



HOME STAR: Putting Americans Back to Work

An Energy Program with Many Benefits

Bracken Hendricks and Tom Kenworthy February 23, 2010

As the nation struggles to recover from one of the worst economic recessions in decades, unemployment has recently shown some marginal improvement, falling below 10 percent in January. But for workers in the construction and construction-related manufacturing sectors, there is little relief as jobless rates remain at near-Depression levels.

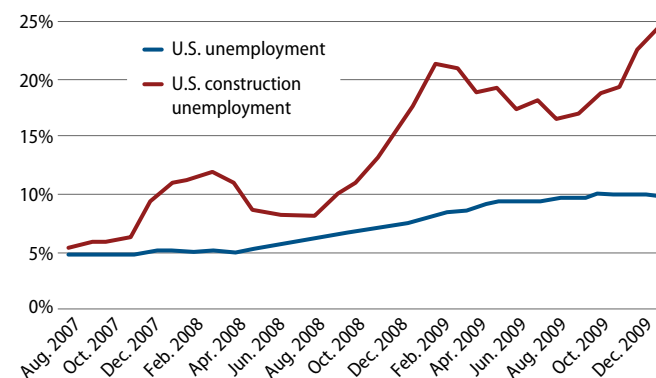
Total construction payroll employment has fallen by 2.1 million since 2006, with residential construction jobs down 38 percent and the jobless rate among experienced construction workers stuck at nearly 25 percent. Overall manufacturing employment has dropped 16 percent since the recession began in December 2007, but for manufacturing tied to construction the numbers are far worse: 30 percent in wood products, 22 percent in items such as window glass and fiberglass insulation, and 19 percent in fabricated metals and heating, ventilating, and air conditioning equipment. With credit still tight and the housing industry still in the doldrums, waiting for market forces to spur a recovery in construction could condemn hundreds of thousands of American families to years of continued economic struggle.

Fortunately, help is on the horizon. This week a bill establishing a HOME STAR program of consumer rebates for home energy efficiency retrofits will be introduced in the Senate thanks to the leadership of Sens. Mark Warner (D-VA) and Jeff Bingaman (D-NM), among others. Concerned members of Congress, with the Obama administration's support, have crafted an incentive program to make millions of U.S. homes more energy efficient, swiftly create 168,000 jobs in construction and manufacturing among other industries, save homeowners nearly \$10 billion over a decade through lower energy costs, and make a dent in global warming pollution.

FIGURE 1

U.S. unemployment, August 2007 to December 2009

U.S. construction industry sees higher unemployment than national average



Source: Home Performance Resource Center

The proposal for a \$6 billion HOME STAR program enjoys broad and bipartisan support. It is backed by the President's Economic Recovery Advisory Board and is part of a jobs agenda endorsed by some Senate Democratic leaders. A large and broad coalition including major corporations, organized labor, and energy nonprofits supports the initiative as well. In President Barack Obama's State of the Union address he said that rebates for Americans who retrofit their homes should be part of a clean-energy agenda. "We should put more Americans to work building clean-energy facilities, and give rebates to Americans who make their homes more energy efficient, which supports clean-energy jobs," he said. The Senate will soon consider jobs legislation and HOME STAR should be a key component.

HOME STAR, sometimes called "cash for caulkers," is a proposal that makes sense. It makes economic sense because it can provide a quick employment stimulus putting 168,000 people to work—the overwhelming majority of them in jobs that can't be outsourced overseas. It makes sense for homeowners who will be able to afford home improvements that will pay real dollar dividends for many years by reducing their energy bills 20 percent or more forever. It makes sense for businesses who will see demand for their products increase. And it makes sense for a more secure energy future since increasing the number of homes with energy efficient retrofits from 200,000 a year to 3 million a year will cut global warming pollution by the equivalent of taking 615,000 cars off the road or decommissioning four 300-megawatt power plants.

As important as these energy benefits are, however, HOME STAR is clearly a job creator and the right medicine for the economy.

The program will be simple, streamlined, speedy, and effective. It will use the market to build demand for the construction industry by offering homeowners rebates for installing appliances, mechanical systems, and products that cut energy use—everything from simple duct sealing to whole-house retrofits. Administration of the program will involve a minimum of new government bureaucracy and will rely to a great extent on existing state programs. Quality assurance of work performed will be a priority to make sure that the savings promised to homeowners are realized. It will take advantage of skilled labor that is now sitting on the sidelines and eager for work. And it won't strain manufacturing facilities, many of which are now operating at near half of their capacity because of the economic downturn.

Consumer incentives

The program gives homeowners a choice of incentives: the SILVER STAR and GOLD STAR paths.

The SILVER STAR incentive provides rebates for purchasing and properly installing specific energy-saving equipment such as furnaces and water heaters, or changes to a building's

envelope such as insulation and duct sealing. Rebate amounts are up to \$1,500 per qualified installed measure, capped at 50 percent of project costs or \$3,000—whichever is less.

The GOLD STAR incentive goes a step further and rewards whole-home or office building retrofits. This performance-based incentive is based on predicted energy savings determined by a thorough energy audit performed before the work begins. The auditor tests the home's energy performance using proven building science methods, designs a customized retrofit plan in consultation with the homeowner, and calculates the energy savings that will result from the recommended measures. Homeowners can receive \$3,000 for modeled savings of 20 percent, plus \$1,500 for each additional 5 percent of modeled energy savings, with total incentives of up to \$8,000, not to exceed 50 percent of total project costs. This will encourage homeowners to invest in the most cost-effective technologies, which are often the simplest and most labor-intensive investments.

