Date: November 1, 2001
To: Tim Wirth
From: John Steinbruner
Re: Vision of the Strategic Problem

In the aftermath of September 11 United States government officials have repeatedly stated that the campaign against terrorism will be lengthy and difficult. The implication is that the results are not likely to be decisive anytime soon. If that assessment is correct, there is a further implication not yet prominently mentioned. A sustained campaign with any prospect of eventual success will certainly require substantial elaboration of existing policy and probably very significant revision. It is prudent to assume, in fact, that the United States will have to devise a new security strategy, different in character and more comprehensive in scope than the improvised reactions we are currently undertaking.

If so, that is a problem that confronts the entire society, not just the government. The initial impetus moreover, will almost certainly have to be developed independent of the government. It is the nature of government to be entangled within the presumptions of existing policy and to be resistant to strategic innovation.

At the outset it is, of course, difficult to visualize the eventual result of a major policy innovation. In this case, however, basic features of the problem are reasonably apparent as are some of the major implications. Terrorism is certainly embedded in the process of globalization, and in all probability it is a symptom of serious pathology in that process. Effective response to terrorist incidents cannot be separated from the larger problem of responding to the central issues of globalization. The most relevant of these have to do with energy policy.

Basically the current commitment to oil as an energy resource has become strategically dangerous, a fact that market conditions will not register until it is too late. In the short term the political and economic dynamics resulting from that situation are pumping money into societies that are not able to direct it to broadly equitable benefit. The process corrupts their governments, alienates their citizenry and generates various forms of civil violence including terrorism. More generally it undermines basic legal standards that are truly vital for managing the global economy. In the longer term - five decades or so - that problem connects very directly to the looming issue of managing global geology. In particular it is now reasonably evident that human induced carbon emissions must be held below the level of 500 ppm by 2050 if the possibility of catastrophic shifts in global climate patterns is to be reliably avoided. In order for that to occur, the technical base for energy production will have to be transformed from approximately 15% non-fossil fuel at the moment to 80% or more. The technologies necessary for accomplishing this have been identified. They are the same technologies that would have to be developed to reduce global dependence on oil, and the time scales of the two problems intersect.

The argument, then, is that the response to terrorism and the response to global warming require a coordinated energy transition. If the transition is to be effective in security terms, moreover, its benefits will have to be equitably distributed. The policies and institutional arrangements that would be required to develop appropriate energy technologies on the schedule required and to work out the distributional effects have yet to be created. That is the core of the strategic problem.

Basic Features of Globalization

Admittedly the word globalization is itself considered contentious and its implications even more so. Nonetheless there are some determining facts whose consequences may be unwelcome but are not obscure.
One of the most important of these facts has to do with the widely noted phenomenon of information technology. Over the past five decades there have been very large efficiency gains in the handling of information. The costs of storing a unit of information and of processing it at a given location have declined by a factor of 100 million for some important applications and continue to decline. The cost of transmitting a unit of information over long distance has declined by a factor of a million and also continues to decline. These advances have enabled human organizations to operate on a global scale as they are increasingly doing. It should not surprise us that a spontaneous process of major significance is emerging from a technical revolution of that magnitude.

Simultaneously there has also been a surge in the total human population and a resulting increase in the aggregate effects of its activities. Since 1950 the number of living human beings has increased by one billion every 12 to 14 years. Barring some cataclysm, that process will continue through at least 2025. There are, moreover, two notable distributional features of this surge. More that 97% of the population concentration is shifting from 2/3 rural in 1950 to what is projected to be 2/3 urban by 2025.

So far at least the pattern of economic growth associated with these events has been disproportionately concentrated at the top of the economic spectrum. At the bottom, where virtually all of the population surge is occurring, there has been a net decline in standard of living over the course of two decades, at least in the United States where measurement of that somewhat elusive notion is most advanced. That pattern poses fundamental problems of social equity. Its indefinite continuation would presumably pose grave dangers to the basic consensus required to operate any society.

If those dangers are to be mastered, then the apparent decline in the economic fortunes of the poorest populations will have to be reversed, and there are in turn serious implications of that basic criterion. Total economic product will have to increase by a factor of five over five decades if comprehensive improvement is to be achieved. Total energy production will have to increase by a factor of three and food production will have to double. All of these requirements will have to be met as the energy transition is being accomplished.

Current market rules will not generate the necessary technical transformation on that schedule, indeed will present major resistance on behalf of fossil fuel technologies. Although the transition will ultimately have to be accomplished through market processes, the initiation of it and basic elements of design are necessarily matters of public policy - global public policy.

So What?

The first step presumably is to present the problem and specify its major implications convincingly enough to induce a sustained and productively evolving public discussion. Transformations of the magnitude required do not occur without broad public involvement. Many relevant elements of such a discussion already exist, of course, but a conception of the problem has not emerged with sufficient clarity to provide an organizing focus. The many issues of technical assessment, economic analysis, institutional design and political reformulation have not been assembled into the conceptual equivalent of a critical mass. In order to do that one has to command the time and attention of capable people in a fairly large number of diverse specialties, induce them to make the effort to comprehend each other, and hope that a productively detailed vision of the problem emerges from it. I can testify that such an enterprise is not created in the course of an exploratory meeting or two. Since there are many uncertainties involved, chances of success would presumably increase if there were several independent efforts of that sort - at least more than one.

I hope you will consider initiating efforts of this sort. I believe you are in position to do it, perhaps uniquely so.