ✧ Under recently implemented FERC rules:
  - A transmission owner can start billing rate adjustments for Transmission Enhancement Projects before the project is completed and placed in service.
  - Transmission owners can also receive Bonus returns on equity for pursuing new transmission projects.
- ✧ With slowed electric demand growth in this region, PJM assigns reduced priority to PHI's MAPP project;
- ✧ Completion of the PHI MAPP project is now delayed to at least the 2019-2021 timeframe.

# Earthquake in the Electric Industry

*Long-Term Impacts on Virginia  
Ratepayers and the Industry  
Could Be Substantial*

# Earthquake in the Electric Industry

- ✧ In August of this year the area was shaken by the **largest earthquake** on the east coast of the U.S. in centuries.
- ✧ The **quake** was **centered** near Mineral, VA only miles from Dominion Virginia Power Company's **North Anna Nuclear Power Station**.
- ✧ Both units of the North Anna Plant were **automatically shut down** when earthquake sensors at the plant were tripped by the trembling.
- ✧ No significant damage has been identified at the plant, but two months later **both North Anna Units remain shut down**.

# An Earthquake Strikes Near DVP's North Lake Anna Nuclear Plant

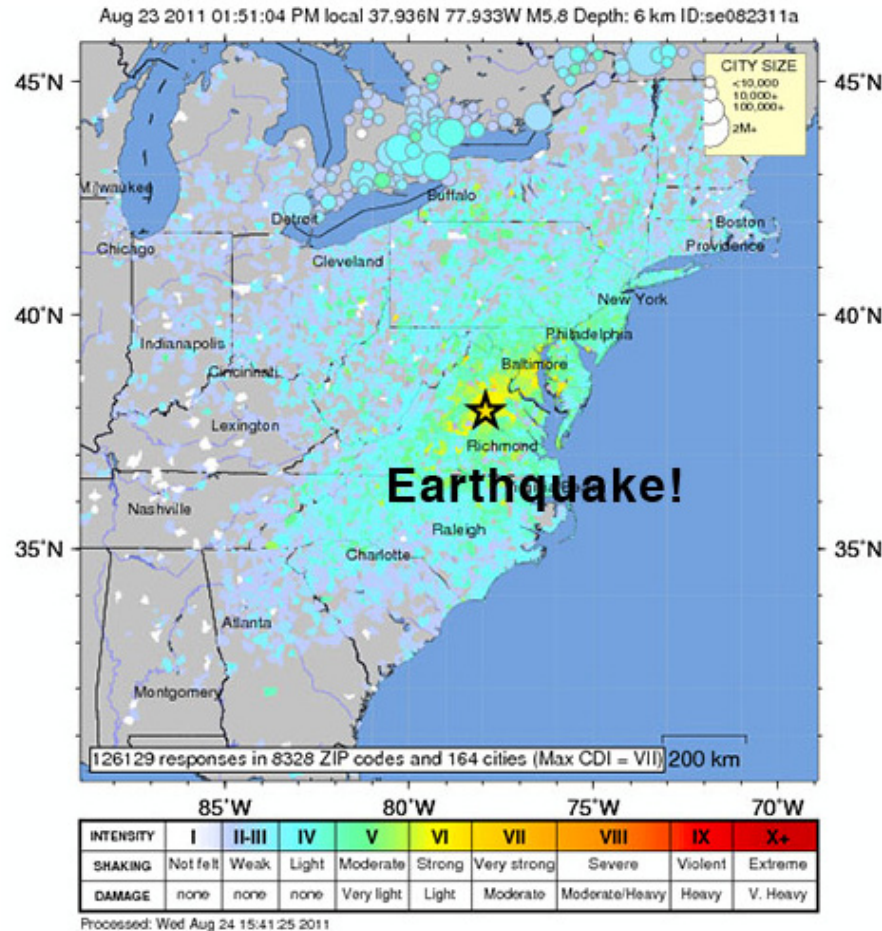


Image: USGS

# Earthquake in the Electric Industry

- ✱ Dominion Virginia Power says both units are in operating conditions and are ready to restart.
- ✱ NCR investigators say plant will not resume operations until assured of plants safety.
- ✱ Issue: Is it safe to restart the plant without upgrades to address the potential for an even more severe earthquake?
  - The earthquake in August was reported in the 5.8 – 5.9 range on Richter Scale.
  - The North Anna Plant was designed to withstand an earthquake of up to 5.9.

# Earthquake in the Electric Industry

- \* Dominion Virginia Power estimates that the outage of the two North Anna Units is costing nearly **\$2.0 million per** day for replacement power.
- \* If NRC decides that Major Upgrades are required, the **North Anna** units **could be out of service for many months**, possibly stretching into years, while upgrades are designed, implemented, and verified.
- \* The impacts of the North Anna earthquake could grow even more substantial if **other eastern U.S. nuclear units** are **required to implement design upgrades** to meet higher earthquake protection standards and possibly shutdown until such new standards are met.
- \* Just the shutdown of the North Anna units could have a noticeable impact on available natural gas supplies and natural gas prices. The concurrent shutdown of other nuclear plants in the region could have a devastating effect on electricity supply and prices.
- \* The recent nuclear problems in Japan add to the likelihood that the NRC will adopt a very conservative position regarding restart of the North Anna units.
- \* We should all pray that the NRC finds that the North Anna units remain safe and can be restarted soon.