Economic benefits

HOME STAR will create 168,000 jobs according to independent analysis by Climate Works using respected economic models from REMI and McKinsey & Co. Those jobs will be heavily concentrated in the hard-hit construction and manufacturing sectors of the U.S. economy and will benefit every state and both urban and rural communities.

The program will help create long-term construction industry careers by increasing demand for home energy retrofits roughly 15 times, rising from current rates of 200,000 homes a year to close to 3 million retrofits annually. It will also provide much-needed help to the retail sector where overall jobs have fallen 7.5 percent since December 2007 but 10.4 percent for building materials and garden supply stores. Jobs in the wholesale sector have declined 22.5 percent for construction supplies compared to 8.1 percent overall.

The HOME STAR program dedicates \$200 million to increase consumer access to financing, which further boosts job creation by leveraging additional private capital investments, and helps homeowners overcome upfront cost barriers to paying for these energy-saving home improvements.

What's more, HOME STAR investments are cost effective, creating an additional economic benefit by saving homeowners as much as \$9.4 billion over 10 years. HOME STAR will also affordably reduce carbon dioxide emissions by 4 million tons per year, or 40 million tons by 2020. That helps the economy by reducing our vulnerability to energy price shocks and getting a head start on driving down the production of greenhouse gases—changes we know we need to make anyway.

Good jobs here at home

One of the most exciting things about a recovery plan built on home energy retrofits is what it does for American jobs. HOME STAR supports domestic job creation by investing in skilled construction, which results in good American jobs that can't be outsourced. But it can have tremendous benefits for other hard-hit sectors of the U.S. economy, too, especially manufacturing industries.

The majority of manufactured goods used in HOME STAR retrofits are already made in the United States, averaging well over 90 percent domestic production in most major goods, with all categories included in the Senate HOME STAR bill reporting above the national average for domestic production. A focus on home energy retrofits will therefore by its very nature disproportionately support American industries and target its benefits to help American workers.

Table 1 (right) shows data from the International Trade Commission and NAICS on the share of domestic production for products used in energy efficiency retrofits. For many of these products the share is over 90 percent.

Plenty of capacity

American construction and manufacturing companies can rapidly absorb large amounts of new demand because current manufacturing capacity has fallen so low. Capacity utilization—the level at which a factory is operating compared to its potential—for all U.S. manufacturing plants is already low across the board, with the average U.S. plant only working at 66.6 percent. Put differently, fully one-third of all U.S. manufacturing capacity is sitting idle today. But in construction-based industries the situation is even worse, with many building materials manufacturers operating at less than 50 percent of their capacity.

As a result, these firms will rapidly absorb any new demand for their products by putting people back on the job. This means that investments in construction, building materials, and manufactured systems are all well-targeted strategies for rapidly creating domestic jobs in impacted industries.

HOME STAR focuses on an area of tremendous unmet need with over 1.7 million members of the construction trades and supporting industries unemployed since 2007. The current proposal for HOME STAR is an important step toward putting America back to work, and it invests in building a sustained market for energy-related home construction jobs that will keep producing economic benefits well into the future.

TABLE 1
Share of U.S. domestic production for products used in energy efficiency retrofits

Duct sheet metal	99.4%
Vinyl windows	98.4%
Rigid foam insulation (Polystyrene)	95.9%
Caulk and duct mastic	
Gas and other furnaces	94.2%
Fiberglass and mineral wool	93.7%
Spray foam	90.4%
Air conditioning and heat pumps	82.3%
Water heaters (electric, gas, solar, and tankless)	77.9%
Average U.S. production for all manufactured products	76.5%

Quality work

The installation of energy efficient measures would be backed by a quality assurance program that would guarantee sound work and offer an additional incentive to contractors that invest in a trained and certified workforce. HOME STAR requires appropriate licensing and certification for all participating contractors, and a percentage of all jobs will be inspected by a third party within 30 days of completion to verify proper installation. This safeguards against fraud and improves consumer confidence that a HOME STAR seal is backed by quality work.

The quality assurance program can involve labor unions and other training providers to ensure a well-trained and certified workforce as the foundation of quality work. It will involve the financial industry in making sure high-quality work backs up the consumer financing they offer to further reduce upfront payments for homeowners. And it will create a standards-based industry so when people buy an energy-efficient home retrofit in the future they can be confident they'll be saving money, saving energy, and cutting pollution for years to come.

Everyone benefits

In addition to all of the real jobs benefits mentioned here, energy efficiency retrofits are a proven and cost-effective way to reduce the household energy use that accounts for one-fifth of U.S. carbon emissions—roughly twice the global warming pollution produced by passenger cars. Basic efficiency improvements can cut energy waste and carbon emissions by 20 percent to 40 percent, while actually saving money instead of costing the economy.

HOME STAR would be effective if all it did was save energy and cut global warming pollution. But the economic case for HOME STAR is just as compelling because it will quickly create tens of thousands of jobs and breathe new life into struggling manufacturing and retail sectors.

“Retrofitting America’s 128 million homes will be the work of private companies, but market forces alone will not move fast enough to avert the crisis at hand,” wrote Matt Golden, founder of a San Francisco home energy retrofitting company, in a recent commentary in *Forbes*. “The legions of unemployed contractors and factory workers desperately need jobs now to pay their mortgages and feed their families. While the private sector is ready to step up and invest in long-term growth, near-term incentives will generate immediate demand and allow private businesses to start hiring again, right away.”

We couldn’t agree more.

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