

NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

1100 New York Ave NW, Ste 1090 East
Washington, D.C. 20005

TEL (202) 347-3190 FAX (202) 393-0993
INTERNET: www.napawash.org

Preliminary Observations
by a Panel of the

NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

**THE REORGANIZATION OF THE
OFFICE OF ENERGY EFFICIENCY AND
RENEWABLE ENERGY**

Panel

Howard M. Messner, *Chair*

Jonathan D. Breul

Harold B. Finger

Dwight A. Ink

Steven J. Kelman

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ACADEMY PANEL'S PRELIMINARY OBSERVATIONS ON EERE'S REORGANIZATION

On July 1, 2002, the Office of Energy Efficiency and Renewable Energy (EERE) within the Department of Energy (DOE) implemented a comprehensive reorganization that affected every aspect of its headquarters operations and its field reporting structure. Shortly thereafter, Assistant Secretary David Garman and the House Interior and Related Agencies Appropriations Subcommittee asked the National Academy of Public Administration (the Academy) to review EERE's reorganization to ensure that it was sound and would effectively position EERE to attain its mission. EERE also asked the Academy to examine its acquisition/financial assistance processes to ensure that they would adequately support the new business model. The Academy Panel will provide a series of interim observations during its 18-month review.

The Panel will be examining EERE's structure and management within the context of the organization's broad mission. The Administration's current emphasis, as reflected in the Office of Management and Budget's (OMB) criteria for research investment, is on long-term, high-payoff, high-risk research projects. During the review, the Panel will assess how EERE's new structure and management supports this new direction and how EERE identifies its priorities. The Panel also will examine how EERE develops and maintains the staff capacity to carry out its mission. Finally, the Panel is mindful that EERE must operate within departmental parameters and will consider those as it formulates its observations and recommendations.

This document provides the Panel's preliminary views on the reorganization. Information development and analysis are not complete. Additional information development and analysis will take place throughout the project. The Panel will provide greater detail and clarify its views to the extent necessary in subsequent documents.

DESCRIPTION OF THE REORGANIZATION

Assistant Secretary Garman was sworn in on May 31, 2001. His overriding goal for EERE was to create a single organization with a single purpose—to achieve results in its programs and activities. To achieve that goal, however, a number of areas had to be addressed.

- The former market sector structure had fragmented power centers, and the Assistant Secretary did not have the level of control he desired over the people and processes.
- Stakeholders complained that EERE was not achieving the results it should and it was not spending money efficiently.
- A March 2000 Academy report, *A Review of Management in the Office of Energy Efficiency and Renewable Energy*, had identified four problem areas that EERE needed to address: (1) fragmentation of the organization, (2) emphasis on process rather than product, (3) poor communications, and (4) weak decision-making processes.

- The Strategic Program Review (SPR) that EERE conducted in 2001 recommended process redirections in a number of EERE programs.
- The President's Management Agenda (PMA) called for (1) flattening organizations to make them more responsive; (2) focusing on results, not process; (3) linking budget with performance; (4) bringing to an end overlapping functions, inefficiencies and turf battles; and (5) using the knowledge, skills, and ability of federal staff to the maximum extent possible.

Although he did not initially intend to reorganize EERE, ultimately Assistant Secretary Garman believed it was the only way to address these issues.

The reorganization eliminated the 5 headquarters market sectors that housed all of EERE's program activities and created 11 program offices that correspond to its major program areas. Eleven program managers who report to a single Deputy Assistant Secretary (DAS) for Technology Development replaced the five DASs who headed the previous market sectors. EERE's six regional offices also report to the DAS for Technology Development.

The reorganization took the business administration, communications and outreach functions, which used to be located in each of the market sectors, and consolidated them into an Office of Business Administration and an Office of Communications and Outreach, respectively. The reorganization created three offices within Business Administration—Program Execution Support; Planning, Budget Formulation and Analysis; and Information and Business Management Systems. The three business offices and the Golden Field Office, which is located in Colorado, report to the DAS for Business Administration who is the business management counterpart of the DAS for Technology Development. The two DASs and the Director of the Office of Communications and Outreach report to the Assistant Secretary. The reorganization afforded Assistant Secretary Garman an opportunity to select the people to lead all of the newly created offices. As part of the reorganization, EERE also created a Board of Directors that reports to the Assistant Secretary. Board members are, primarily, individuals who formerly held leadership positions under the former organization. Their current role is to provide advice and serve as ambassadors representing EERE to stakeholders and others. Organization charts showing the pre- and post reorganization structure are included as Attachments A and B.

Following guidance in the PMA, the reorganization flattened EERE by eliminating supervisory levels. Four of the five sectors had an Associate DAS and Office Directors below them. In the new model, only the Weatherization and Intergovernmental Program (WIP), the largest of EERE's program areas, has supervisors below the program manager level. The DASs do not have Deputies or Associate DASs.

EERE accomplishes its mission by awarding contracts (acquisition) and cooperative agreements and grants (financial assistance) to laboratories; states, local and Native American governments; educational institutions; private industry; nonprofits; small businesses; and other entities. A large part of EERE's workload involves executing these instruments and monitoring the resultant

research and deployment¹ projects. Part of EERE's reorganization is to consolidate its acquisition/financial assistance and project management activities in the Golden Field Office. EERE has been considering this approach for some time² as part of its efforts to streamline, integrate and focus its business management and project management operations.

Assistant Secretary Garman believes that the reorganization is addressing the issues that have made EERE less effective in the past. As an example, the 2005 budget was completed ahead of schedule. Prior to the reorganization, EERE did not submit its budgets on time. The submissions from the five market sectors did not have the same format and did not use the same analytic methods to identify projected results. They had to be molded into one document. The Assistant Secretary recognizes that EERE still has problem areas, such as workload and staff skill mix imbalances. But, he believes the reorganization has identified those weaknesses, which will enable EERE to address them.

PRELIMINARY OVERALL ASSESSMENT

The Panel believes that this relatively small, 542-position organization (see attachment C for details) was over-organized prior to the reorganization. It further believes that the basic construct of the reorganization—eliminating the sector organizations and restructuring around the major programs; consolidating the business administration functions; and consolidating acquisition/financial assistance and project management functions at the Golden Field Office—is sound and appears to be a reasonable structure for managing EERE. Much has been done in the 11 months since the new organizational model was put into place.

The relatively small size of the organization does not warrant breaking it into more than two major components. However, an organization with only two principal components often leads to a disproportionate amount of stress between the two. In this instance, the panel is pleased with the recognition of the need for dedicated attention to close communication and operational cooperation between the program and business administration groups. By design, the DASs' offices are located adjacent to one another, and they have established a close working relationship. They meet every day with the Principal Deputy Assistant Secretary—and sometimes the Assistant Secretary—to discuss issues facing the organization. They are striving to integrate their offices' operations to implement EERE's new business model. For example, Business Administration staff attend the DAS for Technology Development's weekly staff meetings.

