

Energy Efficiency and Renewable Energy (EERE)



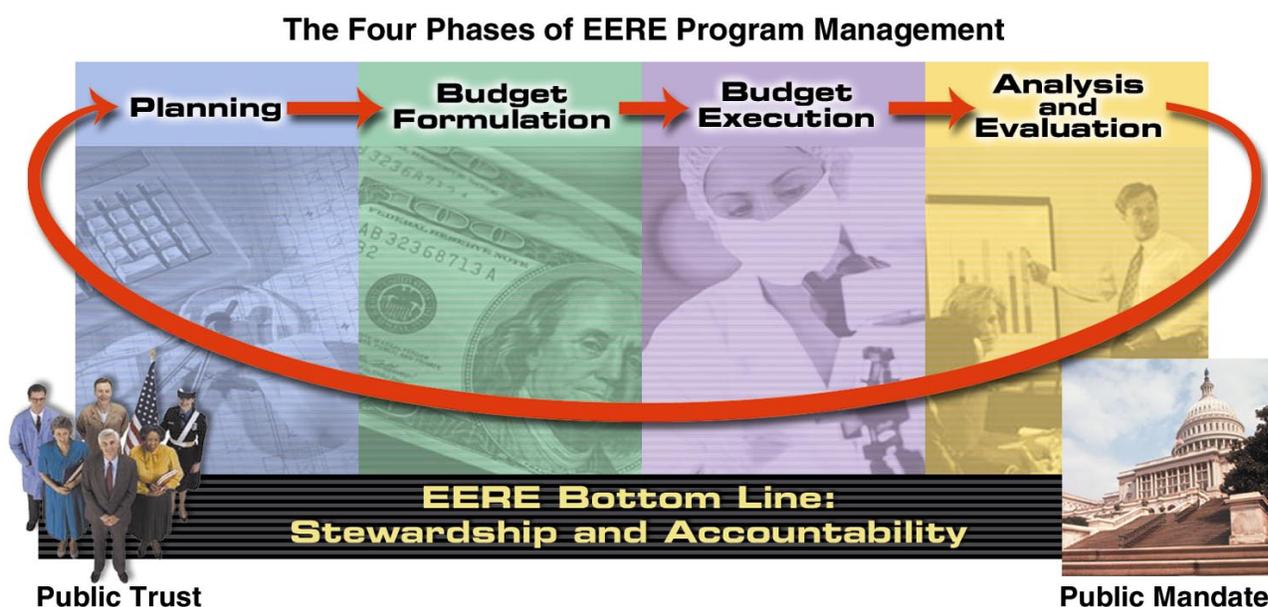
Program Management Guide



A Quick Reference



September 2001



EERE Program Management Quick Reference Guide

This document is a companion to the EERE Program Management Reference Guide. It provides an overall description of the EERE Program Management structure, defines EERE program and project management roles and responsibilities, lays out the general sequence of activities in the program management cycle and introduces the EERE Strategic Management System (SMS) and the SMS' Budget Hut.

Quick references to the Guide and other sources of related program management information are provided throughout the references are shown in information boxes associated with the text.

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I. Introduction – The Essence of Program Management

Running a program is a lot like operating a business.

Managing an EERE program is like running a business; perhaps similar to a division of a large corporation. The business is ongoing; it has no clearly definable point of completion or finish. The business needs to be developed, sustained and run effectively and efficiently.

Each has customers and others who have a stake in the outcome.

The purpose of any business is to meet stakeholders' needs. Everyone plays a role in the success of the business whether they are executive leaders, business or product managers, team leaders, team members or functional support providers. In any of these roles the individuals guide or help guide strategies and carry them out to achieve business results.

Each has an ongoing mission, an overriding purpose and perhaps a vision of where to be in the future. Each also needs strategies and plans with long-term goals and objectives.

Just like any business, it is important to have an explicit mission and a vision. To achieve the vision long- and near-term goals and objectives need to be defined and pursued. The goals and objectives need to address the needs of customers and stakeholders. Resources are needed to operate the business. Therefore, the products and services must offer real value to the stakeholders so that they will bring in revenue to continue business operations.

Each competes for resources and also cooperates.

In EERE, this business is called a program. It is imperative that the program set goals and objectives and devise strategies. Resources are acquired through the budget process, the mechanism for funding in which the program competes for scarce resources, just like companies compete in the marketplace for the consumer's dollar.

Each needs to bring in revenue.

Obtaining funds is necessary but not sufficient. The funds must be put to the best possible use by obtaining the most beneficial mix of services. This is done through contracts, grants, field work authorizations, financial incentives, and partnerships. Other mechanisms include public policies, market interventions, consensus standards, public service promotions and cooperative ventures with business, academia or other Government entities.

Each needs to plan what work needs to be done and how to do it.

Finally, progress and results must be tracked to ensure that plans are being carried out and the desired outcomes are realized. Periodically, goals and objectives need to be reviewed to ensure that they are still viable and that sufficient progress is being made toward achieving them.

Each needs to track and control.

In business, the four stages are planning, marketing, production and evaluation. In program management, the four steps are planning, budget formulation, budget execution, and analysis and evaluation.

Each has a number of businesslike functions and activities to do.

The buck stops at the manager's desk.

Described in the two scenarios above are the four phases of program management: Planning, Budget Formulation, Budget Execution, and Analysis and Evaluation. To be successful, a program must be planned, budgeted for, implemented, and evaluated.

Program management entails serious responsibility, trust and accountability. The bottom line is that, as stewards of substantial public funds, program managers are accountable for the success of the program in all aspects.

