

Ukraine Should Develop a Pilot Emissions Trading Program

by

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This paper describes the advantages of initiating pilot programs for emissions credit trading and emissions quota trading in the Ukraine. We also explain why pilot projects are desirable and what outcome might flow from a pilot GHG trading initiative.

Introduction

There are two general models for environmental regulation. One is called command-and-control (or an administrative form of regulation) and the other is called market-based. Within the family of market-based approaches are policies that affect prices and policies that affect quantities. The latter is the foundation for so-called emissions quota or credit trading systems.

Emissions quota and credit trading have been very successful in the United States and similar programs have been successful elsewhere. However, there are few examples of emissions quota or emission credit trading outside of the United States.

Why are there few success stories with emissions credit and quota trading?

First among the reasons is the lack of a clear and aggressive implementation strategy. Public sector management is historically very bureaucratic and subject to significant political interference and policy implementation is often poorly targeted. Government bureaus are typically not fertile soil for regulatory experimentation and economic incentive-based instruments find inhospitable institutional and cultural grounds in which to take root.

Based on more than 25 years of successful experience in the international arena we offer the following conclusions for advocates of market-based environmental reforms, in general, and emissions trading in particular.

- **REALISM**
Be modest. Do not try to implement policies and instruments beyond the available institutional capacity.
- **GRADUALISM**
Implement national or regional projects gradually by use of pilot projects or experimental programs. Start by establishing plausible and enforceable norms, standards, and guidelines.
- **LEGAL FLEXIBILITY**
Legislation must allow for the possibility of low-cost revisions.
- **INSTITUTIONAL INTEGRATION**

Pursue intra- and intergovernmental integration to overcome barriers and capitalize on institutional strengths. Include economic agencies as well as representation from the legislative branch.

- **LEADERSHIP**
Those responsible for environmental management must lead the decision making process by identifying stakeholders, constraints, and the means for building consensus.
- **PARTICIPATION**
Participation by stakeholders is critical and must be based on open sharing of information. Avoid issues that may paralyze the process; equity issues should be properly identified, evaluated, and addressed.
- **MARKET RELIANCE**
The growing reliance on markets must be incorporated into the design of environmental policy and trading-based instruments. Reforms should not outpace implementation and acceptance of market adjustments.
- **WESTERN-FOCUS**
Do not reject OECD experiences and recommendations without careful consideration. To enhance learning and build a body of meaningful success stories increase ties among regional agencies whose economic and cultural contexts may be more familiar and lead to increased success.

Background on Market-based Environmental Programs

In the early 1970s, when environmental policies were still in their infancy, economic instruments were used in only a few instances and were subject to much controversy. Since then, a slow, but continuous evolution has taken place. The role of economic instruments has increased for several reasons.

First, the number of applications has increased as economic instruments are increasingly used in more OECD countries – success creates more success. Second, the variety of instruments has also grown.

It is well known that economic incentive-based approaches to environmental and energy policies can provide good outcomes for the public and for the private sector. Economists have been studying these properties for more than 30 years and there has been increasing support for these programs by the OECD and by many nations as well as local governments.

Since 1976, there has been more than \$10 billion in cost saving in the United States due to the use of these trading concepts. Based on these successes, other countries such as Denmark, Germany, Norway, and the United Kingdom are developing national trading systems while the European Union is proceeding with an emissions quota-based system for EU-wide greenhouse gas trading.

As people begin to think about international GHG trading, it is worth noting that Ukraine could become one of the largest suppliers of emission credits and allowances for the international GHG reductions market. It is the eighth largest source of GHG emissions in the world and Ukraine's transitional economy offers many cost-effective ways to mitigate emissions, particularly in industrial sectors. However, Ukraine will be

able to realize this potential only if it develops the capacity and institutions needed to deliver marketable GHG credits (ERUs) and GHG quotas (AAUs).