# Evolving U.S. Natural Gas Markets

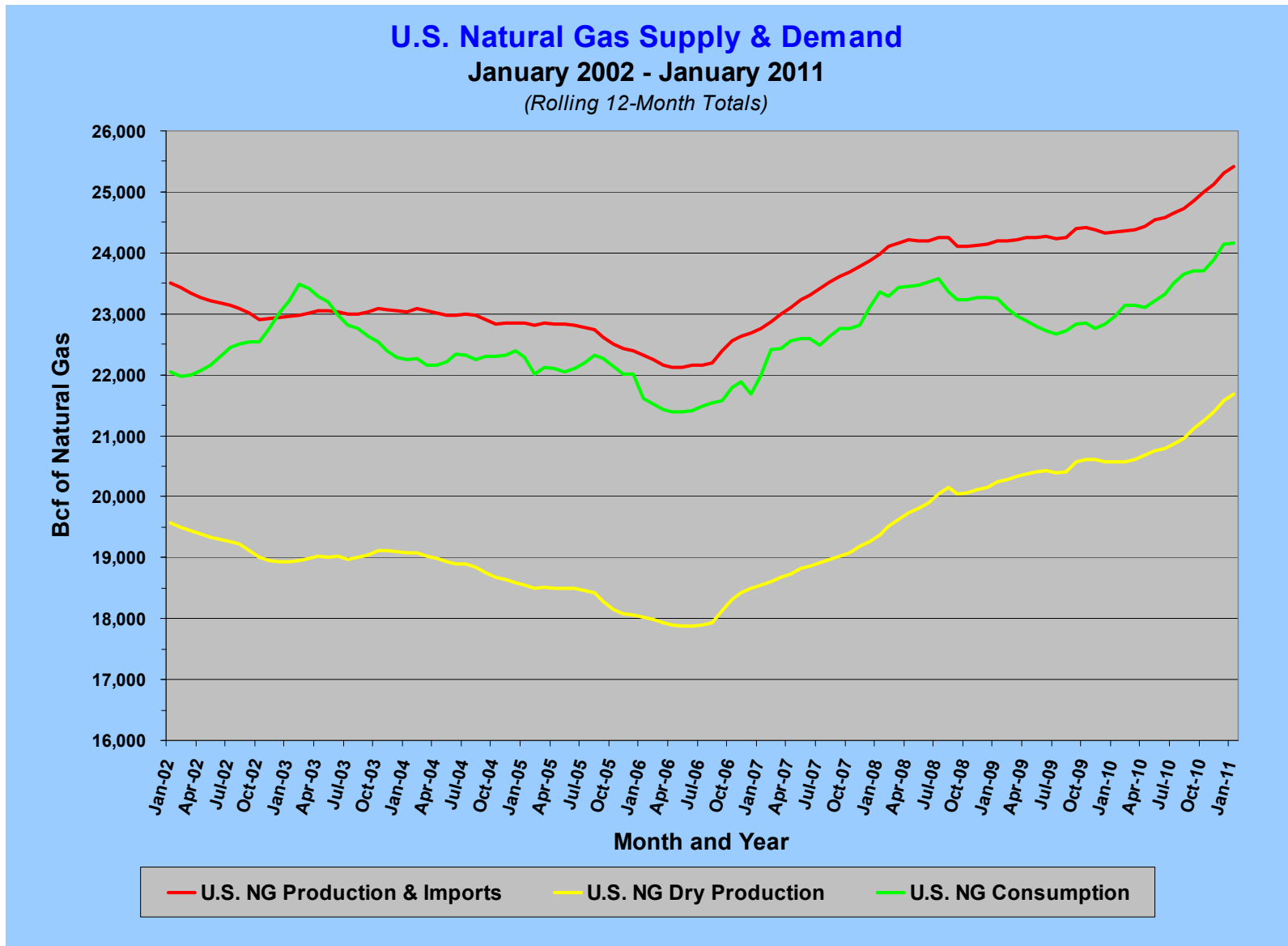
Continued Growth in Electric Generation Demands for Natural Gas

