## The Exploding Carbon Tax

The costs imposed by the cap and trade system are equivalent to raising a family of four's income tax by 50 percent.

## By MARTIN FELDSTEIN

he cap and trade legislation supported by the Obama administration is a stealth strategy for a massive long-term tax increase. It is a large tax on all American households, and the tax burden rises in future years without any need for further legislation. It will evolve into an enormous new source of tax revenue for the government.

A cap and trade system is supposed to reduce carbon dioxide (CO<sub>2</sub>) emissions by raising the price of CO<sub>2</sub>intensive goods and services like gasoline, electricity, and a wide range of industrial products. This, in theory, will induce consumers to shift their spending to services and products that involve lower levels of CO<sub>2</sub> emissions. It achieves these price increases by requiring firms that create CO<sub>2</sub> in their production process, or sell goods like gasoline that create CO<sub>2</sub> when used, to have a permit per ton of CO<sub>2</sub> emission.

The Congressional Budget Office estimates that reducing the level of  $CO_2$  to 15 percent less than the total level of U.S. emissions in 2005 would require permit prices that would increase the cost of living of a typical household by \$1,600 a year. To put that \$1,600 carbon tax in perspective, a typical family of four with earnings of \$50,000 now pays an income tax of about \$3,000. The tax imposed by the cap and trade system is therefore equivalent to raising the family's income tax by about 50 percent. (Some advocates of a cap and trade program argue that the cost to households could be much less than \$1,600 if the government uses the tax revenue to finance transfers to low income households and tax cuts to others, but since there is no way to know how the future revenue would actually be used, the only number we have to consider is the \$1,600 direct increase in the burden on households.)

Martin Feldstein, chairman of the Council of Economic Advisers under President Reagan, is a professor at Harvard University. The Waxman-Markey bill that recently passed the House Energy and Commerce Committee would cause an even greater initial rise in the cost of living by its requirement to cut  $CO_2$  emissions to 17 percent less than the 2005 level of emissions rather than the 15 percent reduction assumed in the CBO estimates. (European officials are, moreover, calling for the United States to agree to a much bigger initial cut—20 percent less than the U.S. emission level in 1990.)

As the legislated  $CO_2$  reduction increases automatically after 2020, the price of the permits would rise to further limit consumers' demand for  $CO_2$ -intensive goods and services. The Waxman-Markey legislation requires the  $CO_2$  level in 2050 to be an amazing 83 percent less than it was in 2005, and a study by the EPA estimates that the price of the permit would rise from about \$20 a ton in 2020 to more than \$75 a ton in 2050. The higher permit costs would be reflected in the prices that households would pay for  $CO_2$ -intensive goods and services.

Rises in the cost of living would be greater for households that use more energy and CO<sub>2</sub>-intensive goods and services. The implied rate of the cap and trade carbon tax would therefore rise with income. In that way it would act like an income tax—reducing the reward for additional effort by putting a tax wedge between the individuals' additional work effort and the resulting increase in their standard of living. But while it would collect more tax from higher income households, the cap and trade tax would be a *relatively* heavier burden on lower-income and middle-income households. The Congressional Budget Office estimates that spending on "carbon based energy" is 21.4 percent of income among households in the lowest income quintile but only 4.1 percent of income in the highest income quintile.

Although the cap and trade plan that President Obama proposed during the campaign called for auctioning all of the  $CO_2$  permits, members of Congress in heavily industrialized states and in states that use coal to generate elec-

tricity refused to support the plan unless the auction process was eliminated. To get their support, Waxman and Markey agreed to a fundamental change in the structure of the program. Instead of auctioning the permits, about 85 percent of them would initially be given away to a variety of firms. (Since a firm that had excess permits would be able to sell them to other firms, the price of the permit would still be determined by what firms were willing to pay for excess permits, just as it would be in an auction system.) Electricity distributors would get the largest amount-more than 30 percent of the total per-

mits. If electricity regulators required these distributors to pass along the benefit of the free permits to consumers in the form of lower electricity prices, this source of CO<sub>2</sub> would not be reduced. That would require raising the cost of other CO<sub>2</sub>-intensive products to achieve the required overall reduction in  $CO_2$ .

The proposed cap and trade plan also provides an escape hatch for firms that emit CO<sub>2</sub>. Instead of reducing their own emissions or buying permits at auction or from other firms, they could pay others to take actions that reduce global CO<sub>2</sub> emission. They could, for example, pay for the planting of trees to absorb CO<sub>2</sub> emissions from the atmosphere or pay firms in other countries that are not covered by  $CO_2$  caps to reduce their  $CO_2$ emissions. The Financial

Times estimates that the regulated European market for such carbon offset credits will increase to more than \$60 billion next year. Such offset activities are obviously difficult to monitor. It is even more difficult to judge the extent to which these extra CO<sub>2</sub> reductions would have occurred without the financial inducements.

