
By J. Kevin Healy

The State of New York and its municipalities have the opportunity to assume a leadership role in the worldwide effort to alleviate the changes that are now taking place to the earth's climate. A report resulting from a two year effort that has come to be known as the "Symposium on Economic Development and Climate Change" (the "Symposium")\(^1\) details the steps to be taken by New York in seizeing the initiative in the climate change mitigation effort. The recommendations incorporated into the report, which include a mix of administrative and regulatory strategies, stem from the recognition that the need to allay climate change will present significant economic opportunities. The fundamental message of the Symposium is that New York should pursue these opportunities, and turn the effort to reduce the global emission of greenhouse gases into an engine for business development and energy cost savings.

I. BACKGROUND

Evidence is mounting that the overall temperature of the earth is on the rise,\(^2\) and that the reason for the warming, at least in part, is human activity.\(^3\) There are strong indications that portions of the Antarctic ice cap are shrinking, that permafrost is thawing, and that various glaciers around the globe are in retreat. Moreover, weather patterns are shifting in a manner consistent with the computer models that link climate change to the emission of greenhouse gases.\(^4\)

The principle behind these computer models is straightforward. According to the "greenhouse theory," emissions from human activities, such as combustion of the fossil fuels that have been used since the start of the industrial revolution more than 200 years ago, have caused a dramatic increase in the concentration of carbon dioxide (CO\(_2\)), methane, nitrous oxides and other "greenhouse gases" in the atmosphere. Since these compounds hold heat more effectively than other atmospheric components, the "greenhouse" that blankets the earth has become more efficient. As a result, more

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solar energy is being captured and retained, leading to an increase in average global temperatures.

Although this basic science is generally accepted, there has been much debate over the timing and consequences of the greenhouse effect. In recent years, however, a technical consensus has emerged that the next several decades will experience the increasingly rapid transformation of the earth's climate. Thus, the World Meteorological Organization (WMO) has stated unequivocally that "global temperatures during the next century are expected to rise to levels that have not occurred on the earth for millions of years." Many scientists are warning that severe consequences will result from these changes. Among the more disturbing predictions are:

- an increased potential for the spread of vector borne diseases such as malaria, yellow fever, and encephalitis;
- increased rainfall in some areas, and droughts in others, which would shift significantly the zones of agricultural productivity, causing widespread social, political, and economic dislocation; and
- the extinction of those plant and animal species that are unable to evolve quickly enough to adapt to climate changes around the globe.

Some meaningful progress has been made on the international level by governments to develop systems for dealing with this potentially enormous problem. Multinational negotiations convened periodically over the course of the last decade culminated in the issuance of the “Kyoto Protocol to the United Nations Framework Convention on Climate Change” in 1997. The “Kyoto Protocol,” which was signed by the United States in November 1998, sets binding targets for the reduction of emissions of six greenhouse gases by developed nations (referred to in the Protocol as “Annex I Parties”) and provides precise guidelines for countries to follow in reaching the required emissions levels. The Kyoto Protocol’s targets are aimed at rolling back emissions of the specified compounds to 1990 levels after 2008. Although mandatory emission budgets are established under the treaty, a good deal of flexibility has been built into the agreement regarding achievement of those binding commitments. For example, countries subject to mandatory budgets would be permitted to trade emission credits, so that reductions can be achieved at a cost dictated by the open market. Moreover, participating countries may obtain credit for reductions achieved through “joint implementation” projects undertaken in other areas of the world. Under such an arrangement, a project reducing emissions in Brazil, for example, could be credited to the United States, if a domestic company were to sponsor the project that leads to the reduction.

For the Kyoto Protocol to take effect, at least 55 countries must adopt the agreement, including a sufficient number of the industrialized countries to account for 55% of 1990 CO₂ emissions. Moreover, the Protocol’s commitments will not be binding on the United States unless it is ratified by the Senate. Additionally, even after congressional approval, federal legislation would be required for implementation of the Protocol’s commitments by controlling domestic greenhouse gas emissions. While the prospects for ratification and implementation of the Kyoto Protocol are currently uncertain, it is likely that some form of mandatory greenhouse gas emission controls will be put into place in the future.
II. THE SYMPOSIUM EFFORT

In 1996, the Symposium co-sponsors set out to put together an economically responsible agenda of measures New York could take to address the issue of climate change. This initiative was undertaken in recognition of a number of facts concerning climate change.

