

GUEST COMMENTARY

Carbon bank could steer US toward low cost reductions

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The two major schools of thought among academics studying how to limit climate change are split primarily by whether policymakers should control the quantity of emissions via cap-and-trade policies or the price of carbon emissions via a direct tax.

Proponents of a carbon tax believe that this price-based mechanism provides greater flexibility for policymakers to directly influence price regardless of market activity. The “price certainty” arising from a carbon tax would allow businesses to plan efficiently, because an increase in the tax rate beyond any foreseen adjustment would require a vote in Congress that would adjust only slowly.

Cap-and-trade focuses on setting an absolute cap on carbon emissions and selling rights to emit carbon up to that cap in the form of tradable carbon emissions permits. The point of cap-and-trade is that permit prices are bid up to the highest marginal value of emissions, as firms that are able to cheaply economise on emissions rationally do so. The expense of carbon permits prevents additional investment where emissions are difficult to restrain, leading to reductions in carbon emissions.

As policymakers and market participants are discovering, implementing cap-and-trade in the real world is quite complex. Theoretical models of the tradeoffs between the two approaches have established that cap-and-trade is only more efficient than a carbon tax in models assuming “optimal banking and borrowing.”

Moreover, that optimality concerns contract mechanisms and price dynamics that do not fit

any traditional financial contract design. Even though active markets for carbon emissions contracts have begun to trade in Europe, the uncertainty about both the financial price characteristics as well as policy decisions has led to tremendous price volatility in European markets.

Part of the problem is that applying cap-and-trade to carbon emissions is not as straightforward as previous emissions applications. An important precondition of the economic theory underlying cap-and-trade is that the externality that is to be capped is readily identifiable, yet we are still debating the “cap” in carbon cap-and-trade.

The vagueness of “optimal banking and borrowing,” combined with the lack of understanding of normal price dynamics for carbon contracts, presents paralyzing obstacles to carbon cap-and-trade policy. Thus, environmental researchers and public policy economists have more recently argued that the lack of theoretical “fit” between carbon pollutants and cap-and-trade can be overcome by implementing a management board design.

The idea is that something like a central bank, most recently referred to as a “Carbon Market Efficiency Board” in the US, can manipulate contract supply to facilitate the “optimal banking and borrowing” required in the theoretical models. But the initial application has been adapted to suit other agendas.

It turns out that policymakers and environmental theorists like cap-and-trade because they believe that cap-and-trade provides “benefit certainty” by setting a hard cap on emissions. Many,

however, are loathe to admit that it is the price uncertainty in cap-and-trade that provides the disciplinary mechanism for that benefit certainty.

What those policymakers do not realise is that actively manipulating carbon permit supply through an efficiency board that is charged with decreasing emissions while constraining price volatility that could harm economic growth necessarily decreases the benefit certainty that is the hallmark of cap-and-trade. Without this certainty, the convoluted design of a carbon permit market – coupled with the risk of market collapse – is practically unnecessary. If successful, this type of board pegs the price of carbon while allowing benefits to fluctuate, which is exactly the result of a carbon tax.

Proposed US cap-and-trade policies are attempting to implement something far different from original economic proposals, using complex financial contracts and intricate market designs to mitigate the very price uncertainty that is the disciplinary mechanism that restrains emissions under cap-and-trade. In seeking to achieve a middle ground, such mechanisms and designs will not only substantially reduce the policy’s impact on the environment; they may also pose significant risks to US economic growth and competitiveness.

In sum, therefore, the policy debate is really between a “straight” carbon tax and an “institutionally complex” carbon tax, not a carbon tax and a true cap-and-trade system. In that tradeoff, a straight carbon tax is both more economically efficient and environmentally beneficial.