

**STATEMENT OF KEN SIMONSON  
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NATIONAL SURFACE TRANSPORTATION POLICY AND REVENUE STUDY  
COMMISSION  
WASHINGTON, DC  
MARCH 19, 2007**

**I. Introduction**

Thank you, Madam Chair and other members of the Commission, for inviting me to participate in today's hearing and to serve as a member of the Blue Ribbon Panel of Experts for this Commission. My name is Ken Simonson, and I am Chief Economist for the Associated General Contractors of America. In an earlier incarnation, I served as Vice President and Chief Economist for American Trucking Associations for 13 years, so you can see that I have a long-standing interest in the issues you are dealing with.

The issue I will focus on is materials costs—specifically, that the cost of building surface transportation infrastructure has risen much more rapidly than most other costs in the past few years, and the likelihood that such extreme cost increases will persist rather than subside. Making adequate allowance for materials inflation is vital if the Commission is to propose policies that realistically meet the nation's long-term transportation needs.

**II. Cost data**

There is no single measure that fully captures the change in costs for infrastructure. However, there are two producer price indexes (PPIs) that track the price, at the producer level, of materials and components used in highway and street construction and in "other heavy" construction, such as rail, transit and intermodal construction. (Components are items, such as diesel fuel, that are used up in the construction process.) These PPIs, which are produced monthly by the Bureau of Labor Statistics, are publicly accessible (at [www.bls.gov/ppi](http://www.bls.gov/ppi)) and can be readily compared to other producer and consumer prices, such as the PPI for finished goods and the consumer price index for all urban consumers (CPI-U). The finished-goods PPI and the CPI-U are two frequently cited measures of inflation and are used by many planners to pick a "reasonable" estimate of future price change.

### III. Recent history

The table below provides a 10-year record of annual changes in the CPI-U, the PPI for finished goods and the PPIs for materials and components for highway and street construction and other heavy construction. For many years, until early 2004, there was little inflation in the economy as a whole or in construction costs. From December 1996 to December 2003, for instance, the 12-month change in the CPI-U varied from 1.6 percent to 3.4 percent; the cumulative increase over seven years was less than 13 percent. The PPI for finished goods, which is affected more heavily by big swings in oil and other commodity prices, ranged between -1.6 percent and 4.0 percent and had a cumulative increase of less than 12 percent. The highway materials and components index had two consecutive years of 5-to-7 percent increases but then fell in the years before and after; the cumulative change was 10 percent. The PPI for other heavy construction had the least increase of all, varying between -2.6 and 3.8 percent, with a cumulative change of 5 percent.

#### Change in Consumer and Producer Prices, Dec. 1996-Dec. 2006

12 mo. ending Dec.	Producer Price Indexes			
	CPI-U	Finished Goods	Highway & street	Other heavy construction
1997	1.7	-1.2	0.2	0.3
1998	1.6	0.0	-1.6	-1.6
1999	2.7	2.9	6.9	3.8
2000	3.4	3.6	5.0	2.0
2001	1.6	-1.6	-3.6	-2.6
2002	2.4	1.2	1.0	1.0
2003	1.9	4.0	2.6	2.6
2004	3.3	4.2	10.8	13.4
2005	2.4	5.4	14.1	8.8
2006	2.5	1.1	6.0	5.6
<u>Cumulative</u>				
12/96-03	12.9	11.6	10.2	4.9
12/03-06	9.5	11.0	34.0	30.4

Source: Bureau of Labor Statistics, [www.bls.gov/cpi](http://www.bls.gov/cpi) and [www.bls.gov/ppi](http://www.bls.gov/ppi) (as of March 12, 2007)

In 2004, steep price increases hit several items that are particularly important to highway and heavy construction, including steel, diesel fuel, asphalt and concrete. Other materials, such as copper (used in wiring), aluminum (some signs, poles and guard rails) and construction plastics (pipes, signs, vapor barriers), have also had double-digit price increases in one or more of the past three years. The combined effect of these price jumps was to push up the highway and heavy construction PPIs by anywhere from 5.6 to 14 percent in each of the past three years, for a cumulative three-year change of more than 30 percent.

