

OPINION POINT

Too Many Carrots and Not Enough Sticks?

The Role of the Carbon Tax in Energy Tax Policy

By Roberta Mann*

After years of inaction, the U.S. government appears poised to do something about climate change. The government can control environmentally damaging activity either by regulation or by market mechanisms—that is, by imposing costs that alter the economics of the activity. As almost all modern human activity involves greenhouse gas (GHG) emissions, regulation would be burdensome, inefficient, and unpopular. It is almost certain that the government will choose to use a market mechanism to reduce GHG emissions.

Options

The most popular proposal to date has been some form of a cap-and-trade system. In a cap-and-trade system, the government decides the maximum permissible quantity of GHG emissions and allocates or sells permits to GHG emitters. Once the initial allocation of permits has been made, the emitters can buy and sell permits. The other market mechanism is a tax on GHG emissions, also known as a carbon tax. Economists, including Peter Orzag and Lawrence Summers, prefer a carbon tax, finding it superior to cap-and-trade from an economic efficiency standpoint. Like a cap-and-trade system, a carbon tax adds to the cost of GHG emitting activity, but unlike a cap-and-trade system, the cost is limited to the tax. In a cap-and-trade system, the quantity of GHG emissions is limited, but the cost of reducing the emissions is theoretically unlimited. In practice, cap-and-trade systems have experienced significant price volatility.

Recently, Exxon Mobil's CEO, Rex Tillerson, called a carbon tax "a more direct, a more transparent and a more effective approach" to reducing GHG emissions than a cap-and-trade system. Russell Gold & Ian Talley, *Exxon CEO Advocates Emissions Tax*, WALL ST. J., Jan. 9, 2009, at B3. Most other oil companies have supported a cap-and-trade approach. For businesses, the

carbon tax presents two advantages over a cap-and-trade system: reduction in uncertainty and trade advantages. See Martin A. Sullivan, *Will Business Learn to Love the Carbon Tax?*, TAX NOTES TODAY, 2008 TNT 102-11, May 27, 2008. Nonetheless, carbon taxes face significant political challenges. Supporting a new tax requires political courage, and imposing higher costs on business and consumers requires a lot of courage in harsh economic times.

Tax Incentives

Adding new incentives to the Code, on the other hand, requires very little courage. Tax incentives are popular with the beneficiaries, and they rarely cause dissent except among academics. The energy sector has long benefited from tax incentives, from the venerable expensing of intangible drilling costs (1916) to the production credit for electricity produced from marine renewables (2008). The energy tax provisions in the Emergency Economic Stabilization Act amount to \$17 billion. That amount doesn't sound like much when numbers like \$700 billion, \$825 billion, or \$1 trillion in economic bail-out provisions hit the front pages every day. However, the energy sector receives more money from the tax system than from direct governmental expenditures. In 2007, the energy sector received \$10.4 billion in tax expendi-

tures, and \$6.2 billion in direct expenditures, research and development, and federal electricity support. See Energy Information Administration, *Federal Financial Interventions and Subsidies in Energy Markets 2007*, at xi (Apr. 2008), at <http://www.eia.doe.gov/>.

Tax incentives for renewable energy are designed to encourage production and use of renewable energy sources. Using renewable energy for power generation and transportation, instead of fossil fuels, will reduce GHG emissions. Tax incentives reduce the cost of producing renewable energy, making it more competitive with such traditional energy sources as oil, gas, and coal. Both traditional energy fuels and renewable energy get subsidies through the tax system. In 1997, the fossil fuel industry received more than half of the tax expenditures for energy. In 2007, renewable fuels received more than half of the tax expenditures for energy. According to economist Gilbert Metcalf, nuclear, wind, and solar power enjoy tax subsidies ranging from nearly 100 percent for nuclear, to more than 200 percent for solar. Gilbert E. Metcalf, *Taxing Energy in the United States: Which Fuels Does the Tax Code Favor?*, ENERGY POL'Y & ENV'T REP., Jan. 2009, at 5, http://www.manhattan-institute.org/html/eper_04.htm. Subsidies for biofuels constitute the single largest expenditure.

* University of Oregon School of Law, Eugene, OR.

Grants

Congress recently added another carrot. The American Recovery and Reinvestment Act of 2009 (ARRA), Pub. L. No. 111-5, section 1603, provides grants for placing certain energy property in service. Depending on the type of property, the grant equals either 10% or 30% of the property's basis. These grants are in lieu of production and investment tax credits for renewable energy otherwise available under sections 45 and 48. I.R.C. § 48(d)(1). The grants are not included in gross income, and the effect on basis is determined using the rules in sections 48(a) and 50(c). I.R.C. § 48(d)(3).

