

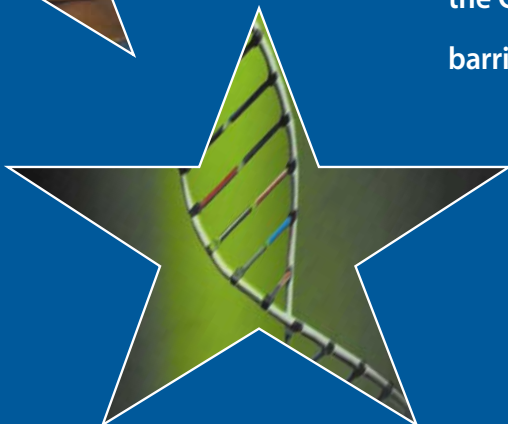
# Science and Technology

## in the National Interest

### THE PRESIDENTIAL APPOINTMENT PROCESS



To create a stronger economy, a cleaner environment, improved public health, and a secure national defense, the nation requires the judgment and skills of its most qualified scientists and engineers in key government service positions. To recruit these leaders, including some from key sectors of the new economy, the President and the Congress must smooth the path and reduce the barriers to government service.



NATIONAL ACADEMY OF SCIENCES  
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**NATIONAL ACADEMIES**  
**COMMITTEE ON SCIENCE, ENGINEERING, AND PUBLIC POLICY**

**PANEL ON ENSURING THE BEST SCIENCE AND TECHNOLOGY  
PRESIDENTIAL APPOINTMENTS**

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## FINDINGS

### 1 Timely selection of scientists and engineers is important.

- Before and after the presidential election, the eventual President-elect needs advisors with expertise in science and technology (S&T) to advise on policy issues and help to locate a candidate for the position of Assistant to the President for Science and Technology (APST).
- Soon after the election, the APST candidate is needed to help set priorities, plan strategy, advise the President-elect and cabinet designees, and find qualified candidates for key S&T positions.

### 2 The pool of talented S&T candidates for presidential appointments is less broad and deep than it should be.

- The pool of qualified candidates for presidential S&T appointments is insufficiently broad (representation from industry is low) and deep (some qualified candidates do not agree to enter the pool).
- The attractiveness of government service to scientists and engineers is often diminished by professional losses (the need to interrupt research, an irreversible career shift toward management, and time away from a fast-moving field) and financial losses (unduly complex and restrictive preemployment and postemployment requirements).
- Variations in preemployment and postemployment requirements among agencies, departments, and congressional committees create an environment of uncertainty and inequity for appointees.
- The executive and legislative branches share the responsibility of reducing the preemployment and postemployment restrictions and requirements, which serve as obstacles to public service for S&T leaders.

### 3 The appointment process is slow, duplicative, and unpredictable.

- From 1964 to 1984, almost 90% of presidential appointments were completed within 4 months (from the time of first White House contact to Senate confirmation); from 1984 to 1999, only 45% were completed in 4 months.
- Many S&T nominees already have high-level security clearances.
- The White House nominee-tracking system is slow and inconsistent. Candidates do not receive timely status reports.

## RECOMMENDATIONS

### 1 Initiate the appointment process for key S&T leadership early.

- In advance of the election, each presidential candidate should appoint advisors with S&T expertise to the transition team.
- Soon after the election, the President-elect, with the advice of this transition team, should identify the candidate for the position of APST to consult on urgent S&T questions.
- Once identified, the APST-designee should work with the transition team to identify candidates for science and technology leadership posts (see "50 Most Urgent Science and Technology Presidential Appointments" list) for the President-elect.

### 2 Increase the breadth and depth of the pool of candidates by reducing the financial and vocational obstacles to government service.

- The executive and legislative branches should take action immediately to reduce as many financial and vocational obstacles as possible before the President-elect begins recruiting candidates for presidential appointments requiring Senate confirmation (PAS) positions.
- The President and Congress should establish a bipartisan framework—including representatives from the executive branch, Congress, and the Office of Government Ethics—to identify actions that should be taken by the President and Congress to broaden and deepen the pool of qualified persons willing to consider presidential appointments. The objectives of these actions should be to clarify and standardize preemployment and postemployment restrictions, reduce unreasonable financial and professional losses for those who serve, and suggest other ways to enlarge the pool of qualified candidates.