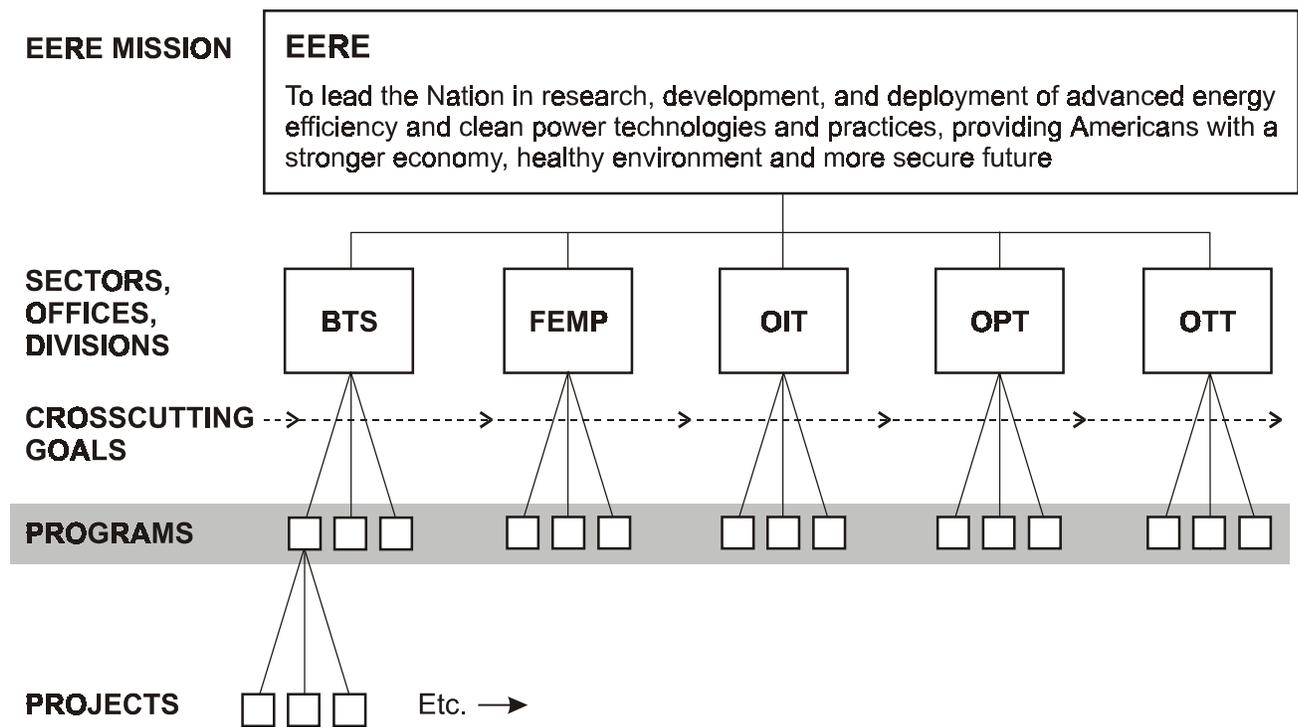
II. EERE Programs as Key Mission Elements

EERE accomplishes its mission through individual programs and collective efforts across programs.

EERE and the PMs are involved in producing a series of related specific plans including Strategic Plans, Multi-Year Plans, Annual Operating Plans, Approved Funding Programs and R&D and Technology Roadmaps.

To accomplish its mission, EERE, like any organization, must segment its work. EERE’s work can be represented by a work breakdown structure ; a pyramid where the top level is the EERE mission and the succeeding lower levels are the EERE Sectors, Offices and Divisions, respectively. The next level is the Program, the primary EERE mission element or building block. Most EERE Programs are further subdivided by the program manager into sub programs. EERE must ensure that all of the work needed to accomplish its mission has been assigned to, and is being pursued by, individual programs, or is being addressed collectively across sectors and programs as “crosscut” goals and objectives. If all programs are successful in meeting their goals and objectives (including their expected contribution to crosscut goals) then, by definition, EERE should be successful in accomplishing its mission.

Below the program level is the project level. Projects may include discrete research and development activities, technology demonstrations or deployment initiatives. The distinctions between programs and projects are shown in detail on the next page.



Currently, EERE has approximately 31 active programs. Each program has a performance risk, which means there is some likelihood that the program may not be able to carry out its plan completely and fall short of its goals. However, it is still possible that other programs may exceed their goals, resulting in EERE still accomplishing its mission. Hence the term “pooling the (performance) risk” at the next higher level. This is comparable to a stock portfolio or mutual fund where the performance of some stocks falls short, but others yield more than expected, so the overall fund or portfolio achieves the desired return.

Program portfolios enhance EERE’s chances for success.

Program managers must consider both their program and EERE’s mission.

EERE management officials must keep this pooling of risk concept in mind when establishing programs and providing them guidance and resources.

Since Programs must fit into the larger portfolio and compete for scarce resources, some may not be ideally chartered or funded. Additionally, programs must give attention to crosscutting goals, sometimes at the expense of higher risk to your program’s goals.

EERE’s program portfolio is dynamic, requiring periodic review and adjustment.

EERE’s program structure needs to be carefully reviewed and adjusted over time in response to internal performance and external scientific/technological, political and economic factors. This causes turbulence that program managers must continually address.

III. Distinctions Between EERE Programs and Projects

Programs and Projects are defined (and managed) separately.

EERE Programs typically involve a range of activities including Technology Research and Development, Demonstration, and Deployment. These activities are generally planned and carried out as discrete projects. EERE's policy is to assign and manage (plan, fund, implement and track) programs and projects separately. Programs typically are managed in Headquarters and projects either in Headquarters or in the field.

- **Program:** An organized set of ongoing activities directed toward a common purpose, or goal undertaken in support of an assigned mission area.

Programs are typically managed by Headquarters.

A program is generally the highest level or sector of work breakdown structure within a specific mission area or sector. It is characterized by a strategy for accomplishing a set of definite goals and objective(s) aligned to and in support of the mission goals. Programs are typically subdivided into projects which are managed closely by using project management tools and techniques. Programs in EERE are characterized as either core programs or developmental and support programs (programs in the exploration or initiation stage or that crosscut and contribute to other programs). Common functions, such as planning, research, and international cooperation, typically are not programs. Viewed as an integrated whole, a program is the aggregate of its subprograms (which have the same characteristics of programs but represent one additional level of subdivision) and its projects.

- **Project:** An executable element of a program, normally with its own discrete beginning, end and specified outcome(s).

Projects are managed in either Headquarters or the Field.

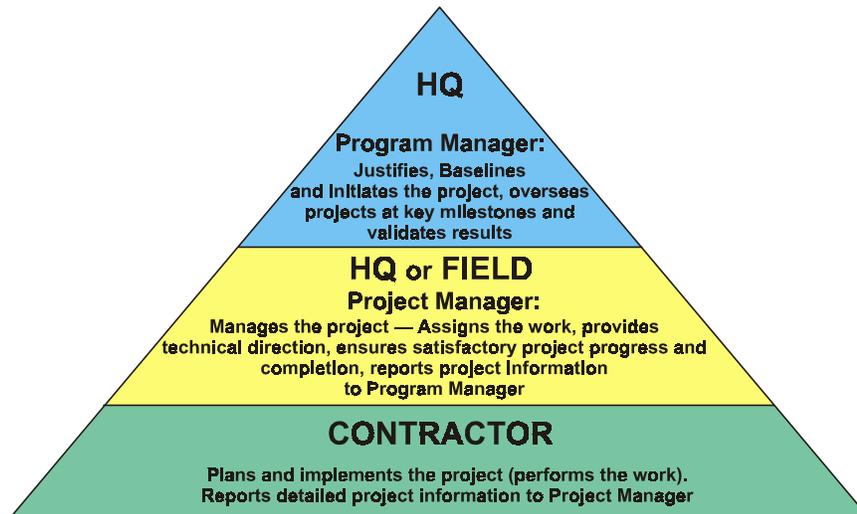
A project could be an effort to establish additional capability to support one or more programs (e.g., a construction project), or it could be an executable increment or stepping stone of program activity (e.g., FY2002 heavy vehicle fuel system research and technology advancement) aimed at achieving specific objectives in the specified period. A project, usually consisting of one or more tasks, is individually planned and approved and is closely managed and controlled.

