

Material Price Adjustment Clauses (PACs)

March 19th, 2012 – The American Concrete Pavement Association (ACPA) supports the view that “all possible and proper measures be taken to ensure the tax payers of this country that they are receiving full value of every highway dollar spent”.ⁱ The use of material price adjustment clauses (sometimes known as commodity price adjustments or price escalators) may be an acceptable agency strategy to attempt to control costs, but only in certain specific bidding circumstances – when using traditional design-bid-build contracting mechanisms, and where the cost impacts of the PACs are accounted for in the life-cycle cost analysis (LCCA) used for pavement type selection. In all other circumstances, the use of material price adjustment clauses is unfair and disruptive to the competitive bidding process. FHWA and NCHRP guidance on alternate bidding procedures reinforce this view.^{ii iii iv}

Why Do DOTs Use PACs?

The highway construction sector is a monopsony (one buyer – DOTs, with multiple sellers - contractors), with imperfect information (future commodity prices are unknown). Highway agencies use PACs as a means to shift business risk (or potential reward) from the contractor to the DOT. This shift in risk theoretically benefits the DOT through contractors’ willingness to submit lower bids.^v

Price adjustment clauses are currently used in a variety of other markets, including shipping, trucking, airlines and taxis (in the form of fuel surcharges), and even the Department of Defense (for bunker C oil). Use of PACs in the highway sector emerged in earnest during and immediately after the oil embargo of the 1970s. As a result, FHWA in 1980 published technical guidance on use of price adjustment contract provisions, allowing the use of PACs to minimize the cost effects of price uncertainty for materials used in construction.^{vi}

PACs were primarily initiated for fuel and asphalt. Included in FHWA’s criteria and conditions are that PACs should not be incorporated into standard specifications for permanent application to all projects, and should not be adopted as a standard long-term policy for all projects. Rather, inclusion of PACs should be assessed on a project-by-project basis. This relates to the criteria that PACs are only appropriate when current material prices “reveal unpredictable, uncontrollable shifts away from normal price trends over the longer term”. Moreover, FHWA guidance states that the need, effectiveness and fairness of PACs’ should be continually evaluated by the agency.

In 2009, the AASHTO Subcommittee on Construction conducted an extensive survey of DOTs on the use of PACs. NCHRP Project 20-7 commissioned a study on price indexing in transportation construction contracts under task 274.^v Results of this study were published in January 2011. According to these efforts, 46 of 50 states, District of Columbia, and Puerto Rico currently employ price adjustment clauses as part of their contracts (42 for fuel, 41 for asphalt, 14 for steel and 3 for cement).

The NCHRP-sponsored study concludes the following about PACs within the context of design-bid-build contracts:

- Not only is there broad support for PACs (for fuel and for asphalt) among DOTs, there is mounting interest in order to control costs.
- DOT consensus on benefits:
 - Lower bid prices (study did not establish conclusively with statistical analysis)
 - Increased number of bidders
 - Market stability (shield from large losses)
- There is substantial support for PACs among both contractors and DOTs (study did not distinguish the type of contractors holding this view).
- PACs for cement is not recommended, as pricing of cement is historically much more stable than other commodities.
- Contractors and DOTs feel PACs improve estimating accuracy and lower contractor risk.

When Do PACs Impact the Competitive Bidding Process?

It is critical to understand the context of PACs in a typical pavement type selection process using traditional construction contracting. With the vast majority of federal aid projects, the pavement type is selected after a preliminary LCCA evaluation of equivalent pavement alternatives. Once a pavement type is selected, the project is first designed and then let. In this manner, all responsive contractors are provided the same potential price adjustment, because the pavement type has already been selected. If an asphalt pavement was selected in the pavement type selection process, all of the asphalt contractors that are bidding are receiving the same PAC benefit (if there is an asphalt PAC in the contract) – there is no competitive advantage of one contractor over another. Conversely, if the pavement was selected as a concrete pavement, none of the bidders are receiving an advantage over the other (whether there is a material PAC or not).