However, much still needs to be done in terms of developing the processes to implement the new business model, and there are questions about how EERE will develop the capabilities that are

¹ *Strategic Performance Review*, Chapter 3, page 3-3. "Deployment programs typically seek to accelerate market introduction of advanced technologies to help meet specific policy objectives. These programs generally address technologies that have recently become cost-effective, or that are moving towards cost-effectiveness in new applications. The types of information provided can include product ratings and labeling, general information about cost-effective opportunities (efficiency, renewable or alternative), and targeted technical assistance."

² Academy staff saw a reference to such a proposal in a July 11, 2001, EERE document reporting on the status of EERE's efforts to implement the recommendations from the prior Academy report, *A Review of Management in the Office of Energy Efficiency and Renewable Energy*, published in March 2000.

required to effectively consolidate project management activities in Golden. In part, these concerns stem from the fact that a reorganization of this nature must involve significant cultural change. Such change can take many years to take effect. These concerns also stem, in part, from the manner and speed with which the reorganization was developed and introduced to the organization. A handful of senior officials designed the new structural model. And, prior to the reorganization's implementation date, there was little opportunity for office staffs to rethink their business practices and develop new standard operating procedures.

The implementation challenge has been made more difficult because EERE has not had an implementation plan to bring about all of the changes needed to support its new structure and business model. The need for a well thought out plan is substantial because the new program managers are trying to learn new jobs and implement the reorganization simultaneously. EERE began to develop an implementation plan after the Academy suggested it was needed. The Panel believes that such a plan will assist EERE's managers with the change management process that lies ahead. At this point, however, the plan is still a work in progress. The Panel has asked to review a final draft when it is available.

Some of the organizational changes, including flattening the organization as called for by the PMA and refocusing it around EERE's primary programs and not the markets they serve, could not have been accomplished without major redesign of the previous market sector organizations. The reorganization of the business administration and communications and outreach functions, which was designed to eliminate problems related to the five different ways the market sectors managed those operations, was a solution to address problems that appear to be more management and personnel related rather than structural. However, consolidating those functions should provide a more unified approach for those activities and more consistent procedures throughout EERE. This should reduce the amount of oversight needed to ensure that proper procedures are followed. The consolidation also should result in economies of scale with a resultant decrease in the number of staff needed to perform these functions. However, such savings are yet to be identified and are elusive to pursue. Despite these advantages, the greater structural distance between the business activities and the programs they serve will require greater attention to ensuring that they function as a team with their program counterparts.

The Panel notes that EERE worked closely with and received a high degree of cooperation from DOE's Union as it planned the reorganization. Had there not been this high degree of management-Union cooperation, it is likely that the challenges facing EERE as it implements the reorganization would be substantially greater. However, EERE's management prerogatives have been constrained by its decision to agree with the Union proposal that there would be no reductions-in-force (RIFs), pay reductions or downgrades as a result of the reorganization. EERE must rely on attrition to realize personnel savings from economies of scale unless it is able to use the provisions afforded by the Chief Human Capital Officers Act of 2002 that would allow EERE to use federal employee early retirement provisions for purposes of reshaping the organization without losing full-time equivalents (FTEs).³ Relying on the randomness of attrition could result in economies of scale not materializing for a number of years. The Panel

³ Title XIII—Federal Workforce Improvement-Subtitle A: Chief Human Capital Officer—Chief Human Capital Officers Act of 2002, Section 1313.

will address the question of potential savings from the reorganization in its September observations.

The success of the reorganization is dependent, in part, on EERE management having the flexibility to implement changes in the skill mix and location of staff. The agreement with the Union, however, could impede EERE's plans to move staff in headquarters and the field to areas that need additional resources, such as the Golden Field Office for the project management initiative. Dealing with this constraint requires that EERE conduct additional human resource analysis and planning. A Workforce Analysis project underway in EERE should address these issues and provide the data needed to determine whether EERE needs to redeploy staff to areas that need additional resources, such as the Project Management Office in Golden.

As indicated earlier, the Panel believes that the construct of the new organizational structure appears to be a reasonable structure for managing EERE. Sustained leadership and good human resource management within the organization can help EERE successfully work through the implementation problems currently being experienced. EERE should move forward quickly to fully implement the many facets of its new organizational model and to give it an opportunity to work. The aspects of the new organizational model that the Panel believes warrant further examination and possible mid-course corrections are discussed below.

THE BOARD OF DIRECTORS

A particularly controversial aspect of the reorganization has been the creation of a Board of Directors, chaired by the Assistant Secretary. Four of the five original Board members were the DASs who headed the old market sectors. The Panel understands that it is EERE's intention to replace Board members as vacancies occur.

According to the explanatory material prepared for the reorganization, the role of the Board, which was described as "typical of private sector Board," is to:

- Direct corporate policy, strategy, and budget.
- Serve as "ambassadors" representing EERE to stakeholders and others (outreach).
- Provide senior technical/peer review to programs.
- Advise on all technical and analytical issues.

The Panel notes that this type of Board is usually found in government only when a corporate structure is involved. Members also are usually appointed from outside the organization and are not full-time employees.

The Panel believes there is a contradiction between the stated role of the Board and its actual functions. While consisting of talented individuals who perform useful functions, the Board does not "direct" any EERE activities, is not involved in developing policy or resolving management issues, and has no decision-making authority. Board members provide advice within a limited sphere of organizational issues, represent EERE with stakeholder groups where programmatic decision-making is not involved, and work on individual projects in their areas of

expertise. The Panel believes the Assistant Secretary should be able to get the advice needed to effectively carry out the office's mission. However, it also believes that the Board's title and stated roles and responsibilities should better reflect the actual functions it performs.

The Panel recommends that (1) the positions of departing Board members not be refilled until EERE has a definite, agency-wide function in mind for such a high-level group of staff and (2) that a name be devised for this group that is more aligned with its actual roles and responsibilities.

One alternative to consider may be to use the talents of the current members as the core for separate staff functions. For example, one Board member spends a large amount of time on international activities. If international activities are a major priority for EERE, it should consider establishing an International function. The Panel recognizes that the creation of such a function may run counter to the direction in the PMA. Nevertheless, the Panel believes that EERE needs to consider this and other alternatives to the current Board structure.

