Natural Gas Price Update

Doug Peterson, Director of Marketing and Sales, CenterPoint Energy

Introduction

Natural gas pricing factors

- Storage levels
- Supply
  - Weather (potential supply impacts)
  - Availability of long-term domestic and international supplies
- Demand
  - Warm winters/cool summers (demand down)
  - Cold winters/hot summers (demand up)
  - Economy
- Current supply and demand balance

Components of Your Gas Bill

- Delivery charge- The Delivery Charge is a fixed rate and recovers the natural gas utility's cost of doing business not recovered through the basic charge.
- Pipeline Demand Charge- Covers the cost of transporting the gas on the interstate pipeline (e.g. from Oklahoma to Minnesota)
- Commodity Charge- Covers the total costs paid by the natural gas utility to purchase the gas used by customers. The commodity charge varies from month-to-month as the price of natural gas from the producers and suppliers changes. Customers only pay the wholesale cost of natural gas which is passed through to the customer without mark-up.
- Prices- given in dollars per Dekatherm (DTH)
  - 1 Dth = 10 Therms = 1 MCF
  - 1 Dth = 1,000,000 BTU

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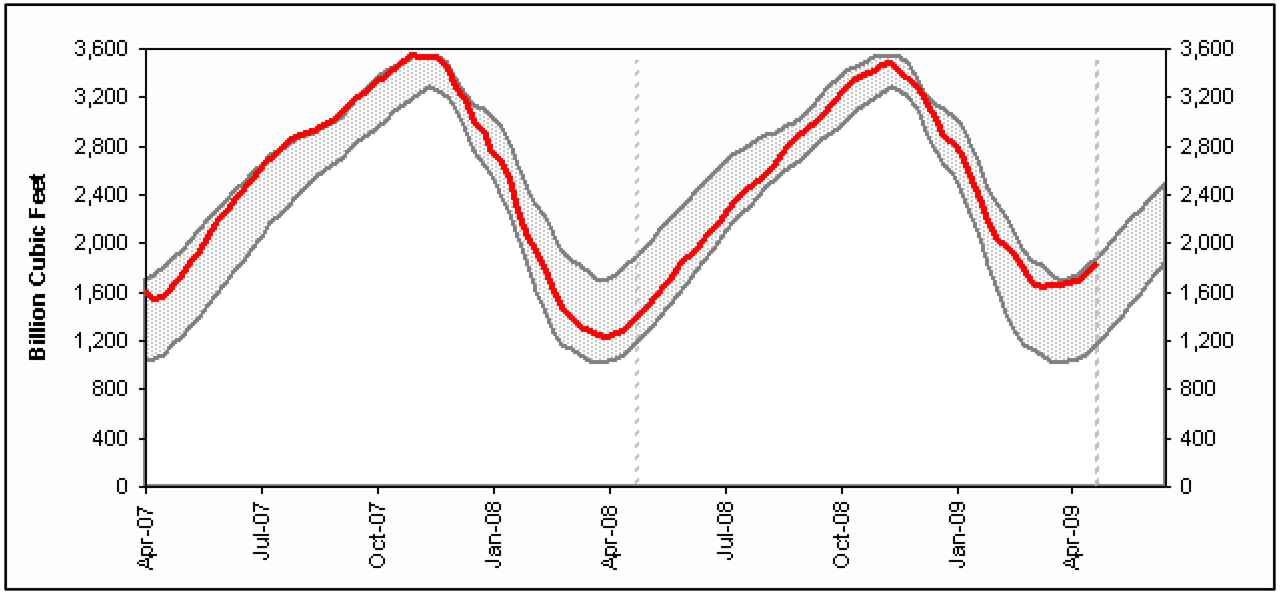
Supply- Gas in Storage