However, there are two situations where problems arise with the use of material PACs in the competitive bidding process.

1. **Unaccounted Costs** – When material PACs are used in traditional (design-bid-build) construction contracting, it is critical that the amounts paid out under material PACs are accounted for in the pavement type selection process. DOTs should routinely track material PAC payments, and add those costs to the associated bid costs for use in bid estimates and LCCA comparisons in support of future pavement type selections. Accounting for these costs in this manner allows DOTs to base pavement type selection decisions on a more accurate accounting of the actual cost of various pavement alternatives (not just based on bid costs). Unfortunately, this is rarely (if ever) done by DOTs presently. As a result, DOTs are inadvertently biasing their economic selection and creating an unfair and inequitable bidding environment.
2. **Alternate Bidding** – If during the pavement type selection process, alternate bidding is selected as the contracting method, use of material PACs is not appropriate. When concrete pavement contractors are bidding against asphalt contractors, material PACs compromise the integrity of the low-bid process. It essentially amounts to the unequal sharing of risk – the DOT is absorbing economic risk for the asphalt contractors, but not for the concrete contractors, disadvantaging the concrete bidders. This violates the competitive bidding provisions contained in federal code 23 USC 112.

The problem with material PACs in ADAB procedures have been well understood for a long time. FHWA's 1981 Policy Statement on Pavement Type Selection states, "Price adjustment clauses should not be used when alternate bids are permitted." ⁱⁱ Furthermore, NCHRP's 2011 Report 703 notes, "The agency should not allow adjustment factors for material prices, as it is difficult to administer equal treatment to various alternate materials." ^{iv} Finally, FHWA's December 20th, 2012 Technical Advisory on Use of Alternate Bidding for Pavement Type Selection acknowledges this as well, "The use of commodity price adjustments for material prices is not desirable for alternate bidding contracts, as it is difficult to administer equal treatment to various alternate materials." ⁱⁱⁱ

ACPA's Perspective on PACs

It is ACPA's perspective that a distinction must be made between fuel and materials PACs.

Fuel PACs are generally not an issue for the concrete pavement industry as they do not significantly disadvantage one industry or set of potential bidders over another. We feel that use of fuel price adjustments acceptably shift the risk of potential fuel costs increases to the agency, allowing DOTs to absorb costs only when fuel costs actually rise. Without fuel PACs, the DOT will likely pay for this risk for every project – asphalt, concrete or grading – even if prices don't rise, as contractors will build potential fuel cost increases into their bids.

The use of asphalt PACs may be an acceptable agency strategy to attempt to control costs, but only when using traditional design-bid-build contracting mechanisms, and where the cost impacts of the PACs are accounted for in the life-cycle cost analysis (LCCA) used for pavement type selection. Only if asphalt PACs are accounted for in this manner is it conceivable that a DOT can realize savings (from taking on the risk of potential asphalt cost increase) similar to those realized with fuel PACs.

Under no circumstances are asphalt material PACs appropriate where asphalt contractors (or teams) bid directly against concrete paving contractors (or teams), such as with alternate bidding or design-build contracts.

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ⁱ An Informational Guide on Project Procedures, American Association of State Highway Officials (AASHO), Nov. 26, 1960.

ⁱⁱ FHWA Pavement Type Selection Policy Statement, 23 CFR Ch1, FR Vol. 46, 195, October 8, 1981

ⁱⁱⁱ Use of Alternate Bidding for Pavement Type Selection, FHWA Technical Advisory T5040.39, December 20, 2012.

^{iv} Guide for Pavement Type Selection, NCHRP Report 703, November, 2011.

^v Price Indexing in Transportation Construction Contracts, NCHRP Project 20-7 Task 274, January 2011.

^{vi} Development and Use of Price Adjustment Contract Provisions, FHWA Technical Advisory T5080.3, December 1980.