In Sunday's <u>New York Times</u>, Thomas Friedman made the case for putting a price tag on carbon:

Price matters. Without a fixed, long-term, durable price on carbon, none of the Obama clean-tech initiatives will achieve the scale needed to have an impact on climate change or make America the leader it must be in the next great industrial revolution: E.T., or energy technology. At this stage, I'd settle for any carbon price mechanism — cap and trade, fee-bates, carbon tax and/or gasoline tax — as long as it real and provides consumers and investors a long-term incentive to shift to clean cars, appliances and buildings.

It's hard to argue against the idea of getting the price of carbon right. But there are two key questions to ask: Is that a sufficient policy response to climate change? And is it a necessary part of the policy response?

The conventional view among economists is that if you get prices right, all else will follow. So their policy prescription begins and ends with a carbon tax (or sometimes a cap-andtrade scheme). There are reasons to doubt that getting the price right is enough by itself. First, markets — as we've all seen in the past year to our dismay — don't always function with the perfection assumed by economic theory. Energy markets have major imperfections. Second, an increased price on carbon will help stimulate innovation, but there's no evidence that it will produce the degree of innovation that we need. The cap-andtrade program for acid rain has produced good progress through fuel shifting but no real technological improvements. Third, and most importantly, the politics of climate legislation make it almost inevitable that we won't get the price of carbon right, and that in fact we will set the price too low (or the cap too high).

We might also ask whether we need to worry about price at all — why not simply limit ourselves to regulatory measures and subsidies for R & D? For instance, if we want to reduce carbon from the transportation sectors, why isn't it enough to raise fuel efficiency standards for vehicles and use a low-carbon fuel standard? Why worry about the price of gasoline? One reason is that we need to worry about adverse changes in behavior. If we make cars more efficient, people may simply drive more because it costs them less per mile. This could cancel out the gains from fuel efficiency. In addition, trying to regulate every source of carbon directly is probably not feasible, and a price mechanism is an efficient way of making sure we cover the full range of sources.

The bottom line seems to be that we need to get the price of carbon right — or as close to "right" as possible — but we need subsidies for R & D and we need direct regulation of the

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major categories of emitters.