Working gas in underground storage compared with 5-year range

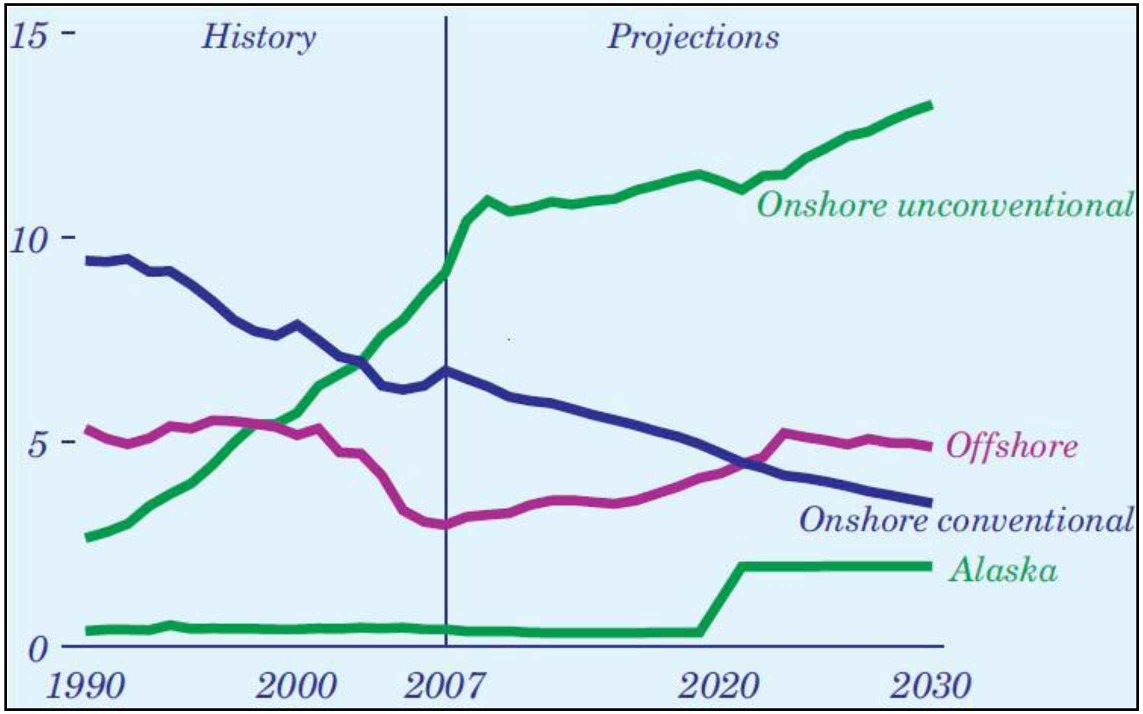


Working gas in storage was 1,823 Bcf as of Friday, April 24, which is 23% above the 5-year average.

Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2004 through 2008. Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

Supply By Source- Domestic

U.S. Natural Gas production by source,1990-2030 (trillion cubic feet)



- Unconventional production (shale formations) is expected to soar 43% to 13.2 Tcf in 2030 from 9.2 Tcf in 2007.
- Domestic gas production overall will increase by 4.3 Tcf (22%) from 2007 to 2030 due primarily to large gains in shale formations.
- Conventional production will continue to decline as fields mature.

Energy Information Administration, Annual Energy Outlook 2009

Supply – Domestic (Long-Term)

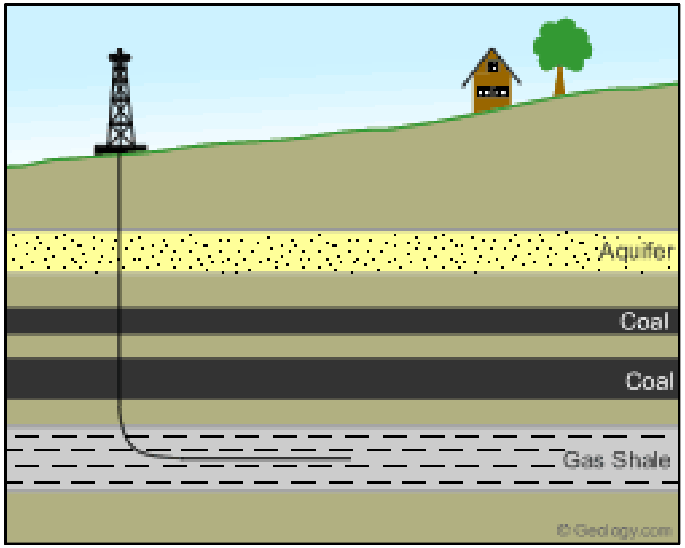
- According to the American Clean Skies Foundation and Navigant Consulting, Inc., the United States has enough natural gas reserves to last more than 100 years.

- Growth in shale fields "unconventional production" is experiencing the most rapid growth. Recent reports have one field alone, the Haynesville Shale play, providing up to 1500 Tcf. That equates to over 60 years of reserves from just one field!

- Increased domestic supply of unconventional gas will have a positive long-term impact on natural gas pricing.

"Unconventional" Shale Formations

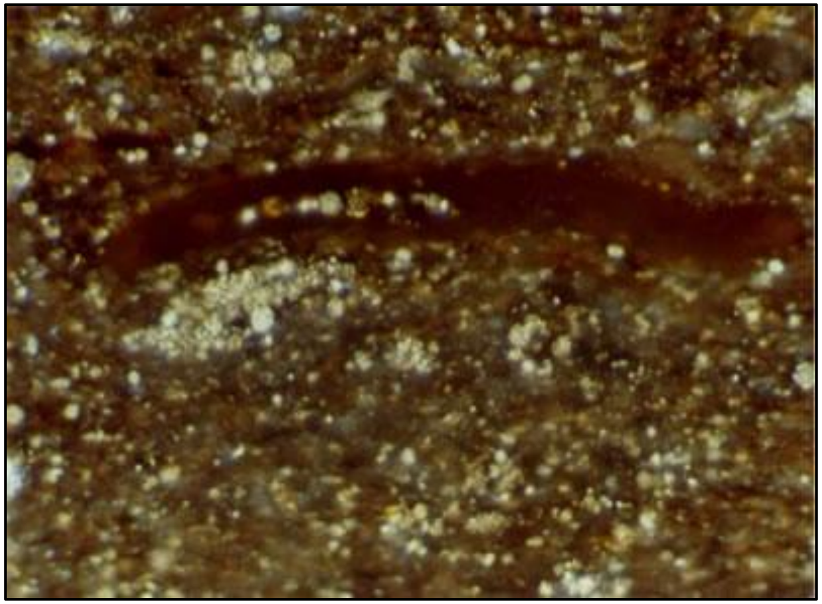
- Shale is a very fine-grained sedimentary rock that breaks into thin parallel layers.
- When two thick, black shale deposits 'sandwich' a thinner area of shale the shales will often contain natural gas.
- Since natural gas is found in shale formations that are extremely deep into the earth, drilling vertically then across horizontally is required.



- A combination of pressurized water and sand is used to fracture the shale.
- The fracturing technique releases the natural gas trapped in the shale and it is then extracted.

"Unconventional" Shale Formations

- Natural gas occurs within the Shale in three ways: 1) within the pore spaces of the shale; 2) within vertical fractures (joints) that break through the shale; and, 3) absorbed on mineral grains. Most of the recoverable gas is contained in the pore spaces.



