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An Overview of the European Union Emissions Trading Scheme

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Good afternoon, Chairman Bingaman and members of the committee. I am Ray Kopp, a senior fellow at Resources for the Future, a nonpartisan, non-advocacy research organization specializing in environment, energy, and natural resource issues. The opinions I offer today are my own and should not be attributed to Resources for the Future.

The purpose of my remarks is to provide a brief introduction to the European Union Emissions Trading Scheme, which goes under the acronym EU ETS.

I will also discuss some lessons one might draw from the EU experience.

The EU ETS is an emissions allowance cap-and-trade system, similar in many respects to the current system used to control sulfur dioxide under provisions of the Clean Air Act.

All cap-and-trade systems have the following in common:

- They establish a cap on annual emissions, identify those entities whose emissions will be regulated, and set a few rules.
- In most contexts, one allowance is required for each ton of emissions, and allowances are usually freely transferable.
- Allowances can be initially distributed in the market through free allocation based on some metric or another, or sold through an auction.
- A key question each system must address is whether allowances that are not used in the year they are issued can be banked for use in subsequent years.

EU ETS Structure

- The EU ETS began in January 2005 and includes the 27 countries of the European Union.
- The program is run in two phases.
 - Phase 1 (2005–2007) was intended to be a trial period to work the bugs out of the system; however, in all respects, it is a mandatory and binding cap-and-trade system.
 - Phase 2 (2008–2012) coincides with the Kyoto commitment period.
 - Specifications regarding future phases have yet to be established, but the program is intended to run indefinitely.
- The cap covers only carbon dioxide (CO₂), although other greenhouse gases (GHGs) may be added in the future.

- The EU ETS is not an economy-wide cap-and-trade system. Rather, it regulates downstream about 12,000 emissions sources, accounting for half of all EU emissions. Covered sources include iron and steel; cement, glass, and ceramics; pulp and paper; electric-power generation, and refineries.
- Transport is not currently included in the system, although the EU will include air transport in 2011.
- Each country submitted for approval plans for the allocation of allowances for Phase 1. The European Commission is in the process of finalizing allocation plans for Phase 2. Allocation plans describe three decisions each country must make.
 1. How much of a country's Kyoto target is assigned to the sectors participating in the trading system. By implication, the remainder of the target must be met by sectors outside the system—for example, transport.
 2. How much of the cap will be assigned to each sector—determining how much of the burden and cost individual sectors will have to bear.
 3. How the sector allocation is further subdivided among individual companies.
- Phase 1 rules allowed countries to auction an upper limit of 5% of the allowances; only Denmark chose to auction the full 5%, the remainder being allocated gratis. More auctioning is likely to occur in Phase 2, where the upper limit on auctioning is expanded to 10%.
- Emissions sources covered by the EU ETS may satisfy their commitments by surrendering allowances in an amount equal to their emissions or may supplement the EU ETS allowances with credits available under Kyoto Protocol rules, including Joint Implementation and Clean Development Mechanism credits.
 - As a result, the price and availability of these Kyoto credits will have bearing on the price of EU allowances.

EU ETS Allowance Market

- Early in Phase 1, allowance trades were handled by brokers outside of formal exchanges. Currently about ½ the trading volume occurs on exchanges and the other ½ over the counter.
- In 2005 about 8 billion dollars of trades took place.
 - By the end of 2006, this had grown to \$24 billion.
 - Trades in the worldwide carbon market for 2006 may be on the order of 30 billion dollars—with the lion's share owing to the EU ETS.
- The current spot price for a Phase 1 allowance is €1.00, or about \$1.30.

- But the price for a Phase 2 allowance on the futures market is €16.35, or \$21.75.

There are several lessons we can draw from the EU experience.

These lessons can be placed in context by considering three features of a cap-and-trade system that are important when evaluating its policy effectiveness.

1. Cap-and-trade systems establish a new class of asset—the emissions allowance—and these assets will have immediate value once the system is established; therefore, initial allocation of allowances is an allocation of wealth.
2. Cap-and-trade emissions-reduction policies impose a cost on society, and once the initial allocation is made, the distribution of that cost will be determined by the market, not government policy.
3. The spot price is a visible signal regarding the current cost of GHG reductions, while the future price reflects expectations regarding future cost and takes into account expectations regarding government policy decisions and the future cost of abatement—closely linked to available abatement technology.

Turning to the Lessons

1. The performance of a cap-and-trade market hinges on accurate monitoring, reporting, and enforcement. At the outset of the EU ETS in Phase 1, many nations lacked reliable data-reporting systems, which in part contributed to extraordinary price volatility.

- The lesson we draw: inclusion of sectors and sources should be preconditioned by the development of strong monitoring and accounting systems.

2. The ability of government to distribute the economic burden a cap-and-trade system will impose on the economy is greatest during the allowance allocation stage. And importantly, the manner in which permits are allocated can alter economic incentives leading to a variety of unintended consequences.

- The lesson here is rather obvious: think very carefully about allocation and keep the allocation rules as simple and as transparent as possible.

3. Allowances are assets that can have significant value. Allowances that have fixed lives, like those of Phase 1, must have asset values that go to zero at their terminal points. This raises difficult issues of asset management for those required to hold allowances.

- The lesson: develop effective banking rules, or least short-term overlapping rules from one phase to the next.

4. Near-term investments in technology needed to radically lower GHG emissions are likely confined to the energy sector, where these investments tend to be large and very long lived.

Allowance prices are intended to incentivize these investments and must have as little political uncertainty as possible. At the current time in the European Union, there is considerable uncertainty concerning the level of emissions reductions that the EU governments will actually require post 2012.

- The lesson again is rather obvious: governments need to be as clear as possible about emissions-reduction targets, the commitment periods need to be as long as feasible—certainly longer than current Kyoto periods—and allowance banking is requirement.

Mr. Chairman, thank you for this opportunity to speak before the committee. I'm pleased to answer any questions you might have.