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The Property Tax Firm

Expert Opinion

The Driver of Market Value in the Cost Approach to Value

From 2003 to 2008 there was an unprecedented boom in the construction of new oil refineries and petrochemical plants, as well as a substantial increase in offshore drilling and production operations around the world. This was driven in particular by demand from China, the Middle East, the Oil Sands Developments in Canada and the devastation effected by hurricanes in the U.S.

With the global recession starting in 2008, the price of commodities and labor costs decreased significantly. Now, industrial manufacturers that enjoyed the markdown in construction costs during the global recession are facing large price increases. As the economy and construction activity revives in the U.S., the energy industry is seeing higher costs for commodities and labor.

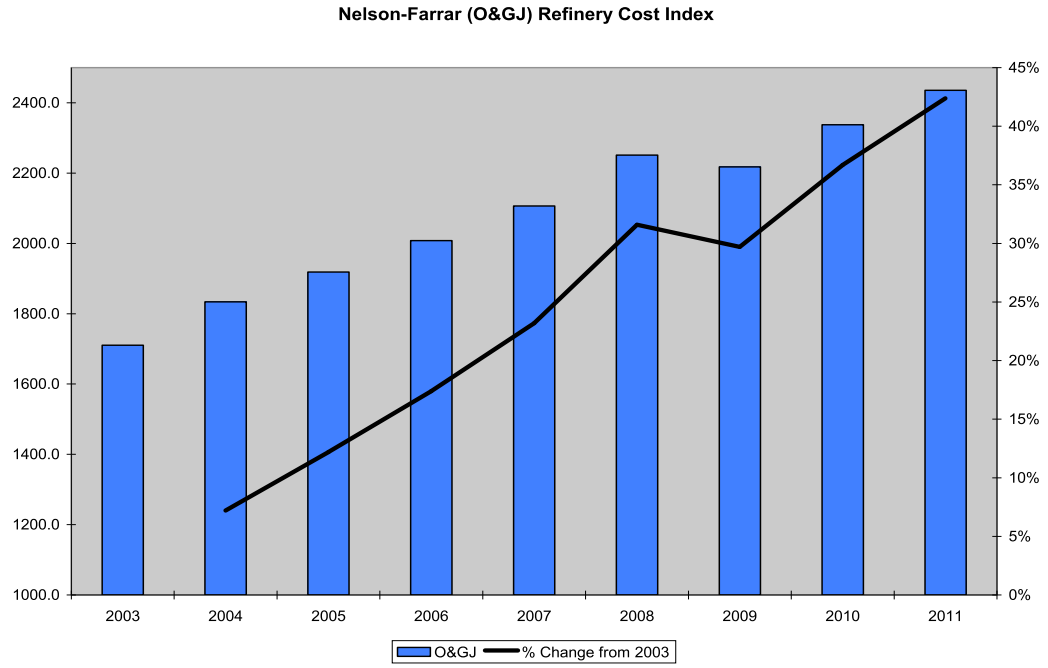
While the world outlook for oil and gas, refining, and petrochemicals construction in 2012 remains positive, the demand and cost for engineering and construction services, materials and equipment and commodities continues to rise. These developments have had a major impact on replacement cost new for petrochemical plants and oil refineries.

Cost Escalation

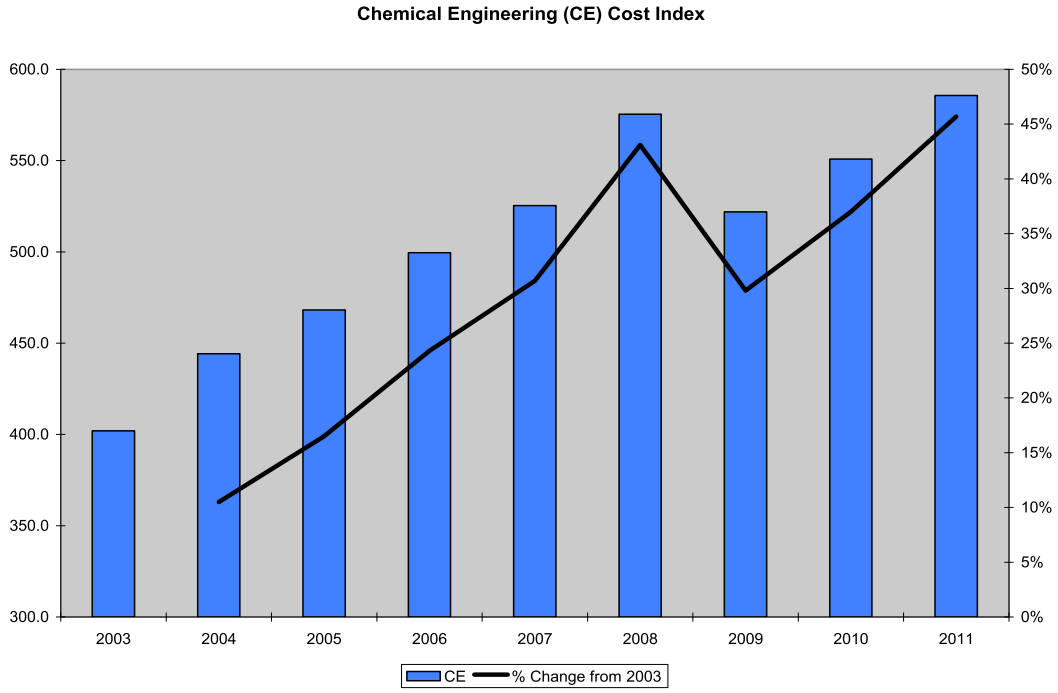
Cost escalation is the change in the cost or price of specific goods or services over a given period. Cost escalation risks include uncertainty in construction costs, delays in source materials, and increased labor cost for contractors and maintenance personnel. A further consequence of the current situation is that at short notice it is difficult for contractors to find experienced/qualified resources to work on a specific project. This tends to have the effect of increasing the length of the project because it is not being handled as efficiently.