The Waxman-Markey legislation provides that the annual giveaway of permits would eventually phase down so that more than half of all permits would be auctioned after 2050. This would create a massive rise in tax revenue PHOTO I that could finance new government spending without the need for any new tax legislation. The Hamilton Project at the Brookings Institution estimates that just stabilizing CO<sub>2</sub> emissions at the current level could produce revenue of more than \$470 billion a year (in today's prices) by 2050. They estimate it would be a 9 percent increase in total non-CO<sub>2</sub> federal tax revenue, an amount equivalent to \$200 billion a year in today's economy.

The rise in the prices of U.S. goods would make them less competitive. American firms would suffer in export markets and domestically in competition with goods imported from countries that do not impose such a high implicit tax on CO<sub>2</sub> emissions. There would no doubt

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be pressure to impose tariffs on imports from other countries that have lower carbon costs. This might be welcomed by the unions that now seek to use foreign labor practices as an excuse for tariffs on imports, but countervailing tariffs based on carbon content would hurt American consumers and threaten our global trading system.

And, despite the high cost to American households and the economy, the proposed cap and trade plan would do little to deal with concerns about global warming. Although there is a broad scientific consensus that the increasing level of total global CO<sub>2</sub> emissions is raising temperatures, which could have significant adverse long-term effects, the potential U.S. reduction of CO<sub>2</sub> would not be enough to prevent those

adverse effects unless China, India, and other rapidly industrializing countries also agreed to major reductions in their CO<sub>2</sub> emissions.

The proponents of enacting a U.S. cap and trade program at the present time "to show U.S. leadership" so that other countries will follow are naïve to think that China and India will agree to major CO<sub>2</sub> reductions without financial inducements. The Chinese and Indians have stressed their opposition to any major reduction in their CO<sub>2</sub> emissions and have given no indication that their position would change if we enacted limits on our CO<sub>2</sub> emissions. It would be a big mistake to enact legisla-

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tion before the international meeting in Copenhagen in December where these issues can be discussed and a negotiation could begin.

he initial shift from an auction process to giving away permits is just one of many departures the Waxman-Markey bill makes from the type of pure cap and trade system that appeals to many economists. They favor cap and trade over administrative regulations like automobile mileage standards and smokestack scrubber requirements because the uniform price of permits allows every amount of CO2 reduction to be achieved at the least cost to the economy. The 900-page Waxman-Markey bill imposes a wide array of costly administrative regulations that should be unnecessary if CO<sub>2</sub> is limited by a cap and trade plan. Fifteen percent of electricity must be produced with renewable technologies, including wind, solar, and biofuels. Household appliances must meet various efficiency standards. The Obama administration has added a 39-mile-per-gallon fleet efficiency standard for new automobiles. To the extent that these rules restrict behavior, the result will be a more expensive way of reducing CO<sub>2</sub> than a pure cap and trade arrangement.

The combination of permit giveaways to selected firms, separate administrative regulations aimed at  $CO_2$  reduction, and a market for offset credits means that the Waxman-Markey bill lacks the efficiency virtues of the classic cap and trade system. Some of its supporters may not care that it reduces U.S. emissions inefficiently and does little to reduce global warming as long as it produces a large future source of government revenue. If cap and trade legislation is passed, it should be for a relatively limited period of time like five or ten years rather than the 40-plus

year horizon in the Waxman-Markey bill. We need to see how the system works in practice. In particular, it is not clear how  $CO_2$  monitoring and compliance will work in all of the participating countries.

Scientific knowledge in this field is changing rapidly, and our approach to global warming should be flexible as we learn more. One important approach being explored by scientists, geo-engineering, is not even recognized in the Waxman-Markey legislation or in the administration's original proposal. (Geo-engineering uses a variety of technologies to offset the warming effects of the level of  $CO_2$ in the atmosphere.) If one or more of the geo-engineering methods is successful, it will be possible to have higher levels of  $CO_2$  emissions without the adverse environmental effects. And the higher level of  $CO_2$  will allow a higher level of economic activity and a higher standard of living. Governments around the world should be devoting more research funds to promising ideas.

If there is to be a U.S. cap and trade plan to reduce  $CO_2$ emissions, it would be best to avoid the big revenue creation of permit auctions and the arbitrary congressional granting of free permits to favored industries and firms. Tradable electronic permits should instead be distributed directly to all households. This distribution could reflect the average spending on CO<sub>2</sub>-intensive goods in different income groups and geographic areas. Individuals could then sell the permits through an organized auction exchange. The payments that they received would offset most of the adverse effects on their standard of living of the higher prices that they would have to pay for CO<sub>2</sub>intensive goods and services. Such a system of individual permit distribution would reduce CO2 with all of the efficiency advantages of a pure cap and trade system but without increasing taxes and enlarging government.

