



MEMORANDUM

To: Home Star Coalition

From: ICF International (Bansari Saha, Eliza Johnston)

Date: May 10, 2010

Re: **UPDATED - Approximate Impacts on Public Sector Revenues due to the HOMESTAR Program**

At your request, ICF conducted a very simplified analysis to provide ball-park estimates for the public sector impacts of the proposed HOME STAR program. We defined public sector impacts as economic impacts accruing to the federal, state, and local governments, in addition to the economic impacts to the general economy (or the private sector economy). As you indicated to us, there have been several assessments of the general economic impacts of the HOMESTAR program but, to our knowledge, there has not been any explicit analysis of the impacts on the public sector. This analysis attempts to bridge that gap, albeit in a very simplified and “back-of-the-envelope” way.

Introduction

As our starting point, we used the two studies provided to us on the HOMESTAR program to conduct this additional economic impact analysis. The two studies, one conducted by ClimateWorks Foundation using external models provided by REMI and McKinsey & Co and the other by ACEEE, evaluated the more conventional economic impacts to the overall economy, such as jobs created and energy savings, etc. Our analysis builds-off of the outputs from these analyses to estimate the fiscal impacts of HOMESTAR at the federal, state, and local levels.

The two most important revenue/savings streams we calculated for the public sector include savings from reduced unemployment benefits (as workers previously on the unemployed rolls find work because of the HOMESTAR program) and additional tax revenues the federal and state/local governments could collect. In addition, we also present a measure of the government’s return on investment (ROI) based on estimates of the actual government funding for the program and the subsequent economic activity generated due to the program.

Methodology

Our analysis is based on the findings of the ClimateWorks Foundation (which is based on the REMI Policy Insight model and analysis by McKinsey & Co) and the ACEEE analysis, in addition to other secondary data sources for information on average wages, average unemployment compensation amounts, tax rates and commonly used multiplier estimates. We did not conduct any original modeling due to time constraints, but used simple calculations to provide approximate estimates for the various impacts. Because of this simplified approach and the fact that our analysis is based on a wide array of sources, we present our estimates as ranges instead of point estimates. While it is difficult to provide exact magnitude of these impacts without comprehensive modeling, we believe the ranges are fairly robust and are likely to be comparable to any future estimates generated through actual modeling. Moreover, the list of public sector impacts estimated here are not meant to be exhaustive but are those we

considered as the most significant and amenable to a simplified analysis as presented here. Thus the estimates presented here could be considered conservative in that respect.

In some instances, the ranges are quite wide, so it is important to remember that our findings are based on outputs from two different studies and a variety of assumptions about percent of jobs created by the program that are new (ranging from 50-100 percent) as well as average tax burden (for income and sales taxes). As our starting point, we used job creation numbers and bill savings from two separate studies. The ranges of outputs that were used from the two studies include:

- Job Creation: The HOMESTAR program would create between 100,000 – 139,000 jobs during its first year and 29,000-62,000 jobs during the second year.
- Bill Savings: The program would generate bill savings of \$627-\$639 million in its first year and an additional \$812 – \$820 million in its second year. Bill savings are estimated to continue well beyond the two-year lifespan of the program, but those estimates are not used in our analysis. Refer to the original studies for more details.

Unemployment Compensation Payouts

The biggest impact on public sector revenues from the HOMESTAR program will likely come from the savings in unemployment compensation payouts. The jobs created by the HOMESTAR program would lead to reduced burden on the government to pay unemployment compensation, thus saving the public sector substantial revenues. According to our quick research, for the types of jobs predicted to be created by the HOMESTAR program, the government pays out on average about \$21,000 annually for those who are in the labor force and are unemployed.

Although most of the studies we reviewed asserted that the jobs created by the HOMESTAR program are all incremental (or new jobs), the low end of our range for unemployment compensation benefits is based on the assumption that only one-half of the jobs created are actually new jobs while the rest will be filled by workers transferring from other activities who would not have been collecting unemployment benefits otherwise (or those not collecting unemployment benefits due to individuals not filing for compensation). We realize this is a fairly conservative assumption, but it does provide a lower bound for the impacts. On the high end, we assume that all 100 percent of the new jobs are filled by currently unemployed workers.