IV. Roles and Responsibilities of Headquarters and Field Activities

EERE HQ manages the programs, identifies and assigns the work; field elements manage and/or do the work.

The basic division of responsibility and accountability in EERE is that Headquarters elements plan, direct and oversee the programs and Field elements implement them (conduct or assign the actual work). Part of HQ program planning and oversight entails establishing projects (discrete activities with definitive beginnings and endings). EERE Headquarters or Field elements (the Golden Field Office, DOE Operations Offices and Regional Offices) then plan the projects and direct and oversee project implementation and other program operations and activities conducted by Federal laboratories and other Government and non-Government entities, including contractors, industry partners, interagency partners, etc.

Project Management Roles



V. Program Management and Project Management Responsibilities

The following table outlines the general responsibilities of EERE Program Managers and Project Managers. Even though Program Managers and Project Managers have the lead responsibilities listed below, they will frequently consult and coordinate with each other during the year. In some cases, usually depending on the nature and size of the program, the same individual may perform both program and project management activities.

Planning

EERE Program Management:	EERE Project Management:
<i>Plans and develops the overall program</i>	<i>Initiates and oversees the project</i>
Provides policy and broad program direction	Provides the Program Manager recommendations on technical performance, cost and schedule requirements for the planned project that contribute to the program's goals and objectives
Aligns programs and projects with Corporate and Sector goals and objectives	Defines the project's objectives and how the project will be organized, staffed, and managed
Conducts multi-year program planning and identifies annual performance milestones	Defines the project management approach and optimizes the procurement strategies
Establishes and justifies the need for project within the program	Develops the project execution plan
Supports EERE and Sector strategic and mid-term planning efforts	Understands EERE and Sector and program goals, objectives, and strategies

Budget Formulation

EERE Program Manager:	EERE Project Manager:
<i>Prepares, justifies, and defends the program budget</i>	<i>Develops and submits the project budget to the Program Manager</i>
Develops and submits estimates of the funding and FTEs needed to carry out the program's science and technology base and operations and support plans	Prepares the resource requirements of the project
Aggregates and submits the funding and FTE requirements for implementing the program's authorized projects	Estimates and validates contractor and Federal FTE requirements
Provides the rationale for the program's activities, including science and technology base, projects, and operations and support	Identifies and validates necessary facilities and equipment
Optimizes program resource allocations to maximize performance results	Justifies the project's submission to the EERE budget

Budget Execution

The EERE Program Management:	The EERE Project Management:
<i>Executes the program budget and implements the program</i>	<i>Implements the project</i>
Authorizes projects and establishes and staffs project management offices and project cancellations	Determines project and contract scope, and recommends new projects, project modifications
Ensures timely funding for projects and other program activities	Executes the project in coordination with the field procurement function
Integrates across all elements of the program (science and technology base, projects, and operations and support)	Selects project performers in coordination with the field procurement function
Monitors program-level milestones and evaluates progress	Evaluates contractor performance and determines acceptability of completed work
Assures proper coordination between multiple Field Elements, other DOE programs, Federal agencies, other program partners.	Monitors project-level milestones and evaluates progress
Advocates the program through liaison with the public and private sectors	Provides technical direction to Field contractors who execute projects
Is accountable for achieving program objectives, e.g. cost, schedule and technical performance	Is accountable for Government project funds and ensures their timely distribution
	Assures proper coordination by all appropriate line and staff elements beginning with project inception
	Is accountable for achieving project objectives, e.g., cost, schedule and technical performance

Program Analysis and Evaluation

The EERE Program Manager:	The EERE Project Manager:
<i>Analyzes and evaluates the overall performance of the program</i>	<i>Analyzes and evaluates detailed performance of the project</i>
Evaluates program variances from expected progress and initiates necessary corrective actions	Tracks project execution against cost, schedule and technical performance
Ensures Field performance of assigned status program tasking, e.g. science and technology base and operations and support	Independently assesses regular project status reports
Reviews project portfolio performance against established baselines	Identifies significant variances in project progress and recommends corrective actions
Supports Sector, Corporate and Departmental evaluation efforts	Regularly assesses and reports project status, e.g., cost, schedule, technical performance, to the program manager
Identifies significant variances in program results and recommends corrective actions	
Validates reported results	
Establishes an evaluation plan	
Estimates program benefits to date	
Ensures adequate peer reviews of program progress	

VI. How to Manage an EERE Program: A General Overview of the Program Management Cycle

The Program Management Cycle

Additional information about the EERE mission and the supporting sector missions is in the Guide Chapter 2.

The EERE program manager is the vital agent who is responsible for transforming strategic objectives into reality through the successful development and execution of programs/projects.

The successful accomplishment of EERE's mission is dependent upon the ability of program managers to transform strategic objectives into reality, building the foundation for EERE's success.

While program managers use defined methods to develop and monitor programs, effective program management is best described as an art. Vital elements of program management can be identified and detailed in guides (such as this) and training. However, it is the personal combination of motivation, talent, knowledge, and experience that produces effective program managers.

Program management is a complex and multi-dimensional task involving technical competence, communication and negotiation skills, creativity, organization, and especially, effective time management. Using these skills, the EERE program manager must juggle the many different tasks and responsibilities involved in successful:

- Planning,
- Budget formulation,
- Budget execution, and
- Program analysis and evaluation.

Planning

Additional information about the EERE planning structure is in Section 4.2 of the Guide.

Program manager must plan in three broad areas:

- *Strategic*
- *Multi-Year Program*
- *Annual Operations*

The EERE program management planning cycle involves a progression of activities that are tiered into three broad levels. The program manager contributes at all three levels. Strategic planning at the DOE, EERE, and Sector levels addresses the broad DOE wide missions, visions, strategies, and strategic objectives (identified in the current DOE Strategic Plan) and formulates EERE and Sector specific missions, visions, strategies and strategic objectives. Multi-Year Program Planning is performed largely at the program level and translates the strategies and strategic objectives developed at the strategic level into specific technical, funding, and schedule requirements for multi-year program plans. Annual operations planning reduces programs into their constituent projects and details, technical objectives, contracts, grants, and Field assignments, budgets, and milestones for each year. The figure below summarizes the program management cycle planning stages.