- Although the problem is one with global implications, many of the actions that could be taken to address it fall within the jurisdiction of state and local authorities.
- The primary source of greenhouse gas emissions in New York is the combustion of fossil fuel for the purpose of producing energy—an activity that represents a significant cost of doing business in New York State. As a result, appropriate measures that are taken to improve energy efficiency could have both economic and environmental benefits.
- As with any problem, economic opportunities can be found in fostering the businesses that could provide solutions to climate change. Therefore, New York could draw on its resources as the commercial and financial capital of the world to become a center for the implementation of strategies that will alleviate greenhouse gas emissions worldwide.

After several months of discussion, the co-sponsors developed a number of preliminary proposals aimed at (i) making New York the center for the trading of rights to emit greenhouse gases, including the development, production, and export around the world of the technology needed for the efficient generation and use of energy; and (ii) transforming New York into a model of an energy efficient commercial and industrial economy. The report was distributed, initially, in draft form to leaders of state government, local governmental representatives, public interest organizations, and representatives of the environmental, utility, construction, manufacturing, transportation, planning, consulting, and academic communities. It was then reviewed and refined at a conference, convened in June 1998 at the Association of the Bar of the City of New York, that was attended by approximately 100 representatives from these groups.

III. THE PROPOSED INITIATIVES

The report proposes a broad array of initiatives in the areas of (A) economic development; (B) public sector initiatives; (C) utilities/energy efficiency, and building design; (D) zoning and land use; and (E) education. Some of the specific proposals for action in these areas are discussed below.

A. Economic Development

The report first recommends that a task force consisting of economic development experts, representatives of the financial and banking communities, environmental consultants and lawyers in the environmental, financial, and securities fields be organized to assist in the creation of a workable, effective emissions trading program. The purpose of this task force would be to identify and help resolve roadblocks which could impede the creation of a viable emissions trading industry centered in New York. Additionally, this group would assist in the development of the documentation and tracking systems necessary for trading emissions on a global scale. One initiative specifically recommended by the report is the development of computer software programs that would be made available to both small and large businesses to simplify the calculation, documentation, and tracking of emission reductions.

The report further suggests that New York build on its progress in developing (i) "clusters" or "incubators" for research and development (R&D) and (ii) manufacturing facilities to create additional incentives for the development of businesses producing photovoltaics, clean and efficient biomass, and fuel cells for export around the world. This recommendation arises from the understanding that the economies of the developing world will inevitably have — and are entitled to — ample power to support expansion. They will get this power by either the combustion of fossil fuels, in which case greenhouse gas emissions will skyrocket, or by emerging alternative energy technologies. Thus, the potential for the development of a virtually limitless market for these emerging technologies could support substantial economic activity in New York. The report also recommends creation of a task force comprised of business, university, and government representatives, along with experts in the areas of economic development, venture capital financing, and energy efficient technology, to assist in nurturing these industries in New York.

Similarly, there is a recommendation that New York State build upon its achievements to date and become a primary location for factories that produce electric, hybrid and low fueled vehicles, and/or their component parts. This effort, according to the report, should be coordinated jointly by the Low Fuel Technology Center (a non-profit enterprise owned by the New York State Technology Enterprise Corporation), New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), and the Empire State Development Corporation (ESDC).

Moreover, the Symposium co-sponsors suggest that incentives be created for New York companies to achieve "early reduction" of greenhouse gases in advance of any mandate stemming from the Kyoto protocol, and that an emissions credit "registry" be established that would document reductions achieved. The report recognizes the work New Jersey has already accomplished in this area, and suggests that New York join with New Jersey to establish a regional emissions credit registry. It also recommends that registry information be made available to the public, possibly via the worldwide web, allowing consumer access to any particular company's practices, progress and overall performance.

