

# Selling the Greenhouse

By L. Stephen Joyce  
in Prague

As negotiations surrounding the approval of a key amendment to a United Nations convention on lowering greenhouse gas emissions continue, four Central European countries are readying themselves for the amendment's implementation, a process that could generate billions of dollars in revenue for the region.

According to the historic Kyoto Protocol of the United Nations Framework Convention on Climate Change (FCCC), convention parties must reduce greenhouse gas emissions by a fixed percentage over the period 2008–2012 based on 1990 emissions levels. The Czech Republic and Slovakia must reduce greenhouse gas emissions by 8 percent while Hungary and Poland must cut their emissions by 6 percent on average over the five-year period, according to the agreement.

The protocol, agreed on 11 December 1997 in Kyoto, Japan, allows a country exceeding its reduction target to trade or sell its excess emissions reductions to a nation not reaching its own reduction obligation. The protocol refers to this mechanism as emissions trading.

A country might also benefit from a second mechanism in the protocol referred to as joint implementation, which would allow countries

to invest in projects outside their borders and receive emissions credits for the reductions brought about by the projects

when calculating its domestic reductions.

Exactly how these two mechanisms will work has not yet been decided, so it is unclear how these markets will ultimately operate. Can a country with excess emission reductions, for instance, sell these for hard currency? If so, who or what receives that money—a country's general fund, or perhaps the company providing the technology? Will a company reaping foreign investment through a joint implementation program have to give the investor equity in the enterprise? The answers to these and other questions are not yet known. Parties to the convention tried to develop the two concepts during a 2–12 June meeting in Bonn but according to a

United Nations official familiar with the proceedings “progress was slow.” The issue will be raised again at the next Conference of the Parties held in Buenos Aires in November. It will be the fourth so-called COP and thus is known as COP-4 of the FCCC.

## *Economics of enviro restructuring*

Joint implementation is not without its critics—even before it is formally launched. FCCC parties have complained that JI will unfairly transfer environmental obligations from developed countries to developing countries, could limit economic development of poorer countries and might deplete the stock of low-cost reductions available to host countries.

Such was the controversy at the COP-1 in Berlin during 1995 that a pilot phase was launched in order to study its effects. Projects in this pilot phase are known as Activities Implemented Jointly (AIJ). AIJ projects, it was agreed, should bring about real, measurable and long-term environmental benefits related to the mitigation of climate change and be compatible with and supportive of national environment and development priorities.

Central European countries have actively sought projects under AIJ. In September 1994, for instance, Poland set up a national JI secretariat which focuses on developing project selection guidelines, identifying potential projects, developing official reporting methods to the FCCC, opening lines of contact with likely foreign investors, and helping to disseminate information. Other countries are preparing for JI and emissions trading as well, believing regional competition for projects and for selling emissions may emerge.

Emissions trading and joint implementation are intended to lower global greenhouse-gas levels, but the Kyoto protocol is also about money. Though the cost of emissions credits—if sold and not traded—will be set by the market, one FCCC study estimated the price of one ton of emissions may eventually be sold for about \$10. If so, Poland's projected emissions credits by 2000, 154 million tons, could be worth more than \$1.5 billion.

And joint implementation is, on one level, simply another form of foreign direct investment. FDI is music to the ears of countries like the Czech Republic, which recently has been

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shunned by foreign investors when compared to its popularity in the early 1990s. Hungary, whose early rush to privatize was a symptom of the government having little international credit, is another regional country now seeking foreign investment.

Poland is no different. "We have to have additional sources of finances for infrastructure projects. We need more money," a Polish environmental official said in July. His country is particularly anxious to attract projects modernizing the country's energy grid, such as new cogeneration plants or district heating stations. Such investments, he said, will move the country away from coal-fired plants and their attendant sulfur and oxide emissions. Because investors would upgrade energy facilities that would eventually have to be modernized, likely with help from the state, "we are able to save a little bit of money," he added.