### 3 Accelerate the approval process for all nominees in S&T positions.

- The President should, in collaboration with the Senate, adopt the goal of completing the appointment process for 80-90% of nominees within 4 months.
- The procedure for FBI background checks should be streamlined, incorporating results of previous investigations.
- The White House should deliver timely reports to candidates on the status of their appointments.

# Preface

In recent years, there has been a substantial change in the number and breadth of issues coming before the US President that require science and technology (S&T) knowledge and judgment. S&T appointees can be crucial in assisting the next President in addressing the inevitable issues raised by the end of the Cold War and the evolution of the “new economy,” from new technical issues of missile defense to the changing role of regulation in telecommunications and biotechnology.

The federal government plays an increasingly important role in nurturing scientific and technological advancements and bringing their full benefits to society. At the same time, insights generated by research empower government decision-making in most major domains, from economic productivity and national security to public health, the environment, and agriculture by providing the data and analysis needed to make better decisions. The President needs the wise guidance of scientific and technical experts to achieve the nation’s policy goals in these areas.

The authors of this report (see page 2) are scientists and engineers who have served in senior positions in the federal government in Washington, D.C., and who have found their experience to be stimulating and satisfying. They encourage their colleagues in all sectors to make contributions in government service. To that end, this report seeks to make government service more accessible and fair for leading scientists and engineers and for appointees in other fields.

# Introduction

Central to the federal role in promoting and managing research are some 80 senior scientists and engineers appointed by the President and confirmed by the Senate. The positions listed on page 8 are 50 of the most sensitive and influential of these positions that we believe should be filled as soon as possible by each new administration.

High-quality appointees are crucial in providing guidance on changing societal issues (especially those which pertain to the “new economy”), managing large research and development programs, and overseeing regulatory activities that have large technical components. Our own experience leads us to believe that the quality of past appointees has been high and that the nation’s global leadership depends on continued success in recruitment. However, we and many of our peers are concerned that the pool of talented people drawn to the nation’s capital is reduced by the growing obstacles to government service.

A series of relevant reports (see page 7) have illuminated shortcomings in the appointment process—not only in S&T, but in every field. An increasingly complex web of restrictions makes it difficult for appointees to enter government service and then resume their careers after government service. Despite sound suggestions for improvements, *conditions have remained the same or worsened*.

We believe that the many deterrents to government service identified in this and similar reports can be reduced by initiating the nomination process earlier, reducing financial and professional obstacles to service, and shortening key phases of the approval process. In the remainder of this report, we focus on those three essential steps, using the information in the earlier reports as a basis. Information from these past reports is indicated by superscript references to the list at the end of this report.

More details on our methodology and background data on our findings are available at our Web site at [www.nationalacademies.org/presidentialappointments](http://www.nationalacademies.org/presidentialappointments).



## FINDING 1

### Timely selection of scientists and engineers is important.

Recent decades have seen a steady increase in the number and complexity of issues coming before the President.<sup>5</sup> These issues arise from increases in scientific knowledge and technological development, their application in society, and increased understanding of their impact on society. Resolution of such issues requires S&T expertise and balanced judgment.

For a new administration, a fast start in identifying and nominating highly qualified scientists and engineers to fill key positions is important—beginning with the Assistant to the President for Science and Technology (APST). Initiating the appointment process for other key S&T leadership early is also important, because appointees need to be in office by late spring or early summer if they are to interact with Congress on the current budget submission and to begin preparation of the next. To meet that deadline, the President needs to submit nominees to the Senate no later than April.

A “qualified” candidate for an S&T presidential appointment would likely have an advanced degree (probably a doctorate) in science or engineering, management and leadership capability, and a good reputation among peers.