“Fracking” and the Development of Marcellus Shale Deposits in Appalachia

Should the U.S. Become a Major Exporter of Natural Gas

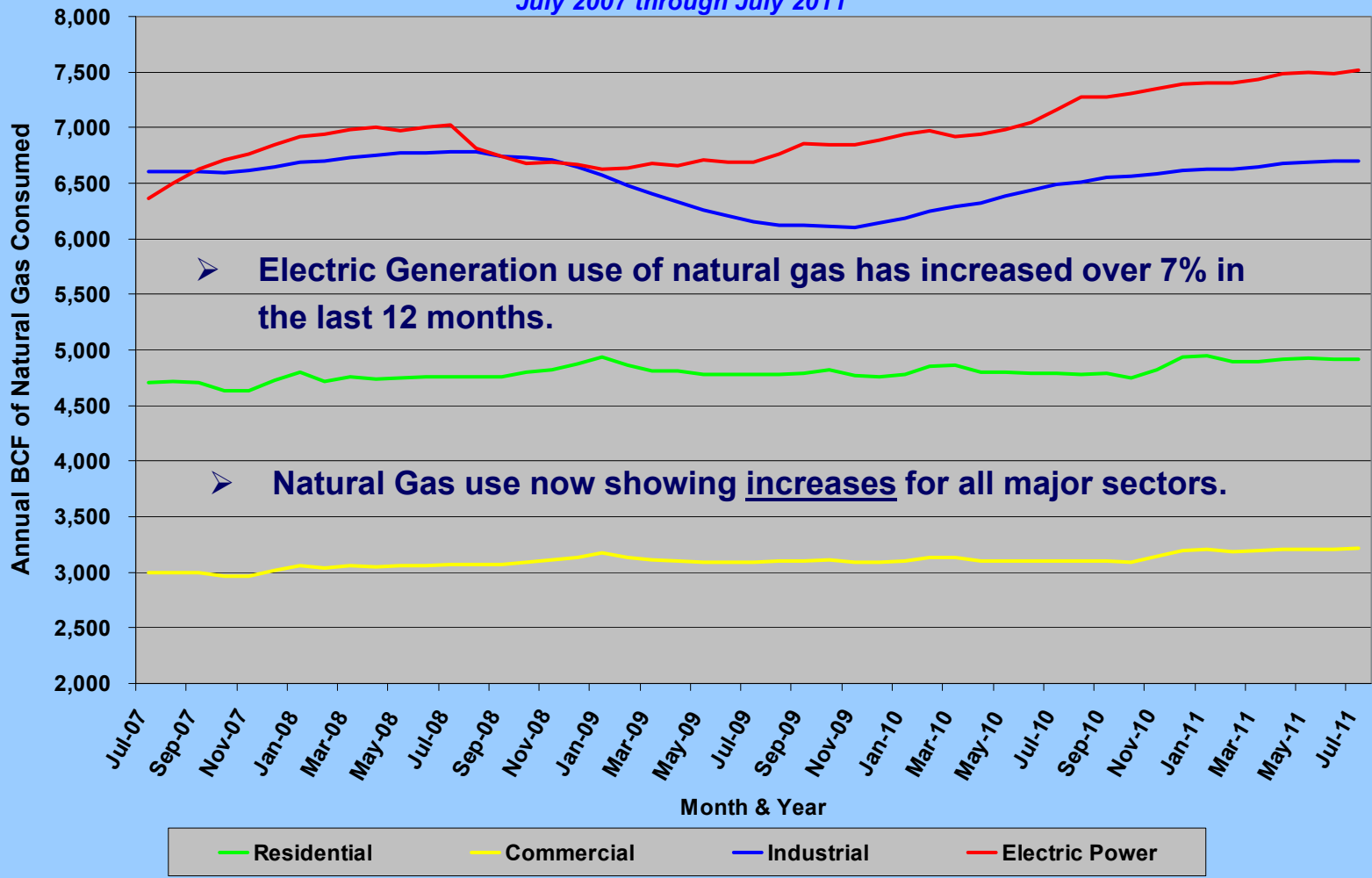


# U.S. Natural Gas Production Continues to Set New Records While Outpacing