

It's All About The Obsolescence

**Presentation for Oklahoma Tax Commission – Ad Valorem Division
2016 Business Personal Property Hearing**

In general, oil & gas field equipment is valued using the cost approach by Oklahoma Assessors.

Taxpayer is required to render using actual dollars spent on an asset or use cost schedules provided by the Oklahoma Tax Commission.

PETROLEUM PRODUCTS IN STORAGE

The Value of Petroleum Products in Storage is the average of the NYMEX of the previous twelve months.

CRUDE OIL IN STORAGE

Sweet : 95.23 per barrel
Sour: 83.23 per barrel

NATURAL GAS IN STORAGE

4.24 per mcf

GAS COMPRESSORS

Economic Life: 20 years

Due to the various components of compressor systems, requested information should include but not be limited to the following:

Compressor Type: year, fuel, BHP, stages, discharge pressure, etc.

Compressor Equip.: turbine or recipitating, cooling, controls, piping, skids, measurement system, etc.

Site Preparation: leveling, gravel, concrete, electrical service, fencing, etc.

PIPELINE COMPRESSOR

VALUES ARE ESTIMATES PER HORSEPOWER

(50-99 h.p.)	(100-399 h.p.)	(400-699 h.p.)	(700-1099 h.p.)	(1100-1699 h.p)	(1700h.p. & above)
1620	1430	1240	1140	1050	870

SMALL PRODUCTION COMPRESSOR

Single stage compressors not included under Gross Production In-Lieu Tax as defined by OTC rule 710-10-8-2. Generally, the lower the horsepower, the higher the cost per horsepower.

Small production under 50 horsepower

1,900

METERS and METER STATIONS, LOW PRESSURE

Economic Life: 20 Years

	2"	3"	4"	6"
Manual	4,387	5,337	8,003	16,768
Electronic	5,815	7,236	8,992	12,175
Add for:				
Gas Sampler	1,303	1,303	2,609	2,609
Electric Field Measure	4,788	4,788	4,788	4,788
Solar Panel	341	341	341	341
Building	3,155	3,188	3,572	4,012
Birdhouse	400	400	400	400
Meter Setting:	1,095	1,095	1,848	2,330

*No data available at this time for 8" and above

VALVE STATIONS and or LAUNCHERS/RECEIVERS

Are included in typical pipeline cost.

ENCLOSED AREA for METER STATIONS, METERS and VALVE STATIONS

Are included in typical pipeline cost.

DEFINITION OF COST APPROACH

Using the cost approach, the appraiser starts with the current replacement cost new of the property being appraised and then deducts for the loss in value caused by physical deterioration, functional obsolescence and economic obsolescence. The logic behind the cost approach is the principle of substitution: a prudent buyer will not pay more for a property than the cost of acquiring a substitute property of equivalent utility.

There Are Two Basic Types Of Obsolescence

Internal or Functional Obsolescence

and

External or Economic Obsolescence

- **Functional Obsolescence** is loss in value due to inability of the structure to perform adequately the function it is used as of the appraisal date.
- **Economic Obsolescence** is loss in value as a result of impairment in utility and desirability caused by factors outside the property's boundaries.

Source: International Association of Assessing Officers, *Property Appraisal and Assessment Administration* (1990): 220-221.

There Are Two Basic Types Of Obsolescence

Internal or Functional Obsolescence

and

External or Economic Obsolescence

- **Functional Obsolescence** A form of depreciation in which the loss in value or usefulness of a property is caused by inefficiencies or inadequacies inherent on the property itself, when compared to a more efficient or less costly replacement property.....
- **Economic Obsolescence** A form of depreciation where the loss in value or usefulness of a property is caused by factors external to the property.

Source: American Society of Appraisers, *Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets*, Third Edition, 2011.