The President-elect needs a trusted and respected APST-designee as early as possible to help identify S&T leaders for agencies and departments, set initial policy priorities for the new administration, and address budgetary questions concerning S&T investments in health, defense, energy, and other major components of the imminent budget message to Congress. That person also should have connections within the S&T community to make it possible to identify qualified candidates for S&T leadership positions in the new administration.

## RECOMMENDATION 1

### Initiate the appointment process for key S&T leadership early.

The first step toward building technical competence in the new administration is to ensure that the transition team has expertise in science and technology. In advance of the election, each presidential candidate should appoint advisors with S&T experience to their transition team.

Soon after election, the President-elect, with the guidance of these advisors, should identify a respected and compatible candidate for the position of APST. This should be a person who can advise the new President on strategic planning and who is familiar with major issues that require daily attention. The approval process for the APST should be put on a cabinet-level fast track.

The APST should be both a senior member of the White House staff, consulting on policy and budgetary issues, and the director of the statutory Office of Science and Technology Policy (OSTP).

Once identified, the APST-designee should work with the transition team quickly to begin the process of identifying and recruiting scientists and engineers for S&T leadership posts (see “50 Most Urgent Science and Technology Presidential Appointments”). A list of candidates should be submitted to the President-elect as early as possible.

## FINDING 2

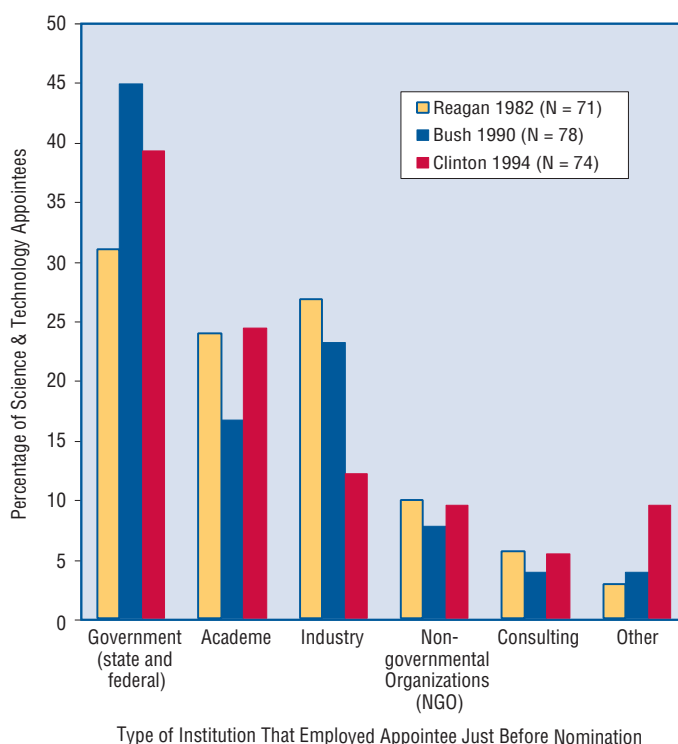
### The pool of talented S&T candidates for presidential appointments is less broad and deep than it should be.

To make the best use of the nation’s S&T expertise, the President must be able to draw on a broad and deep pool of talent. That is not now the case. In a recent poll of all presidential appointees, only 11% said that their fellow appointees represented the “best and brightest,” whereas 79% reported that they were a “mixed lot”—some highly talented, others less so. Respondents also said that just over one-third deserved a grade of “high competence” for their service in government.<sup>2</sup>

In our collective experience, *many prospective candidates refuse even to be considered for government posts*. The pool of qualified candidates for presidential S&T appointments is insufficiently broad (representation from industry is low) and deep (some qualified candidates do not agree to enter the pool).