U.S. Demand Growth



# US Natural Gas Consumption by Sector

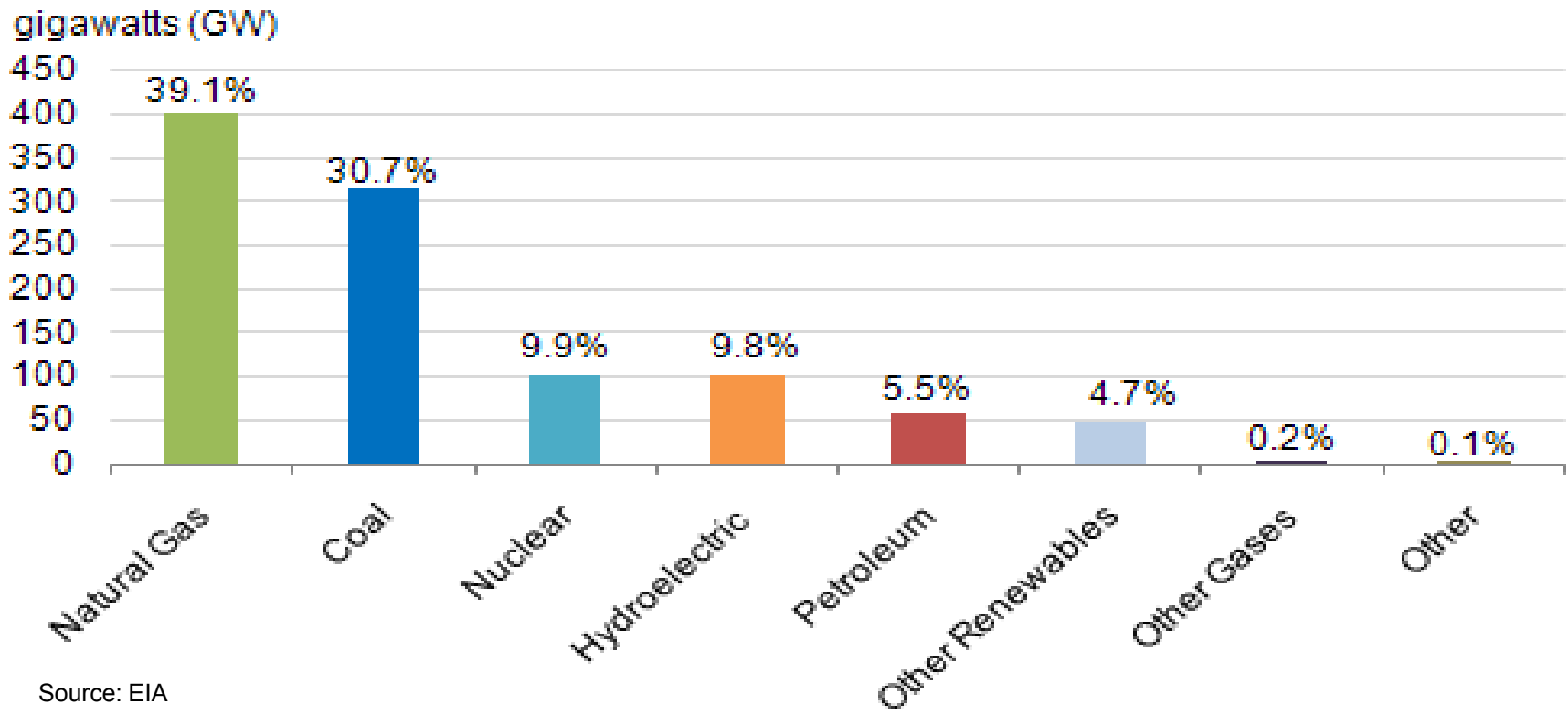
July 2007 through July 2011



# Nature Gas Dominates

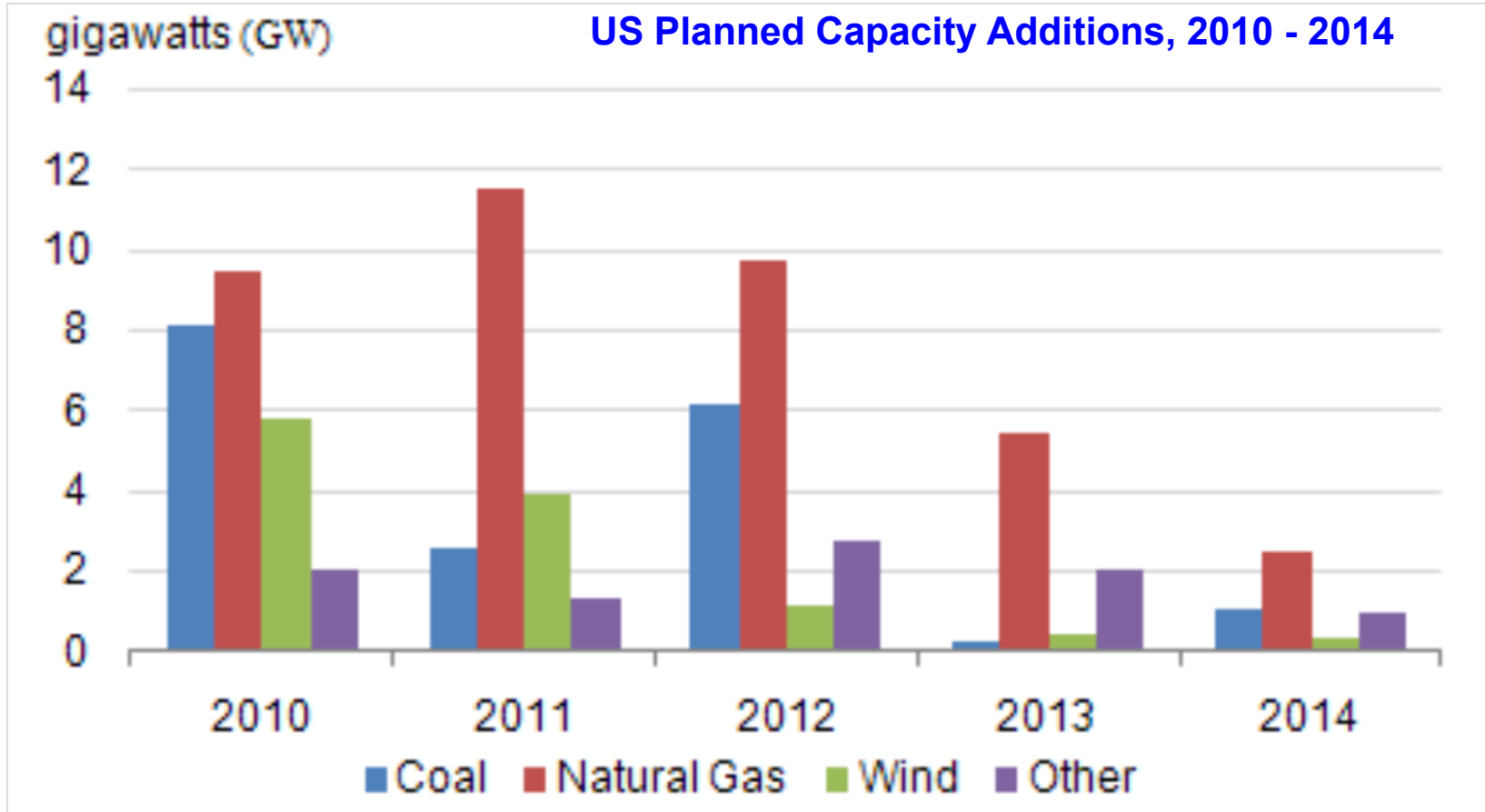
## *Existing and Planned Electric Generating Capacity*

