

# Why Carbon Markets Will Work

By Michael H. Levin

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Carbon taxes are being promoted as a solution to climate change, but no government has managed to implement a carbon tax high enough to reduce emissions even close to Paris Accord levels, says environmental attorney Michael H. Levin. By contrast, he contends there is a 50-year body of U.S. emissions trading experience that has cut pollutant discharges cost-effectively and can be utilized.

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Voices from both ends of the political spectrum have pitched a U.S. carbon tax as the preferred solution to climate-driven biblical weather events. These proposals tend vastly to oversimplify the difficulties of implementing a carbon tax that will change behaviors in crisis-averting ways.

No government has managed to implement a carbon tax high enough to reduce emissions even close to Paris Accord levels. In sharp contrast stands a 50-year body of U.S. emissions trading experience that cost-effectively has cut analogous pollutant discharges.

That experience gave rise to the EU emissions trading scheme and a U.S. trading regime to stop stratospheric ozone depletion. It includes state renewable portfolio standards mitigating the impacts of fossil-fired electric utilities through sales of emission-avoidance certificates by renewable-energy facilities.

It also includes the Environmental Protection Agency's seminal final emissions trading policy (1986); the Clean Air Act's acid rain program; trading regimes to reduce region-wide smog or haze; the Northeast Regional Greenhouse Gas Initiative (RGGI); the multi-jurisdiction Western Climate Initiative; nationwide trades to meet refinery blending obligations under the federal renewable fuel standard; increasingly flexible trades to cut agricultural emissions and meet water quality standards; and trade-based approaches phasing out lead-in-gasoline or granting credits for emission reductions from old-car scrappage.

In addition, most states have long had EPA-approved reduction-bank-and-trade programs by which facilities may meet new source offset requirements and existing facilities may comply more inexpensively with national air-quality mandates.

The accumulated wisdom from dozens of hard-fought battles to implement these approaches speaks directly to the carbon sphere. Put differently, there are reasons why trading approaches have proliferated, while pollution taxes with teeth remain rare.

## **Carbon Tax Obstacles**

Trading approaches may raise thorny questions, like how to allocate reduction credits or deal with possible pollution hotspots. But those questions pale before the obstacles facing a carbon-tax regime.

From an economics perspective, setting a tax per ton of carbon emissions that efficiently secures desired reductions requires knowing the compliance costs of every diverse covered emitting sector.

Such data are largely unavailable; acquiring them by information requests would replicate the resource-intensive delays of source-category by source-category “command and control” regulation. Worse, they imply different levels of tax for each sector that emits CO<sub>2</sub>-e, unless governments are prepared to take a best-guess shot at a single negotiated number.

Yet single number difficulties abound. The Biden administration recently drew vocal opposition for provisionally increasing the government’s informal social cost of carbon damage calculation fivefold to \$51/ton, still well short of the \$150+/ton many see as the minimum needed to drive sufficient reductions.

And from a political perspective, any formal number likely will be fixed nearly forever. No legislature in modern history has delegated to a regulatory agency the setting or adjustment of an economy-wide business tax, much less a retroactive one.

Given legislative dynamics, that price will not be set too high. If it is set too low, reduction shortfalls will be locked in for an indefinite time. An unraveling climate crisis will not wait out such impasses.

### **Trading Approaches**

Fully developed emissions trading methods mostly sidestep these obstacles. Instead of pricing carbon, they set a target number of allowable emissions, allocate them to individual emitters, and let the market price surplus allowances sold by those who can reduce more than required.

Unlike a meaningful carbon tax, we already know how to implement such approaches. For example, the acid rain allowance trading program produced virtually 100% compliance by fossil-fired electric utility units, based on electronically reported continuous emissions monitoring and direct reductions plus covering allowances.

The E.U. emissions trading system largely adopted that approach, correcting for an initial emissions cap inflated by too many legacy allowances. Where continuous emissions monitoring is impractical, continuous parameter monitoring of throughputs—plus satellite monitoring of methane or other emissions—now can step in. And analyses have found that trades generate hotspots only when market geography and participants are limited, and thick markets tend to mitigate existing pollutant concentrations.

Resulting insights have been reflected in low carbon fuel standards (LCFS) to reduce transportation-sector CO<sub>2</sub> emissions and a rising national renewable portfolio (clean energy) standard that would eliminate or sharply reduce electric-utility CO<sub>2</sub> emissions coast-to-coast.

Emissions trading may not work perfectly if, as with, say, sulfur dioxide, precisely where and how discharges are emitted may determine resulting pollution concentrations. But those situations are the opposite of the case for cost-effective trade-based reduction of carbon emissions whose pertinent atmospheric effects are the same wherever they occur.

### **Long-Lived Emissions**

Finally, there is the great climate unmentionable —long-lived legacy emissions that comprise most CO<sub>2</sub>-e concentrations in the atmosphere.

It seems increasingly clear that even more-ambitious Paris commitments to reduce what is added to those concentrations going forward may not be enough to avert severe effects. Securing going-forward reductions sufficient to compensate for failures to deal with legacy emissions would overprice such reductions.

Attempts to reduce those concentrations by conventionally taxing current emissions plus many industrial facilities’ million+ tons/year accumulated carbon emissions back to the 1970s would seem to be a non-starter. But here, too, there are models with lessons learned—judicially-affirmed federal and state Superfund programs meant, however imperfectly, to hold to account entities responsible for past contamination.

We now know, for example, that an upfront cleanup fund financed by low-interest tax-exempt bonds could avert long remediation delays from responsible-party battles over who bears what costs. We know such a revolving fund could finance multiyear scheduled payments that mitigate legacy remediation assessments—and that an emission trading-type offsets approach may drive faster or better cleanups.

For carbon, this might mean that instead of managing remediation, governments would set remediation amounts that could be reduced by responsible parties' verified negative-CO<sub>2</sub>-e actions .

Such comprehensive steps may not be imminent for carbon. Still, an approach that grants government-backed advance credits for removing carbon from the air could start to put a dent in legacy emissions by helping deploy such technologies.

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### **Author Information**

*Michael H. Levin, former national regulatory reform director at the EPA, is managing member of the Michael H. Levin Law Group PLLC in Washington, D.C., and a principal in NLGC LLC and Solar Shield LLC, which respectively focus on capital formation for renewable-energy projects and development of residential rooftop solar facilities. He is also a contributing editor to BioCycle Magazine.*

*Alan P. Loeb, an environmental technology historian who was senior attorney to EPA's lead-phasedown program, assisted with this article.*

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