Examples of Functional Obsolescence

- Old Technology
- Deficient or Outdated Design
- Overcapacity
- Excess Construction (excess capital costs compared to a modern alternative)
- Lack of Functional Utility
- Excess Operating Costs

Causes of Economic Obsolescence

- Economics of the Industry
- Availability of Financing/High Interest Rates/Inflation
- Loss of Material and/or Labor Sources
- Passage of New Legislation/Changes in Ordinances
- Increased Cost of Raw Materials, Labor or Utilities (without an offsetting increase in product price)
- Reduced Demand for the Product
- Increased Competition

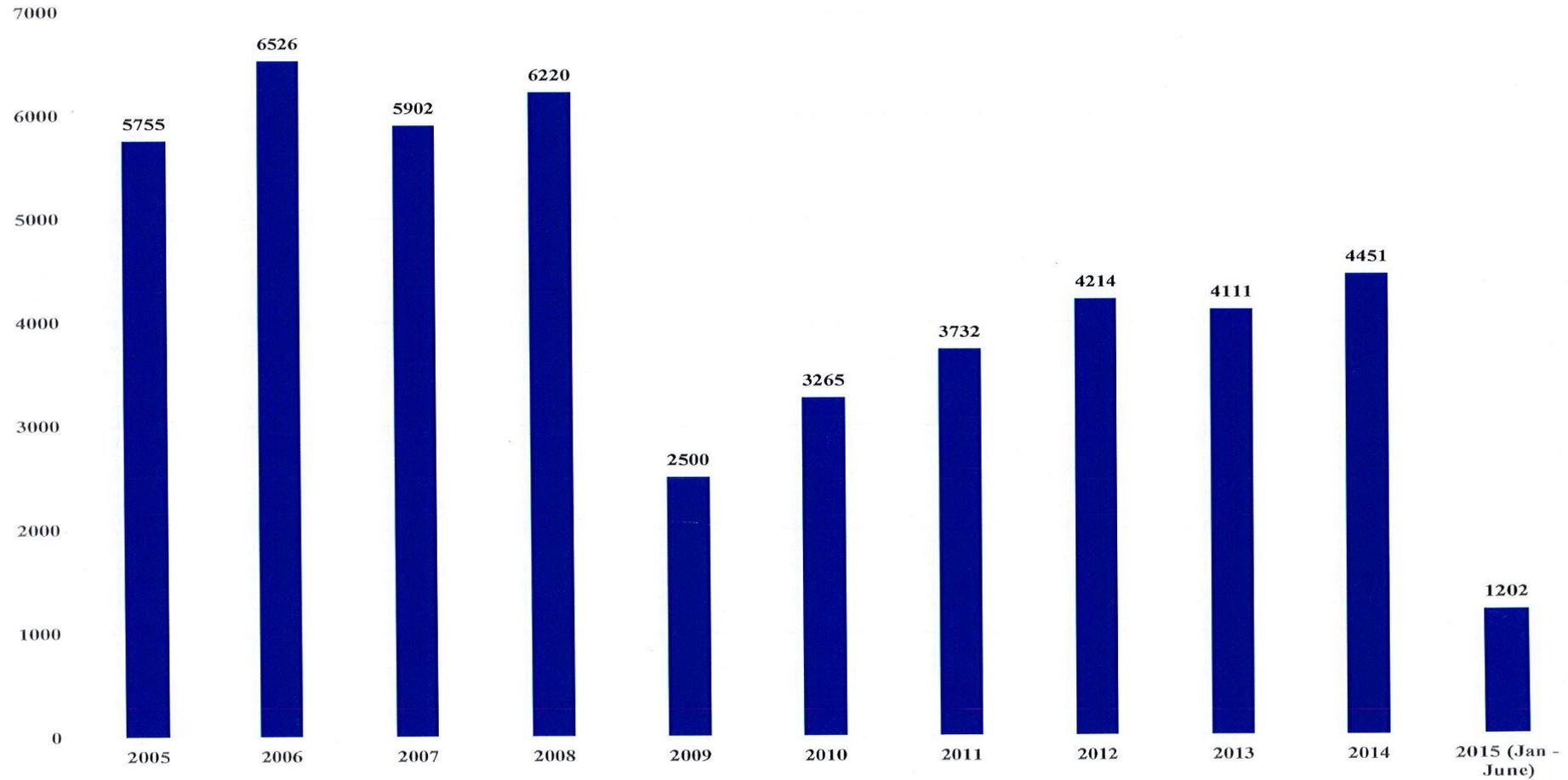
The cost approach as generally applied in Oklahoma

If an assessor or appraiser reaches a value conclusion where the Replacement Cost New is reduced only for physical deterioration, that assessor/appraiser is asserting that the property is operating at its full potential, with no deficiencies (internal or external), fully utilized by the market it serves.

In other words, an RCNLD (Replacement Cost New Less Physical Depreciation) value is the Best Case Scenario for that property. This begs the question:

Is every property on every county tax roll operating and utilized at its full potential, with full market acceptance, and at optimum levels of cost and profit ?