### 2009 Summer Generating Capacity by Fuel Type



# Nature Gas Dominates

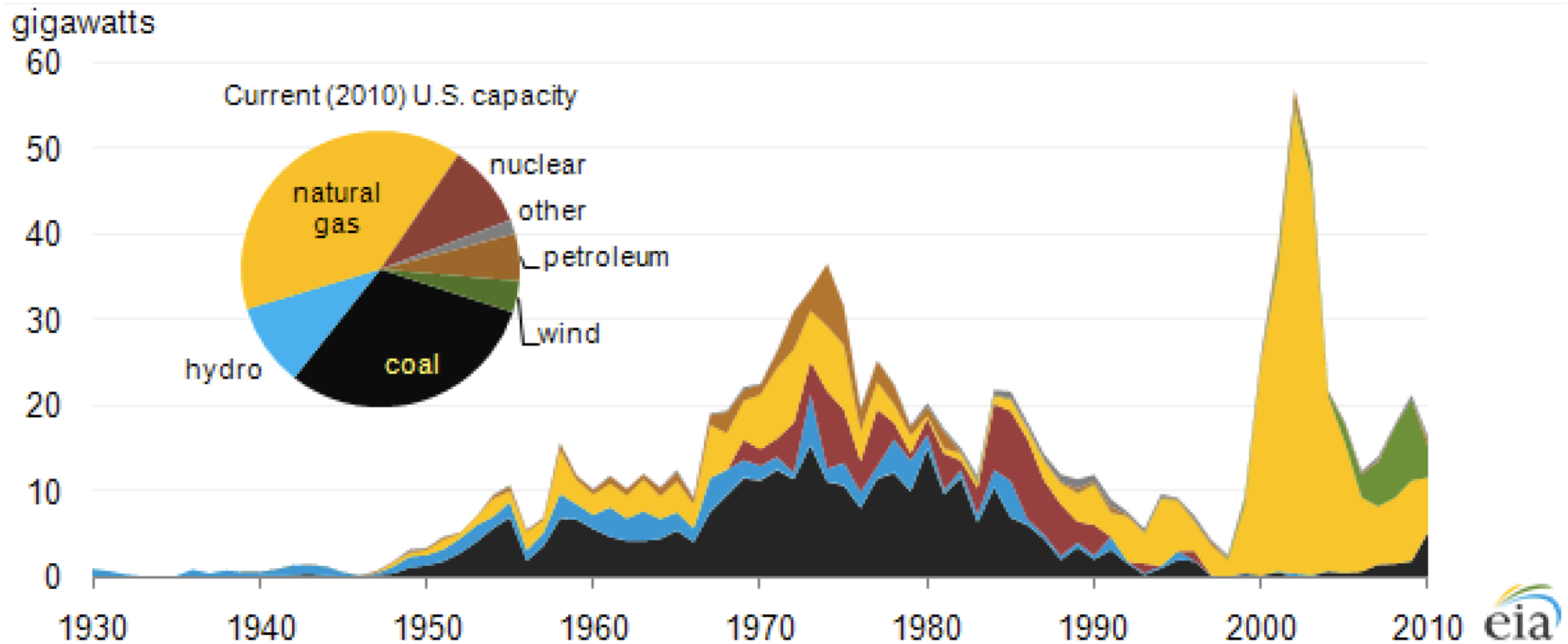
## *Existing and Planned Electric Generating Capacity*