In addition to these plans, a prudent program manager would develop contingency plans at the program level and, more importantly, at the project level to be ready to respond to significant, and unexpected, increases or decreases in budget authority.

Strategic Planning (every 2-3 years)

EERE Strategic Plan will be updated in December 01.

Strategic planning steps:

- 1. EERE Strategic Plan is issued.**
- 2. DAS generates the sector Strategic Plan.**
- 3. Program manager assists in the development of the strategic objectives and issues.**
- 4. Program manager helps generate strategies.**
- 5. Program manager conducts broad program planning.**

DOE Guidelines for Strategic Planning are at <http://www.cfo.doe.gov/stratmg/index.htm>.

The strategic planning process is a multi-level process where the overall DOE and EERE mission, vision, and broad strategic goals are successively refined into increasing levels of detail. The process leads to the formulation of EERE, Sector and/or program-specific strategic goals that provide the focus and justification (including legislative) for EERE programs.

The EERE Strategic Plan is produced at the Assistant Secretary level and is updated approximately every 2-3 years.

The Sector Strategic Plan is generated at the Deputy Assistant Secretary (DAS) level and is updated periodically as the technology sector and DOE environment changes and as the EERE Strategic Plan is updated. The key role of strategic planning is to assure that the long-term goals and objectives for which the program is striving are the best that can be currently envisioned. The program can then be executed in concert with the DOE and EERE missions, goals, and objectives.

The key elements developed or reaffirmed through strategic planning are as follows:

- Mission,
- Values,
- Situation analysis,
- Vision, strategic goals and objectives,
- Strategic issues, and
- Strategies.

Additionally, the strategic plan must support the establishment of DOE and EERE performance goals, measures, and expectations as required by the Government Performance and Results Act (GPRA).

The Deputy Assistant Secretary and his/her staff develop the bulk of the sector strategic plan including the mission, values, situation analysis, and vision. Program managers and Office Directors assist in the development of specific strategic objectives and performance goals, and in the identification of strategic issues.

The program managers and Office Directors complete the strategic planning process by generating strategies that target the achievement of the strategic objectives while addressing the realities imposed by the strategic issues (especially legislative mandates and constraints). Broad program planning is conducted by the program manager with input from Office Directors, the Golden Field Office, the Regional Offices, the National Laboratories, industry groups, professional associations, and panels of experts to identify and develop new program areas or to refocus existing programs (if necessary) to achieve strategic objectives.

Multi-year Program Planning (Update annually)

Multi-year Planning is discussed in more depth in Appendix A-2 of the Guide.

- 1. Program manager identifies key program elements.***
- 2. Program manager develops the Multi-Year Program Plan (MYPP).***
- 3. Program manager identifies projects, levels and content of lab support and procurement and financial assistance.***

In developing the Multi-year Program Plan, the program manager begins by identifying key program elements required to achieve the strategic goals and comply with Congressional directives, specifically:

- Technical and/or marketing requirements, risks, and potential barriers,
- Legislative requirements and limitations,
- Program structure,
- Identification of technical and contract management,
- Identification of desired support providers,
- If a team of support providers is desired, identify the structure and roles of this team,
- Funding requirements, and
- Milestones/scheduling requirements.

Program milestones must be identified at junctures along the critical path to the program goals and objectives. They should represent key decision points for determining as early as practicable if the program is on track toward achieving objectives and facilitate timely adjustments to the program's strategies.

The MYPP integrates these key program elements and becomes the *basis for budget requests and justifications*, as well as the baseline document that provides the framework for periodically evaluating and reporting program progress. The MYPP is also considered a "living document" and is updated on an annual "rolling" basis. An MYPP is developed for each program and contains the following:

- Introduction
- Goals and Objectives
- Technical and/or Marketing Plan
- Implementation Strategy
- Management Plan

The program manager updates the MYPP with input and assistance from many sources, including laboratories and support contractors.

Annual Operations Plan (Each fiscal year)

AOP starts with ensuing fiscal year of MYPP.

Program manager reviews goal, objectives and milestones.

AOP defines means of achieving upcoming FY milestones.

AOP identifies all work for year by all performers.

AOP includes spend plan.

AOP drives acquisition plan.

Detailed process for preparing Annual Operating Plans is in Appendix A-3 of the Guide.

After the MYPP is updated, the program manager begins the annual operations planning process by using the ensuing fiscal year (slice) of the MYPP as the foundation on which to develop the Annual Operating Plan (AOP). The program manager reviews the program's goals and objectives. He/she then reviews the near-term milestones and determines the activities required in the upcoming execution year to achieve them. Some of the milestones will be achieved by ongoing project activities from prior fiscal years. Others will require the initiation of new projects. All will require the identification of the applicable funding requirements and the timing of the funding obligations. In each case, the work performer and/or procurement and/or financial assistance vehicles will be identified and the cost, schedule and technical requirements specified.

Where it is anticipated that the laboratories will be assigned the work, the program manager may direct them to generate and submit a field Work Proposal (FWP). In many cases the FWP will be submitted as part of the laboratory's Annual Operating Plan. In reviewing the FWP, the program manager may discuss and negotiate its provisions with the lab before deciding upon the level of tasking and funding necessary.

Where the performer is other than a lab, the program manager needs to determine the appropriate procurement or financial assistance instrument and estimate the funding required.

To complete the AOP, the program manager develops a Spend Plan, which identifies all of the funding required and when it will be needed during the year. The completed AOP is then used to develop an Acquisition Plan (see Appendix A-2), which provides the planning details including the lead times for preparing procurement and financial assistance documents. The AOP is also the source of information for generating Work Authorizations and Program Guidance Letters to the field.

SMS Planning Stages are defined in Section 4.2.3 of the Guide.

Budget Formulation

- *The program manager refers to internal planning.*
- *The program manager gathers input from Labs and Field offices.*
- *DOE Controller issues call for development of the Corporate Review Budget (CRB).*

After the program has been fully defined, the program manager secures funding through the budget development process.

The DOE budget process begins each spring with the preparation of DOE internal budget called the Corporate Review Budget (CRB). This budget is for the fiscal year that is two years away, e.g. the budget process beginning in the spring of 2001 is for FY 2003.

Prior to developing the first draft of the budget, the program manager gathers input from appropriate personnel at DOE headquarters, the labs and field offices as well as internal planning, primarily the multi-year program plan. Program managers should already have much of this information from the multi-year program planning process which occurs prior to the Budget Formulation Process.

The Budget Process begins when the DOE controller issues the call for development of the CRB and guidance for its preparation.

