THE HBR LIST

Break-through Ideas for 2010

ILLUSTRATION: LASSE SKARBOVIK

5 ENERGY ALTERNATIVES
JACK D. HIDARY

A Market Solution for Achieving "Green"

Financing that encourages building retrofits

The Problem

It's easy to get excited about the promise of clean technology—especially new high-efficiency and solar devices that can significantly reduce the energy use of existing homes and commercial buildings. But the retrofitting challenge we face is immense, and if we hope to see major progress, we must help home and building owners overcome the barrier of up-front costs.

Few of today's owners have the necessary capital on hand, or can tie it up until the break-even point is reached and payback begins. In theory they could tap into lines of credit and home equity to pay for clean tech, but in practice they are reluctant or unable to do so. Institutional investors, meanwhile, have the capital and the appetite for the sure and steady returns of clean-tech installations; but they are set up to write large checks, not to finance disaggregated, small-scale projects. And, as smart investors, they are leery of opportunities where borrowers can default but improvements can't be undone and funds recouped.

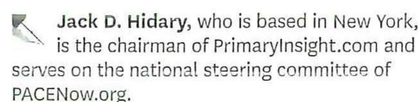
Already we are at the point—thanks to falling prices from large-scale production in China and other manufacturing hubs, and thanks to government rebates—where some clean-tech retrofits achieve cash payback in less than three years. But unless we can provide the necessary assurance to investors and tap into private capital markets, the improved economics of clean technology won't make enough difference.

The Breakthrough Idea Enter PACE (Property Assessed Clean Energy) bonds, which are just being introduced in 15 states across the country. PACE bonds are debt instruments issued by a municipality and backed by property-tax liens on buildings whose owners take PACE loans from the bond pool. Here's an example: Suppose a commercial building in Annapolis, Maryland, has utility costs of $20,000 a month, which include electricity and natural gas. The building owner, Annapolis Management, has done an energy audit and concluded that a $300,000 investment in energy efficiency (retrofitting windows, lighting, and HVAC) would bring monthly utilities down to $13,000.

Annapolis Management takes a $300,000 loan from the city's PACE program and retrofits the building. The owner repays the loan over 20 years through an increase in the building's annual property taxes equal to one-twentieth of the loan amount plus interest. In this example, assuming an 8% interest rate, that means additional taxes of $1,350 a month. Because this expense is markedly less than the utility cost savings of $7,000, the owner is cash-flow positive from day one after retrofit.

The Promise Let's examine PACE bonds from the perspective of the city. The municipality issues the bonds, which are bought by institutional investors. Investors are drawn to bonds backed by property taxes, because they have very low default rates. The obligation to pay them survives foreclosure, so even if a property owner defaults on a mortgage, the new owner who buys the building at a bank fire sale must immediately bring the tax payments up to date.

PACE bonds are also very attractive to political leaders. As opt-in solutions, they raise taxes only for the property owners who choose to take loans. Other constituents' pocketbooks are unaffected. Furthermore, retrofitting projects financed by PACE bonds bring employment for more construction and installation workers, potentially amounting to hundreds of thousands if not millions of jobs as this idea spreads across the country. What politician would not want to lay claim to a program that increased property values, lowered monthly utility costs, and created jobs?


Jack D. Hidary, who is based in New York, is the chairman of PrimaryInsight.com and serves on the national steering committee of PACENow.org.