



4. ENERGY: Does daylight saving time really save power? Some doubts emerge (12/02/2008)

Jessica Leber, *ClimateWire* reporter

Daylight saving time, the summer's hour-long reprieve from night, may lift people's spirits, but whether it also cuts their electric bills, as it was intended to do, is still an open question.

One point in the policy's favor is a study that the Department of Energy recently sent to Congress deeming the four-week lengthening of daylight time, in effect since last year, a success. The Energy Policy Act of 2005 required that Congress review the extension's effect on energy consumption before making the change permanent.

In their own study, however, California Energy Commission staff concluded that the extension, which added three weeks in the spring and one in the fall, had little or no effect on energy use in the state.

But by limiting the analysis to only the four-week addition, these studies may be missing the point entirely, according to economist Matthew Kotchen. Last year, he and a doctoral student, Laura Grant, found that daylight saving time as a whole was a net energy waster, at least in the residential sector.

"Just because you make a bad policy better doesn't make it a good policy," said Kotchen of DOE's results.

Popular perception vaguely associates the motive for our annual time shift with America's agrarian past. But really the controversial policy, first temporarily instituted during World War I and World War II, has always been mostly about saving energy. In fact, farmers, who cherish morning daylight, are often opponents of the practice.

A permanent fixture in the U.S. since 1966

After making daylight saving time a permanent fixture on U.S. calendars in 1966, Congress temporarily extended it year-round following the 1973 oil embargo.

As the theory goes, shifting daylight hours from the morning, when most are asleep, to the evening should save in lighting demand. Those energy savings, however, can be offset by increased morning heating or evening cooling needs, especially in the South, or even more car travel during late sunny hours.

One frequently cited federal study estimated a 1 percent energy savings, but the results are more than 30 years old.

Kotchen and Grant, both at the University of California, Santa Barbara, recently found exactly the opposite effect by taking advantage of a natural experiment in Indiana, which only instituted daylight time statewide in 2006. The two compared Indiana's household energy use before and after the change. What was unique was that they had a control group -- a handful of counties that were early adopters of daylight saving time -- to help them factor in unrelated annual energy use fluctuations caused by weather patterns or more juice-guzzling plasma television screens, for example.

But Ind. study shows heating and cooling demands rise

Residential electricity consumption, they found, actually rose 1 percent overall and cost the state an extra \$9 million. More demand for morning heating and evening cooling accounted for the increase, even though the change did save on lighting use.

Kotchen said the government should give up on its premise that changing the clocks saves energy, though there are other unrelated reasons to favor or oppose the practice.

"We know enough to say that at least it should not be part of the Energy Policy Act."

Given the DOE's October report to Congress, though, the issue seems less likely to be re-evaluated anytime soon.

For each day of the extended period, the DOE found that the nation used half a percent less electricity, which translated to a slight drop in energy consumption for the year, according to the study. Importantly, the department did not see any detectable rise in gasoline consumption, which might have resulted if more cars started driving during the evening hours.

While Kotchen's results only applied to Indiana, he says that the state is about in the middle of the climate spectrum and that all the states that are hotter than Indiana may be seeing even higher energy losses during the summer.

Benjamin Franklin first suggested an "economy of using sunshine rather than candles" in a 1784 essay.

Today more than 70 countries regularly turn the clock. "Conventional wisdom has a way of perpetuating itself," said Kotchen.

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