**Oklahoma
Drilling Permits Approved
2005 through June 2015**

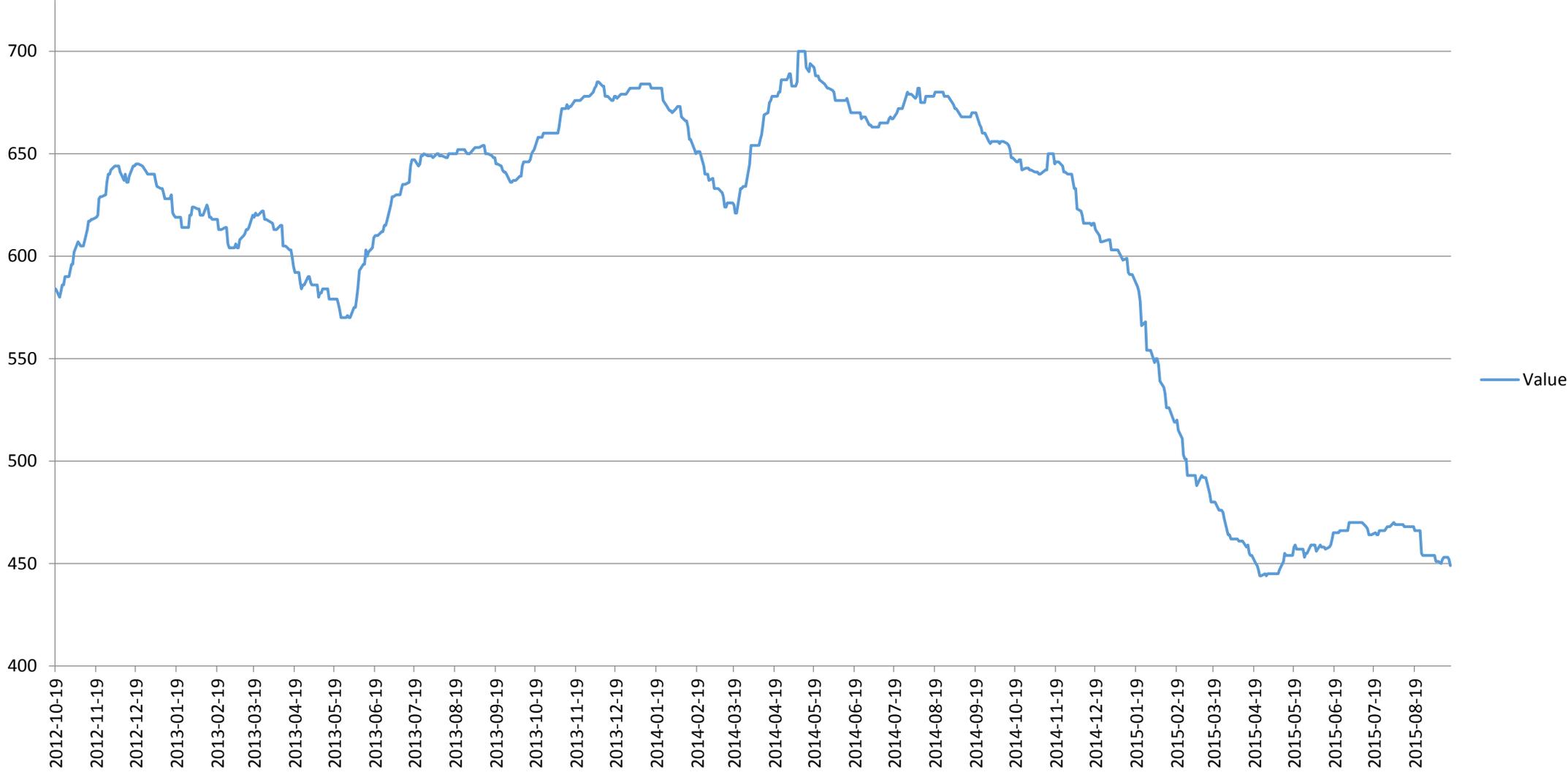


7/15/2015

Source: Oklahoma Corporation Commission

Steel, Hot Rolled Coil US, FOB Midwest Mill

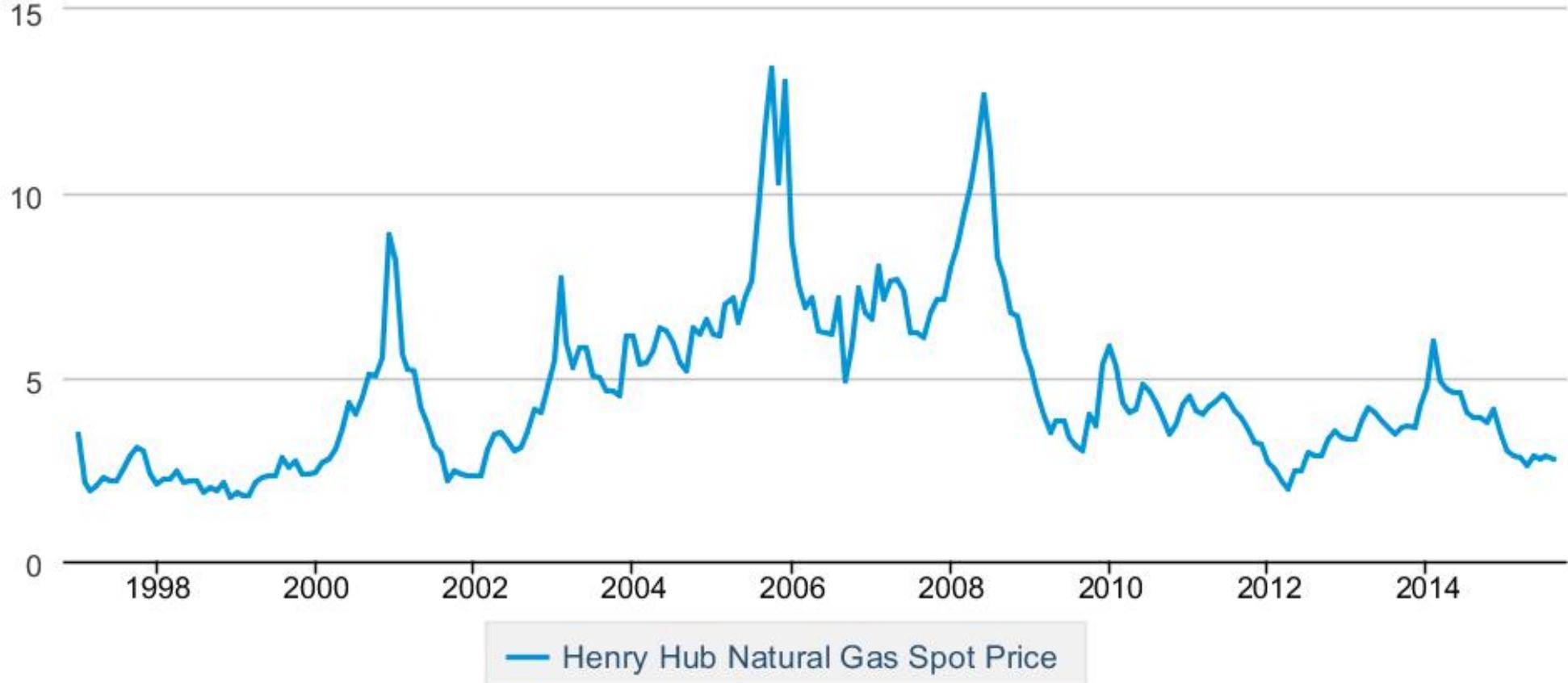
Dollars per Short Ton



Source: Wall Street Journal

Henry Hub Natural Gas Spot Price

Dollars per Million Btu



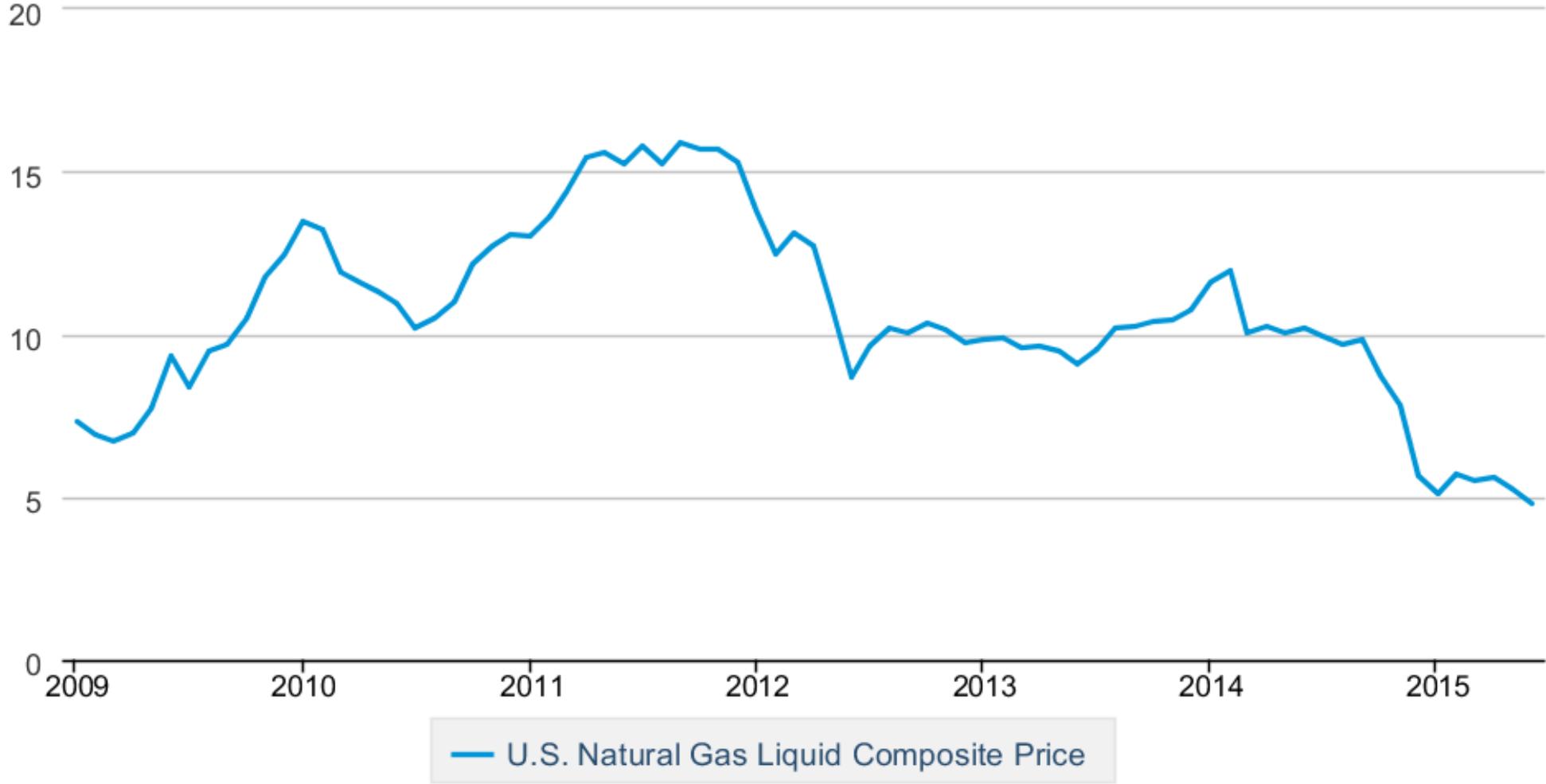
Cushing, OK WTI Spot Price FOB

Dollars per Barrel



U.S. Natural Gas Liquid Composite Price

Dollars per Million Btu



Source: Bloomberg

Inutility Defined

- How do the Appraisal Societies Define Inutility

ASA defines utility:

“Whenever the operating level of an asset or an entire plant is significantly less than its rated or design capability, and the condition is expected to exist for some time, the asset is less valuable than it would otherwise be. Such a penalty for inutility **can be** a measure of the loss from this form of **economic obsolescence**.” (Valuing Machinery & Equipment: the Fundamentals of Appraising Machinery and Technical Assets, Third Edition, pp. 76-77)

Obsolescence Calculation

Capacity 100,000 mcf/d

Utilization 65,000 mcf/d

Percent Utilized 65%

Percent Obsolete $1-(65\%)^{.6} = .23$ or 23%

Replacement Cost	Physical Depreciation	RCNLD
\$1,000,000	x .80	= \$800,000

RCNLD	Percent Obsolete	Obsolescence Amount
\$800,000	x .23	= \$184,000

FMV = \$800,000 - \$184,000 = \$616,000



IAAO Conference - Florida Chapter
Tangible Personal Property Conference
December 3-5, 2012

Revisiting Inutility Penalties