RECONFIGURING THE SECTORS ALONG PROGRAM LINES

Prior to the reorganization, EERE had 21 offices and multiple supervisory layers managing its research and development and deployment activities. The new structure substantially reduces the Assistant Secretary's span of control and the number of supervisory layers within the Technology Development area. The reorganization has structured EERE according to how it delivers the results of its activities to the American people—through its research and deployment programs. By structuring the organization around its programs instead of the markets it serves, EERE has the opportunity to more clearly focus on the desired end results of its activities. The Panel believes, however, that the name of the DAS' office—Technology Development—should be changed to reflect the deployment activities for which it is responsible and which account for a significant portion of the office's resources.

Program Offices' Configuration and Size

The configuration of the technologies within the program offices appears sound, for the most part. Perhaps the most visible example of where the reorganization was needed is in the Biomass Program. Prior to the reorganization, the three main biomass components (power, fuels and products) were in three different sectors. To deal with this situation, EERE had formed a Biomass Board, headed by the Principal Deputy Assistant Secretary, to bring together the biomass work of the three sectors in order to reduce the competition for resources and increase the ability to capitalize on synergies

However, the Panel has concerns about some of the other program configurations. For example, WIP and the Federal Energy Management Program (FEMP) are the deployment program offices for EERE. While most of the deployment activities have been realigned under those offices, some remain within the other program offices whose missions are research and development, for example, Wind Power America. Also, there are large disparities in office size. The Geothermal Technologies Program has 5 people and WIP has 41. While office size should not dictate

structure, the significant differences here will require additional review and consideration by the Panel. Further, the elimination of the supervisory levels may have created spans of control for the program managers that are too large. Eight of the program managers have more than 17 staff and 4 have more than 27 people reporting to them. Only in WIP are there supervisors below the program manager level. It may be desirable to change the structure within some of the program offices to add supervisors under the program managers. The Panel will consider these issues further for its September observations.

Interactions Between Program Offices and Program and Regional Offices

One of the goals of placing all of EERE's programs under the DAS for Technology Development was to promote better interaction and coordination among the program offices and to eliminate the stovepipe organizations that the market sectors had become. The DAS for Technology Development expects the program offices to work together and holds weekly staff meetings with the program managers and regional office directors, which, among other things, promote interactions. He also is considering developing crosscutting teams with membership from the 11 program offices to further promote interaction. The efforts to date are resulting in some of the program offices consulting one another about areas of mutual interest. However, much of the interaction to date is based on personal relationships that existed prior to the reorganization.

The Panel believes that EERE needs to continue to pursue opportunities that bring people together on both a formal and informal basis in order to institutionalize the interaction among the program offices and between program and regional offices. Thus far, it appears that such coordination has been largely left to the individual program managers' initiative. While the efforts to date are producing some positive results, the Panel believes that a formal structure may be beneficial to ensure that interactions between the offices are institutionalized and continue regardless of who is heading those offices. The Panel suggests that EERE examine other formal and informal mechanisms that identify and promote opportunities for coordination and collaboration among the program offices and between the program offices and the regional offices.

The Panel has identified some mechanisms that EERE might explore.⁴

- Establish a staff position reporting to the DAS for Technology Development responsible for encouraging and facilitating crosscutting activities.
- Allocate to the DAS for Technology Development a budget that can be used to assist the program offices to engage in joint projects.
- Within each research and development program office, identify a contact point responsible for working with the deployment program offices and the regional offices to identify and develop deployment strategies for the research being conducted.
- Develop incentives, such as cash awards and other forms of recognition, for significant collaborative activities.

⁴ A more complete explanation of some of these interaction techniques may be found in a recent Academy report, *Scientific Research at the Smithsonian*, October 2002, Appendix E.

- Adopt a program review model similar to one used by the National Renewable Energy Laboratory (NREL) where all Technology Development program offices would periodically provide a status of key program and organizational tasks underway.⁵
- Organize a brown bag lunch series that focuses on program office interactions.

Reengineering Processes

The DAS for Technology Development is allowing the program managers to identify where reengineering projects for improving processes are needed. He has, however, asked that program managers review their portfolios to identify how they can reduce the number and increase the dollar size of their acquisition/financial assistance transactions. The draft implementation plan for the reorganization includes an area of improvement called Work Packaging that addresses this initiative. The goal is to develop tailored acquisition/financial assistance strategies for each program office by October 1, 2003.

The Panel believes that this is a critical activity for EERE. In fiscal year 2002, EERE executed 4,400 acquisition/financial assistance transactions. Of those, 40 percent were modifications involving no change in cost or funding and 70 percent obligated only 8 percent of the total dollars for acquisition/financial assistance. Ninety-five percent of EERE's total 2002 transactions were less than \$1 million.⁶ These figures would suggest that EERE needs a strategic assessment of how it uses acquisition/financial assistance awards to meet its mission.

The Panel supports EERE's planned approach to work packaging, which would allow program managers to consider programmatic differences and tailor their acquisition/financial assistance strategies accordingly. EERE's research and development activities are diverse and program offices need the flexibility to be able to enter into relationships with organizations having the necessary expertise. This could result in small transactions in some cases. Many of EERE's deployment activities leverage relatively small amounts of money in projects that produce significant energy savings.

Span of Control for the Deputy Assistant Secretary for Technology Development

The span of control for the DAS for Technology Development is large. Eleven program offices, six regions and several other staff report directly to him. Also, with the elimination of supervisory positions below the program managers, the DAS is the performance reviewer for about 250 people.

The DAS for Technology Development has taken some steps to reduce his managerial burden. He has delegated to the program managers funding authority approval up to \$5 million, source

⁵ NREL adopted its program performance management model from the National Aeronautical and Space Administration. The reviews are done once a month and take a half-day. Each program, center, and office presents on a rotating schedule. During the reviews, specific issues that need management attention are raised and systemic issues and opportunities are identified.

⁶ Source: EERE staff evaluation of fiscal year 2002 Procurement and Assistance Data System data for all EERE acquisition/financial assistance providers.

selection authority, and the authority to approve travel. He also has a person detailed to his staff who serves as a liaison to the regional offices and is in daily contact with the regional office directors, and is accepting fewer speaking engagements with stakeholders; leaving more of those activities to members of the Board.

EERE leadership has indicated that many of the organization changes are designed to place more emphasis on program management. The Panel understands EERE's desire to increase its focus on the management of its programs, but notes that it is important that the DAS not become immersed in the operational details of program management rather than providing program leadership. EERE needs to ensure that the managerial workload of that office does not inhibit the DAS' ability to lead his organization. The Panel will continue to examine this area throughout the project.

CONSOLIDATING HEADQUARTERS BUSINESS ADMINISTRATION AND COMMUNICATIONS AND OUTREACH FUNCTIONS

The Panel believes that the decision to consolidate business administration and communications and outreach operations in this small organization is sound. It can improve the ability to have a focused approach while improving operational efficiencies and maintaining service levels. However, the Panel has identified several areas where EERE should consider modifications as implementation proceeds.