No records are kept of how many people have declined nomination or withdrawn early or their reasons for doing so. However, we can analyze the institutional origin of appointees just before nomination as a surrogate measure. As shown in figure 1, the percentage of S&T appointees who came directly from industry declined significantly from 25% in the Reagan-Bush years to 12% in the Clinton years. Of particular concern is the low representation of people with managerial experience in the pharmaceutical, chemical, and information-technology

**Figure 1** Science and technology appointees in the second year of the Reagan, Bush, and Clinton administrations, by institutional background



Source: Data collected by the National Academies’ Panel on Ensuring the Best Science and Technology Presidential Appointments

industries. Recruitment of leaders in emerging fields (for example, biotechnology and information technology) is especially difficult.

The attractiveness of government service to scientists and engineers is often diminished by professional losses (the need to interrupt research, an irreversible career shift toward management, and time away from a fast-moving field) and financial losses (unduly complex and restrictive preemployment and postemployment requirements).

One cause of decline that a new administration can help to control is preemployment and postemployment restrictions. Sensible standards clearly are necessary to prevent conflicts of interest, but we believe that the number and complexity of requirements have risen steadily and to the point where they deter potential candidates from accepting presidential appointments.

A move to Washington, D.C., to undertake an appointment might require severing all ties with employers; forgoing pension benefits; selling stock, options, or other financial interests in companies at unfavorable terms; and forgoing options that are not yet vested (a particular problem for those in emerging fields). The recent discussion of the options provided by a company to one of the vice-presidential candidates is an example of the financial losses that might be incurred if an appointment is accepted.

Departure from Washington can also carry restrictions for science or technology appointees. These restrictions can include permanent bans from any attempts to influence the government on matters in which they participated, 2-year prohibitions against communicating with the government on matters that were pending during service, and bans from communicating with one's former agency. The restrictions can curtail one's professional postgovernment options, especially in industry.

Furthermore, variations in preemployment and postemployment restrictions among agencies, departments, and congressional committees create an environment of uncertainty and inequity for appointees. All those entities can impose supplemental restrictions or specific interpretations. For examples, see [www.usoge.gov/usoge006.html#supplemental](http://www.usoge.gov/usoge006.html#supplemental).

In sum, on the basis of our experience, we believe that the decline in the number of S&T appointees from business and industry from the Reagan-Bush years to the Clinton years is due not to philosophical differences between the two parties, but rather to the preemployment and postemployment restrictions.

The panel found, in its discussions with members of the legal community, that because many of the restrictions cited above are statutory, few substantial changes can be made without the participation of Congress. For that reason, the executive and legislative branches share the responsibility for reducing the obstacles to public service for S&T leaders. Changes in preemployment and postemployment restrictions and requirements would need action by both.

## RECOMMENDATION 2

### **Increase the breadth and depth of the pool of candidates by reducing the financial and vocational obstacles to government service.**

The President-elect should make every reasonable effort to increase the "breadth and depth of the pool." This can begin with basic steps to improve recruitment, such as ensuring S&T expertise in the Office of Presidential Personnel. The President-elect can also make more effective use of recruiting by departments and agencies. Similarly, academe, industry, and disciplinary societies should actively encourage midcareer scientists and engineers to take leadership positions in the federal government.

Because the next transition is just around the corner and the nation needs to recruit from a broad and deep pool of qualified appointees, the executive and legislative branches should take action immediately to reduce as many financial and vocational obstacles as possible.

Since both the executive and legislative branches share responsibility for reducing the obstacles to public service, the President and Congress should establish a bipartisan framework—that includes representatives of the executive branch, Congress, and the Office of Government Ethics—to identify actions that should be taken by the President and Congress to broaden and deepen the pool of qualified persons willing to consider presidential appointments.

Specifically, the bipartisan framework should clarify and standardize preemployment and postemployment restrictions, strive to reduce unreasonable financial and professional losses for those who serve, and suggest other ways to enlarge the pool of qualified candidates.

Some specific changes that could be evaluated are a *de minimis* rule (limiting required divestiture if only a small percentage of a company or a small portion of one's assets is involved), reduction in the restrictiveness of blind trusts, continuation of health-insurance and pension-plan coverage, and maintenance of equitable treatment of the unvested portion of options.

