

**National Advisory Council
for Environmental Policy and Technology**

September 30, 2002

Governor Christine Todd Whitman
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Governor Whitman:

I am pleased to present to you a pre-publication copy of our most recent report, *The Environmental Future: Emerging Challenges and Opportunities for EPA* and an advice letter on a process that EPA might employ to better identify emerging trends and issues.

The Environmental Future report offers a framework to analyze the environmental implications of trends in world population and demographics, natural resources, science and technology, information management and access, economics and commerce, and politics and social evolution. There are sixty recommendations in the report on opportunities for EPA to address changing environmental conditions.

The NACEPT Council believes that a viable futures process is critical to the ongoing effectiveness of EPA. Futures analysis, the art and science of anticipating nascent environmental issues, can help EPA prevent potential problems rather than responding after the fact. Many assumptions presiding over government practices today may not apply in the future, particularly in the areas of science and technology. The speed at which science, technology, and other drivers are advancing, threatens to surpass the government's ability to adapt. To remain credible and effective, government must anticipate such advances, and carefully consider future implications of decisions made today. Failure to integrate futures thinking into daily decision-making increases the risk that EPA will lose influence and relevancy in its goal of environmental protection.

We encourage you and EPA's senior leadership to continue to refine the Agency's futures analysis capabilities. Thank you for giving us the opportunity to advise you on this engaging topic, and we look forward to your response to these recommendations.

Sincerely,

A handwritten signature in cursive script that reads "Dorothy Bowers".

Dorothy Bowers, Chair
National Advisory Council for
Environmental Policy and Technology

Enclosures

cc: Eileen McGinnis, Chief of Staff
Chief Financial Officer
Assistant Administrators
Associate Administrators
Regional Administrators
Staff Office Directors

National Advisory Council for Environmental Policy and Technology (NACEPT)
Emerging Trends and Issues Advice Letter

The following advice letter was approved by the NACEPT Council on July 18, 2002.

The Emerging Trends and Issues Workgroup of the National Advisory Council for Environmental Policy and Technology (NACEPT) met with foresight specialists from the U.S. Environmental Protection Agency (EPA) and other government agencies at the Woodrow Wilson Center in Washington, DC on June 6, 2002. From this meeting, previous research and discussions, the Workgroup developed recommendations on a process that EPA might employ to better identify future emerging trends and issues. The Workgroup's observations complement NACEPT's recent report "*The Environmental Future: Emerging Challenges and Opportunities for EPA.*"

During the June 6th meeting, the Workgroup concluded that a viable futures process is critical to the ongoing effectiveness of EPA. We also concluded that NACEPT could best support the Agency by suggesting attributes of a viable futures process, rather than actually designing a process for EPA. Being overly prescriptive at this point would limit value added by agency input and constrain the flexibility needed to meet changing environmental and institutional dynamics. NACEPT does, however, offer its continued support in developing and implementing an EPA futures process.

The NACEPT Council believes that many assumptions presiding over government practices today may not apply in the future, particularly in the areas of science and technology. The speed at which science and technology are advancing challenges, and, in many cases, threatens to surpass government's ability to adapt. To remain credible and effective, government must anticipate such advances and carefully consider future implications of decisions made today. Failure to integrate futures thinking into daily decision-making increases the risk that EPA will lose influence and relevancy in its goal of environmental protection.

We have identified a number of potential barriers to optimally integrating futures into the Agency's structure and operations:

- As is the case with many governmental agencies having finite resources and expanding responsibilities, there is little time or incentive for EPA staff to lift its eyes from the day-to-day workload long enough take a strategic look toward the future.
- The stove-pipe, programmatic nature of EPA's enabling legislation and resultant organizational structure tends to thwart broad-based dialogue on shared needs and overarching developments.
- The Office of Management and Budget (OMB) and administrative constraints limit the expenditure of funds not directly associated with specific authorized programs.

- Years of litigation and court-imposed deadlines often have driven specific Agency policies and programs without regard to broader Agency objectives.

In spite of these barriers and to the credit of the Agency and its staff, there are many "pockets" of foresight expertise and activity within EPA. Unfortunately, these "pockets" are generally isolated from one another, disconnected from the policy-making process, dependent upon employee interests rather than Agency support, and too often unnoticed and ephemeral.