Roles and Processes

The plan for this aspect of the reorganization is that the staff in the previous market sectors who performed business administration and communications and outreach activities would move to the new offices under the DAS for Business Administration and the Office of Communications and Outreach, respectively, and that those offices would provide those services to EERE headquarters. This move, along with uniform business practices, was expected to result in more effective and efficient operations, thus resulting in savings. However, although the sectors' staffs were reassigned to the new offices, the reorganization was implemented before new administrative policies and procedures were developed and implemented. As a result, EERE has not yet realized the savings originally intended.

The business offices are working to develop and implement new procedures. However, officials interviewed informed Academy staff that some procedures are still inconsistent, and some program office staff are unclear about how to obtain needed services. A number of program office staff believe that the issue of "process over product" still exists on the administrative side of the organization. They describe the current situation as the program offices "feeding" numerous administrative processes because they are required to provide significant amounts of information to the business offices. They also believe that some service levels have deteriorated, which may be due, in part, to the fact that the business office staffs need time and training to learn their new jobs.

Although not universal, there are perceptions that the business offices are driving the work of the program offices. These reports concern the Panel and should be examined. The program offices must have the capacity to articulate their business needs and work with the business offices to obtain needed services. On the other hand, the business offices must have the capacity to develop appropriate business strategies and have procedures in place that meet the program offices' needs. The Panel believes that the type of collegial working relationship that exists at the DAS level needs to flow down through the entire organization. The roles and responsibilities of all EERE staff for acquiring and providing needed business services should be clarified in the context of how best to achieve EERE's mission. Further, EERE leadership needs to ensure that the offices have the necessary resources and training to carry out their responsibilities. The issue of staff capacity is discussed further on page 15.

Once the roles and responsibilities are clarified, they need to be clearly articulated to EERE staff and should form the basis for new operating procedures. The Panel understands that it is EERE's intent to develop standard operating procedures for its business administration functions. The reorganization implementation plan is one vehicle for pursuing this effort in a timely fashion. EERE also has launched a new Program Management Overview Course for program managers, project managers, and other EERE employees. Senior EERE staff have indicated that these courses should help clarify the business administration practices and procedures. The Academy staff have received some favorable feedback about this program. The Panel believes that the course content should reinforce the roles, responsibilities and the relationship between the program and business offices needed to effectively achieve EERE's mission.

Structure Within the Business Administration Offices

The Panel has some concerns about the structure of the Business Administration offices and believes that changes either in structure or process may be desirable. One concern is the degree of separation of budget formulation and execution. The budget formulation function is part of the Office of Planning, Budget Formulation and Analysis. Budget execution is part of the Office of Program Execution Support, which includes other administrative functions such as contracting, human resources, and travel management. The Panel can understand EERE's desire to link the budget execution and contracting functions. However, it believes that budget execution must be closely coordinated with budget formulation so that there is consistency between the two functions.

The Panel has seen the budget formulation and execution functions separate in other agencies, but it knows of no other instance where these essential budget elements do not report to one budget officer. EERE's current structure essentially results in two budget officers—one for formulation and one for execution. The Panel believes that this unusual split not only leaves open the possibility of inconsistencies between budget formulation and execution, but also can hinder effective communications between congressional appropriations committee staff and the agency. One of the concerns expressed by the House Interior and Related Agencies Appropriations Subcommittee staff when this project began was that they could not get sufficient information from EERE on its budget. When issues arise under the current structure, subcommittee staff often have little option but to contact the DAS for Business Administration who has too many other responsibilities to assume the role of the EERE budget officer.

Accordingly, the Panel recommends that EERE appoint a budget officer who can ensure consistency between budget formulation and execution, and is empowered to act as EERE's spokesperson on all issues related to the budget.

EERE management understands the Panel's concerns leading to this recommendation and intends to address them within the existing organizational structure by creating a "seamless relationship" between formulation and execution--essentially creating a "virtual budget office." The Academy staff will examine this concept and how EERE expects it to function in the coming months.

The Panel also is concerned about the collocation of the analysis staff with the budget formulation staff. In the Panel's experience, when these functions are merged in one organization, the analysis needed to support the day-to-day workload of the budget function tends to supersede other essential analysis work. EERE leadership advised the Panel that it believes it is critical that the analysis and budget formulation staffs be in the same office in order to ensure that analysis will drive the budget process. The Panel does not take a position at this time, but will examine the matter further in the coming months.

ACQUISITION/FINANCIAL ASSISTANCE AND PROJECT MANAGEMENT

Acquisition/financial assistance operations will be included in the Panel's November observations. At this point, the Panel will provide its preliminary observations about those activities as part of its overall assessment of EERE's progress in implementing the reorganization.

Many EERE officials use the term "procurement" to mean both acquisition instruments (contracts) and financial assistance transactions (grants and cooperative agreements). Although acquisition and financial assistance are similar, their differences have significant implications for developing effective and efficient approaches for acquisition/financial assistance awards, administration and project management. The Panel's continuing review will assess how effectively EERE makes these distinctions.

Senior EERE managers involved in shaping and implementing the reorganization correctly recognize that successful program delivery is heavily dependent upon having responsive and effective acquisition/financial assistance support. To make their point in a very visual manner, they created a "spaghetti diagram" that depicts the flow of EERE funds to numerous DOE laboratories and operations offices for acquisition/financial assistance support (see Attachment D). In addition, they emphasized that much of the impetus behind consolidating acquisition/financial assistance and project management operations at the Golden Field Office was the desire to be less dependent upon other DOE offices that may not give EERE's work sufficient priority.

Consolidating acquisition/financial assistance and project management operations in Golden would afford EERE the opportunity to streamline and standardize these functions, which should

lead to efficiencies. Even if EERE had not wanted an office responsive to just its work, this is probably a necessary restructuring due to other changes underway in DOE. Guided by the PMA and declining budgets for management functions, DOE is initiating changes that will impact the nature of the operations offices that EERE has depended upon in the past. Although Academy staff have been told that the proposed changes should not affect the operations offices' ability to provide acquisition/financial assistance and project management services to EERE, the outcome is still unclear. It appears that those offices are moving away from being matrix support organizations (providing services to many DOE offices) towards being single mission service providers.

Until very recently, EERE did not have a plan to implement this initiative. According to the current draft plan, Golden will assume the non lab-related acquisition/financial assistance work currently being done by the Idaho Falls Operations Office by the end of June 2003; the Chicago Operations Office's work by the end of July; and the Oak Ridge Operations Office's work by the end of September. This is the bulk of the work that those offices perform for EERE.⁷ EERE is transferring 22 positions to Golden this fiscal year to handle this additional workload. Golden currently estimates that its Project Management Office staff will need to increase by a total of 75 positions to fully implement the concept.