Ukraine has several programs to promote climate change research and encourage climate change mitigation measures. One such program includes the State Energy Conservation Program which promotes energy efficiency. To implement this program the parliament adopted in 1994 the Law on Energy Conservation which authorizes subsidies, tax credits, and other privileges to promote energy efficiency measures. However, strong economic incentives for climate change mitigation projects do not now exist. Other laws exist that will yield good GHG control outcomes. Nevertheless, Ukraine is not likely to soon develop GHG trades without either pilot programs or projects or without immediate action by the Parliament to put in place the needed infrastructure to support GHG trading.

Why a Pilot Trading Program

There have been many GHG trading related seminars in Ukraine. Nevertheless, there has been little or no success in developing real trades.

Today, new opportunities exist to move forward with GHG trading. One reason is that Ukraine is more rapidly modernizing its industry. A second reason is the Kyoto Protocol is expected to go into force once Russia ratifies it. This means that countries such as Russia and Ukraine will be able to sell greenhouse gas emission credits and quotas if the regulatory, legal, and management information system institutions are in place. If these systems are not in place, then the incremental funds that would flow to Ukraine for “green” energy projects will flow to other countries. Such claims are not idle, for it should be noted that even Slovakia has recently completed a greenhouse gas trade for 200,000 tons of CO₂E with a company from Japan. This trade could have been done by Ukraine. It was not.

We propose developing a pilot program or series of pilot projects that would prove the viability of greenhouse gas emissions trading in Ukraine, in general, and build the infrastructure for much future greenhouse gas or non-greenhouse gas trades. This infrastructure would include rules, guidance documents, management systems such as a greenhouse gas credit registry, and training for regulators. This is the same infrastructure that is needed by Ukraine to comply with its obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. It is the same infrastructure that will allow the broad development of economic-incentive based regulation for air, water, and solid waste management.

How Have Pilots (Demonstration Projects) Made Implementation Easier

The history of emissions trading is filled with the use of pilot activities that demonstrate the viability of certain trading mechanisms. Based on these pilots, fully-developed programs emerged. Below we cite three cases where pilot activities resulted in fully-developed programs being implemented.

Open Market

The US developed a so-called Open Market emissions trading program to promote better air quality related to NO_x emissions in the Northeastern part of the US. It was advocated by several power companies located in the US states of New Jersey and Connecticut. By creating demonstration projects, these companies illustrated the practicality of their proposals and built a constituency for further development and refinement of these programs.

Bubbles

Armco Steel and 3M Corporations were advocates for the US EPA Bubble Policy that allows companies to trade emission credits within their own facilities to meet ambient air pollution control requirements. By controlling emissions where it is not costly and not doing so where it is costly, companies can meet air pollution control requirements in a cost-effective manner.

Both Armco Steel and 3M were advocates for this policy and did considerable analysis of how a “bubble”-like transaction would benefit them and the environment.

AIJ (Activities Implemented Jointly)

The very essence of AIJ was experimentation. Experimental Joint Implementation (JI) activities were developed in many countries and considerable research was done into the cost and benefits of these practice trades. Both JI and the Clean Development Mechanism (the CDM) were built from experience based on these many transactions.

The experience with AIJ confirms the value of pilot emissions trading activities.

A Site for a Pilot Program

There are many potential experiments that could be undertaken to begin transplanting credit and quota-based system from the West into the emerging market economy of Ukraine. One version would lead to an internal, domestic GHG trading program. Another would lead toward an international trading system. A third would be both domestic and international in nature.

There are a variety of good sites to begin with. Donbass is probably the best site but Kyiv would also be a plausible site of an experiment.

We believe that the Donbas region is a good candidate for an economic experiment of an emissions trading system. First, there is considerable industry in the region. Second, it has been extensively studied by the US EPA, EBRD, World Bank and others for economic and environmental reasons. Third, there are potential health and safety issues that could be addressed under a well-designed experiment.

We believe that there are several administrative mechanisms available to facilitate such an experiment and means are available to develop complementary funding to help promote even more trades.

Alternatively, we could develop a pilot program within the city or region of Kyiv. As a large and economically active city, there are many sources of GHG and non-GHG

emissions that could be the subject of an emissions trading experiment. The experiment could take various forms. For example, the Ukraine could:

- First establish a domestic trading system to establish a proof of concept, and then move into international transactions, or
- Do the reverse and pursue international GHG trading first.