Although some of these items also affected the indexes for consumers and for producers of finished goods, most prices did not accelerate, and some decreased. As a result, the CPI-U showed no acceleration and rose only 9.5 percent over the past three years, and the PPI for finished goods rose just 11 percent—roughly one-third the increase seen in the construction PPIs.

#### **IV. Looking ahead**

Although the rate of increase in construction materials prices cooled significantly in late 2006, there is little sign that those prices will stay docile. Indeed, in the first two months of 2007, there have been substantial price increases for cement, reinforcing steel (twice), diesel fuel (more than 20 cents per gallon at retail with more likely soon, judging by futures prices), copper futures, and bauxite (the ore from which aluminum is derived). It seems more probable that the PPIs for construction materials will return to the 6 percent and higher rates of increase that prevailed in 2004 to mid-2006 than that will settle back in the sub-4 percent range of 2003 and before.

Why? Two factors distinguish construction inputs.

First, the amount of materials used per lane-mile or other unit of output has remained fairly constant over time, unlike say, consumer electronics, whose makers continuously use fewer materials per unit. Demand for these materials is expanding as U.S. construction grows, and as the economies of China, India and other countries develop. Those economies are building infrastructure, industrializing and getting a middle class that is consuming materials for modern housing with plumbing, wiring, electronics, appliances and vehicles. Many of the materials for

these purposes, such as copper, come from relatively few sources of supply. In 2006, all of the world's chief copper mines were affected by strikes, labor unrest, or political turmoil that kept supply from expanding to meet demand. Consequently, prices soared. Once demand cooled (with the decline in U.S. homebuilding and automotive production) and supply increased, copper prices dropped, but not to former levels. Similar stories are likely for other materials (and for copper again) as long as these economies are growing.

Second, construction materials must be physically delivered to a job site, unlike many services or products for which transportation costs are minimal or nonexistent. Even when there are ample foreign sources of a material, transportation costs and bottlenecks can add greatly to the delivered cost and uncertainty of a construction project. For instance, the U.S. experienced cement shortages in more than 30 states in 2004 and 2005, partly because of port congestion and rail line breakdowns. In 2006, China doubled its exports of cement to the U.S. and there were no shortages. But the dry bulk cargo ships that brought cement to the U.S. were also in high demand to carry copper ore, iron and steel scrap and other bulk goods. As a result, ship charter rates soared, which made a big difference in the final cost of a low-value commodity like cement. Fuel surcharges on freight bills also added to the delivered price of many construction inputs. The freight charges and fuel costs both seem likely to rise more rapidly than the general rate of CPI-U or finished-goods PPI as long as international trade is expanding and infrastructure is stressed.

These two factors—frequent supply-demand imbalances for key construction inputs and dependence on physical delivery using congested transport modes and high-priced fuel—make it likely that construction input prices will rise indefinitely at the 6-to-10 percent rate of the last three years, with even steeper price spikes occurring when multiple inputs have simultaneous supply shortages.

## **V. Implications for the Commission**

Making proper allowance for materials costs is vital for assuring there will be enough funding available to build the infrastructure needed to meet passenger and freight demand. The Congressional Budget Office projects a long-term increase in the CPI of 2.2 percent per year. If

planners assume materials costs will rise at 3 percent, costs would double in 24 years. But if the actual rate of materials cost increases averages 6 percent, costs will double in 12 years and double again in 24. Thus, a plan for funding infrastructure that uses a 3-percent inflation rate when 6 percent is the actual rate cover just half the funding needs after 24 years. Based on the experience of the past three years, when materials increases averaged 10 percent, even a 6 percent inflation rate for materials is likely to be too conservative.

Therefore, the Commission can make a major contribution to public policy by educating policy makers, budget setters and others involved in funding and designing infrastructure to use an inflation assumption for construction materials and components that is substantially higher than the rate used for other projections. Such realism will facilitate proper funding and avoid the “sticker shock” that now accompanies far too many bid openings, followed by costly and frustrating delays, redesigns and rebidding of projects.