Even though EERE is not a priority client at the other DOE operations offices, EERE program managers told Academy staff that they have been quite satisfied with the support they receive from those offices. Program offices to be affected by the consolidation have expressed serious reservations about Golden's technical capability to perform the project management work now being done in Idaho Falls, Chicago, and Oak Ridge. However, these concerns may be caused, in part, by the lack of a plan showing how the Project Management Office will obtain people having the necessary expertise to handle the workload. Program office staff believed that there could be a significant period of time where projects would not be properly managed because the new Golden staff would need time to learn their projects.

Recently, the program offices learned that Golden will be acquiring, on detail sometime in July 2003, a number of staff from DOE's Rocky Flats Office, which is closing, and could have the opportunity to retain them permanently. This fortuitous development has allayed some of the program offices' concerns to some extent, because the Rocky Flats staff may have the necessary technical and educational backgrounds to meet EERE's needs. Also, it appears that a number of the Rocky Flats staff have experience in some of the specific technologies in the projects they will manage.

The Panel believes that moving away from the chaos suggested by the "spaghetti diagram" to a more self-sufficient model for acquisition/financial assistance and project management is desirable and necessary. The ability to hire from Rocky Flats will facilitate implementation of this initiative and EERE needs to take advantage of this situation and proceed with its plans. Although it is still not clear how EERE plans to acquire the additional resources needed beyond this fiscal year to fully implement the Project Management Office concept, the Panel believes

⁷ These operations offices do not perform a large volume of EERE's acquisition/financial assistance and project management work with the national labs.

there is a risk that delaying implementation until all questions are answered may jeopardize the initiative.

EERE's top leadership is committed to this new business model and should ensure that the momentum for its implementation continues. However, the Panel cautions that EERE needs to proceed with the implementation of this effort at a pace that will optimize its chance for success. The Panel believes that EERE needs to carefully think through and manage the consolidation effort to ensure that the necessary technical expertise is not lost in the process, and that the level of service ultimately provided by consolidated operations at Golden represents an improvement over current levels.

One other area of concern is that EERE does not have a written document that describes the end state for the consolidation effort. The draft implementation plan is silent in a number of areas. For example, at present, a number of headquarters program office staff perform project monitoring functions, which, conceptually, should be done in the Golden project management office consistent with EERE's overall approach. The Panel needs additional information to fully understand EERE's plans for transferring project monitoring activities to Golden.

Beyond the specifics of the consolidation of contracting and assistance activity in Golden, the Panel is of the strong belief that the ability successfully to manage acquisition/financial assistance instruments for attaining successful results is a core competency of EERE. The organization therefore must make it a high priority to devote central attention to issues of skills, managerial techniques, and procedures for developing performance-based arrangements for these instruments (including questions of contract incentives), and for managing these instruments post-award. The Panel will return to these issues in greater detail in a later report.

THE ROLE OF DEPLOYMENT ACTIVITIES IN EERE—THE ROLE OF THE REGIONS

A significant portion of EERE's workforce is currently dedicated to deployment activities. They are essentially carried out in WIP, FEMP and the regions, and comprise about one-third of the total staff. The regions alone constitute over 20 percent of EERE's workforce but, except for their reporting relationship to headquarters, are not addressed in the reorganization.

Looking at the success indicators or measures for the goals outlined in EERE's Strategic Plan, eight of the nine indicators involve deployment--getting new energy efficient and renewable energy technologies into the marketplace.⁸ For example, for its goal of increasing the energy efficiency of industry, EERE's success indicator is, "Energy-efficient technologies are widely available within the next 20 years, due to EERE's public-private partnerships, that enable America's energy-intensive industries to significantly increase their productivity without increasing their energy consumption."⁹ Despite the emphasis on deployment in its Strategic Plan, a number of EERE officials have expressed some uncertainty about the future of deployment activities within EERE. Many believe that EERE's focus appears to be shifting

⁸ The ninth strategic goal is an internal management goal for EERE to change the way it does business.

⁹ Office of Energy Efficiency and Renewable Energy, *Strategic Plan*, October 2002, page 7.

away from deployment activities to high-risk, high-potential research. This new direction appears to be related to the OMB priorities for supporting research and development. When assessing the federal role in research and development, OMB's criteria for investment appears to give the highest rating to long-term activities requiring significant research effort and major infrastructure development rather than more fully proven concepts that with industrial support, could provide earlier, but perhaps more limited, benefits.

The Panel believes that EERE needs to assess its deployment programs within the context of the OMB research and development investment criteria. This would enable them to better define an EERE deployment strategy similar to the research strategies developed by its program offices. A critical element of such an assessment should be the regions' functions and structures, as well as those of the two deployment program offices, in order to determine the most effective overall organization. The Workforce Analysis project may provide the data necessary for EERE to begin such an effort.

The Panel recommends that EERE systematically develop a strategy for its deployment activities that includes an assessment of the role of the regions and the deployment program offices to carry out the agency's deployment mission. The results of that evaluation should be factored into EERE's overall reorganization strategy.

OTHER ISSUES

Developing a Reorganization Implementation Plan and Communicating With EERE Staff

Although the reorganization was executed on July 1, 2002, EERE only recently started preparing an implementation plan. The Panel believes that the lack of a plan has hindered the implementation process and has created unnecessary concern and confusion for staff. The staff have been without a clear roadmap of where the organization is going and, in many cases, new ways of doing business have not been developed. EERE is now working to rectify the situation.

The Panel endorses the need for a detailed implementation plan but is concerned about the process EERE is using to create it. The director of the Office of Information and Business Management Systems (OIBMS) is responsible for developing the implementation plan. Academy staff have seen two drafts and provided EERE with comments. The plan includes numerous "Areas of Improvement," many of which are based on White Papers previously developed by OIBMS. OIBMS has been thinking about these issues for some time and has developed some persuasive arguments outlining the need for change. The Panel is concerned, however, that the Technology Development organization has not been actively involved in defining the areas that need to be addressed or in developing proposed solutions. Although the DAS for Technology Development received the second draft of the implementation plan for comment, the Panel believes that EERE would benefit by engaging a wide group of officials in a much more interactive process to finalize the plan and move forward. Business Administration needs to intensify efforts to include the Technology Development organization in the process in order to avoid the appearance that Business Administration is driving the change management

agenda. Senior managers across EERE need to take ownership of the change management process.

The Panel recommends that EERE approach the implementation of its reorganization with the same rigor it would a research project. EERE needs to officially designate a manager to oversee a change management process that involves a wide range of senior managers to finalize the implementation plan and its execution.

