Building an energy corridor along the border instead of just a wall

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A bold new plan proposes that the United States and Mexico jointly build a 1,954-mile energy park along the border instead of a wall. The proposal, by 28 prominent U.S. scientists and engineers, says that the effort would bring abundant energy and water to the region while also providing border security and economic stability. Credit: Purdue University photo/Jorge Castillo Quiñones

Instead of a wall, build a first-of-its-kind energy park that spans the 1,954 miles of the border between the United States and Mexico to bring energy, water, jobs and border security to the region.

That's the audacious plan put forward by a consortium of 28 prestigious engineers and scientists from across the nation who propose that the two nations work together on an enormous infrastructure project: a complex train of solar energy panels, wind turbines, natural gas pipelines, desalination facilities that together would create an industrial park along the border unlike anything found anywhere else in the world.

The facilities would provide the desired border security, the researchers say, because utility facilities and infrastructure must be well-protected. The connected energy parks would also be an economic driver, both in the construction of the facilities themselves and in the businesses that would be attracted to the region by cheap electricity and plentiful water resources. Comments from co-authors of the proposal to build an energy-water-security corridor are available here.

Luciano Castillo, Purdue University's Kenninger Professor of Renewable Energy and Power Systems, and lead of the consortium, says if enacted, the mega infrastructure project would have a historic positive effect for both nations.

"Just like the transcontinental railroad transformed the United States in the 19th century, or the Interstate system transformed the 20th century, this would be a national infrastructure project for the 21st century," Castillo says. "It would do for the Southwest what the Tennessee Valley Authority has done for the Southeast over the last several decades."

Ronald Adrian, Regent's Professor at Arizona State University and a member of the prestigious National Academy of Engineering, says this proposal, although a huge undertaking, is worth serious study.

"At first blush the idea seems too big, too aggressive, but consider the Roman aqueducts or the transcontinental railroads—enormous undertakings that gave enormous benefits. The cost of providing basic,

essential infrastructure to the border lands is tiny compared to the opportunities it creates," he says. "I view this project as a means of creating wealth by turning unused land of little value along the border into valuable land that has power, water access and ultimately agriculture, industry, jobs, workers and communities. With only a wall, you still have unused land of little value."

Carlos Castillo-Chavez, Regent's Professor at Arizona State University, says a cooperative effort between the United States and Mexico to address the issues of the border region would reinforce the cultural ties that have existed for hundreds of years.

"The USA-Mexico border is home to families with common bonds, large Spanglish-proficient communities, talented creative large pools of young people, intersecting cultural ties and more. These communities have faced day and night similar ecological, health, education, energy, water and security challenges," Castillo-Chavez says. "They know that solutions must address these challenges across both nations. There are no effective single-territory solutions."

The plan was first reported by *Scientific American*; the full proposal is available online.

Provided by Purdue University

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