Using this and other assumptions, we estimated that in the first year of the program, the government could save roughly \$1.0 - \$2.9 billion due to reduced unemployment benefit payouts. In the second year of the program, the federal government could save an additional \$609 to \$645 million, depending on the temporal pattern of incremental job creation. Thus, depending on the study source used to estimate these impacts, the government could reduce its unemployment compensation burden by \$1.7 - \$3.5 billion, cumulatively over the course of the two years for the HOMESTAR program.¹

¹ Individual estimates shown for the two years are not additive for the cumulative impacts over two years because the low- and high-end of the ranges come from different studies for the two years. This is because, while both studies present fairly comparable total number of jobs created, their temporal pattern is quite different (i.e., one study estimates more jobs in the first year, while the other estimates higher jobs in year 2). One should not add the numbers from the two different studies since their methodologies are completely different.

Tax Revenue

We estimated three types of tax revenues in this analysis – federal and state income taxes from the jobs created (both direct and indirect jobs), and state sales tax from the induced impacts of higher consumer spending. For federal income tax, we estimated that in the first year of the program, there could be \$149 - \$648 million in increased federal income tax revenue due to HOMESTAR. In the second year, an additional \$86 - \$143 million could be generated for the incremental jobs created in the second year. In total, the federal income tax revenue generated could be anywhere from \$300 - \$700 million, at the end of the two-year program.²

In addition to federal income tax, states could collect \$64 - \$177 million in the first year and an additional \$37-\$39 million in the second year in income tax revenues. In total, states could gain anywhere from \$100 to a little above \$200 million in state income taxes at the end of the HOMESTAR program.

Finally, jobs created by the HOMESTAR program would also benefit the states due to the sales tax generated by the additional purchasing power to consume goods and services. Moreover, homeowners who benefit from increased energy efficiency and subsequent energy bill savings will likely spend that money elsewhere in the economy, generating additional sales tax. In the first year of the program, state and local governments would receive between \$36 - \$100 million in sales tax generated by the increased earning power of newly employed workers and another \$24 million from increased spending by homeowners experiencing bill savings in the first year of the program.³ This constitutes a total increase of \$61 – 124 million in sales taxes in the program's first year. In the second year, another \$52 million could be generated from increased spending, for a total of \$114 - \$176 million over the program's duration.

When both income and sales tax are considered, the HOMESTAR program would generate between \$273 and \$949 million in tax revenues for federal, state, and local governments in its first year. During the second year of the program, the tax revenues generated could be between \$175 and \$235 million. Thus, over the course of the HOMESTAR program's two-year lifespan, it could bring in an additional half a billion to over one billion dollars in increased tax revenues.

Return on Government Investment

The HOMESTAR program, which would be federally funded at \$6 billion over a two-year period, also includes additional private investments from homeowners and/or lending institutions, ranging from \$4.8 – 10.4 billion.⁴ At the end of the program's two year lifespan, between \$16 and \$32 billion in industry activity could be generated from the initial government and private investment of about \$11 - \$16 billion. This estimate is based on the assumption that the multiplier effect of these types of investments could range from 1.5 to 2. This is consistent with ICF's work in estimating economic impacts for other similar types of scenarios. Thus, a government investment of \$6 billion is likely to generate significant economic activity and provide substantial return on the government investment. As the economy

² Again, the numbers are not additive for reasons discussed in a prior footnote.

³ One could argue that the bill savings are not incremental spending but a re-allocation of consumer spending.

⁴ Range estimates based on two separate analyses, one conducted by ClimateWorks Foundation using external models provided by REMI and McKinsey & Co and the other conducted by ACEEE.

recovers from a significant recession, helping to generate economic activity that could be in the range of \$20 billion or more, for an investment of \$6 billion seems like a very attractive proposition.

Total Public Sector Savings/Revenue Generated

In summary, investing in the HOMESTAR program will not only lead a substantial number of jobs, as estimated by other studies, it will also generate significant revenues (or savings) for the public sector. According to our simplified, back-of-the-envelope analysis presented here, the HOMESTAR program could generate tax revenues and savings for the federal, state, and local governments that could range anywhere from slightly over \$2 billion to more than \$4.5 billion. Broken down by each metric we assessed, the program constitutes a two year impact of:

- Unemployment insurance: \$1.7 – 3.5 billion in total savings
- Federal income tax: \$300 -- \$700 million in revenue
- State income tax: \$103 -- \$213 million in revenue
- Sales tax: \$114 -- \$176 million in revenue

While this is significant in its own merit, we should also note that the program is likely to generate significant return on government's investment by generating over \$20 billion in economic activity. Finally, as impressive as these public sector benefits are, we should note that there are likely to be other benefits to the public sector that have not been estimated in this study.