

GLOSSARY

DEFINITIONS OF TERMS

The following is a list of definitions of terms that are unique or nearly unique to project management. Also included are terms that are not unique to project management, but are used differently or with a narrower meaning than in general everyday usage. Many of the terms have broader, or sometimes different, dictionary definitions.

Acceptance. The official act of signing a reimbursable agreement, e.g., bilateral sales contract or interagency agreement, by a Department of Energy (DOE) contracting officer or DOE official to whom such authority has been delegated. Acceptance commits DOE and/or its contractor to perform Work for Others. Authority to sign and execute bilateral sales contracts can be delegated to the DOE contractor by the Head of a Field Element.

Acceptance Testing. The performance of all testing necessary to demonstrate that installed equipment will operate satisfactorily and safely in accordance with plans and specifications. It includes hydrostatic, pneumatic, electrical, ventilation, mechanical functioning, and run-in tests of portions of systems, and finally of completed systems.

Accrued Cost. See APPLIED COST.

Accountability. The requirement, obligation, or willingness of an individual to accept responsibility for the outcome, results and consequences of their actions and decisions. In a project setting, accountability is inseparable from authority and responsibility.

Accountability Matrix. See RESPONSIBILITY ASSIGNMENT MATRIX.

Acquisition Executive. The individual designated by the Secretary of Energy to integrate and unify the project management system and monitor implementation of prescribed policies and practices. Approves the initiation of a major system

project (or a selected other project) and its transition through phases of the acquisition process and other subphases involving major commitments; selects from among competing systems those that are to be advanced to development, demonstration, and production/operation; and authorizes development of a noncompetitive (single concept) system.

Acquisition Plan. Provides the procurement and contracting detail for elements of a system, program or project. The Acquisition Plan is execution oriented and provides the framework for conducting and accomplishing the procurements and includes actions from solicitation preparation through contract award administration.

Acquisition Proponent. The DOE component having the primary responsibility for research, development, demonstration, production or operation of a major system project (to include, when applicable, the system for its logistic support) that meets Departmental objectives in carrying out DOE missions.

Acquisition Strategy. Describes how the Department will acquire capital assets and establishes the framework within which detailed acquisition planning and program execution are accomplished. Once approved, it should reflect the approving authority's decisions on all major aspects of the contemplated acquisition.

Action Plan. A description of reportable problems or reportable financial management system nonconformances, their root cause(s), and the action(s) planned for correcting them.

Activity. An element of work performed during the course of a project. An activity normally has an expected duration, an expected cost, and expected resource requirements. Activities are often subdivided into tasks.

Actual Cost of Work Performed (ACWP). Total costs incurred (direct and indirect) in accomplishing an identified element or scope of work during a given time period. See also EARNED VALUE.

Administrative Closure. Generating, gathering, and disseminating information to formalize project completion.

Authority. The power or right granted or assigned to an individual to (a) lead, guide, and direct an activity, (b) make decisions, (c) authorize action, and (d) influence or control other individuals. In a project setting, authority is inseparable from accountability and responsibility.

Backfit. The imposition of a new or proposed nuclear safety requirement that

dictates the modification of, or addition to: (1) systems, structures, and components of a facility; (2) the existing or approved design of a facility; or (3) the procedures or organization required to design, construct, or operate a facility.

Bar Chart. A graphic display of schedule-related information. In the typical bar chart, activities or other project elements are listed down the left side of the chart, dates are shown across the top, and activity durations are shown as date-placed horizontal bars. Also called a GANTT CHART.

Baseline. A quantitative expression of projected scope, schedule, and cost requirements. Baseline establishment includes criteria to serve as a base or standard for measurement during the performance of an effort and the established plan against which the status of resources and the progress of a project can be measured.

Baseline and Change Control Levels. The project baseline consists of scope, schedule, and TPC as stated on the project data sheet, the project baseline summary, or similar documents. A baseline range is established at CD-1, Approve Preliminary Baseline Range, for tracking purposes. A performance baseline, against which project performance will be measured, is established at CD-2, Approve Performance Baseline.

Baseline Change Control Board. A multi-discipline functional body of representatives designated and chartered by the appropriate management level to ensure the proper definition, coordination, evaluation, and disposition of all proposed changes to approved baselines of projects that are within their chartered jurisdiction.

Baseline Change Proposal. The instrument/document prepared to provide a complete description of a proposed change and its resulting impacts on project baselines.

Benchmarking. An improvement process in which an organization, agency or company measures its performance against that of best-in-class organizations, agencies, or companies; determines how those organizations, agencies, or companies achieved their performance levels; and uses the information to improve its own performance. Benchmarking can compare strategies, operations, processes, and procedures.