This change manager should be closely aligned with EERE's power structure, and should be charged with working collaboratively with stakeholders of the reorganization, i.e., key EERE staff, to finalize the implementation plan. Because many of the areas in the draft plan impact others, the manager needs to develop mechanisms to coordinate the activities to be undertaken and to regularly review their progress to ensure that they address all areas and are accomplished in a timely fashion. In addition, the manager needs to develop mechanisms to keep EERE staff informed of the status of the reorganization's implementation and to obtain their feedback. These do not have to be complex or cumbersome systems. Weekly notices on EERE's intranet system that provide brief updates on activities underway or opportunities for input would help ease staff concerns, provide an opportunity to recommend ways to fine-tune EERE's new business model, and build support for the change effort.

Addressing the Needs of Stakeholders

Stakeholders contacted thus far have expressed mixed reactions to the reorganization, with opinions apparently being colored by whether or not their programs fared better or worse in the budget. Consistent, however, from stakeholders were comments about desiring more information about the organizational changes. The Panel believes that EERE needs to ensure that stakeholders are adequately informed about the reorganization and how it affects the areas of stakeholders' concerns. EERE also needs to make clear to stakeholders that there are policy changes affecting some programs that have nothing to do with the reorganization. This may not allay all stakeholders concerns, but it should alleviate some of the confusion about what is prompting program changes.

Technical Capabilities of the Research and Development Staff

In order to accomplish its mission, EERE staff manage and monitor research and development projects performed by national laboratories, universities, industry and other partners and make decisions about whether to continue funding those projects. To perform these oversight functions, EERE has 114 engineers and 22 scientists on board.¹⁰ Currently, the vast majority of EERE's technical staff are located in headquarters. The initiative to consolidate project management in Golden will require EERE to build this expertise in the Golden Project Management Office. In order to perform this work, EERE staff need to keep current their skills and knowledge in the various technical areas as well as other aspects of project management.

EERE staff members indicated that reading technical journals, talking to researchers working on projects, and conducting peer reviews of projects, which are done periodically to help EERE

¹⁰ Data provided by EERE's Human Resources staff as of April 8, 2003.

assess the progress achieved by the research, help them stay abreast of new developments in their fields. In the past, another primary method was attending conferences where EERE staff had opportunities to interact with other experts in their fields. However, funding reductions have limited the staff's ability to travel to conferences, and workload levels have reduced the time available to attend such activities. In some cases, reduced funding also has affected the program offices' ability to conduct peer reviews of their projects as often as needed. The Panel is concerned that these factors could impact EERE's engineering and scientific employees' ability to keep current in their fields and to effectively monitor research and development projects.

The Panel believes that this is an area that EERE leadership needs to watch closely. In order to keep its staff technically current, EERE needs to look for means to increase the interaction between its staff and their technical peers. The issue may become more acute as EERE builds its project management capability in Golden. Unless EERE's staff stay current in the technologies being explored, they will not be able to make sound decisions on the benefits of the research being conducted. EERE may find it useful to examine how other organizations that perform research using contractors keep their staff current. For example, the Panel notes that it has been a National Aeronautical and Space Administration approach in the past that staff who monitor research contracts should also spend time working in the technical areas, such as a laboratory. EERE might also consider whether staff sabbaticals with industry or the national labs would be beneficial.

Assessing the Results of the Reorganization

A primary goal of the reorganization is to improve EERE's effectiveness and enhance its capability to meet its mission. The Panel believes that it is important for EERE to demonstrate such results. To do so, EERE needs to determine fairly quickly how it will assess the results of its new organizational structure and collect baseline data to evaluate it. This assessment needs to be done over a realistic timeframe. In a reorganization of this magnitude, the Panel recognizes that it is unreasonable for everything to be accomplished at once. Some changes may take years. As it does with its research and development efforts, EERE needs to develop milestones for evaluating the reorganization's results.

The Panel recommends that an evaluation strategy be included in EERE's overall implementation plan for the reorganization.

