A Call to Serve

ONCE BARACK OBAMA BECOMES THE 44TH PRESIDENT OF THE UNITED STATES IN JANUARY 2009, he will, sooner or later, appoint individuals to science and technology policy positions within the executive branch of government. It seems as though every science- and engineering-related think tank either has published, or shortly will, a report calling on the new administration to appoint these people quickly and give them the authority and tools to do their job.

But it is not just an administration choice; qualified scientists and engineers need to be willing to take those jobs. The quality of the decisions and actions of an administration directly depends on the quality of those appointees and others who serve. Our premise is that every engineer and every scientist ought to include service to their country in their career plan.

Too often we have heard “I am too busy,” or “my research is my service to the country,” or various disparaging remarks about government bureaucrats and not wanting to be associated with them. There are several reasons why technically literate people should serve. First, they are needed. The world is more technologically sophisticated than it has ever been, and today most public policy issues have technical dimensions. Without sound technical input, some bad public policy will result. Without unrelenting oversight by individuals with technical expertise to ensure sound implementation, foolish actions will be taken.

The U.S. population broadly supports the nation’s research and, frankly, in return the research community owes it to society to ensure that the best possible policy decisions are made. And there is a self-interest factor. This community believes that increased support for research would benefit the nation in the long term, but that case needs to be made from within the government as well as from the outside. The same argument is valid for other nations as well. Lastly, government service can be intellectually interesting. Executive agencies have resources to deal with problems. The challenge is to address them creatively and effectively.

Scientists and engineers think about problems differently. For example, lawyers, who disproportionately populate government positions, are trained to marshal an argument to support a predetermined conclusion (e.g., the client is innocent). In contrast, scientists and engineers are taught to analyze and design so that the outcome is not predetermined but is derived from the constraints of the problem. They collect relevant information, and only solutions that fit the data are acceptable. Scientists and engineers also think in terms of the total problem—for today and for tomorrow. An engineer will design a bridge to be taken down cost-effectively at the end of its life. This culture of thought and analytic tools and decision-making methods needs to have a stronger influence in decisions made about issues that at their root involve science or technology.

So how might one try out such service? One approach is to volunteer to advise some element of the government. Once a person is seen to contribute, they are increasingly called on to advise at higher levels. This can lead to appointment to more senior advisory bodies. Alternatively, an individual can apply to be a program officer in a federal or state government agency. Universities routinely grant leaves of absence for such service. Although one does not begin as the head of an agency, these program officer positions wield considerable resources and can materially address important challenges.

We believe that the scientists and engineers of all countries need to step up. Every one has a contribution to make. Shouting from the sidelines does not work. And if the technical community does not engage, we will get what we deserve.

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