General Budget Formulation Guidance is in Section 4.3 of the Guide. The DOE Budget Process is further explained in Appendix B-1 of the Guide.

Reference: DOE Budget Formulation Manual DOE 0130.1

SMS Budget Formulation are defined in Section 4.3.2 of the Guide.

Development of DOE Corporate Review Budget

- **Sector prepares CRB.**
- **Office Directors review CRB.**
- **Deputy Assistant Secretary and the Assistant Secretary review the CRB.**

The DOE Corporate Review Budget Document is described in detail in Guide Appendix B-2.

The program manager reviews his/her program and prepares the program budget including the key activity summaries, based on what the program needs to accomplish to achieve its goals and contribute to higher level (EERE, DOE National) goals. Useful information for budgeting purposes can come from the DOE spend plan history, the existing budget, and the multi-year program plan. These budgets are then reviewed by the appropriate Office Directors who direct comments and revisions back to the Program Manager.

The overall sector budget is then reviewed by the appropriate Deputy Assistant Secretary who may accept the budget, or recommended changes or cuts. Discussions between the Deputy Assistant Secretary and the Assistant Secretary determine initial funding levels at which the budget will be developed. Based on the budget agreed upon by the Assistant Secretary and the Deputy Assistant Secretary, the program manager is usually requested to update his/her FY Key Activity Summaries.

3.6.3.2. The Key Activity Summary

The program manager prepares the Key Activity Summary based on the CRB.

The Key Activity Summary is a major part of the overall budget document that is the basis of the budget request. The Key Activity Summary includes program descriptions/explanations, overall objectives and long-term strategic goals, and lists all projects conducted under each program. The program manager develops the upcoming budget year's key activities using the CRB for guidance, or any draft key activities developed for the CRB, the previous fiscal year's Key Activity Summary, and planning documents. With each review process of the budget, the Key Activity Summary should be updated to reflect any changes in the budget.

Preparation of The Key Activity Summary is discussed in Guide Appendix B-2 beginning on page B-8.

Appendix B-2, "The Corporate Review Budget Document," explains the development of the Key Activity Summary, and the Budget Analysis Review and Reporting System (BARRS) used to coordinate its development.

Budget Execution is further described in Section 4.4 of the Guide.

SMS Budget Execution Stages are defined in Section 4.4.2 of the Guide.

Budget Execution Processes are described in detail in the Guide at Appendix C “EERE Acquisition Guidance”. A detailed Table of Contents in Appendix C is helpful in identifying and locating specific information.

Budget Execution

- **Program manager initiates the development of required program support funding documents.**
- **Program manager updates the Multi-Year Program Plan, Spend Plan, and the Annual Operating Plan.**
- **Program manager finalizes and submits program support funding documents.**
- **Program manager tracks the obligation of funds and updates the Spend Plan accordingly.**

Since budget execution and procurement activities are vital to maintaining program progress, and many procurements and inter-agency agreements can have significant lead times, program support funding documents (e.g., procurement requests, work authorizations, etc.) should be submitted at the earliest possible time. To accomplish the timely submittal of the program support funding documents, the program manager should implement the acquisition plan and initiate the generation of these documents early (especially documents for interagency agreements, sole source justifications, and statements of work).

After fiscal year funding levels (from Congress) have been established, the program manager updates the MYPP, AOP (projects, milestones, spend plan), and acquisition plan to reflect funding realities.

The program execution phase is initiated with the finalization and submittal of the program support funding documents to the Sector’s Budget Execution Specialist to begin the authorization, obligation, and procurement process. As funds are authorized, the Budget Execution Specialist updates the Spend Plan accordingly, and the program manager tracks the obligation of funds and updates the Spend Plan as funds become obligated. The current Spend Plan is reflected in the Spend Plan spreadsheet in the EERE SMS Budget Hut.

To avoid program interruptions, another major program manager responsibility is to ensure that funding is provided to the program supporters (labs, contractors, etc.) in a timely fashion according to the Spend Plan. This is accomplished through the submission of the appropriate program support funding documents to the Budget Execution Specialist as part of the monthly Approved Funding Program (AFP) process.

Program Analysis and Evaluation

Program analysis and Evaluation is further described in Section 4.5 of the Guide.

- *Program manager oversees and tracks program performance.*
- *Program manager presents program progress at Program Progress Reviews.*
- *Program manager must allow for unforeseen events.*

Program manager feeds program progress back to strategic planning participants to update strategic objectives and refocus program if necessary.

SMS analysis and Evaluation Stages are in Section 4.5.2 of the Guide.

As the program and individual projects progress, the program manager is responsible for oversight and tracking of the program's technical, schedule, and fiscal progress. The program manager will continually evaluate progress through discussions and reviews with project managers, and when required initiate corrective action to keep programs on target toward achieving the desired strategic goals.

Guide Appendix D-1 provides a suggested Program Review Process.

Program progress will be reported to management through monthly EERE Program Progress Reviews. These reviews provide the forum for the dissemination of program progress to EERE management along with required status reports from the field.

One thing the program manager can always count on is that unforeseen events will occur that significantly alter the dynamics of his/her programs. The skillful program manager will identify the disruption early and develop (often with consultation with peers and Office Directors) a plan to redirect the program. These events/ disruptions may be small enough to require only minimal restructuring of a project milestone or may be large enough to require re-examination of the attainability of the strategic goal itself.

The key to maintaining the program on a steady course in turbulent conditions is to continuously evaluate progress and feed this information back into the strategic and operational planning processes to realign the program course accordingly.

The very nature of the strategic planning process ensures that EERE programs are not conducted in a vacuum and are coordinated to achieve strategic objectives. Therefore, the progress (or lack of progress) in a program will impact other programs. For this reason, feedback from program managers to the strategic planning process is vital to maintain the coordination and focus of efforts.

At key intervals the program should conduct comprehensive reviews supported by analysis and objective review and recommendations by panels of experts (merit review/peer review). The frequency, regularity, depth and degree of independence of these reviews depends on the nature of the program, degree of technology change or evolution, the program's performance and results and interest among the stakeholders. The results of these reviews help complete the program management cycle by feeding forward into the next planning stage.

VII. The EERE Strategic Management System (SMS)

SMS is a tool for the programs and the organization.

The SMS is EERE's executive and program management operating system. It defines each of the four program management phases in terms of a scheduled series of products and their linkage to other products and phases (their interdependencies). This helps to properly align the program and business management activities and provides critical information at the right time for key decision-making. By adopting a clearly defined, integrated, and systematic approach for its management activities, EERE will be able to improve the effectiveness, efficiency, and quality of its programs.