Early Crediting for JI Projects Could Work Nationally or At Any Site

Under current rules, international greenhouse gas (GHG) credit trading for developed countries can only include reductions created after January 1, 2008, unless countries take specific actions to remedy the situation. Therefore, while specific policies might seek to advance early or other legitimate policy actions such as the capture of coal mine and coal bed methane (to prevent the death of miners and to increase mine production), energy efficiency or renewable power (to promote energy independence), no Kyoto Protocol related GHG credits can be generated in developed countries for years to come. Certainly there can be forward trading of 2010 or 2012 GHG-credits, but how can Ukraine jump-start the market and pursue other policy objectives?

One way is for a country to allocate assigned amount units (AAUs) from the first budget period to projects started before the beginning of this period. For Ukraine, such a program might make economic sense. For others, such a program might not.

Problem

Under the Kyoto Protocol, emissions reductions in Annex I countries will be counted starting in 2008. This means that GHG reductions achieved before 2008 will have no value since they are not creditable toward a country's obligation. However, countries have several reasons for wanting to achieve emissions reductions before this date.

How can countries leverage the incentives that the Kyoto Protocol provides in order to monetize GHG reductions before the first budget period (2008-2012)?

The United States has substantial experience with emissions credit and emissions quota trading. Its programs focus on emission generating units and not on down-stream consumers of energy. Therefore, if down-stream users such as hospitals or factories reduce power consumption, the beneficiary of these reductions will be the power generating facility that has fewer emissions due to a reduction in fuel consumption. And less emissions means less demand for emissions quotas or surplus quotas that can be sold. In the context of our example, if a Ukrainian hospital or university installs energy efficient systems, they reduce power consumption, fuel consumption, and can create GHG credits that the power company might sell. The legal entity that installs the equipment, in this case, does not benefit from capturing valuable GHG credits.

Clearly, promoting energy efficiency is a legitimate public policy objective, and encouraging more facilities to do so should be a high priority. Therefore, how can governments add the financial benefits derived from trading GHG credits to the value of energy efficiency? How can we devise a regulatory system that sends the financial benefit that results from GHG sales to the coal mine, the hospital or university since most people imagine the power plant, not the end user, to be the subject of GHG regulations?

Two questions:

- How do we create incentives for early action, and
- How do we create incentives for energy efficiency actions?

A Solution

Assigned amount units (AAUs) are a valuable commodity even before 2008. They can be sold forward to provide incentives for various activities that the government wants to promote or they can be “optioned.” AAUs could also be “sliced-out” of the 2008-2012 budget period and made available for early actions. The figures below provide a visual example of the proposed concept.

A government might create an early action program to prompt early experience with GHG trading or provide an incentive for certain types of activities. One such activity could be early use of energy efficiency.

Outline of One Such Approach

A country could allocate a certain number of AAUs to promote energy efficiency projects in a pilot program. These AAUs would be assigned to investors and developers of energy efficiency according to a predefined formula. For example, each ton of GHG reductions could be given a single AAU. AAUs would have unique serial numbers that would identify them and be used to track them in domestic and international exchange. AAUs that are given to early energy efficiency activities could then either be held in the country or be brought into another country. In either case, the investor in the energy efficiency project would be given a valuable asset as partial payment for the energy efficiency project. This could provide the additional and necessary incentive to interest investors.

An Example

Country X has been given AAUs as shown in Figure 1a. This country does not expect that it will be using all the AAUs to meet domestic emissions during the first compliance period. The country therefore moves 10% of its AAUs to be used before the first compliance period (as shown in Figure 1b). These AAUs are given to projects that demonstrate an energy efficiency improvement in a certain region. Project investors would be paid in the form of Country X’s AAUs that investors could then take and either sell or use to offset their emissions in other countries.