Other recommendations made by the report include:

- New York State officials, in consultation with the financial sector, should examine how to promote "joint implementation" arrangements, whereby New York businesses would invest in capital projects aimed at reducing greenhouse gas emissions in other countries, and get credit for those reductions.
The infrastructure needed to support low and zero emission vehicles including, but not limited to, the refueling and re-energizing stations necessary for the convenient use of such vehicles, should be put into place by New York. This recommendation anticipates that such vehicles will be in production in the near future, and that consumer acceptance will depend, in part on issues of convenience. For the same reason, the report recommends that training programs should be made available to mechanics to instruct them in the repair and maintenance of low and zero emission vehicles.

The development of private sector service companies providing comprehensive energy efficiency services to consumers should be encouraged by the State.

The State should ensure that architects, contractors, electricians, HVAC technicians, and plumbers receive training in (i) the importance of energy efficiency to the world’s environment; (ii) the economic benefits that could accrue to their customers from the installation and utilization of efficient appliances and fixtures; and (iii) the state of the art technology in the area of energy efficiency within their respective trades. Those who complete the training should receive some form of recognition.

B. Public Sector Initiatives

The Symposium’s initiatives in the public sector field focus primarily on efforts to promote energy efficient transportation systems and public buildings. Numerous capital projects are endorsed which, if implemented, would create a seamless system for the movement of goods and people in and around the New York metropolitan area. Among the recommended transportation improvements are:

- Construction of a cross-Hudson rail freight link between Brooklyn and New Jersey, in order to resuscitate rail transport as a means of moving freight in Queens and Long Island.
- Improvement of mass transit across the Hudson and East Rivers, so that Rockland County, New Jersey and Long Island commuters have better access to midtown and lower Manhattan.
- Creation of rail links between Penn Station, the Port Authority Bus Terminal and Grand Central Terminal.
- Rail access to all New York City area airports.

All of these projects are currently being considered by the relevant transportation agencies, and the co-sponsors recommend their vigorous implementation, to the extent funding can be made available.

In addition, the report recommends considerably more modest improvements for the transportation sector, such as:

- Establishment of a network of transit services, such as shuttles or jitneys in suburban neighborhoods, to bring passengers to railroad and express bus stations.
- Creation of administrative mechanisms to provide for coordinated fares and one-ticket access for all public transit across jurisdictional lines, facilitating rail travel throughout the metropolitan area and the northeast (e.g., establishment of an “E-Z pass” system for rail, bus and subway travelers).

C. Utilities/Energy Efficiency and Building Design

The co-sponsors expressed their concern that the utility industry restructuring currently underway could result in a nationwide increase in greenhouse gas emissions, by shifting energy generation from cleaner New York-based utilities to greater polluting facilities located in other areas of the country. They called for a report to be prepared jointly by the Department of Environmental Conservation (DEC) and the Public Service Commission to discuss how deregulation can be accomplished without increased emissions. They further suggested that New York press for federal controls—such as a cap and trade mechanisms—to ensure that emissions rates are comparable among utilities nationwide. The report also recommends:

- Regulatory and financial inducements for utilities to become more energy efficient;
- The elimination of unwarranted barriers to distributed generation, including any undue interconnection standards, stand-by charges or exit fees; and
- The removal of regulatory barriers that inhibit the bundling of electrical services with other services such as gas, cable, and telephone.

With respect to energy efficiency in public and private buildings, the report suggests the following:

- All newly constructed public buildings in the State of New York—without exception—should be energy efficient “green” buildings.
- The New York State energy laws should be amended to require pre-sale energy audits and disclosure of annual energy costs during real estate transactions involving industrial, commercial, and multi-family residential buildings. With this information available, the co-sponsors anticipate that the market would dictate whether and how energy-related improvements should be made.
- The NYPA should create a revolving fund through bonds or cash reserves to fund energy efficiency, fuel cells and photovoltaics in public (state, county, and municipal) buildings and facilities throughout New York State.
- NYSERDA should establish procurement specifications relating to energy efficiency for equipment and fixtures purchased by New York State and the political
subdivisions of the State. Agencies should be required to procure equipment meeting those specifications.

