**Climate Change, Taxes and Investment***James Barrett*

*American Council for an Energy Efficient Economy*

Despite the fact that they are often couched in terms of science, the most effective arguments against the United States adopting climate policy typically have their basis in economics. Generally speaking, they follow logical arguments along the lines of: “Why should we tax/spend on something that will produce no benefits?” This argument is effective if one denies climate change altogether, if there is no such thing as climate change, then creating an economically costly program to combat it is a waste of time. It also works effectively if the approach is not to deny the science of climate change, but rather that the U.S. can do anything about it: “Why should we implement a costly carbon control regime that would not make any meaningful reductions in global atmospheric concentrations?” It has been particularly effective around issues of fairness: “Why should the United States unilaterally disarm its economy if the Chinese and Indians refuse to do the same?”

Whatever, specific form this argument takes, the overall message is that the costs of action outweigh the benefits, an intrinsically economic argument. Of course, it is based on the assumption that climate policy must be economically costly. This is something of a leap, but it is not difficult to find economic studies to support the contention.

An in-depth examination of those studies reveals an important fact: They are probably correct. The same in-depth examination would reveal an even more important fact: They are not particularly relevant.

Studies that show that climate policy would be economically costly do not use particularly radical economic ideas or methodologies (at least not ones that most economists think are radical). But they do use particularly pointless assumptions, namely that the primary policy we have is to tax carbon at rates sufficiently high to bring emissions down to target levels. If this were the only policy we deployed, then the studies are probably at least directionally correct. Taxing carbon is economically almost equivalent to taxing energy. Rising energy prices often damage the economy, sometimes disastrously so.

Such studies are tremendously helpful to the extent that they provide a useful guide of what types of policies to avoid.

At the same time, there is a body of economic literature with the opposite results, that find that deep cuts in greenhouse gases are possible to achieve while simultaneously accelerating economic growth beyond baseline levels. These studies typically use the same types of mainstream economic ideas and methodologies. The main difference is that they examine a policy set that includes pricing carbon (either through a tax or a cap-and-trade system) alongside a suite of investment policies designed to improve the carbon efficiency of the economy, and a suite of policies designed to invest the revenues from carbon pricing in other economically efficient areas (cutting taxes on work and investment, for example). There may be some disagreement among authors of these studies around the best way to price carbon and the best investments to make, but there tends to be strong agreement around the core tenants: increase (from zero) the price on carbon and increase investments to increase the economic returns to energy, carbon, and economic efficiency.

There are, of course, barriers to implementing those points of agreement. The U.S. does not suffer from a lack of smart climate policy options, but rather from a lack of political will. Fortunately, there are incremental steps that we can take in its absence.

As the old saying goes, if you have dug yourself into a hole and you want to get out, the first thing you should do is stop digging. In this context, if we are unwilling to put a price on carbon, at least we could stop subsidizing the production and consumption of fuels that emit it. In 2009, the Environmental Law Institute published a study that identified over $70 billion in subsidies to the fossil fuel industry from 2002-2008 as compared with $12.2 to renewable energy. Economically, there seems to be little reason to subsidize energy sources that produce not only carbon but a wide variety of harmful pollutants, particularly when those benefits confer largely to the most profitable companies in the world.

Beyond the question of paying companies for the privilege of dealing with their pollution, it makes little sense from an investment standpoint. The first rule of smart investment is to diversify. Any investment advisor looking at the U.S. energy system would cringe. We get over 90% of our energy from traditional energy sources: oil, coal, natural gas, and nuclear power. Any energy investment strategy that stresses “All of the Above” simply perpetuates this dangerously unbalanced situation.

Absent from the analysis of our energy sources is a discussion of what we do with our energy. The number one use of energy in the United States is not transportation or electricity, but waste. According to a study by William Ayers, 86% of the primary energy consumed in the United States is wasted. Instead of finding ways to consume more energy so that we can waste the vast majority of it, a smart investment policy would focus on finding ways to make use of the energy we already consume.

This issue goes beyond climate change, of course. It goes to the heart of U. S. economic growth. Though it's unreasonable to expect that we could convert 100% of our energy into useful work. However, it's not unreasonable to expect that we could make significant improvements. And given the economically productive nature of many uses of energy, reducing waste and increasing efficiency have multiplicative effects that increase economic growth far beyond the value of reduced waste.

A second basic rule of smart investing is to optimize risk-adjusted returns. Targeting a specific rate of return is meaningless unless you also consider the risk you have to bear along with it. Typically, riskier investments carry a higher rate of return to compensate for the uncertainty, and investors have to sacrifice higher returns for safer investments. One area where this does not hold is in energy efficiency, where research at ACEEE has shown efficiency to have both lower risk and higher rates of return than a variety of common investment classes.

This means that the US economy as a whole is leaving a potentially vast portfolio of low-risk high-return investments unexploited with serious consequences for both economic growth and climate change. These are the types of investments that put the lie to studies predicting economic disaster caused by climate policy.

This raises the question of why these possibilities are not already being exploited. There are a number of reasons, including market failures of various types, and other barriers such as rational ignorance, which require more space than is available here.

However, one thing we can easily explain is that far more of these opportunities would be exploited if energy users and producers had to pay anything like the full social costs of their energy behavior. So long as the price of polluting is lower than the costs it generates, a free market economy will produce too much of it.

The Obama administration recently released an update to its estimate of this cost, the present value of damages caused by an additional ton of carbon equivalent in the atmosphere, raising it from $21 to $33 per ton. That is on the low side of other estimates (the British Treasury's so-called "Stern Report" estimated the cost to be over $100), but agencies will now at least have some cost to use in their cost-benefit analysis for things like appliance standards.

Incremental steps like these can start to turn the economy gradually toward a more sustainable future, and they are an indispensable part of a comprehensive climate policy. They make carbon pricing more effective and are the difference between climate policies that harm economic growth and those that enhance them. They create positive synergies with other climate policies, but alone they are unlikely to be sufficient to achieve the kind of reductions in greenhouse gases that we need.