Officials even are thinking about JI and emissions trading as an international competitive exercise, with the winner obtaining the most domestic investment and selling any excess credits for the highest cost. At a February joint implementation conference in Prague, a senior Czech environment official said the Czechs will face their toughest competition from Russia because Russia's environment and energy-efficiency infrastructure sorely needs foreign investment, and because the Kyoto protocol only requires Russia not to exceed its 1990 emission limits, unlike Central European countries that must reduce their emission levels.

#### *Case study: Decin, Czech Republic*

The first AIJ project in the Central European region occurred in Decin, Czech Republic, according to Lubomir Nondek, an environmental consultant to the Czech government. This project [originally reported in *E/W Letter*, Jul/Aug 1994, p.1] converted a coal power plant using low technologies into a cogeneration plant fired by natural gas. The project was completed in time to heat living units in Decin, a city of about 50,000 north of Prague near the German border, last winter.

The foreign investors were three United States power companies. The Czech Environment Fund put together a complex package of grants, no-interest loans and interest-bearing loans totaling \$6.56 million, which paid for more than half the project. The city participated in project financing as well.

Nondek declared that though the project suffered administrative setbacks, the technical

and environmental benefits make the project a success because positive, measurable results can be discerned from the project: sulfur and oxide emissions have been significantly reduced, plant boilers are more efficient and the facility's delivery system now conserves more energy. The Decin air, he said, is noticeably cleaner.

Also, for the first time Decin living units on the facility's grid have individual thermostats that in part encourage conservation because people can now turn off their heat. Most housing units in the Czech Republic do not have individual heating thermostats or regulators; in the winter, district heating plants simply pump heat into the system; people opening windows to cool their apartments is not an uncommon site, even in the dead of winter.

Czechs can afford to let money literally slip out the window because energy prices are heavily subsidized by government and industry. The government has for years struggled with the issue of how to raise energy prices to levels representing the cost of production; still, prices remain artificially low due to political considerations. Except, that is, for Decin customers of the modernized plant, who are not subsidized.

The Decin project thus has also introduced market-based energy economics to city residents. The actual cost of producing residential heat is being charged to utility customers, in large part because loans and other financial obligations associated with building and maintaining the facility must be retired. As a result, Decin residents incur some of the highest heating costs in the Czech Republic.

Another more recent and unusual Czech AIJ project is one financed by the government of the Netherlands, which paid to reforest national Czech parklands. The forests absorb greenhouse gases out of the air through photosynthesis. The project has been "very helpful to the most damaged parts of the park," Nondek said.

#### *A reduction progress report*

Because their industrial infrastructure is in need of modernization, especially in terms of energy efficiency and energy infrastructure modernization, Central European countries will likely welcome joint-implementation projects, especially in the area of fuel conversion projects.

FCCC data compiled this year predicts the Czech Republic, Hungary, Poland and Slovakia each will reduce total greenhouse emissions beyond the levels required by the Kyoto Protocol. The FCCC recognizes its estimates will be affected by several factors, such as economic

activity and marginal costs of production, but the report nonetheless estimates that both the Czech Republic and Poland will cut greenhouse emissions by about 25 percent during the protocol period. Slovakia (decrease of 16 percent) and Hungary (12%) also will be net emissions creditors, according to the report. Indeed, Central European delegations traveled to Kyoto in 1997 prepared to accept much deeper cuts than 6–8 percent, but agreed to the less significant cuts as part of a larger reduction settlement, according to one Central European environment official who helped negotiate the protocol in Japan.

First, however, governments must finalize the two mechanisms and approve the Kyoto Protocol in its entirety. Environment officials in the Czech Republic, Hungary Poland and Slovakia said their governments are inclined to approve the protocol, but in some cases additional study is needed. “[W]e have to make more analysis,” said Polish Environment Ministry official Eva Anzorge, “but I think it will be accepted.” Slovakia is now discussing whether to implement a national trading mechanism between Slovak companies in order to reach a specific national goal, and after this goal is reached the country could then trade or sell emissions to other countries, Slovak environmental official Ivan Mojik said. *E&H*

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