Source: EIA

# Recent EIA Data Illustrates Dependence on Natural Gas for Electric Generation

## *Current (2010) Generating Capacity by Initial Year of Operation and Fuel Type*

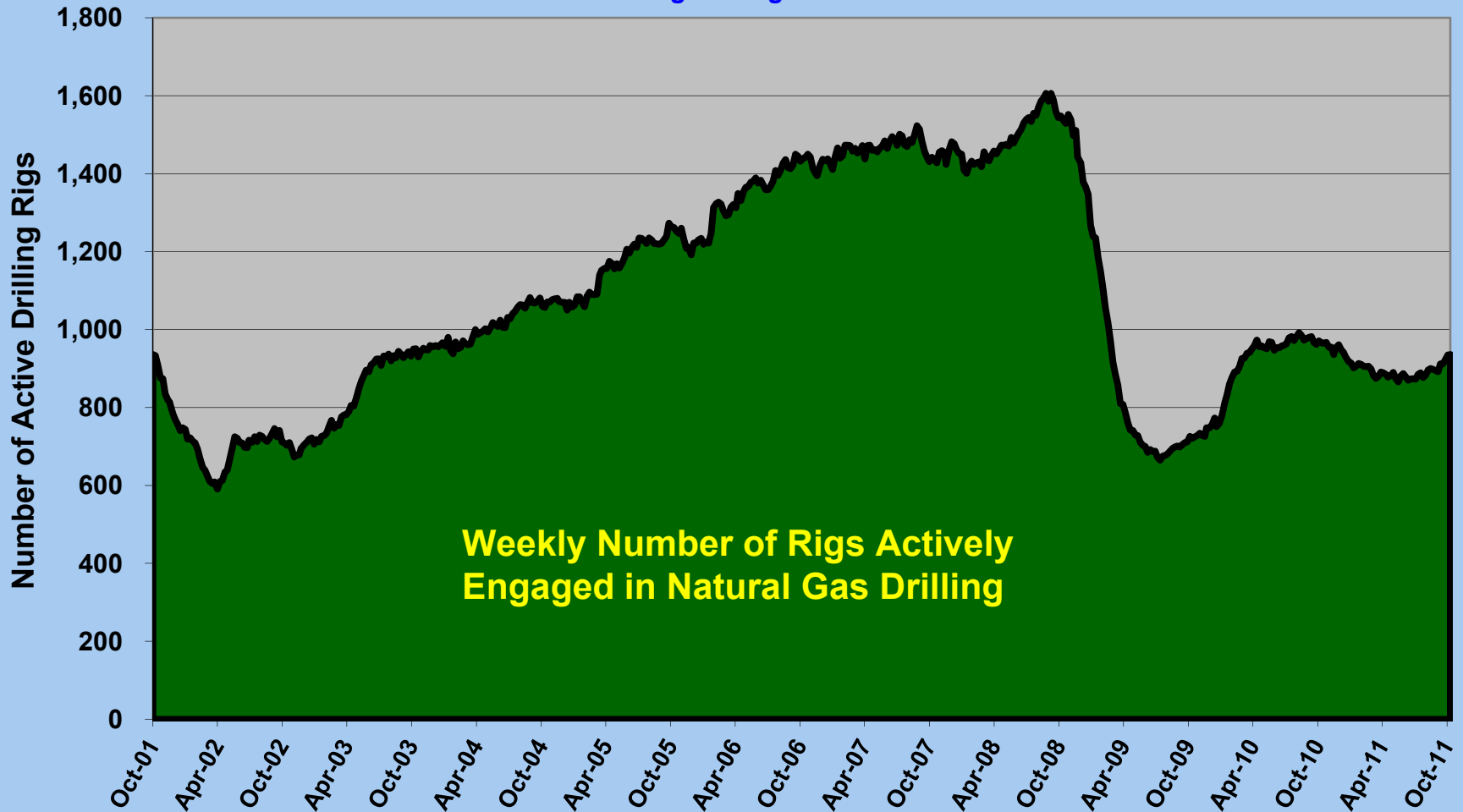


Source: EIA

# U.S. Natural Gas Drilling Activity

*October 2001 to October 2011*

*Baker Hughes Rig Count Data*



# North American Shale Plays (as of March 2011)



Source: Energy Information Administration based on data from various published studies.  
Updated: March 21, 2011

