

Tradable Permits as a Way to Lessen Global Warming

Olena Dudar¹

Economics Exchange Student, CSUB

Many scientists and artists show through their work the connection between people and nature. They emphasize that humans and the environment are interconnected and interdependent parts of the same planet, the Earth. That is why we have to preserve nature. Over the past centuries, our actions have damaged the environment. Most scientists agree that climate change and global warming, in particular, are major challenges we face today.

This research not only presents the importance of environmental problems, but also searches for economically efficient methods of solving them. This paper argues that issuance of tradable permits is an efficient market arrangement, which would help decrease greenhouse-gas emissions and reduce fossil-fuel pollution.

Greenhouse gases - such as carbon dioxide, methane, nitrous oxide, and hydro fluorocarbons - released anywhere on earth act to trap heat in the atmosphere, causing climate changes like global warming. Greenhouse-gas emissions have been increasing very rapidly in the past several decades. Total carbon dioxide emission reached its peak all over the world in 2004-05. North America was the leader, emitting about 16.2 metric tons of carbon dioxide in 2004. Increased greenhouse-gas emissions cause global temperatures to rise. Most countries, especially the more developed nations, are taking immediate actions to prevent this catastrophe.

There are a few methods the governments can use to reduce pollution. The first one is the *command-and-control system*. This system requires uniform reductions or specific technology applications for all sources. For example, the government could require all factories to use only one specific type of device to reduce pollution. The government would charge violators pollution taxes.

The second method, called the *cap-and-trade system*, works by the government setting a cap on the amount of a particular gas that may be emitted in a certain year. Each company then receives a tradable quota of how much they can emit. David Anderson² argues that “the beauty of emissions trading programs is that they allow room for flexibility and creativity.” Indeed, with the *cap-and-trade system*, firms have a few options in dealing with their emission problems. They can either use new environment-friendly technology to reduce pollution or buy the tradable permits from other companies, should they not meet their quotas.

The *cap-and-trade system* provides incentives for factories to pollute less and then make money by selling their unused pollution permits to other firms, which are unable to meet their quotas. The result from imposing tradable permits is obvious. Basically, permit

¹ This is summary of a paper that won the CSUB Student Research Competition and was presented at the system-wide competition.

² Anderson, David A. *Environmental Economics and Natural Resource Management*. New York: Pensive P, 2006.

buyers agree to pay fees for pollution emissions. In comparison, permit sellers receive rewards for polluting less. Firms realize that buying permits is similar to paying taxes. It is only a short-term solution. Using new environmentally clean technology provides a long-term solution. Tradable permits make firms think about creative and efficient ways to reduce greenhouse-gas emissions.

Tradable permits are active and work efficiently in several programs. The biggest and most widespread is the European Union Emission Trading Scheme. This is the largest multi-national, greenhouse gas emissions trading scheme in the world. It was created and approved under the Kyoto Protocol in 1997. The most important aspect of the EU emission trading was the idea of trading pollution permits not only between individual factories but also between nations.

International cooperation is crucial for the success of the *cap-and-trade system* since pollution knows no borders. However, due to economic instability, political crises, and other reasons it is very difficult for less developed countries to achieve significant reduction in pollution. That is why with the E.U. Emission Trading Scheme countries such as Russia and Ukraine are allowed to keep their emissions at the same level. It was suggested that industrial nations, such as the U.S., E.U. members, and Canada, must take the burden and reduce pollution significantly.

Most countries agreed to such a plan; the U.S. signed the protocol but rejected to ratify it. Since more nations were joining such emission trading schemes, the program became more global and more powerful. For example, in 2006 the global market of carbon dioxide reached the volume of \$30 billion. Asia was the main selling region. Asian countries were able to reduce great amounts of carbon emissions for a relatively cheap cost. Before the program they refused to do so because profit-making dictated them to keep their costs low. With the *cap-and-trade system*, they received an opportunity to decrease pollution at low costs and sell their permits to make profit. At the same time, industrialized nations, such as the U.K., other members of the E.U., and Japan are the biggest buyers of tradable permits. As a result of this program, many countries have decreased the levels of pollution; other regions took various important actions which will lead to this goal in the future.

The efforts of Europe and many other nations all over the world prove that the *cap-and-trade system* can work efficiently on a global scale. These countries showed that tradable permits not only reduce fossil-fuel pollution, they also help achieve that by reallocating resources from industrial nations to less developed countries. It is hard to understand the policy of American authorities who denied ratifying the Kyoto Protocol for such a long time. The U.S. was responsible for more than 30 percent of carbon emission among industrial countries in 1990. It is extremely important for this country to join the global program on pollution reduction.

In the short run, such policy may seem inefficient because it takes costs for either using new technology or buying permits from other countries. However, in the long run, such changes are essential to provide a better environment and nature for future generations. All individuals and especially policymakers should think globally and take a long-term approach. The *cap-and-trade system* and other environment-friendly programs are aimed

to save our planet on the most economically-efficient cost. We need to preserve the earth for our own survival.