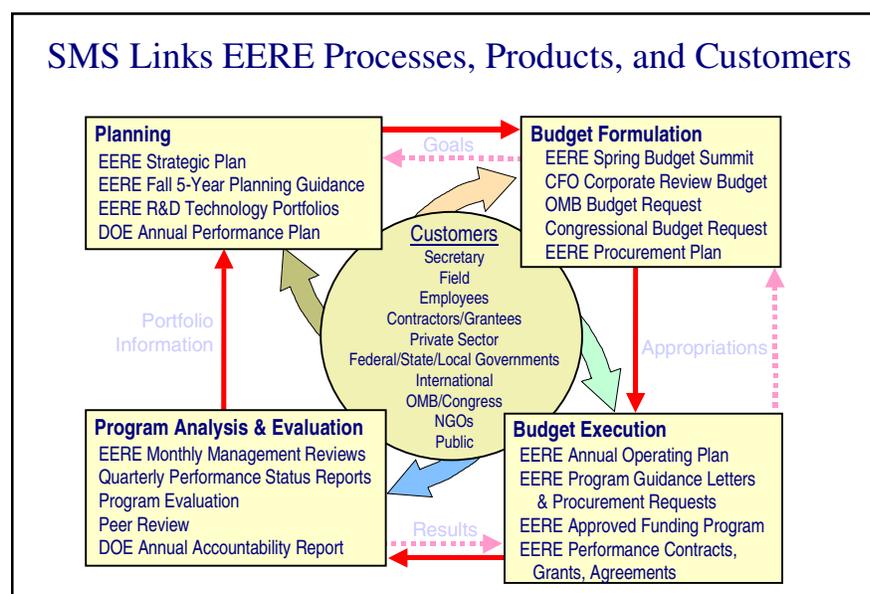
SMS integrates the Program Management Elements:

- **Planning**
- **Budget Formulation**
- **Budget Execution**
- **Analysis and Evaluation**

across all programs and organizational units.

Information on Program Planning, Budget Formulation, Budget Execution and Program Analysis and Evaluation are linked through SMS.

The figure below shows the four phases and the general closed-loop flow for one EERE program cycle.



EERE Strategic management system

As repeated throughout this guide, the program manager needs to plan, budget, execute and evaluate to be successful. It is also necessary that these activities are linked into a cohesive and coherent whole. That is the purpose of the SMS. All of the SMS procedures, processes and tools have been designed to address the interdependence of the parts as well as the parts themselves. If SMS is properly used, each of EERE's goals and objectives and each EERE program's multi-year program plans and annual operating plans will feed into the budget. The plans and budgets will then direct the implementing activities. The analysis and evaluation will focus on the desired outcomes as well as feed into the next planning cycle.

The SMS is part of your program manager's basic tool kit. It's the roadmap and calendar for planning and implementing the program.

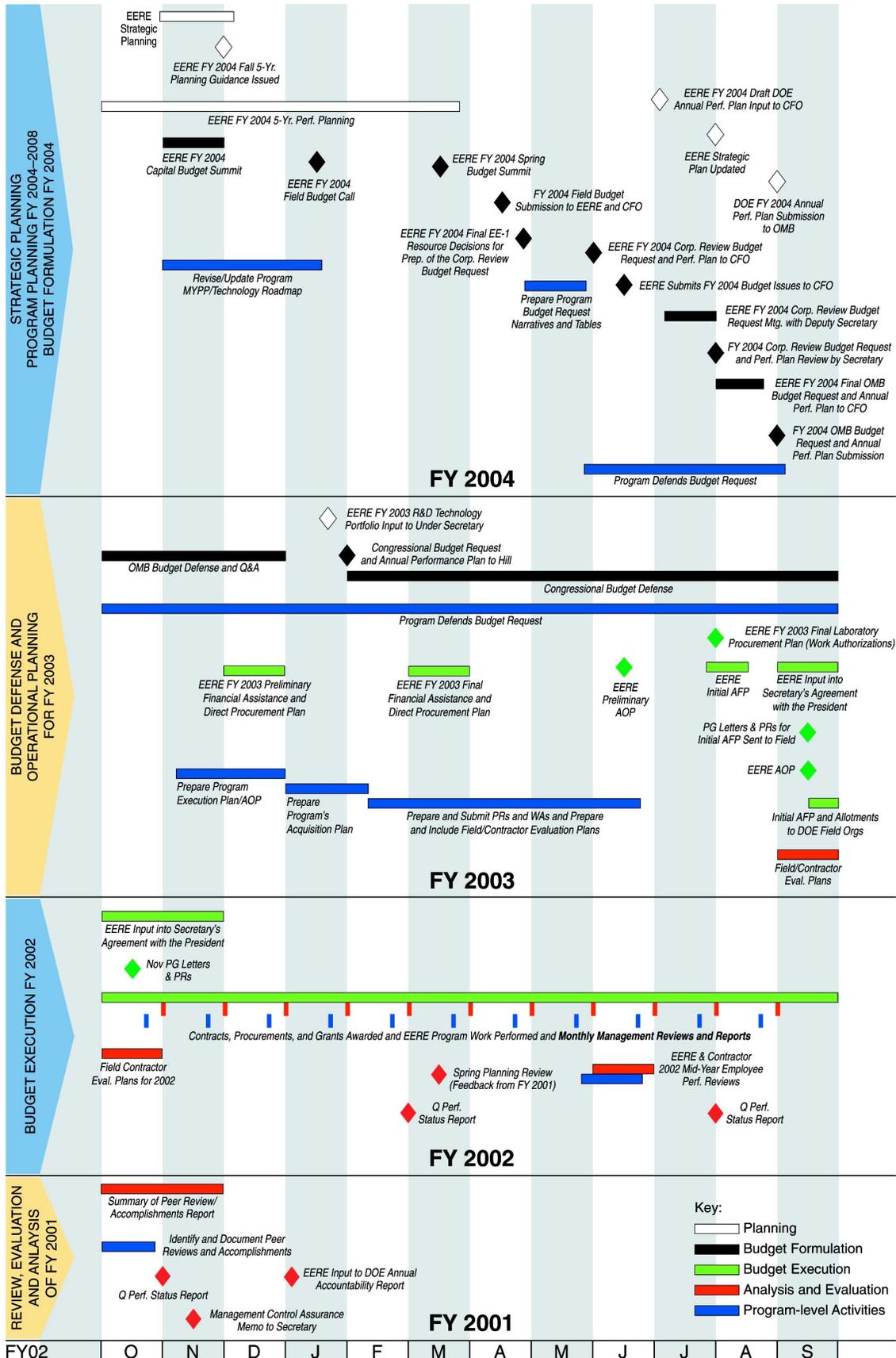
SMS core activities, schedules, and the responsible organizational elements/individuals are shown on the next page. These activities cover the period from September 2001 through October 2003. This information is also shown on the chart on page 24, which depicts these activities by SMS Phase: Planning, Budget Formulation, Budget Execution, Analysis and Evaluation. This chart also shows the execution year for which they apply and shows (in blue) the associated activities at the program level.