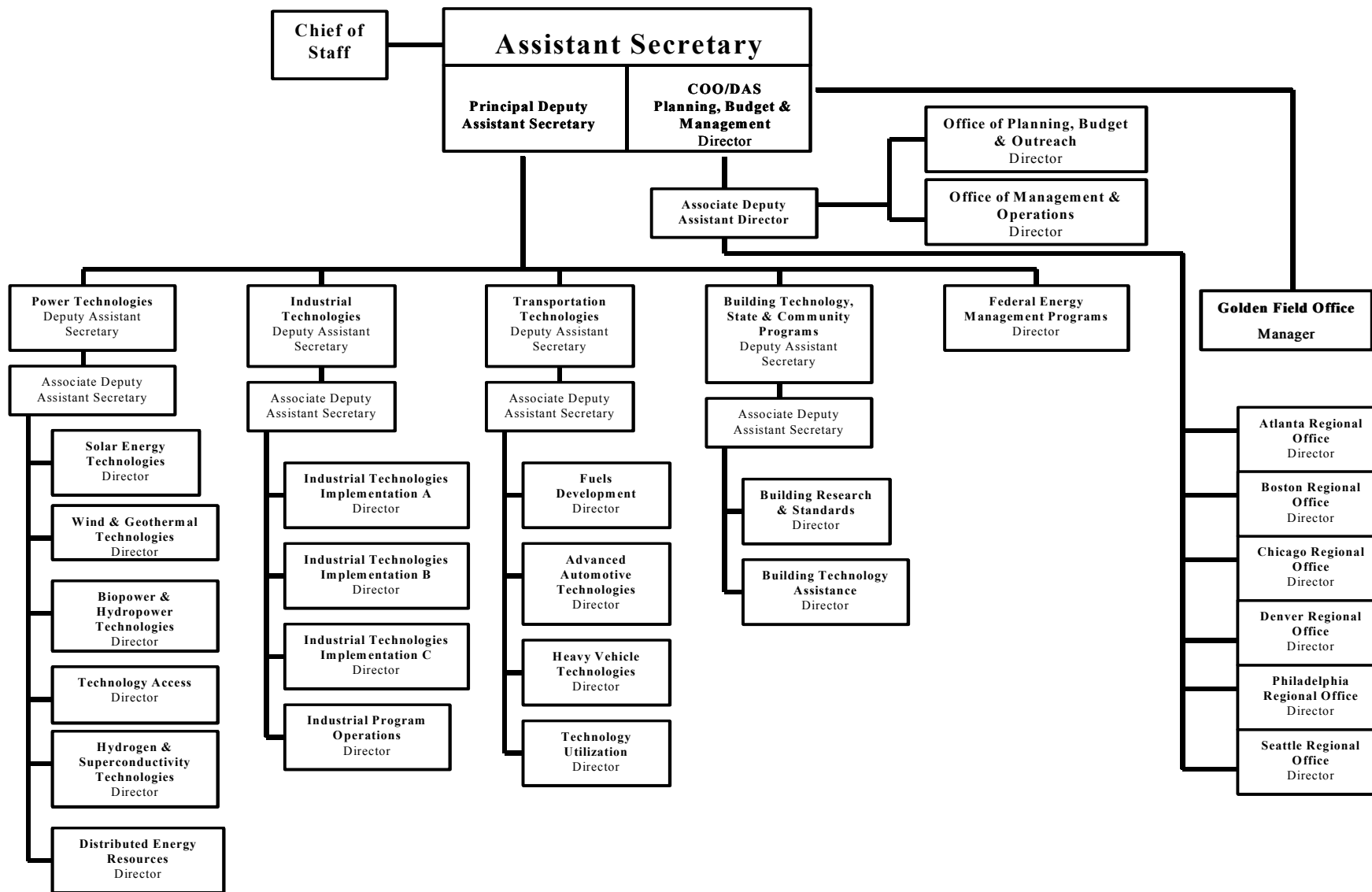
NEXT STEPS

During the next three months, the Academy staff will continue to develop and analyze information on the issues identified thus far for the Panel's further consideration. In addition, Academy staff will devote more time assessing whether EERE has the necessary mechanisms in place to ensure the integrity of its two appropriations in offices that are funded by both accounts, and identifying potential savings from the reorganization. The no-RIF decision limits EERE's ability to achieve immediate savings through staff reductions. However, EERE is working on several projects as part of its efforts to implement its new business model, such as the review of support services contracts, which should result in savings. The Academy staff also will be

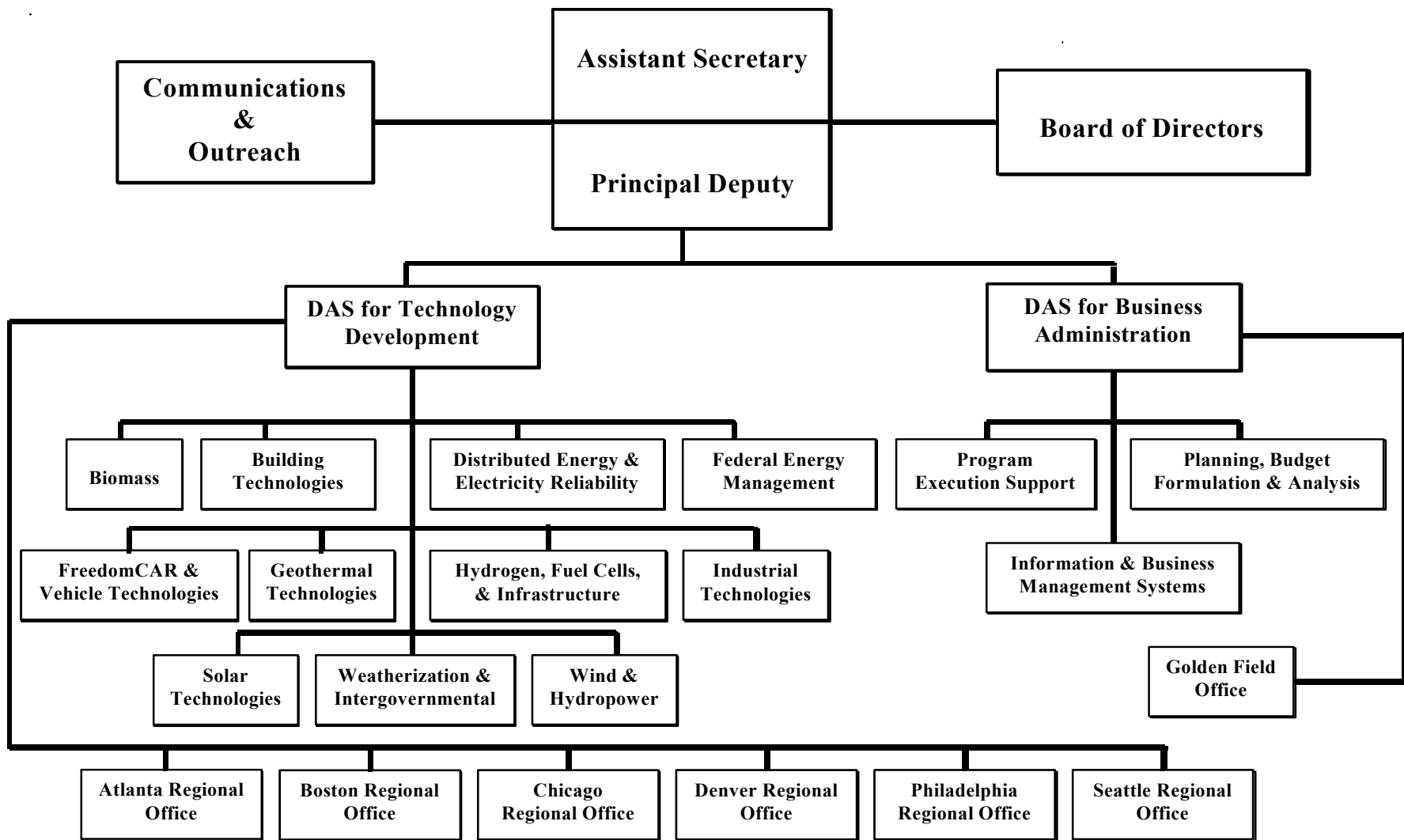
looking for ways in which process reengineering could produce savings. In addition, staff will continue to review EERE's acquisition/financial assistance operations.

As noted earlier, EERE is in the process of conducting a workforce analysis that will document the work performed by the organization, the resources and skills needed to perform that work, and areas where the resources needed do not match the workload. This type of data is often used as the basis for restructuring organizations and, as such, the data resulting from that project could impact the issues the Panel is addressing. Previously, the Academy used a workforce analysis technique to develop a resource estimation and allocation system. Although not within the scope of work or resources for this contract, the Panel believes EERE may want to consider the workforce analysis results together with organizational and process changes with a view towards possibly developing a resource estimation system for use in formulating and defending the budget.