Projects that produce multiple benefits could be targets for the transfer of out-year reductions toward near-interim investment. Promoting reductions of coal mine and coal bed methane, energy efficiency, gas pipeline improvements, and renewable energy are all examples of activities that provide multiple benefits and that should be put on a fast track toward development.

Implementation Mechanisms

There are many ways to develop a GHG trading experiment. Of course, the best way might be to pass a law, but this takes considerable time. Another means to develop such an experiment is to institute a decree from the Cabinet of Ministers. A decree might be sufficient to satisfy some of the pre-conditions that would facilitate an experiment and real commercial transactions. In addition, there are other actions the Cabinet could undertake with regional leaders to facilitate the experiment and establish systems that

would assist Ukraine to fulfill its international obligations under the Framework Convention on Climate Change and Kyoto Protocol.

As noted above, the assistance in meeting certain international obligations would take the form of capacity building, institution building, and developing management systems.

Why is there Interest in Such Pilots and Early Trading?

While the United States is not a supporter of the Kyoto Protocol, President Bush does believe that some action is warranted and believes that companies should seek to register greenhouse gas reductions and seek out inexpensive reduction outside of the US as well as inside of the US. Ukraine represents both a source of investment opportunities in the heat, power, and fuels sector and also is a source of low-cost greenhouse gas emission reductions.

The United States is also a strong supporter of property-rights. Property rights-based environmental programs have been shown to have many advantageous attributes including laying the foundation for more property rights-based systems, and promoting capitalism and democracy. These good outcomes have been a subject of technical assistance and other forms of advocacy by various official arms of the US government.

Conclusions

Nothing gets started without a push. Starting the development of market-based environmental programs outside of the United States has proven to be a difficult process despite the great benefits that result for industry, regulators, and the environment.

The solution to developing these programs is not just working harder, it is also working smarter. One way to proceed is the development of pilot projects or programs and the authors advocate this route for Ukraine.

Figure 1a

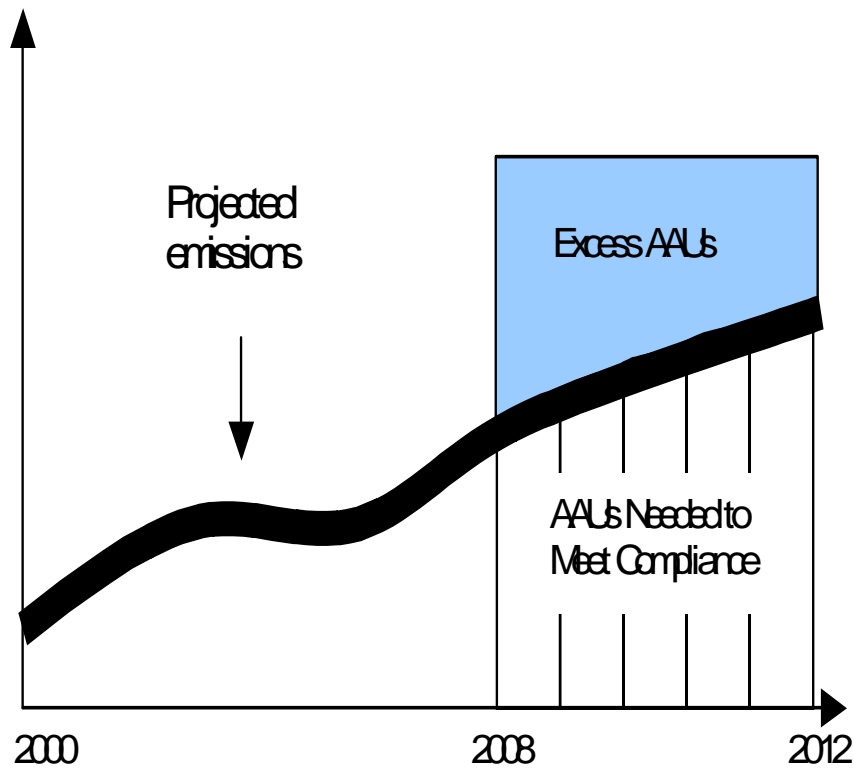


Figure 1b

