Like the U.S., we have a federal program to promote the conversion of oil-fired thermal plants to coal. It is coupled with a clear statement that any increase in the use of coal must not harm the environment. Our current administrative target (it's not a legal requirement) is to reduce SO2 emissions by 50 per cent when converting a plant from oil to coal. We believe, and economists bear out the truth of what I am saying, that there is such a large economic benefit in switching from high cost imported oil to domestic coal that we can more than afford the costs of making sure that we do not harm the environment any further in the process. Indeed we can afford to help the environment.

Action needed at source

These moves are useful but similar actions are needed in the United States. The challenge, in addition to promoting the much needed political will, is to create the necessary mechanisms to do the job. For the most part, the approach that has been followed in both countries to controlling air pollution from existing operations is to set an ambient standard – to measure how much concentration of a pollutant there is around a plant and to set limits on that. However, in acid rain you're not dealing with a concentration around the plant but with a pollutant that moves through the air – air is only the medium. The real problem is on the ground or in the water in a distant place. Thus, emissions from one state might not violate ambient air standards in another, but they could contribute significantly to harmful acid deposition. So a new concept is needed, or perhaps it's an old concept broadened to include existing sources. I refer to the promotion of control at source through technologically-based emission limits on each plant. The philosophical basis for such an approach can be stated very bluntly. The real costs of an economic activity, such as power production, should be borne by those benefiting from that activity and not spread around the countryside in the form of environmental damage. In economic jargon, the costs are internalized rather than passed on to other economic sectors or to other political jurisdictions.

Trade-offs unacceptable

As for cost-benefit analyses, these are designed to allow for trade-offs. Within a nation, such trade-offs may be acceptable, although when more than one state is involved they can become very difficult. Across an international boundary they are totally unacceptable and let me tell you why. According to the principles of cost-benefit analysis, the higher the costs of preventing damage, the more damage is justifiable. Applied to acid rain, that means that the higher the costs of controlling emissions in the United States, the more damage to Canadian lakes, forests and other interests would be justified.

To adopt such an approach would be a denial of the very principles which have governed the environmental relationship between the United States and Canada for seven decades. The essential principle, embodied in the Boundary Waters Treaty of 1909, is that we should not pollute each other – "to the injury of health or property". That same concept was specifically applied to air pollution in the findings of the arbitration tribunal dealing with damage to U.S. crops caused by sulphur dioxide from a smelter in Trail, British Columbia. It is also reflected in the Great Lakes Water Quality Agreement and, on a multilateral basis, in Principle 21 of the 1972 Stockholm Declaration.