- All existing public buildings, including space leased by governmental agencies, should be equipped with energy efficient fixtures and systems, to the extent it is economically advantageous to do so, under principles of "life cycle" cost analyses.

- "Findings" should be issued subsequent to the preparation of an environmental impact statement (EIS) under the State Environmental Quality Review Act (SEQRA) that the project analyzed incorporates cost-effective, energy-efficiency measures into its design and construction to the maximum extent practicable, taking into account social, economic, and other essential considerations. Although energy related issues must now be discussed in an EIS, such issues are routinely given short shrift because no findings that address them are required.

- A system of incentives such as tax breaks or zoning bonuses should be created to promote the development of "green" buildings by the private sector throughout New York State. In particular, the report urges enactment of currently pending "green" buildings legislation formulated by the Environmental Business Association of New York State.

- The New York State Energy Construction Code should be updated every two years to reflect advances in energy efficient technology.

- A "Renovation Energy Code" for projects not covered by the Energy Code (for example, where less than 50% of any building system is being altered) which takes into account the problems and opportunities that are specific to renovations should be developed by the State.

- Energy efficiency review should be made part of the building permit application process.

- Regulatory changes should be put into place to require the electrical submetering of commercial and residential buildings, so that tenants have the financial incentive to conserve electricity.

D. Zoning and Local Land Use

The most significant measures recommended in the report, with respect to zoning and land use, are intended to minimize urban and suburban sprawl, and promote energy efficient development. One suggestion is for the creation of mixed use districts by local governments that would allow residential uses to be built adjacent to commercial uses. The report also recommends that State enabling laws authorizing planning boards across the state to impose energy efficiency standards for new development should be adopted. These standards would encourage appropriate building orientation, maximum use of natural light for indoor lighting, and energy-efficient landscaping. In addition, local governments are urged to promote the use of cluster zoning that would achieve the purpose of district heating and cooling and would allow for energy conservation. The report further suggests that the Department of State draft model zoning and planning regulations which, if adopted by municipalities, would induce the optimum use of public transportation for developments, and establish preferential parking for alternative fuel and low emission vehicles.

As New York City is visited each year by millions of foreign tourists and business travelers, the co-sponsors believe that the City, by its example, is uniquely capable of leading the world towards energy efficiency. An aggressive campaign—supported by a partnership of the public and private sectors—is suggested, to line the streets of New York City with mature trees, and to "green" the roof tops of every appropriate building.

E. Education

The co-sponsors have concluded that students must be well informed about the prospect of climate change and be prepared to meet the environmental and economic challenges that will result from this transformation. Creation of a task force is recommended to: (i) determine how climate change should be incorporated into the current curriculum at all school levels, and (ii) develop models for "hands-on" energy efficiency projects that would result in tangible fuel savings while providing children with a practical understanding of the connection between energy efficiency and protection of the global climate.

IV. NEXT STEPS

The co-sponsors of the Symposium are calling upon the Governor, legislators, and local leaders to adopt the agenda set forth in the report as the policy of the State of New York and its subdivisions. They urge that those initiatives capable of being implemented through executive orders, policy directives, or other informal action go forward without delay, and that appropriate regulatory or legislative steps be taken to implement each of the others. Of course, the co-sponsors cannot expect that all of their recommendations will be embraced without further discussion. They do expect, however, that the report in its entirety will be given prompt and thorough consideration by governmental leaders at all levels. The State will have the opportunity to meet this expectation in the coming months, since DEC and NYSERDA recently have obtained federal funding to formulate their own climate change action plan for the State. The work the Symposium has accomplished thus far can provide the blueprint for this governmental effort.
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1 The Symposium is co-sponsored by the Association of the Bar of the City of New York, through its Environmental Law Committee, International Environmental Law Committee, and Transportation Committee; Columbia University, through its Sustainable Development Initiative of the Graduate School of Business; the Environmental Business Association of New York State, Inc.; the League of Women Voters of New York State; the New York State Bar Association, Environmental Law Section; the New York Academy of Sciences; the New York League of Conservation Voters; the Pace Energy Project of Pace Law School; Pace University; Partners for Sustainable Development; and the Westchester Land Trust.


6 See IPCC Second Assessment Report.