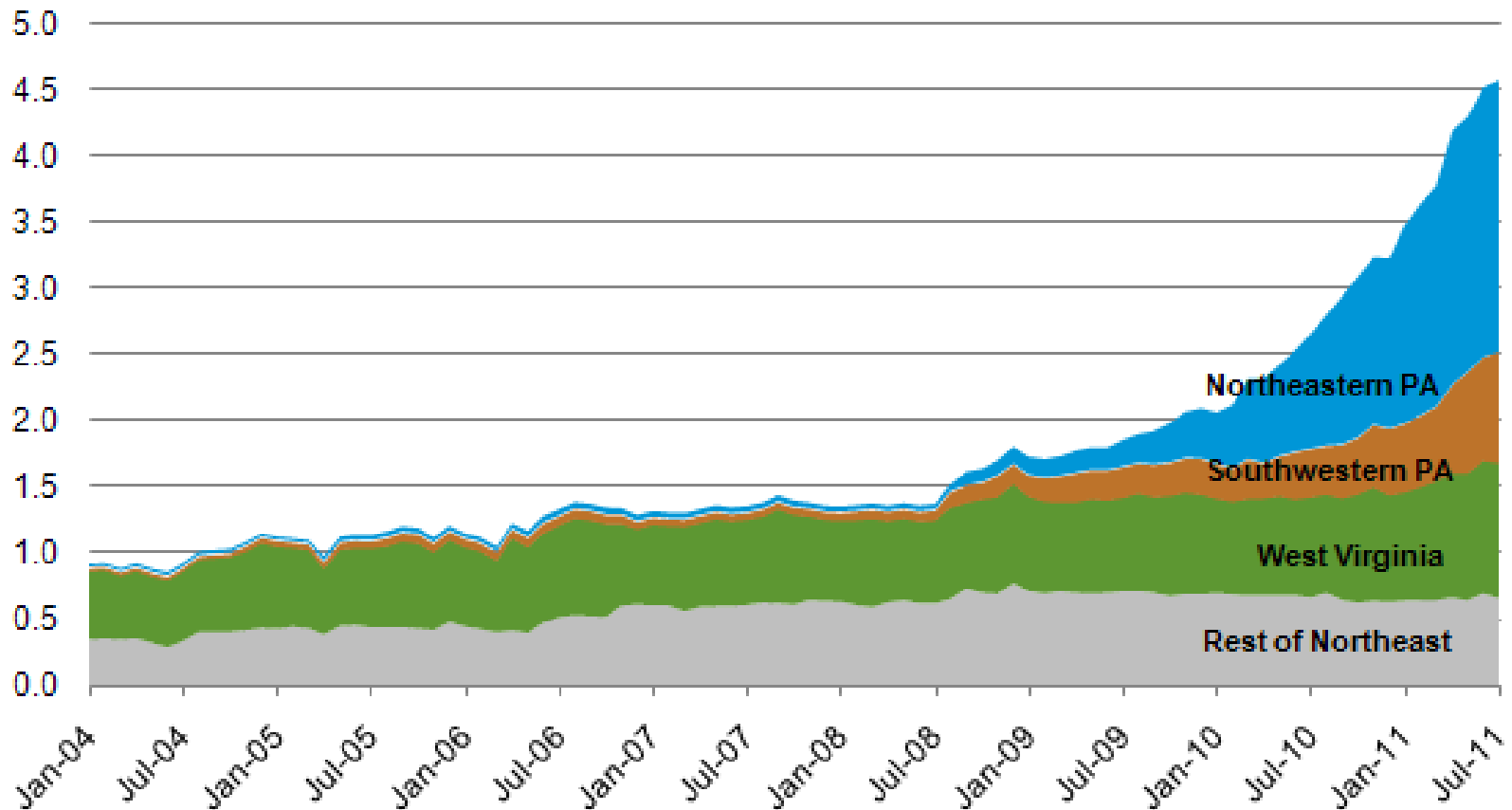
# “Fracking” and Shale Gas Development

- ✧ The term “Fracking” has become the gas industry’s shorthand for “Hydraulic fracturing.”
- ✧ “Fracking” is the process of injecting a pressurized fluid into the ground to propagate the fracturing of a rock layer and facilitate the extraction of natural gas or oil.
- ✧ The development of “fracking” technology has been a key to the extraction of natural gas from shale deposits.
- ✧ The pressurized fluid is often water, but may contain other chemicals to aide the fracking process.
- ✧ Considerable debate has arisen regarding the potential pollution and health impacts that may result from use of fluids other than water.
- ✧ Additionally, fracking can require large draws on local water supply resources.



# Pennsylvania Takes the Lead in Marcellus Shale Development

Average monthly natural gas production  
billion cubic feet per day



# “Fracking” and Shale Gas Development

- ✧ In the eastern Marcellus Shale deposits “Fracking” has become particularly controversial.
- ✧ Some state and local governments have opted to ban Fracking within their borders.
- ✧ Many in the natural gas industry believe that fracking concerns are simply a tool for blocking further exploration and development of eastern shale deposits.
- ✧ Pennsylvania, as the Eastern state with the greatest activity with respect to exploitation of Marcellus shale beds, has taken a proactive position to establish guidelines for fracking and water use regulations for drillers.