- A list of the big shale fields include:
  - Haynesville Shale Play (also referred to as the Shreveport Shale or Louisiana Shale) located in Northwest Louisiana, East Texas, and Arkansas,
  - Barnett Shale Play located in North-central Texas
  - Fayetteville Shale Play located in Arkoma Basin in Arkansas
  - Caney and Woodford formations in Oklahoma
  - Floyd formation in the Black Warrior Basin in northwest Alabama
  - Marcellus Shale in much of Ohio, West Virginia, Pennsylvania and New York
  - Mancos Shale Basin in Colorado

Natural Gas Demand (short-term)

- Consumption is expected to decline by 1.3 percent in 2009 and then increase by 0.4% in 2010.

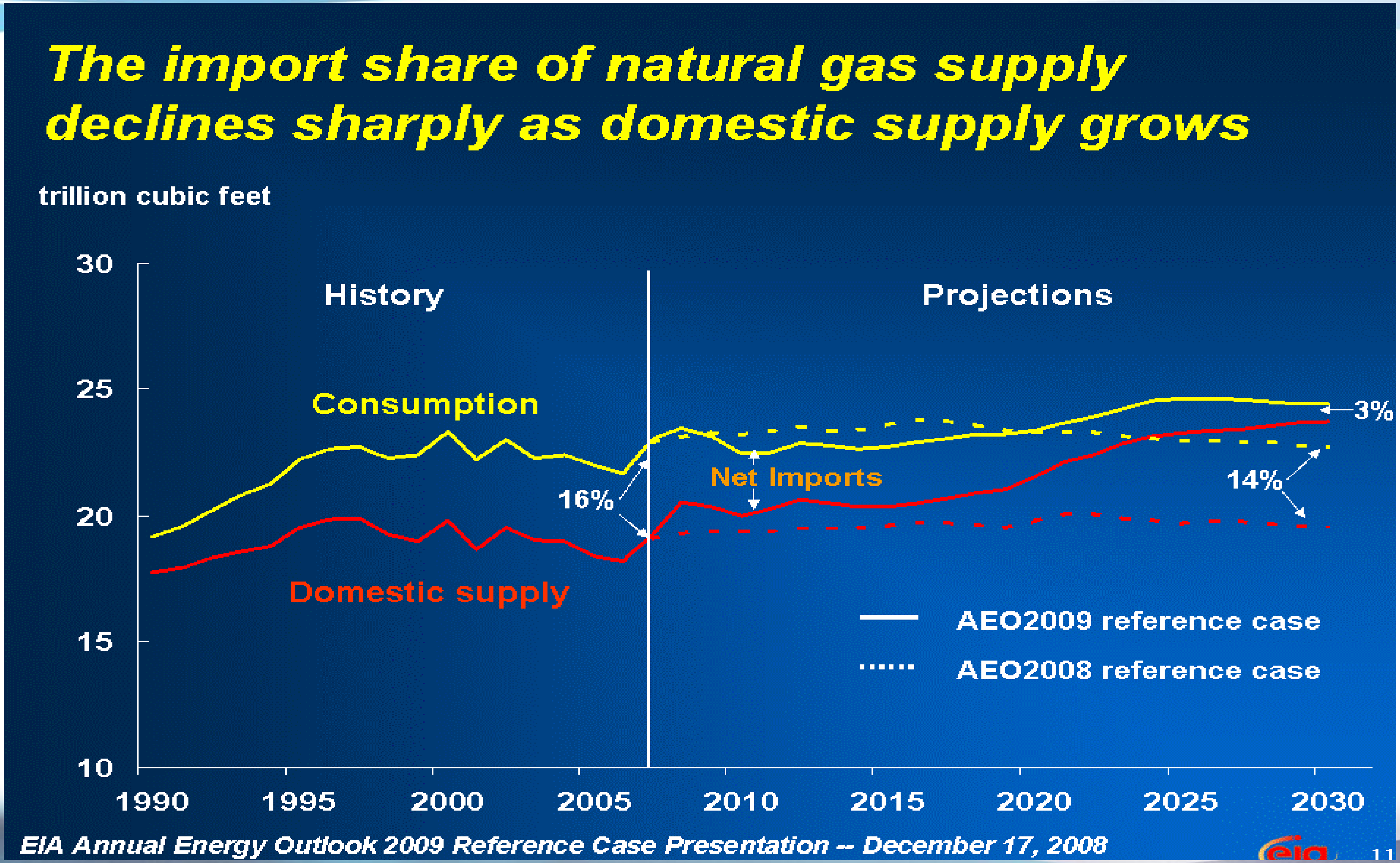
- The pace and extent of economic recovery in 2010 are the primary factors influencing the natural gas consumption forecast.

- If the economy begins to recover later this year as currently expected and weather remains near normal, small consumption growth in the industrial and electric power sectors should be offset by small declines in the residential and commercial sectors.

- Bottom line- Natural gas demand is expected to remain fairly flat through at least 2010.

