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## Fridges could save power for a rainy day

Turning off cold storage could buffer the electricity grid.

[Declan Butler](#)

Refrigerated warehouses might soon be used to store not just food, but gigawatts of electricity. A plan dreamt up in the Netherlands could see the giant fridges acting as massive batteries. They would buffer swings in supply and demand from electricity created from renewable sources.

The idea seems simple. Say you lowered the temperature of all large coldstores in Europe by just 1°C during the night when electricity demand is low, then let it rise 1°C by switching them off during the day when demand is at peak. The net effect would be that the warehouses would act as batteries — potentially storing 50,000 megawatt-hours of energy — and the food wouldn't melt.

That's the calculation of Sietze van der Sluis, head of refrigeration and heating technology at The Netherlands Organization for Applied Scientific Research (TNO) in Delft.

Van der Sluis is now leading a research project called 'Night Wind', to try to put the idea into practice. Together with energy research groups and suppliers in Spain, Bulgaria, and Denmark, he's looking at coldstores as a potential solution to managing the intermittent and unpredictable flow of renewable energy sources, such as wind power.



Burst of energy: schemes are needed to better manage our power supply.

*Photodisk*