

CWRU law professor eyes prize-based incentives to generate climate innovation

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Could a multi-million dollar prize spur the next big innovation in sustainable climate technology?

Jonathan H. Adler, professor and director of the Center for Business Law and Regulation at Case Western Reserve University's School of Law, suggests that prize-based incentives could do just that.

"Technology-induced prizes have a long and storied history," writes Adler in his article, "Eye on a Climate Prize Rewarding Energy Innovation to Achieve Climate Stabilization," recently published in the *Harvard Environmental Law Review*.

Historically prizes have led to discoveries: James Maxwell's mathematical theory of Saturn rings; Heinrich Hertz's detection of [radio waves](#); and the solution for deriving longitude by English clockmaker John Harrison, who invented the marine chronometer that revolutionized sea travel in the 1770s and continues to guide nautical travel. More recently, Richard Branson inspired inventors to strive for a \$25 million prize in the "Virgin Earth Challenge" to reduce [greenhouse gas emissions](#).

Adler adds that a clear need exists for these new technologies that will make [climate change](#) costs for business and countries less expensive and more available.

With President Obama's goal to reduce greenhouse gas emissions by 80

percent by 2050, "[Global climate change](#) is a terribly vexing [environmental problem](#)," Adler writes. "Its scope, complexity and potential costs are daunting."

Carbon emissions currently outpace available solutions to curb them. To achieve what climate experts call the stabilization goal would require reducing carbon emissions to between 450 and 550 parts per million. Those lower levels have not been seen in the U.S. for nearly a century, when the population was at 100 million people. Today, the population is approaching 400 million.

"Yet even reductions of this scale would not leave developing nations much room to increase their emissions," Adler notes.

He suggests shifting some of the dollars earmarked for alternative energy research to prizes. There are drawbacks, he says, to the \$3 billion in federally funded grants offered to researchers working on [climate](#) change solutions. Among those drawbacks, Adler suggests, is the potential for politics to impact the grant-award process.

No guarantees exist that the research money will produce the desired results, he says, and often, research breakthroughs can take longer as basic science builds from one small piece of the solution to another. Researchers are motivated by the grant structure to take on projects requiring research in long time frames, he said.

Prizes offer an incentive to design a proven solution. The award is given after the innovator has proven the solution works. Additionally, the design process is funded privately.

"Prizes are no panacea," he writes, but, he adds, they provide a comparatively low-cost way to encourage greater innovation.

Provided by Case Western Reserve University

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