SMS CORE ACTIVITIES, SCHEDULE, AND LEAD ROLES THROUGH OCT 2003

Core Activities and Products	Target Date	Lead Role*
EERE FY 2002 Field Organization and Contractor Evaluation Plan	Sep 4-Oct 31, 01	EERE, FO
EERE Program Guidance Letters and Procurement Requests for the Initial FY 2002 AFP	Sent to the Field	Sep 7, 01 DASs
EERE FY 2002 Initial AFP and Allotments to DOE Field Organizations	Sep 14 & Oct 1, 01	CFO
EERE FY 2002 Program Guidance Letters and/or Procurement Requests for Monthly AFPs	Oct 1, 01-Sep 30, 02	DASs
EERE FY 2002 Contracts, Procurements, and Grants Awarded	Oct 1, 01-Sep 30, 02	EERE, FO
EERE FY 2002 Program Work Performed	Oct 1, 01-Sep 30, 02	EERE, FO, Contractors
EERE FY 2002 Monthly Field Organization and Contractor Performance Measure Reporting	Oct 1, 01-Sep 30, 02	FO, Contractors
EERE FY 2004 Multi-Year Performance Planning	Oct 01-May 02	DASs, FO
EERE FY 2002 Monthly Management Reviews	Nov 1, 01-Sep 30, 02	EERE
EERE FY 2004 Capital Budget Summit	Nov 01	PBM, DASs, GFO
EERE Strategic plan	Nov 21, 01	EE-1, PBM
EERE FY 2004 Fall Multi-year Planning Guidance Issued	Nov 30, 01	EE-1, PBM
EERE FY 2003 Preliminary Financial Assistance and Direct Procurement Plan	Dec 01	DASs, PBM
EERE FY 2004 Field Budget call	Jan 14, 02	EERE, CFO
EERE FY 2003 R&D Technology Portfolio Input to the Under Secretary	Jan 18, 02	DASs, FO
EERE FY 2002 Quarterly Performance Status Reports.	Feb, Jul, Oct 02	DASs, PBM
EERE FY 2003 Final Financial Assistance and Direct Procurement Plan	Mar 02	EE-1, DASs
EERE FY 2004 Spring Budget Summit	Mar 12-14, 02	EERE, FO
FY 2002 Mid-Year Federal and Non-Federal Employee Performance Reviews	Apr or Jul 02	EERE, FO, Contractors
EERE FY 2004 Field Budget Submission to EERE and the CFO	Apr 12, 02	FO
EERE FY 2004 Final EE-1 Resource Decisions for Preparation of the Corporate Review Budget Request	Apr 26, 02	EE-1
EERE FY 2004 Annual performance plan Input to CFO	Jun 3, 02	DASs, PBM
EERE FY 2004 Corporate Review Budget Request and Performance Plan to CFO	Jun 3, 02	EERE
EERE FY 2003 Preliminary Annual Operating Plan	Jun 12, 02	DASs
EERE Submits FY 2004 Budget Issues to the CFO	Jun 14, 02	EERE, FO
EERE FY 2004 Corporate Review Budget Request Meeting with the Deputy Secretary	Jul 8-26, 02	S-2, EE-1, CFO, MA
FY 2004 Corporate Review Budget Request and Performance Plan Review by Secretary	Jul 31, 02	S-1, S-2, S-3, CFO, MA
EERE FY 2003 Final Laboratory Procurement Plan (Work Authorizations)	Aug 1, 02	EE-1, National Labs
EERE FY 2004 Final OMB Budget Request and Annual performance plan to CFO	Aug 2-23, 02	PBM
EERE FY 2003 Initial Approved Funding Program	Aug 12, 02	DASs
FY 2004 OMB Budget Request and Annual performance plan Submission	Sep 3, 02	PBM, CFO
EERE FY 2003 Input to the Secretary's Agreement with the President	Sep 3-Nov 1, 02	DASs
EERE FY 2003 Final Annual Operating Plan	Sep 16, 02	DASs
EERE Program Guidance Letters and Procurement Requests for the Initial FY 2003 AFP Sent to the Field	Sep 16, 02	DASs
EERE FY 2003 Initial AFP and Allotments to DOE Field Organizations	Sep 16 & Oct 1, 02	CFO
FY 2002 Federal and Non-Federal Employee Performance Reviews	Oct 02 or Jan 03	EERE, FO, Contractors
FY 2004 OMB Budget Defense Q&A	Oct-Dec 02	PBM, FO
EERE FY 2003 Contracts, Procurements, and Grants Awarded	Oct 1, 02-Sep 30, 03	EERE, FO
EERE FY 2003 Program Work Performed	Oct 1, 02-Sep 30, 03	EERE, FO, Contractors
EERE FY 2003 Program Guidance Letters and/or Procurement Requests for Monthly AFPs	Oct 1, 02-Sep 30, 03	DASs
EERE FY 2002 Summary of Peer Reviews; Accomplishments Report	Nov-Dec 02	EERE, FO
EERE FY 2001 Management Control Assurance Memo to the Secretary	Nov 15, 01	EE-1, PBM
EERE FY 2002 Input to the DOE Annual Accountability Report	Jan 1, 03	EE-1, PBM, CFO
FY 2004 Congressional Budget Request and Annual performance plan Submission	Feb 4, 03	CFO
FY 2004 Congressional Budget Request and Annual performance plan Defense	Feb-Oct, 03	EE-1, PBM, FO

* EERE = Office of Energy Efficiency and Renewable Energy S-1 = DOE Secretary
 EE-1 = Assistant Secretary for EERE S-2 = DOE Deputy Secretary
 DASs = EERE Deputy Assistant Secretaries S-3 = DOE Under Secretary
 PBM = EERE Office of Planning, Budget and Management FO = EERE Field organizations
 CFO = DOE Office of the Chief Financial Officer MA = DOE Office of Management and Administration