EERE Prior Organization



EERE Restructured Organization



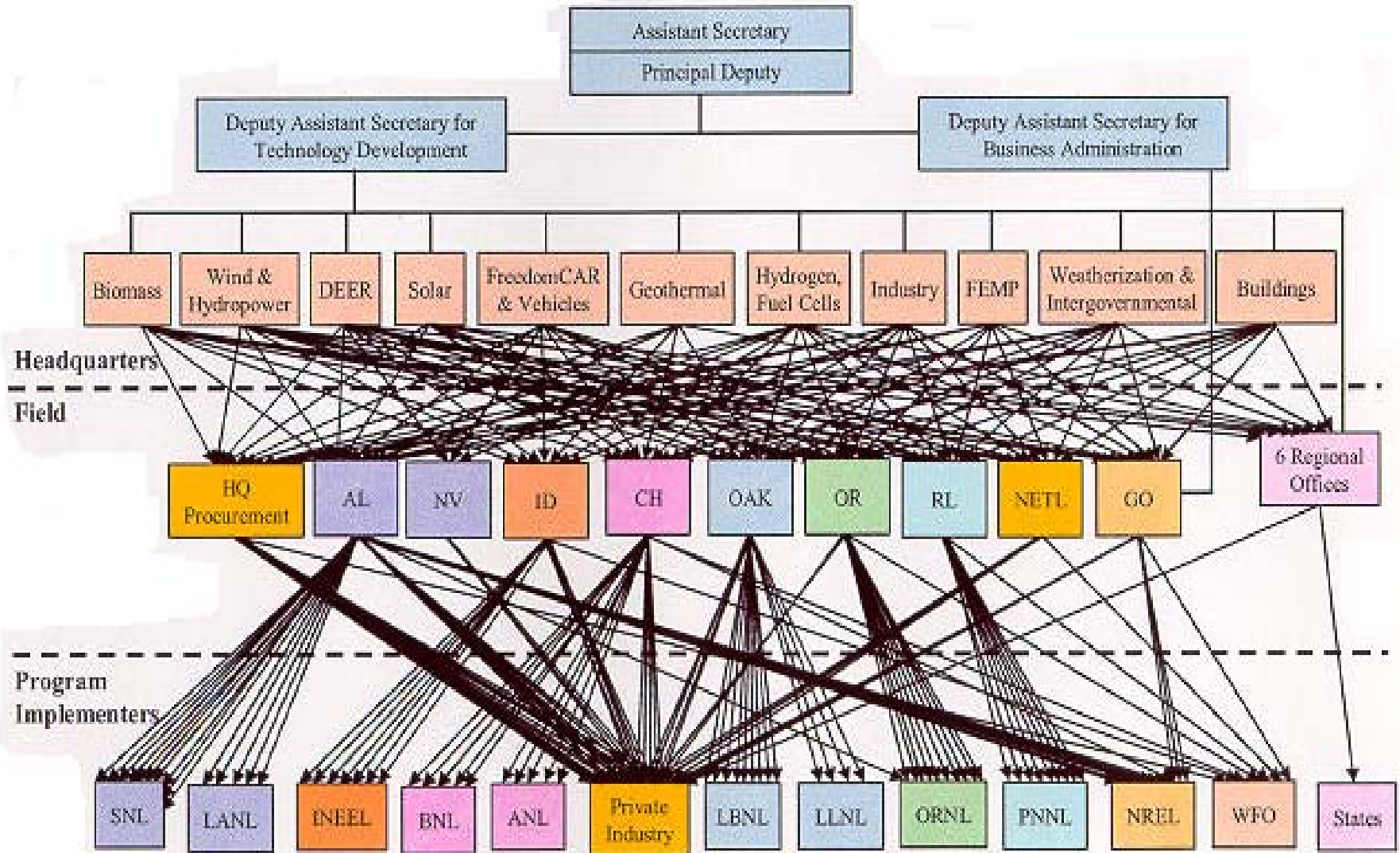
EERE ORGANIZATION AND GRADE STRUCTURE

ORGANIZATION	SES*	GS_15	GS_14	GS_13	GS_9-12	GS-8 &	TOTAL
						Below	
Assistant Secretary for Energy Efficiency	2	2	1	0	1	1	7
Principal Deputy Assistant Secretary for Energy Efficiency	1	0	0	0	1	0	2
Board of Directors	4	0	1	0	1	0	6
Office of Communications and Outreach	0	3	6	3	10	1	23
EERE PROGRAM OFFICES							
Deputy Assistant Secretary for Technology Development	1	1	0	1	0	0	3
Biomass Program	0	6	5	2	2	2	17
Building Technologies Program	0	6	13	9	7	1	36
Distributed Energy and Electricity Reliability Program	1	7	6	0	1	3	18
FreedomCAR and Vehicle Technology Program	1	8	11	2	3	3	28
Geothermal Technology Program	0	2	3	0	0	1	6
Hydrogen, Fuel Cells, and Infrastructure Technologies Program	0	7	8	2	1	1	19
Industrial Technology Program	1	7	15	3	1	1	28
Solar Energy Technology Program	0	3	5	1	1	2	12
Federal Energy Management Program	1	5	14	2	4	0	26
Weatherization and Intergovernmental Programs	1	6	14	7	10	3	41
Wind and Hydropower Technology Program	0	3	3	1	0	1	8
TOTAL, PROGRAM OFFICES	6	61	97	30	30	18	242
REGIONAL OFFICES							
Atlanta Regional Office	0	1	2	6	14	3	26
Boston Regional Office	0	1	1	6	9	1	18
Chicago Regional Office	0	1	1	6	11	0	19
Denver Regional Office	0	1	4	9	9	1	24
Philadelphia Regional Office	0	1	1	4	7	3	16
Seattle Regional Office	0	1	2	9	8	1	21
TOTAL, REGIONAL OFFICES	0	6	11	40	58	9	124
BUSINESS ADMINISTRATION							
Office of Deputy Assistant Secretary for Business Administration	1	0	0	0	1	0	2
Office of Program Execution Support	1	3	10	5	17	1	37
Office of Planning, Budget Information, and Analysis	1	14	3	0	2	0	20
Office of Information and Business Management Systems	1	5	5	0	3	0	14
TOTAL, BUSINESS ADMINISTRATION	4	22	18	5	23	1	73
EERE PAID STAFF IN DOE OPERATIONS OFFICES	0	0	2	6	1	0	9
GOLDEN FIELD OFFICE	1	5	12	19	18	1	56
TOTAL	28	188	274	178	254	59	542

* SES grade includes SES equivalent + executive level

(Data based on report as of April 8, 2003)

EERE Contracting and Financial Assistance Workflow – “Spaghetti Chart”



EXPLANATIONS OF ACRONYMS USED ON “SPAGHETTI DIAGRAM”

HQ	Headquarters
AL	Albuquerque Operations Office
NV	Nevada Operations Office
ID	Idaho Operations Office
CH	Chicago Operations Office
OAK	Oakland Operations Office
OR	Oak Ridge Operations Office
RL	Richland Operations Office
NETL	National Energy Technology Laboratory
GO	Golden Field Office
SNL	Sandia National Laboratory
LANL	Los Alamos National Laboratory
INEEL	Idaho National Engineering & Environmental Laboratory
BNL	Brookhaven National Laboratory
ANL	Argonne National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
ORNL	Oak Ridge National Laboratory
PNNL	Pacific Northwest National Laboratory
NREL	National Renewable Energy Laboratory
WFO	Work For Others (non-DOE entities)