The ARRA authorizes grants only for property placed in service during 2009 and 2010 and for property on which construction began during either year and which was placed in service by the credit termination date. That date varies depending on the type of property. ARRA § 1603(a) & (e).

Economic Challenges

Despite the seemingly large subsidies it has received, renewable energy has gained no more than a toehold in the U.S. energy sector. Renewable energy makes up 6.8% of U.S. primary energy consumption, while gas, oil, and coal make up 86.2%. Falling oil prices, rising corn prices, and a depressed economy have hit the ethanol industry hard. Kate Galbraith, *Economy Shifts, and the Ethanol Industry Reels*, N.Y. TIMES, Nov. 5, 2008, at B1. T. Boone Pickens has abandoned his plans for a 4,000 megawatt wind farm, citing falling natural gas prices and difficulty in obtaining financing. Ryan Randazzo, *Oil Billionaire Revises Plan to Reduce Foreign Oil Imports*, ARIZ. REP., Nov. 12, 2008, <http://www.azcentral.com/arizonarepublic/business/articles/2008/11/12/20081112biz-pickens1112.html>.

Bank failures and mergers of failed banks will dry up financing for renewable energy projects. The renewable credit crunch comes via the convergence of several tax policies. First, many

renewable energy projects are funded by "selling" tax credits. The primary purchasers of those tax credits have been banks. In the wake of the economic crisis, many banks have little income to shelter. The banks that still have income have mostly taken over failed banks, frequently in tax-free reorganizations. Section 382 usually applies to limit the use of net operating losses and built-in losses by acquirers of loss corporations. If a loss corporation, defined as a corporation with net operating losses or built-in losses, has a 50% shift in ownership, the future use of those pre-existing losses is limited to the value of the "old" loss corporation multiplied by the long-term tax exempt interest rate. This rule prevents the use of acquired losses against the profitable purchaser's income. In light of the financial crisis, the Service issued Notice 2008-83, indicating that it would not treat bad debt deductions as built-in losses. See Amit R. Paley, *A Quiet Windfall for U.S. Banks*, WASH. POST, Nov. 10, 2008, at A1 (describing the Notice as a \$140 billion windfall for U.S. banks). Even if Notice 2008-83 was a technically correct interpretation, it would have exacerbated the financing issues for renewable energy projects. Howard Gleckman of the Urban Institute noted on his TaxVox blog that a recession is the wrong time for tax credits. For example, Wells Fargo has financed more than \$300 million in solar and wind projects since 2006. But after acquiring Wachovia, Wells Fargo has enough losses to shelter income for years to come. Fortunately, Congress gave Notice 2008-83 a relatively short life and repealed it, although not retroactively, in the ARRA, section 1261.

Trying Carrots and Sticks

Renewable energy tax incentives and grants are "carrots," encouraging environmentally good behavior. A carbon tax is more of a "stick," discouraging environmentally bad behavior. Economic research shows that cooperation is most successfully enforced when both rewards

and punishment may apply. James Andreoni, William Harbaugh & Lise Vesterlund, *The Carrot or the Stick: Rewards, Punishments, and Cooperation*, 93 AM. ECON. REV. 893 (2003). Particularly in an economic environment where "carrots" lose their appeal, a carbon tax can continue to influence behavior. Moreover, when economic activity is lower than predicted, a cap-and-trade system also loses effectiveness. The Regional Greenhouse Gas Initiative (RGGI) caps emissions for 233 power generating plants in Maine, Vermont, Connecticut, Rhode Island, and Maryland. (New York, New Jersey, Delaware, and New Hampshire also belong to RGGI, but did not participate in the first carbon allowance auction.) In 2004, energy experts set the first RGGI cap at 188 million tons of carbon emission, anticipating that by 2008, emissions would exceed that amount. However, a slowing economy and milder weather caused carbon emissions to decrease from 184.5 million tons in 2005 to an estimated 172.4 million tons in 2007. Felicity Barringer & Kate Galbraith, *States Aim to Cut Gases by Making Polluters Pay*, N.Y. TIMES, Sept. 16, 2008, at A17.

When the cap is set too low, emissions will not decrease. However, a carbon tax would still apply even in a decreasing emission situation, although revenues may be lower. A revenue neutral carbon tax, with revenues recycled to reduce payroll taxes, would be a self-correcting mechanism. The carbon tax would have a regressive impact, as lower income bracket taxpayers spend a greater percentage of their income on energy. As emissions decreased, the revenue from the tax would decrease, but so would the regressive effect and thus the need for lowering other taxes. A carbon tax could also operate to smooth the volatility in fossil fuel prices and thus preserve the effect of renewable energy incentives in the face of falling fossil fuel prices. It could be just the stick to get the economy moving again. ■