To investigate the effects of cost escalation in the petrochemical and oil refining industries, the Nelson-Farrar refinery cost index and Chemical Engineering CE cost index were reviewed.

Since 2003, oil refinery costs have risen steadily due to rises in construction labor and commodities costs. Oil & Gas Journal uses Nelson-Farrar refinery construction cost indices to track the overall cost of refinery construction. The Nelson-Farrar cost index has risen by about 42% since 2003.



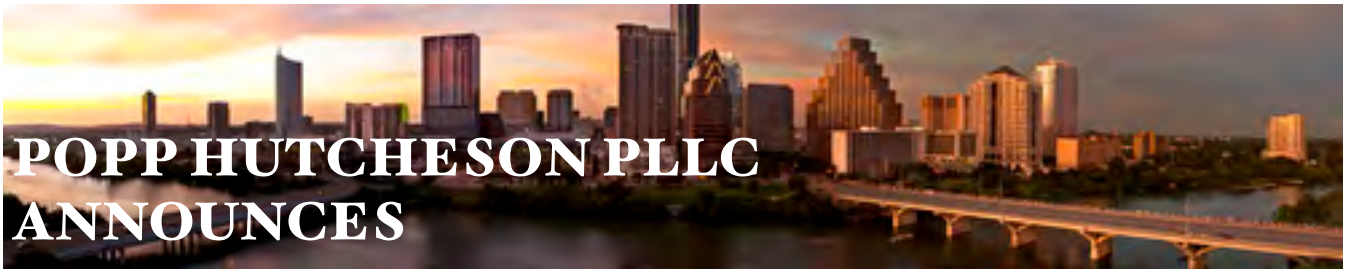
Petrochemicals plant projects costs have also increased since 2003. Costs for petrochemical facilities went up significantly worldwide with the new large projects coming online in the Middle East. Chemical Engineering uses the CE Cost Index to track the overall cost of chemical and petrochemical plants construction. The CE index has risen by about 45% since 2003.



With regard to the oil refining and petrochemical industries, the recent cost escalation for equipment resulting from higher commodity prices is considered to be temporary and self-correcting over the long term, both through the addition of new commodity supplies and through a reduction in demand for those commodities. As a result, equipment costs for the petrochemical industry and refining sectors are expected to rise at the overall rate of inflation over the long term.

The impact of cost escalation when developing the cost approach to value for an oil refinery or petrochemical plant results in an economic reduction in the enterprise value both in the near and long term due to the added construction cost required and/or increased operating costs, with no offsetting revenue or income benefits. This economic reduction in enterprise value is a form of economic obsolescence that must be accounted for in the appraisal of oil refining and petrochemical plant assets.

For further information, please contact Greg Kort, Principal greg.kort@property-tax.com



A NEW NAME FOR THE SAME FIRM

POPP GRAY AND HUTCHESON, PLLC HAS BECOME POPP HUTCHESON PLLC.

Raymond Gray, a partner with the Firm since 1999, has announced his retirement to pursue his expanding commitment to the Boy Scouts and interests in ranching. Jim Popp, Managing Principal, has assumed Raymond's responsibilities. Jim may be contacted at (512) 473-2661 concerning any matters previously handled by Raymond. Raymond will remain "of counsel" with the Firm. We wish Raymond all the best in his retirement and success in his new endeavors.

POPP HUTCHESON PLLC HAS A NEW WEBSITE

Popp Hutcheson PLLC is excited to present our new website. We hope you will take the time to visit our new website at the same address www.property-tax.com.