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State and Local Governments Innovate to Cut Energy Waste

By SAQIB RAHIM of [ClimateWire](#)

As federal policy to curb carbon emissions remains in limbo, a pack of state and local governments is experimenting with new ways to reduce energy waste.

For many of them, fresh efforts to promote clean energy serve as a response to federal inaction. But there are also signs that Washington is watching them, hoping a new idea to snag energy savings will emerge.

Liberal, environmentalist towns like Berkeley, Calif.; Cambridge, Mass.; and Boulder, Colo., have pioneered financing tools to help everyday residents, not just utilities, use less energy. So-called "blue states" are combining policies, like renewable energy standards and electricity price reform, for maximum effect.

All hope to bust the main barriers that have limited investments in energy efficiency despite the fact that many investments pay for themselves: complexity, profitability, and most of all, affordability.

This spring, Delaware plans to roll out a \$35 million fund it's calling a "sustainable energy utility," or SEU. It's a nonprofit organization envisioned to be the "one-stop shop" for anyone looking to save energy.

Fixing a drafty school to curb energy bills

John Byrne, a professor of climate policy at the University of Delaware and co-chairman of the SEU, offered an example of what it wants to do. He said shrinking budgets have saddled most of the state's public schools with ill-maintained, drafty buildings. "The school districts have to pay this high energy bill, [but they] don't have capital to go and fix the problem," Byrne said. "All they can do is keep paying the bill."

The SEU would provide another way. It would pay for an energy audit of the school district's buildings, identifying the upgrades that are cost-effective. Then it would hire building retrofitting companies and write a contract.

According to this contract, the companies would retrofit the schools with energy-saving features, like windows, heating systems and insulation, and then guarantee a certain amount of utility savings over time. The SEU would pay them for the work. Then, each month, as the district saved a fraction of its utility bill, some of the savings would go to the SEU to pay it back.

At first, the savings won't come near covering the full cost of the equipment and installation. But Byrne said the SEU, unlike the retrofitting companies, can afford to be patient. "We're a nonprofit organization, so the length of the time that it takes to get the money back is not a concern, whereas it would be if it was strictly driven by the private sector alone," he said.

The model can also work for renewable energy, Byrne explained. The SEU would pay to have solar panels, for example, installed on a school. Then it would arrange a contract to sell power to the school district over a decade or two, usually for the same price as electricity off the grid, until the cost of the system was paid off.

The SEU will get its first \$35 million from a Delaware state bond, and the fund will be replenished -- and the bonds repaid -- as the school districts and other projects save energy. An independent auditor will routinely check the buildings to make sure their equipment is working properly, allowing the SEU to guarantee savings over the life of its contracts.

The SEU's first targets will be the state's public buildings, Byrne said, but then it will turn to everyday Delawareans' homes and businesses.

Finding ways to help utilities profit from efficiency

Byrne has applied for stimulus funds to do a mass energy renovation in downtown Wilmington, Delaware's largest city. Again, the SEU would write a contract guaranteeing energy savings, hire the contractors, then sit back and let utility savings pay back the loan.

Observers said Delaware's plan fits into a larger national movement away from the traditional way of doing efficiency programs -- with utilities in charge.

Historically, utilities have been the clearinghouse for efficiency programs. The most ardent utilities affixed a charge to electricity bills and recycled the money into promoting efficient light bulbs and demand-response programs, for example. The process hasn't been for the queasy: Utilities usually have to go through the regulatory process and defend the rate increase.

The alternative plan, which many states are adopting, is to reshape the business: Make it possible for utilities to profit from efficiency, not just from selling electrons. But it hasn't fully satisfied efficiency boosters, who point to the dozen or so states that face the same incentive as ever: Sell more power, make more money.

For these reasons, a crop of local and state programs has risen to promote efficiency programs outside the usual utility chain. Utilities often participate in these programs, but with differing levels of involvement.

Efficiency Vermont, for example, gets its funding from a surcharge on Vermonters' power bills. State utilities can help implement its efficiency programs, but their main role is to funnel that surcharge through to the nonprofit group.

"People are trying all sorts of different ways to make this happen. They recognize it's not just going to happen on its own," said Steve Nadel, executive director of the American Council for an Energy-Efficient Economy, a think tank that researches state programs.

Both homeowners and work crews need training

The plans have drawn the Obama administration's interest as part of its "recovery through retrofit" vision. Last October, Vice President Joe Biden released a report proposing that a mass campaign would spur jobs in construction while shoring up the country's building stock.

The 130 million U.S. homes cause about a fifth of the nation's CO2 emissions, the report said, and existing technology could save \$21 billion in utility bills each year.

But the report also said that driving this movement would take more than educating people about efficiency and training the construction workers to do it: It would also take clever new ways of helping people pay for it.

One high-profile option, endorsed by Biden's report and the Clinton Climate Initiative, is called PACE, and it's been adopted by Berkeley, Calif.; Boulder, Colo.; and a number of other cities. The model lets a homeowner take a loan from the city, then repay her efficiency or renewable energy upgrades over decades of utility savings. Most importantly, if she should move, the new resident could pick up the rest of the tab.

PACE has been heralded as a way to solve the "payback" issue. Individuals may balk at efficiency investments, recognizing the long payback horizon, but if the onus is on the property owner, then any number of owners can chip in for the upgrades, over time.

"I think these local projects create actually a new paradigm shift in how energy programs can get taken out into the market," said Ben Taube, executive director of the Southeast Energy Efficiency Alliance. "You don't have to rely on traditional sources of just the utility programs."

Taube's current work has brought him to Virginia, where Albemarle County and the city of Charlottesville have embarked on new efficiency efforts.

Not 'overnight' programs

A public-private group, the Local Energy Alliance Program, will try to play the "one-stop shop" by connecting residents to audits, certified contractors and ways to pay for them.

LEAP will zero in where efficiency has been the toughest sell: homes and businesses. Its current mandate ends by 2017, but by the end of the program, it wants the county's building stock on pace to cause 80 percent less emissions by 2050.

Taube said LEAP has a "good collaboration" with Dominion Power, the local utility, but that Virginia hasn't yet adopted policies that would make efficiency profitable for its. Dominion has taken flak from environmental groups, which say the utility has focused on generation at the expense of efficiency and clean energy.

A spokeswoman for the company said it is "very supportive of the LEAP program, but it is not a program of Dominion." She said the company works with LEAP when it overlaps with the company's smart grid initiative in Charlottesville.

Taube urged patience.

He said efficiency campaigns are facing challenges even where states offer stronger incentives for it, such as in Cincinnati.

"These programs are not overnight programs," he said. "They do take some time, and they will take some

years to create the policy incentives around them."

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