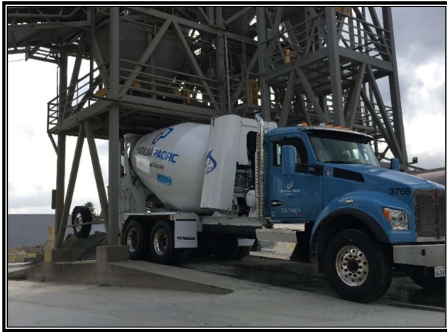




Compressed Natural Gas as a Fuel for Concrete Mixer Trucks

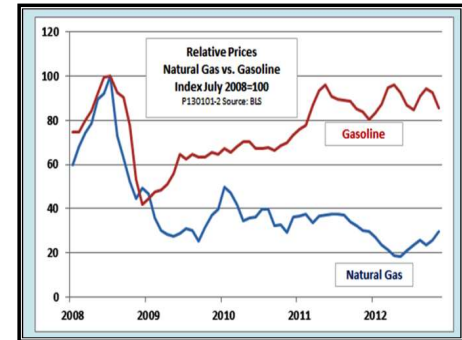
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Key Words: sustainable construction, concrete mixer trucks, alternative fuels, diesel, compressed natural gas



Abstract

Sustainable practices in the built environment are becoming more and more sought after. Transportation has been identified as an area of the construction industry that can help significantly reduce carbon footprint, especially concrete mixer trucks. One question presents itself: Will the cost impact of converting a fleet of concrete mixer trucks from diesel to compressed natural gas outweigh the environmental benefits? This case study will examine the various costs associated with converting a local batch plant from diesel to compressed natural gas. The results of this analysis indicate that the costs associated are a function of multiple parameters, government and local policies as well as the cost and availability of compressed natural gas. A multi-variable model was developed to analyze the financial impacts of CalPortland switching their fueling station and 57 concrete mixer truck fleet from diesel to compressed natural gas.



Methodology

1. Interview with the Project Manager at CalPortland in SLO to determine fleet size and decide best approach.
2. Develop a cost impact analysis that includes all variables that will incur costs.
3. Analyze data and draw a conclusion.