Annual SMS Calendar

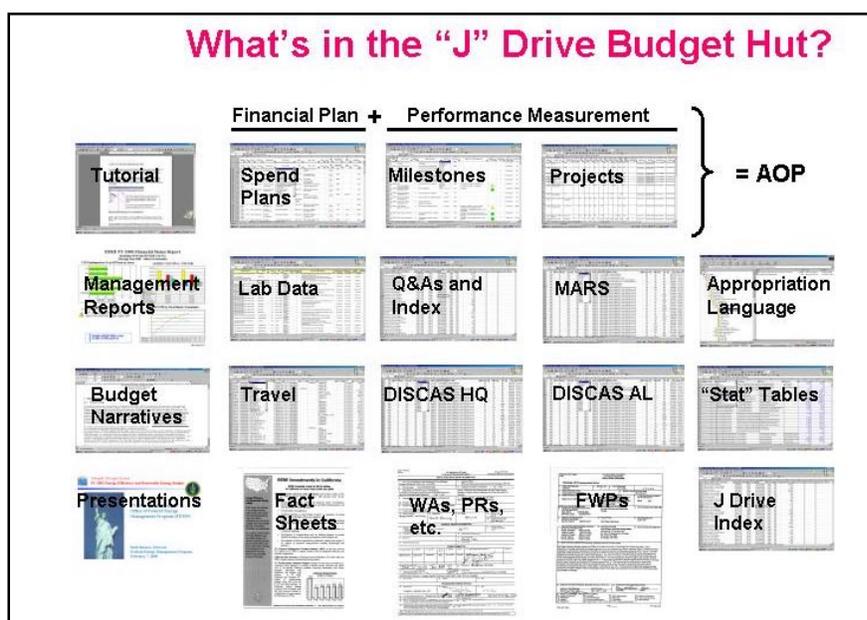


VIII. The Budget Hut

Budget Hut information is presented on spreadsheets that allow the user to quickly filter or relate the data in many ways.

Another essential tool for the program manager is the EERE “Budget hut”, a linked set of spreadsheets, which are populated with program information and routinely updated to help manage the overlapping program management cycles for several fiscal years simultaneously. These budget hut spreadsheets serve as building blocks to plan, budget and implement program activities. They also are used to record implementing actions, including tasking (projects, work assignments and procurements) and related obligations and expenditures. Finally, they facilitate the tracking of program progress against goals, objectives, milestones and planned and appropriated funding.

The EERE Budget hut is currently operational. It is also undergoing improvements. As it continues to evolve, it will further standardize and integrate EERE financial, procurement, and acquisition information in a virtual warehouse. The term “hut” connotes a subset of an information warehouse where information from the DOE level databases has been selected and downloaded specifically for EERE use. It will provide much of the information required for supporting the SMS planning, formulation, execution and evaluation cycle at all levels within EERE including the program level. Some parts of the budget hut provide downloaded and reformatted data from the Departmental systems; other parts require routine data updates by each EERE organization and program. The structure and general content of the SMS Budget hut is shown in the figure below.



Budget Hut Structure and Content

Formally stated, the purposes of the SMS Budget Hut are to:

- Establish a uniform corporate information repository to respond quickly to inquiries,
- Simplify and integrate access to and use of information related to EERE resources, milestones and results, and
- Improve EERE program and project management.

Deputy Assistant Secretaries, with input from program managers, will:

- By November 15, 2001, complete corrections and updates of FY 2002 spend plan, project, and milestone spreadsheets including updates for awards to be made in FY 2002;
- By December 15, 2001, complete FY 2002 spend-plan, project, and milestone spreadsheets, and continue monthly updates based on spend-plan updates, project changes, and awards from new solicitations;
- By March 1, FY 2002, complete initial FY 2003 spend-plan and project spreadsheets based on the President's Budget Request, and update every two months based on changes in the status of the FY 2002 project work;
- By July 31, FY 2002, complete detailed FY 2003 spend-plan, project, and milestone spreadsheets based on the latest Senate, House, and/or Conference marks;
- By October 1, FY 2002, update the FY 2003 spend-plan, project and milestone spreadsheets based on the final appropriation, and continue monthly updates based on spend-plan updates, project changes, and awards for new solicitations; and
- By mid-January 2003, complete initial FY 2004 spend-plan and project spreadsheets based on the President's budget request, and update every two months based on changes in the status of the FY 2003 project work.

The EERE Office of Planning, Budget and Management (PBM) has a number of important budget hut roles and responsibilities. PBM will:

- Maintain, update and analyze financial information from DOE financial, procurement and travel systems, etc.,
- Design and establish common reporting and updating requirements for SMS spreadsheets (spend plan, projects and milestones),
- Ensure a high confidence level in the consistency and quality of SMS information,
- Use commonly shared software (Excel) to access and manipulate data intelligently, and
- Provide training on the SMS Budget hut to EERE personnel.

The following are the types of information spreadsheets offered by the EERE SMS Budget hut and the applicable uses for the program manager and EERE organizational elements (information on DOE departmental budget and finance systems are found at <http://www.cfo.doe.gov/Majorsys.html>):

Financial data from MARS is accessed through the Budget Hut.

Financial. The monthly Financial Information System/Management Analysis Reporting System (MARS) download includes funding, obligation, cost, and uncosted data for each EERE contract or financial assistance instrument by office, national laboratory, awardee, CID, program, subprogram, category, and appropriation symbol. This download should be used monthly throughout EERE in the execution part of the cycle as a means to **identify cost trends and to assure that the timing of obligations and costs are consistent with the needs of the particular project.**

The status of procurements, grants and cooperative agreements is available in the Budget Hut.

Procurement. The monthly Procurement and Assistance Data Systems (PADS) download includes the location, contract value, start date, end date, and a wide-range of other data regarding each EERE procurement. This download should be used monthly throughout EERE in the execution part of the cycle as a means to: 1) ascertain the status of all current procurements; 2) plan procurement actions required to replace expiring procurements; and 3) answer questions regarding the location (state or congressional district) or type (small business set aside) of EERE contracts, cooperative agreements, and grants.

The monthly DOE national laboratory downloads include budget and procurement data as provided monthly by the National Renewable Energy Laboratory, Oak Ridge National Laboratory,

Argonne National Laboratory and others as their information becomes available for downloading. No departmental system identifies individual national laboratory procurements, so these downloads provide the only routine means for EERE organizations to review and report on the timeliness and status of national laboratory procurements. The timeliness of such procurements often impacts significantly the progress of major projects as well as the funding schedule.

Spend Plan. The Spend Plans spreadsheet relates to formulation, execution, and evaluation by assisting each EERE organization to plan, track, and report each funding action over the course of a fiscal year. The Control Table part of the Spend Plan summarizes the administrative control levels and constantly compares the funding actions to the spending plan to identify instances of funds remaining at Headquarters too long. The Spend Plan is one of the three key components of the EERE Annual Operating Plan.

Projects and Milestones. The Projects and Milestones spreadsheets link work performance to the funding actions in the Spend Plan by providing a standard format for each EERE organization to plan, track, and report milestones and project information. These two worksheets with the Spend Plan comprise the EERE Annual Operating Plan.



Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585