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Correct (and Misleading) Arguments for Market-Based Pollution Control Policies

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The extent to which climate change policy will rely on market-based rather than command-and-control policies is a matter of current debate. This research shows why neither policy, in general, has a greater claim to being "environmentally friendly." However, market-based policies eliminate a type of regulatory uncertainty that arises under command-and-control policies. In addition, the anticipation that the regulator will use market-based policies leads to investment decisions that increase the value of markets.

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The growing concern over climate change has led to an increased interest in designing policies to reduce greenhouse gas emissions. Three aspects of the policy question are central. First, the actual cost of reducing emissions in the future will depend on the investment decisions that firms make in the near term. Second, the nature of the future policies, in particular whether regulators will use market-based or command-and-control policies, is currently uncertain. Third, the stringency of the policies (their "level") is also currently uncertain. New research from the Department of Agricultural and Resource Economics and Policy at UC Berkeley revisits the theory of environmental regulation and shows that a widely believed and plausible argument in favor of market-based policies is incorrect. It also shows that there are subtle and not widely recognized arguments in favor of market-based policies. The research therefore helps clarify the discussion of regulatory policy.

The current controversy over California law AB32 motivates this research. This law mandates future reductions in greenhouse gas (GHG) emissions. Chapter 5 of AB32 recommends the use of market-based mechanisms, without mentioning either taxes or tradable permits. The bill gives future regulators discretion over the manner of implementing the mandate. Governor Schwarzenegger had wanted the bill to guarantee a market-based mechanism; shortly after signing the bill, he issued an executive order forming a Market Advisory Committee to design a cap-and-trade market. Some sponsors of the bill considered this attempt to lock in the form of implementation inconsistent with the intent of the law. The bill also gives future policymakers discretion over the extent of implementation. Article 38599 gives the governor the right to adjust the targets "in the event of extraordinary circumstances, catastrophic events, or threat of significant economic harm." AB32 provides a clear signal that California intends to reduce GHG emissions. It exemplifies a situation where the form of the regulation is currently unknown, and where the economic costs of reducing emissions may determine the stringency of the regulation. It is in this context that our research seeks to sort out the correct from the misleading arguments in favor of market-based regulation.

Are Market-Based Policies "Environmentally Friendly"?

There are many different types of command-and-control policies, and several different types of market-based policies. For our purposes, it is enough to consider one of each type. Under the command-and-control policy, the regulator tells each firm in the industry how much of a pollutant it can emit. The market-based policy (cap-and-trade)