Source: 2009 Energy Information Administration Short-Term Energy Outlook

2009 Supply and Demand Balance



2009 Supply and Demand Balance

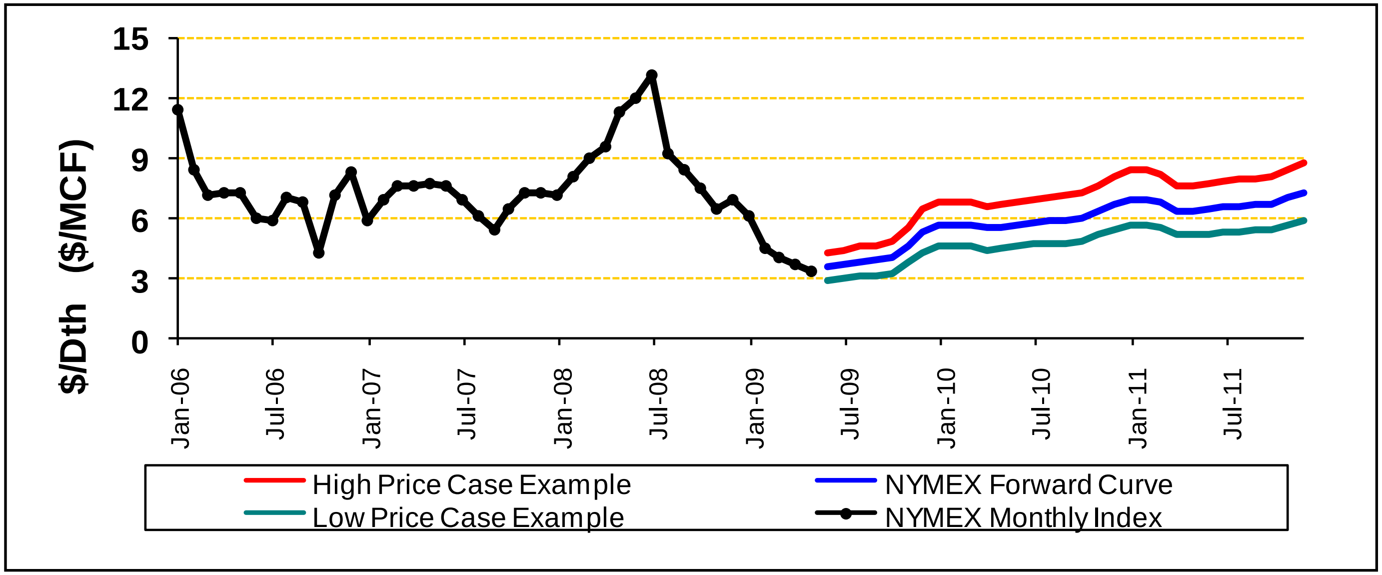
High Gas Prices Case:

- Higher oil prices
- Economic rebound and growth
- Weather Impact: Cold winters / hurricanes

Low Gas Prices Case:

- Domestic supply continues to grow
- Mild Winters / limited hurricane impact
- Recession / limited economic growth

A Look at Past, Present and Future Prices



Based on the NYMEX, prices are forecasted to remain below $6/Dekatherm this year.*

**** Prices are based on the NYMEX forecast as of May 1, 2009. CenterPoint Energy makes no definite predictions on actual future prices.***

Pricing Wrap-Up

U.S. Natural Gas Pricing Summary

Short-term:

- Storage levels are well above the 5-year average.
- Demand is soft due to the economy.
- Domestic supply is up.

Long-term:

- Domestic output is expected to increase gradually to around 24 Tcf in 2030 from 19.3 in 2007.
- Canada's share of the US supply will decline sharply as US domestic production grows.
- US demand is expected to decline slightly and then slowly increase to 25 Tcf in 2030.

Bottom line:

- Domestic supply is increasing.
- Demand is down because of the current economic conditions.
- Overall, prices are expected to remain relatively low in the short-term. When the demand rises as the economy improves, the prices will likely increase.

Questions?

Price Comparisons

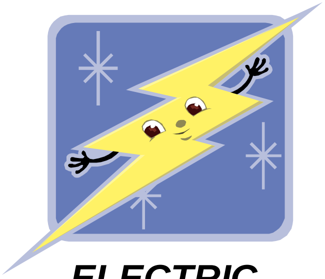
Jason Pung, Technical Sales Engineer, CenterPoint Energy

Energy Choices

NATURAL GAS

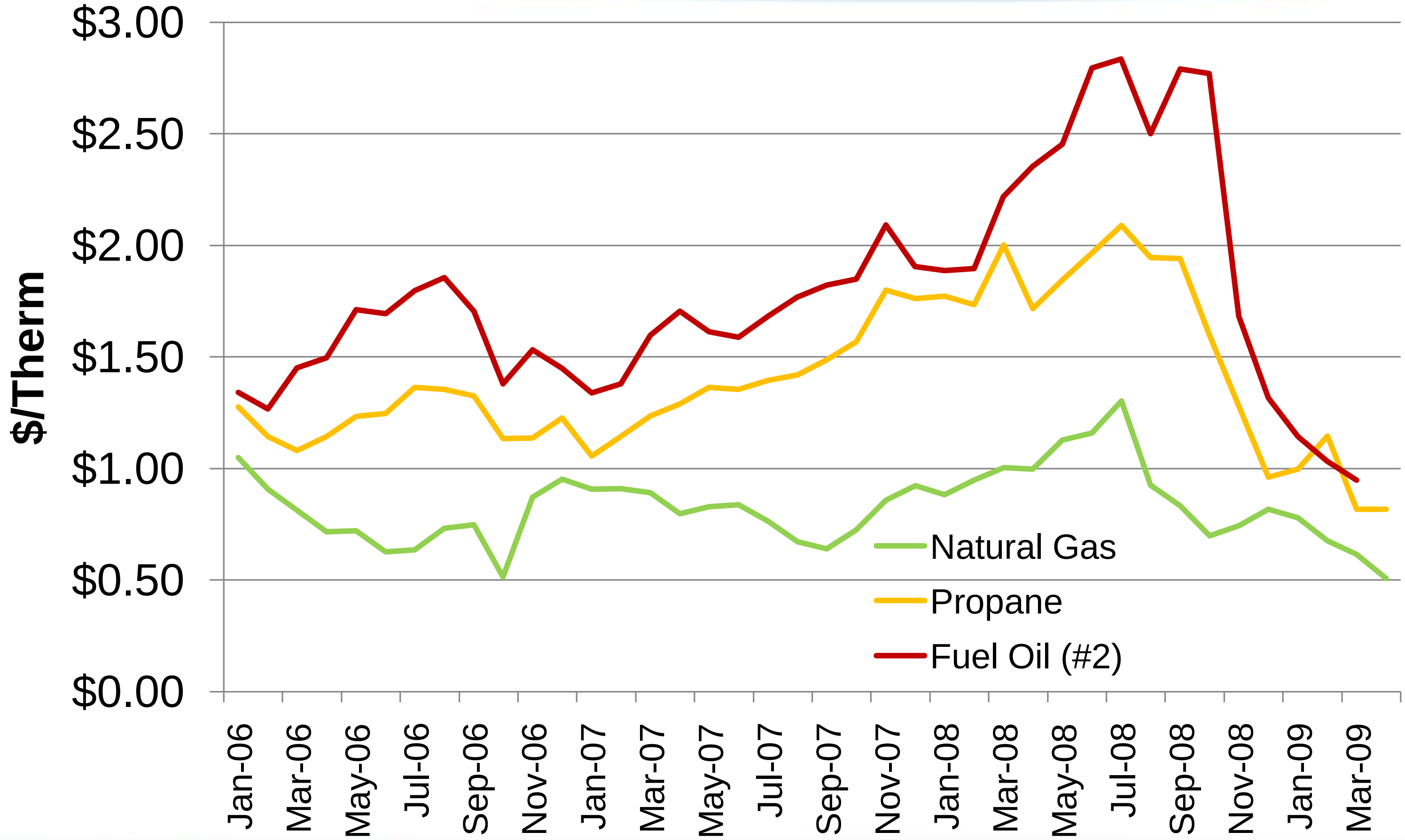
FUEL OIL (#2)