We are reluctant to recommend a framework, because of the time needed to form and implement such an activity. However, given the many reports issued on this topic in the last 10 years and the complicated legal nature of the issues, a bipartisan discussion among the parties involved seems to be the only answer where long-term solutions are needed.

### FINDING 3

#### The appointment process is slow, duplicative, and unpredictable.

As shown in figure 2, the time to complete the appointment process has steadily increased in recent years. From 1964 to 1984, almost 90% of presidential appointments were completed within 4 months—from the time that appointees were informed by the White House that they were being considered for appointment to Senate confirmation. From 1984 to 1999, only 45% of appointments were completed within 4 months.<sup>2</sup>

The President has control over only the prenomination portion of the process. This includes the timeliness of identification, recruitment, and checking the background of potential candidates as well as the timing and timeliness of the checks performed by the Federal Bureau of Investigation (FBI).

The current prenomination evaluation of a candidate is linear. The background check on a candidate is not begun until a number of other steps are completed. Because a check for a political appointment includes issues beyond those for a security clearance, the clearance process is repeated by the FBI for all persons who have not already had political-appointment clearances.

Many scientists and engineers—especially those who might be asked to serve in the largest mission-based agencies (for example, the Department of Defense and the Department of Energy)—already have high-level security clearances, which could be used to jump-start the more extensive clearances for a presidential appointment.

Moreover, White House tracking procedures frequently fail to provide timely reports to candidates while they are making

their way to nomination status. That is often the time when prospective nominees are most in need of information from the White House. After nomination, the legislative-affairs and related offices of the department or agency involved typically take the lead in shepherding nominees through the Senate and providing update information.

One recent nominee reported: “I assumed that this was going to be a reasonably expeditious process. . . . Had I known that I was going to be a ship adrift in the sea, I probably would have taken more personal initiative to ensure that the matter was being pushed along.”<sup>2</sup>

### RECOMMENDATION 3

#### Accelerate the approval process for all nominees in S&T positions.

The White House should streamline its own approval procedures and work closely with the Senate to speed the appointment process. The President should, in collaboration with the Senate, adopt the goal of *completing 80–90% of appointments within 4 months*, which was the norm from 1964 to 1984. If additional personnel are needed to meet that goal, special funding should be requested from Congress to hire them.

The background investigations of candidates should be streamlined, incorporating results of previous investigations.

The White House should improve its tracking system so that it can deliver timely reports to candidates on the status of their appointment during stages in which it has control over the process.

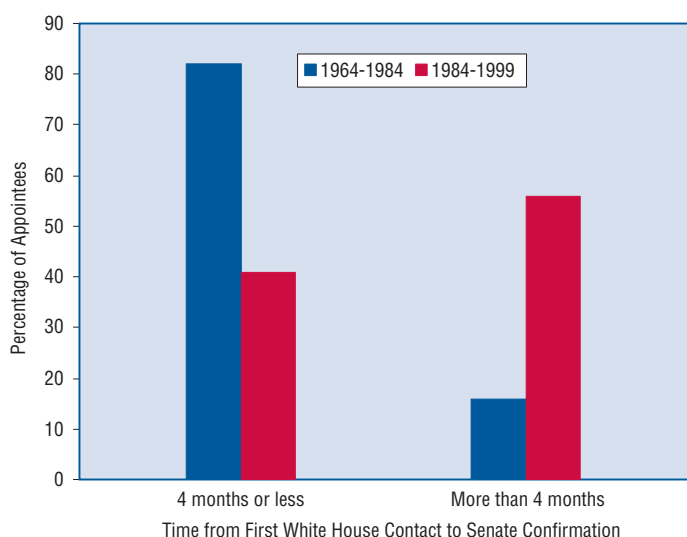
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### FOR MORE INFORMATION SEE

[www.nationalacademies.org/presidentialappointments](http://www.nationalacademies.org/presidentialappointments)

**Figure 2** Time for nominees to complete the presidential appointment process, 1964–1984 and 1984–1999



Note: Time to complete the presidential appointment process is defined in the report below as the time between first White House contact indicating consideration for appointment and Senate confirmation.