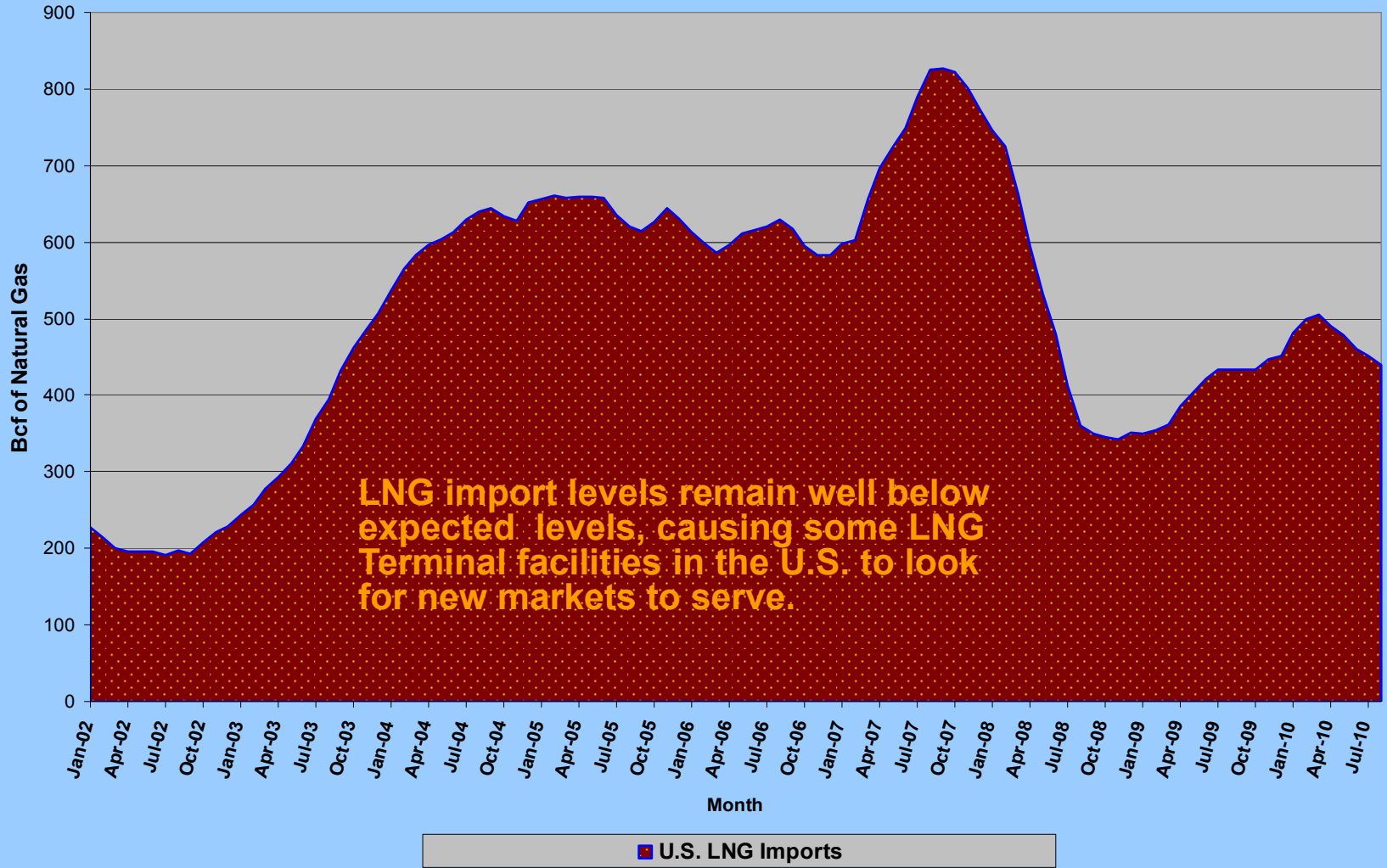
# “Fracking” and Shale Gas Development

- ✧ At this point, the “fracking” controversy does not appear to have had a major impact on the development of Marcellus Shale deposits.
- ✧ Natural gas production from Marcellus shale deposits is expanding at a fairly rapid rate in Pennsylvania, and it is beginning to expand in West Virginia and Ohio.
- ✧ This activity is being aided by substantial foreign investment in Marcellus Shale development.

# Should the US Export Natural Gas?

- ✧ Dominion Resources has announced recently that it has applied for a permit to utilize its Cove Point LNG terminal along the Chesapeake Bay in Maryland as an LNG Export facility.
- ✧ Two LNG terminals in Louisiana have recently undergone similar conversions and have commenced exporting LNG to other countries.
- ✧ Conversion of a terminal such as Cove Point for export can be an expensive undertaking given that cryogenic facilities must be installed for use in liquefying natural gas.
- ✧ However, the economic incentives to convert existing US LNG terminals for exportation of LNG are increasingly attractive.
  - With expanding US natural gas production the demand for LNG imports (which appeared strong 5-10 years ago) has declined sharply.
  - Prices that can be obtained for LNG supplies delivered to Europe or Asia are often well above US natural gas prices.

# U.S. LNG Imports January 2002 Through August 2010 (Rolling 12-Month Totals)



# Should the US **Export** Natural Gas?

- ✦ Some argue that exporting LNG can expand employment and reduce the U.S. trade deficit.
- ✦ However, exportation of domestically produced natural gas can have its drawbacks.
  - Exportation of domestically produced natural gas can be expected to accelerate the depletion of U.S. natural gas resources.
  - Exporting U.S. natural gas will push U.S. natural gas prices upward closer to international natural gas price levels which would, in turn, raise energy costs in the U.S. and reduce the competitiveness of other U.S. products in foreign markets.
  - Exportation of increased volumes of Natural Gas could further erode our energy security.