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Annals of Innovation

The Renewable-Energy Revolution Will Need Renewable Storage

Can gravity, pressure, and other elemental forces save us from becoming a battery-powered civilization?

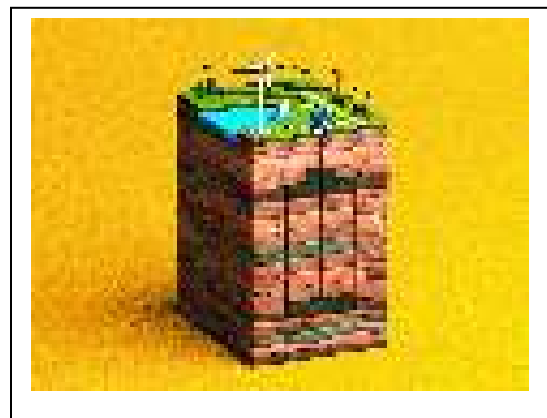
By [Matthew Hutson](#)

POTENTIAL ENERGY

CT.org finds this idea fascinating; maybe not new to you, but to me it is revolutionary. Think about what Einstein told us...mass is energy, potential energy. The trick is to turn potential energy into kinetic energy that can work for us.

To Maximize Renewable energy we'll need a new technology: renewable storage.

- **Think hydroelectric power:** Water in a river flows through a dam, turns a turbine that generates power. Viola, the potential energy of the river was turned into kinetic energy in the form of electricity.
- **Think gravity:** Gravity can draw heavy objects earthward, creating motion that can drive a turbine and generate electricity. The problem is that the energy required to elevate a heavy object exceeds the amount of energy generated when it falls. The solution is genius. Use renewable energy sources to lift heavy objects into position so when called upon, the potential energy in the elevated object can be released to create kinetic energy for our use. The net energy loss still exists, but part of the energy used to create the potential energy is "free" and "green".
- **Think any fuel:** Coal, uranium, oil, gas are all found in the form of potential energy. We process these fuels to create kinetic energy that is useful. Consider the other "sinks" of potential energy. Trees come to mind but burning wood is not useful, at scale. Think about anything that can turn a turbine when converted to another form. Tides, wind,



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