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McKinsey Report Cites \$1.2 Trillion in Potential Savings From Energy Efficiency

By *KATE GALBRAITH*

A new [report](#) on energy efficiency from the consulting firm McKinsey found that the United States could save \$1.2 trillion through 2020, by investing \$520 billion in improvements like sealing leaky building ducts and replacing inefficient household appliances with new, energy-saving models.

U.S. energy efficiency supply curve - 2020. The shorter the bar, the less that category will cost; and the fatter the bar, the more energy can potentially be saved. Click image to see full-sized graphic.

That investment would cut the country's projected energy use in 2020 by about 23 percent — a savings that would be “greater than the total of energy consumption of Canada,” said Ken Ostrowski, a senior partner in McKinsey's Atlanta office, at a press event in Washington this morning. **CLARIFICATION 8/4/09** Mr. Ostrowski was referring to the total annual non-transportation energy consumption of Canada. It would also more than offset the expected growth in energy use that would be expected otherwise in the United States.

“The scale is vast if we can put together the means to pursue it,” Mr. Ostrowski said.

Homes account for about 35 percent of the possible gains in end-use efficiency, according to McKinsey. The industrial sector accounts for 40 percent and the commercial sector for 25 percent.

The report looked only at cases in which the economic benefits of efficiency improvements would ultimately outweigh the cost of the upfront investment. It did not look at the transportation sector; nor did its \$1.2 trillion figure factor in a price on greenhouse gas emissions, which could increase the savings. (If carbon-dioxide emissions are priced at \$30 a ton, the United States could save about an additional 8 percent, the report found.)

The report acknowledged barriers to achieving the savings. First, it would be expensive: The investment envisioned by McKinsey would amount to four to five times the national energy efficiency investment in 2008, maintained over the course of a decade. Even the stimulus package barely makes a dent.

Some home or business owners may not have the money to spend on efficiency

improvements, even if they would pay off in the long run. Other barriers include inertia (a homeowner may simply not feel like replacing an old air-conditioning unit); and poorly aligned incentives (for example, a landlord may not pay the electric bill and thus not have any economic reason to replace the old air-conditioner). The potential energy-efficiency gains are also “fragmented,” the report noted – meaning that they are spread across millions of homes and businesses – so getting widespread participation would be a challenge.

The report’s recommendations included better information and education about potential energy efficiency savings; tighter codes and efficiency requirements for appliances; and stronger financial incentives for making efficiency improvements.

Jon Creyts, a McKinsey partner based in Chicago, said that energy efficiency presented the “most compelling” way to combat climate change, as well as energy security and affordability – but it also is not enough.

“Energy efficiency is an important and compelling low-cost option, but there are reasons that we need to innovate and continue to develop clean sources of energy,” Mr. Creyts said.

The study was partly financed by McKinsey, and partly by a group of co-sponsors, ranging from the Southern Company to the United States Green Building Council to the Department of Energy. (A post on some success stories cited in the study is [here](#).)

Daniel Kammen, a professor in the Energy and Resources Group at the University of California at Berkeley who is unaffiliated with the study, said that McKinsey’s work underscored the possibilities inherent in energy efficiency. “There’s absolutely no place in the U.S., whether it’s residences or industry or buildings or vehicles, that can’t achieve this,” he said.

“I think this is really the key story – everyone can do this,” Mr. Kammen added.