Perhaps the greatest challenge to better integrating futures into EPA operations is a structure and culture rooted in the regulatory paradigm. Too often, it is assumed that the only way to effectively deal with environmental problems is to regulate. Agency staff, Congress, and members of the regulated community are often comfortable with, and deeply invested in, a regulatory paradigm that is relatively predictable, legislatively authorized and constrained, and built upon well-defined relationships.

Even at its best, the regulatory paradigm will prove an inadequate framework for EPA as focus shifts from permitted to dispersed sources and from domestic to global pollution. The regulatory paradigm tends to be reactive and subject to temporal economic and political pressures. As such, it will likely prove ill-suited for addressing long-term environmental behaviors and for transcending short-term regional or national interests in deference to overall, long-term good. Effective environmental protection will always include regulation, but it will increasingly require heightened technical capacity and an improved means to inform a diverse population of stakeholders about the consequences of environmental insult and practicable alternatives.

As science and technology continue to advance, the subtlety and complexity of environmental stressors will be revealed at an exponential rate of speed. EPA will be called upon to respond in a timely fashion to emerging understandings of health and environmental pathologies. At the same time, impacted industries and economies will demand some reasonable measure of proof before incurring costs related to altering facilities or operations. To the extent that EPA can anticipate and monitor scientific and technological advances, it can better position itself to act in a manner that is both timely and justifiable.

Anticipating and monitoring environmental challenges and opportunities requires a systemic and strategic commitment to futures analysis. EPA must have the institutional courage to anticipate and prevent significant environmental hazards rather than responding after the fact. Toward that end, NACEPT respectfully offers the following advice to the EPA on the characteristics of a process to identify emerging trends and issues:

- EPA should seek appropriate amendments to its enabling legislation authorizing the Agency to fully embrace a futures strategy. At the same time, the need for EPA to engage in futures analysis is so evident and urgent that the Agency should, to the greatest degree practicable under current authorizations, move forward with all due speed to integrate futures analysis into its work and strategic thinking.

- EPA should develop and implement a futures strategy that is comprehensive, continuous, and institutional. Like a good radar system, EPA's futures strategy should continuously scan the horizon in all directions for emerging environmental challenges and opportunities.
- EPA's futures strategy should be vertically and horizontally integrated throughout the Agency and among its public and private sector partners. A broad, deep, interconnected futurist activity within and outside the EPA will maximize the Agency's ability to anticipate and respond to changing environmental dynamics.
- At a minimum, EPA should implement a futures strategy that includes Scanning, Scenario Development, and Dephi (Expert) Panels. Each of these elements will only be as strong as its complement of participants.
- EPA must not be precipitous in its actions, but neither should it let the lack of perfect data paralyze efforts to protect the environment. The Agency should actively work with the scientific community and marketplace to encourage development of promising science and technologies. The Agency also should explore opportunities with the social science community to seek effective incentives for improved patterns of social behavior that will result in greater protection of the environment.
- EPA should create incentives and recognitions to encourage Agency managers, staff, and partners to engage in futures analysis and discourse. Participants in the process should be demographically and experientially diverse in order to bridge the stovepipe orientation of EPA's architecture.
- EPA should make a targeted effort to include staff members who are familiar with emerging technologies and computer applications in its futures work. To insure that those who will ultimately live with the consequences of today's decisions have an adequate voice in the process, the Agency may wish to consider soliciting input from college students and even younger-aged citizens interested in environmental futures.

In closing, the NACEPT Council believes that EPA will face growing challenges in connecting the dots that link science, technology, economics, devolution and globalism to environmental protection. The Agency must develop a reliable mechanism for raising futures issues, supporting broad-based consideration of those issues, and framing that consideration into effective policy decisions. Failure to connect the dots leads to environmental surprises and a decline in public confidence. Looking to the future creates a shared vision and brings greater wisdom and cooperation to the decisions we make today.

NACEPT stands ready to assist EPA in meeting this challenge and would be willing to continue to focus on this topic or particular elements as the Agency may wish. We look forward to receiving guidance as to how NACEPT can be of the greatest assistance at this time.

