

Using sunlight to recharge the cooling system of trailer containers

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Betting on clean energy sources is the strategy of the Mexican group ISA Tracto C, which produced a series of energetically self-sustained boxes for the transport of perishable goods, with a cooling system that replaced the use of diesel with sunlight and kinetic energy.

The project leader, Nayeli Flores Huerta, said that by eliminating the use

of fuel for the refrigeration systems of trucks, about 20 thousand liters of diesel could be saved annually, in addition to exponentially decreasing the total cost of the transport operation.

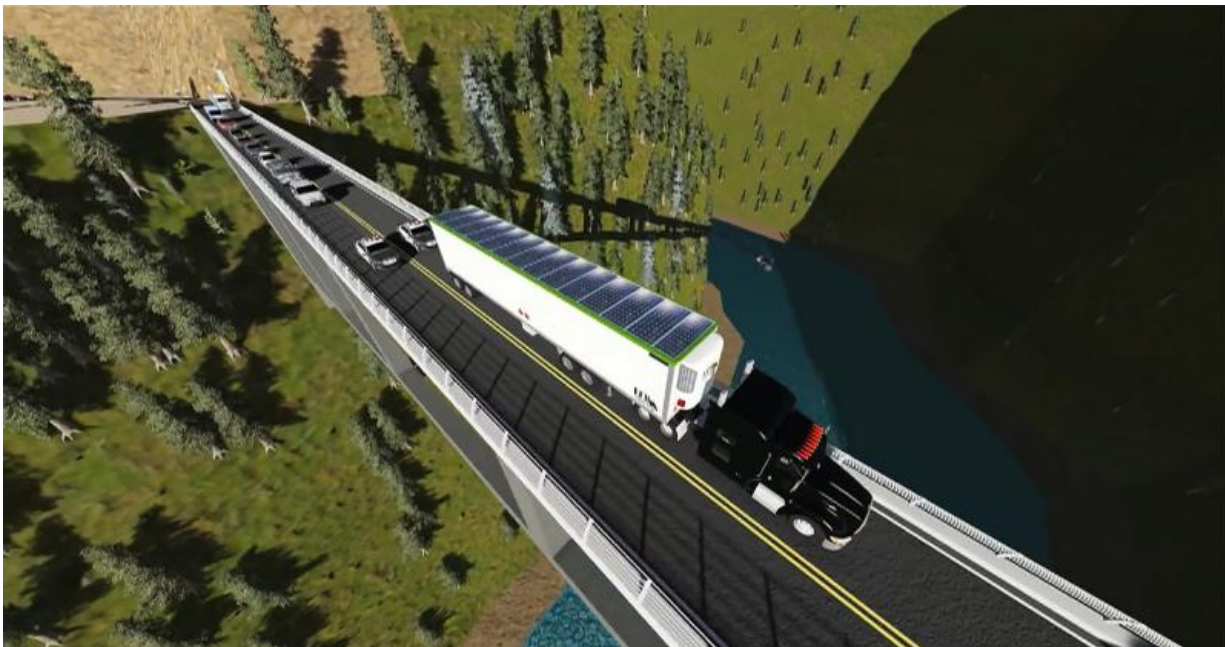
Another benefit of using clean energy is avoiding the emission of 50.5 tons of [carbon dioxide](#) into the atmosphere, according to estimates of the interdisciplinary team lead by Flores Huerta.

"The automated system of the containers allows cooling engines to run on [solar energy](#) through panels. Another advantage is that, after the initial investment, there will be no fuel costs," she added.

For now, there are two prototypes with which they have already carried out field trials in the State of Mexico. Both have the technology that allows the cooling system to operate by harnessing the [kinetic energy](#) from the movement of the tires when the tractor is on the road.

The technology developed by ISA Tracto C can store up to one hundred hours of solar energy. On the other hand, it has an auxiliary battery supplied with kinetic energy, which comes into play when the main power source drops to 30 percent of capacity.

The ultimate goal is to reduce prices of perishable goods, so the primary market are the carriers, as well as the food and pharmaceutical industries.



"These designs not only benefit the environment, but also operators and companies that need this type of equipment because it makes the operation more profitable in the long run, by reducing operating costs," concluded Flores Huerta.

Provided by Investigación y Desarrollo

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