Source: *The Merit and Reputation of an Administrator: Presidential Appointees on the Presidential Appointments Process*, page 8. The Brookings Institution and The Heritage Foundation, April 28, 2000.

# 50 Most Urgent Science and Technology Presidential Appointments\*

## EXECUTIVE OFFICE OF THE PRESIDENT

- ★ **White House Office**  
Assistant to the President for Science and Technology<sup>†</sup>
- ★ **Office of Science and Technology Policy**  
Director<sup>†</sup>  
Associate Director for National Security and International Affairs  
Associate Director for Science  
Associate Director for Environment  
Associate Director for Technology
- ★ **Council of Economic Advisors**  
Chairman and members
- ★ **Council on Environmental Quality**  
Chairman

## DEPARTMENTS AND INDEPENDENT AGENCIES

- ★ **Agriculture**  
Under Secretary for Research, Education and Economics  
Under Secretary for Food Safety
- ★ **Commerce**  
Under Secretary for Technology  
Administrator, National Telecommunications and Information Administration  
Director, National Institute of Standards and Technology  
Administrator, National Oceanic and Atmospheric Administration  
Under Secretary for Economic Affairs  
Director, Census Bureau  
Commissioner of Patents and Trademarks
- ★ **Defense**  
Deputy Under Secretary of Defense for Acquisition, Technology, and Logistics  
Director, Defense Research and Engineering  
Assistant Secretary of Defense for Health Affairs  
Assistant Secretary of the Air Force for Acquisition  
Assistant Secretary (Acquisitions, Logistics, and Technology), Army  
Assistant Secretary (Research, Development, and Acquisitions), Navy
- ★ **Education**  
Assistant Secretary for Educational Research and Improvement
- ★ **Energy**  
Under Secretary for Energy, Science, and the Environment  
Under Secretary for Nuclear Security<sup>‡</sup>  
Assistant Secretary for Energy Efficiency and Renewable Energy  
Deputy Administrator for Defense Programs  
Director, Office of Science  
Director, Energy Information Administration

- ★ **Health and Human Services**  
Assistant Secretary for Public Health and Science<sup>§</sup>  
Assistant Secretary for Planning and Evaluation  
Surgeon General<sup>§</sup>  
Director, National Institutes of Health  
Commissioner, Food and Drug Administration
- ★ **Housing and Urban Development**  
Assistant Secretary for Policy Development and Research
- ★ **Interior**  
Assistant Secretary for Water and Science  
Director, US Fish and Wildlife Service  
Director, US Geological Survey
- ★ **State**  
Under Secretary for Arms Control and International Security Affairs  
Under Secretary for Economic, Business, and Agricultural Affairs  
Under Secretary for Global Affairs  
Assistant Secretary, Oceans and International Environmental and Scientific Affairs  
Assistant Administrator, Bureau of Global Programs, Field Support, and Research, Agency for International Development
- ★ **Transportation**  
Administrator, Federal Aviation Administration  
Administrator, National Highway Traffic Safety Administration  
Administrator, Research and Special Programs Administration
- ★ **Veterans Affairs**  
Under Secretary for Medical Affairs
- ★ **Environmental Protection Agency**  
Assistant Administrator for Research and Development
- ★ **National Aeronautics and Space Administration**  
Administrator
- ★ **National Science Foundation**  
Director  
Deputy Director

\*This list is based on the panel's judgment as to which of the roughly 80 S&T positions are the most urgent. This list includes both positions that are important for science and engineering research policy and those that provide scientific and technical analysis to inform decision-makers on many societal issues.

<sup>†</sup>In recent years, the same person has held the post of Assistant to the President for Science and Technology and Director of the White House Office of Science and Technology Policy (OSTP).

<sup>‡</sup>This person currently also directs the National Nuclear Security Administration.

<sup>§</sup>In recent years, the same person has held the post of Assistant Secretary for Public Health and Science and Surgeon General, but this has not always been the case.