PROPANE

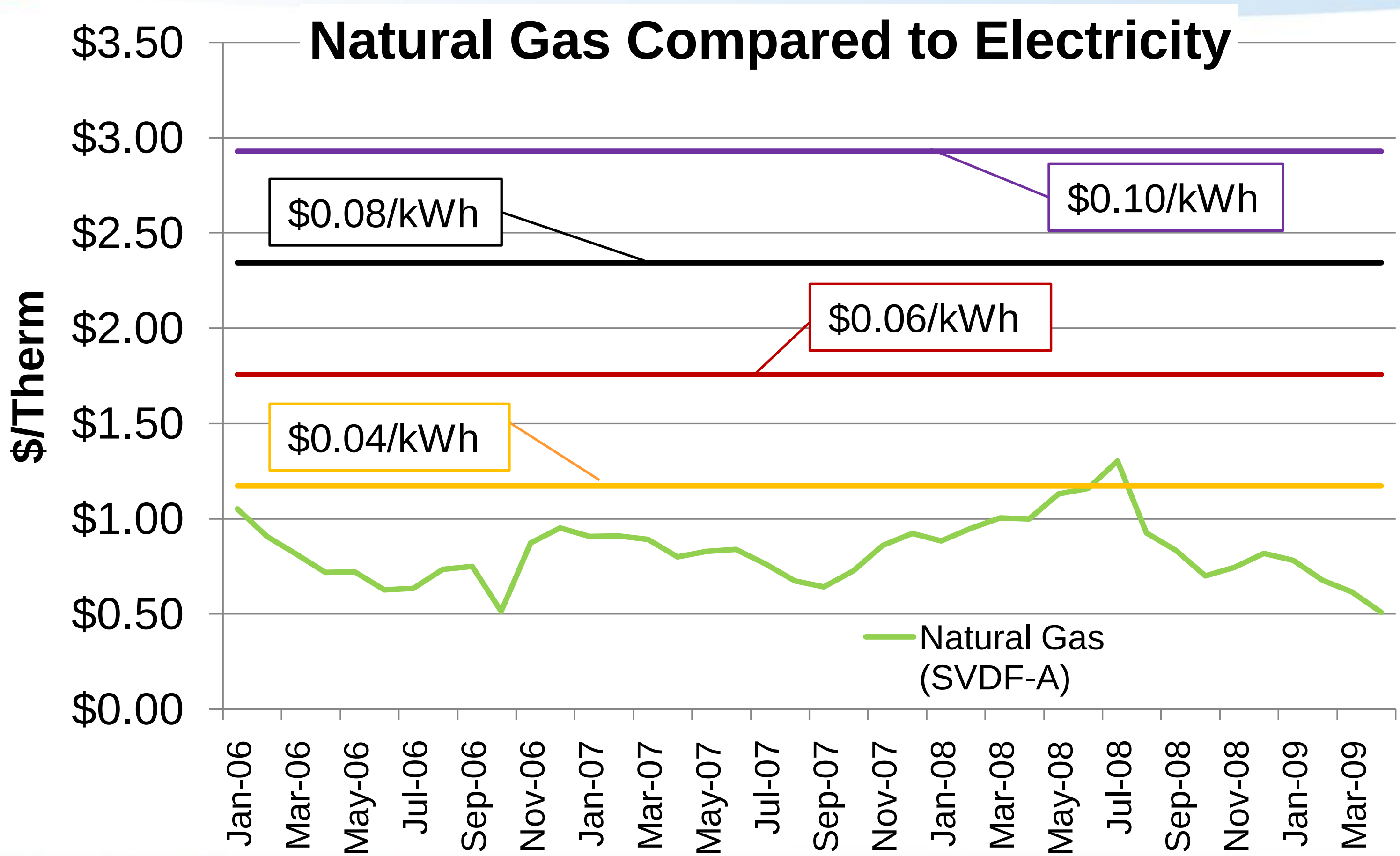


ELECTRIC

Historical Pricing – Alternative Fuels



Historical Pricing – Electric



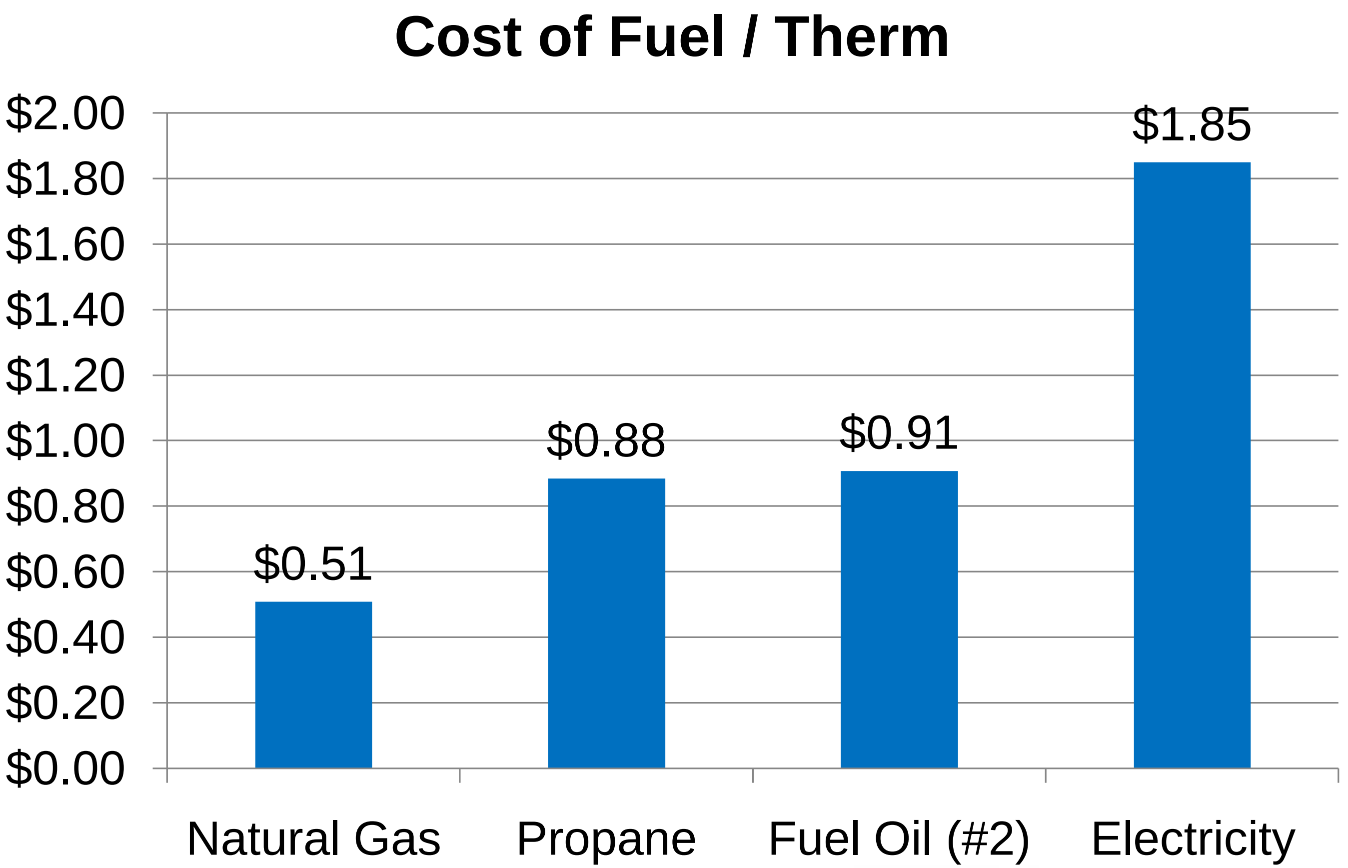
Equivalent Electric Pricing

Snapshot Pricing

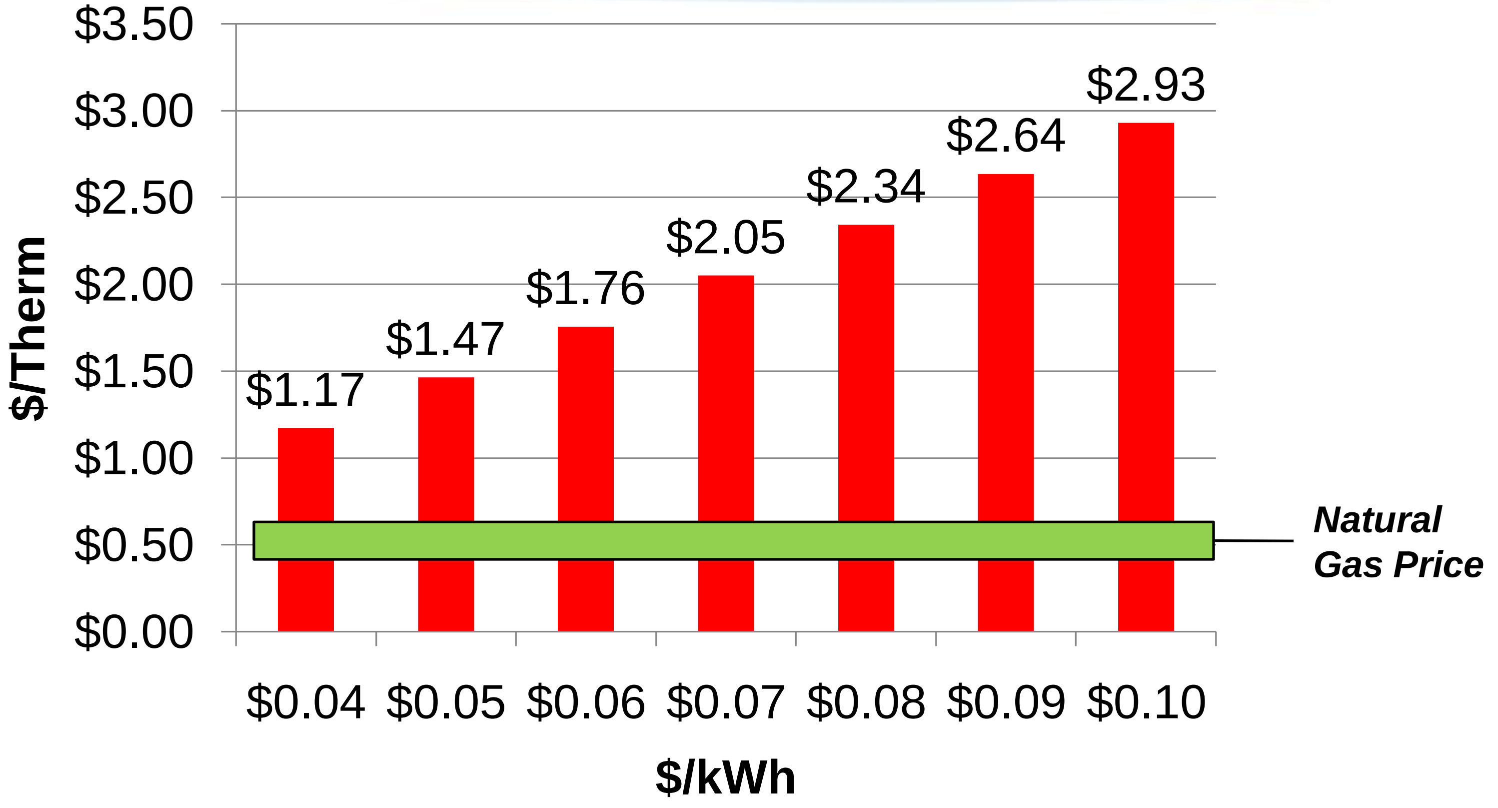
	Therm (100,000 BTU)	$/Therm
Natural Gas 1000 BTU/ft^3	100 ft^3/Therm	$0.50/Therm (SVDF-A)
Propane 91,600 BTU/gallon	1.09 Gallons/Therm	$0.88/Therm ($0.81/gallon delivered)
Fuel Oil (#2) 139,000 BTU/gallon	0.72 Gallons/Therm	$0.91/Therm ($1.26/gallon delivered)
Electricity (3,412 BTU/kWh)	29.3 kWh/Therm	$1.85/Therm ($0.063/kWh)

Prices based on rates/market values – April 2009

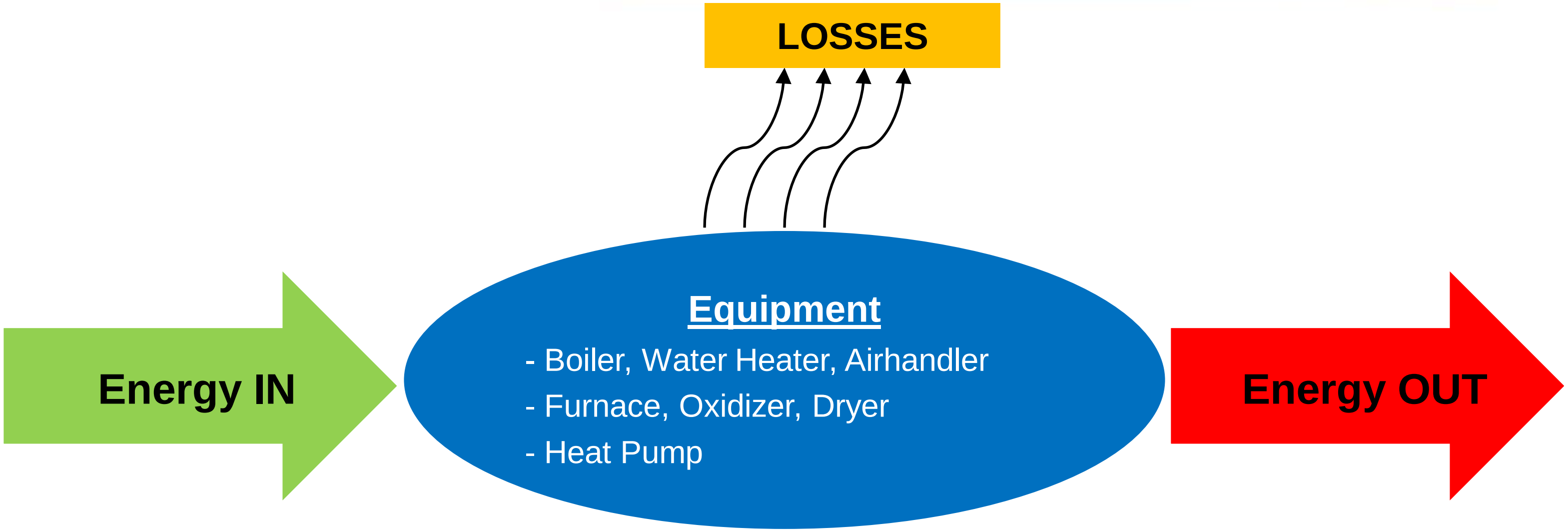
Snapshot Pricing



Natural Gas compared to Electric



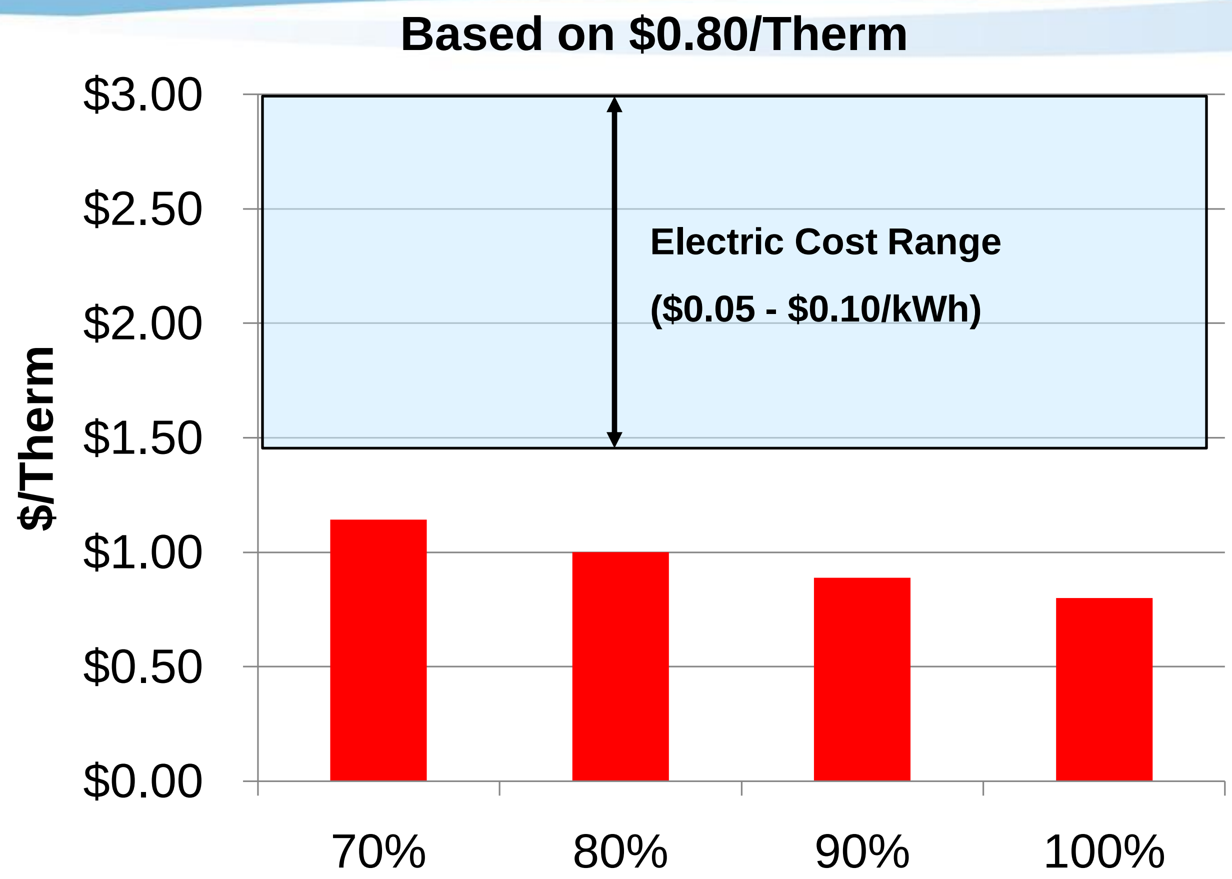
Efficiency Comes Into Play



As "Efficiency" Decreases, "Energy IN" Increases

$$\textit{Energy IN} = \frac{\textit{Energy OUT}}{\textit{EFFICIENCY}}$$

Natural Gas Price @ Efficiency



Price Comparisons

Natural Gas vs. Electric

Commercial Equipment Operating Cost Comparison

Now that we've covered the basics, let's see how this information relates to a commercial building with 500,000 BTU/Hour heating load.

Space Heating for a Commercial Building (Rooftop Air-handler)		**Electric Equipment**	**Natural Gas Equipment**
Output (kWh : BTUH) – (peak day load)		146.5	500,000
Efficiency Factor		.95	.80
Input (kWh : BTUH)		154.2	625,000
Annual Operating Hours (24h/d,30d/m,4m/y)		2,880	2,880
Load Factor (average operating/firing rate)		0.30	0.30
Annual Input (kWh : Therms)		**133,237**	**5,400**
Unit Energy Cost ($/kWh : $/Therm)		**$ 0.063**	**$ 0.80**
Annual Energy Cost		**$ 8,394**	**$4,320**
Operating Savings (electric – gas)		**$4,074 savings using NG**	
Operating Savings Using Gas (%)		**48.5%**	
Incremental Gas Equipment Cost		**$8,000**	
Payback (years)		**~ 2 years**	

Price Comparisons

Natural Gas vs. Electric

Commercial Equipment Operating Cost Comparison

Results of a Small Office heating load using a GHP vs. a Conventional System.

Space Heating for a Small Office Building		GHP	Natural Gas Conventional
Annual Electrical Usage (kWh)		169,434	145,332
Annual Natural Gas Usage (Therms)		0	6,260
Unit Energy Cost ($/kWh : $/Therm)		$ 0.063	$ 0.80
Annual Energy Cost		$ 10,674	$14,180
Operating Savings (electric – gas)		$3,506 savings using GHP	
Incremental GHP Equipment Cost		$162,575	
Payback (years)		~ 46 year payback using GHP	

Questions?