Beneficial Use or Occupancy Date. The process by which a facility, portions

thereof, or the last piece of principal equipment, is released for use by others, prior to final acceptance. Nonintegral or subsidiary items and correction of design inadequacies subsequently brought to light may be completed after this date. On multiple-facility projects, beneficial use of the overall project will be the beneficial use date of the last major building or facility. This activity is always documented and approved by the responsible parties.

Budget at Completion (BAC). The estimated total cost of the project when finished

Budgeted Cost of Work Performed (BCWP). The sum of the approved cost estimates (including any overhead allocation) for activities (or portions of activities) completed during a given period (usually project-to-date). See also EARNED VALUE.

Budgeted Cost of Work Scheduled (BCWS). The sum of the approved cost estimates (including any overhead allocation) for activities (or portions of activities) scheduled to be performed during a given period (usually project-to-date). See also EARNED VALUE.

Capital Assets. Land, structures, equipment, and information technology (e.g., hardware, software, and applications) that are used by the Federal Government and have an estimated useful life of 2 years or more. Capital assets include environmental restoration (decontamination and decommissioning) of land to make useful leasehold improvements and land rights, and assets whose ownership is shared by the Federal Government with other entities. This does not apply to capital assets acquired by State and local governments or other entities through DOE grants. Capital Assets do not include intangible assets, such as the knowledge resulting from research and development and education and training.

Change Control Board (CCB). A formally constituted group of stakeholders responsible for approving or rejecting changes to project baselines.

Change in Scope. A change in objectives, work plan, or schedule that results in a material difference from the terms of an approval to proceed previously granted by higher authority. Under certain conditions, stated in the approval instrument, change in resources application may constitute a change in scope. Under contractual agreement, contracting officers are the only Government personnel authorized to issue a change order of contract modification to a contractor/performer, in order to implement a change of scope. A change in scope may also affect the availability of current year funds until the proper congressional notification procedures have been executed.

Chart of Accounts. Any numbering system used to monitor project costs by category (e.g., labor, supplies, materials). The project chart of accounts is usually based upon the corporate chart of accounts of the primary performing organization.

Chief Operating Officer Watch List. All Federal project managers and their appropriate PSOs are required to inform the Deputy Secretary on MS project issues that may contribute to an expected unfavorable Level 0 scope change, an unexpected unfavorable Level 0 milestone schedule variance greater than 3 months, or an unexpected unfavorable cost variance in TEC or TPC. Projects that encounter significant cost and schedule variances and/or technical issues or projects that develop other problems may be placed on this list, projects require corrective action plans, specific corporate reporting requirements, and periodic review by the Deputy Secretary, arranged through OECM. These projects will be released from the list when Watch List milestones are completed, progress on corrective action warrants, or the project recovers (i.e., the variances fall back within established criteria).

Code of Accounts. Any numbering system used to uniquely identify each element of the work breakdown structure. See also CHART OF ACCOUNTS.

Commissioning. Commissioning is a systematic process for achieving, verifying, and documenting that the performance of the facility and its various systems meet the design intent and the functional and operational needs of the owners and occupants. The process extends through all phases of a project, from conceptualization to occupancy and operations, with numerous checks at each stage of the process to ensure that established procedures are followed.

Commitment. An administrative reservation of funds, prior to creation of an obligation. A commitment is based upon a valid request for procurement that authorizes the creation of an obligation without further recourse to the official responsible for assuring the availability of funds. (Note: This definition concerns commitments in the accounting sense and therefore differs from loan guarantee commitments.)

Communications Planning. Determining the information and communications needs of the project stakeholders.

Conceptual Design. Conceptual design encompasses those efforts to: (a) develop a project scope that will satisfy program needs; (b) assure project feasibility and attainable performance levels; (c) develop reliable cost estimates and realistic schedules in order to provide a complete description of the project for Congress-

sional consideration; and (d) develop project criteria and design parameters for all engineering disciplines, identification of applicable codes and standards, quality assurance requirements, environmental studies, materials of construction, space allowances, energy conservation features, health safety, safeguards, and security requirements, and any other features or requirements necessary to describe the project.

Conditional or Provisional Acceptance. The acceptance of a unit or facility with a documented listing of the specific testing to be accomplished or work remaining including the furnishing of any outstanding submittals of technical and record data, to be completed by the construction contractor, and on or by what date the actions are scheduled to be complete.

Configuration. The functional and/or physical characteristics of hardware and/or software, as set forth in technical documentation and achieved in a product.

Configuration Acceptance. The systematic evaluation, coordination, approval (or disapproval), documentation, implementation, and audit of all approved changes in the configuration of a product after formal establishment of its configuration identification.

Construction. Any combination of engineering, procurement, erection, installation, assembly, demolition, or fabrication activities involved in creating a new facility, or to alter, add to, rehabilitate, dismantle, or remove an existing facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction, demolition, and excavation activities conducted as part of environmental restoration or remediation efforts. Construction does not involve the manufacture, production, finishing, construction, alteration, repair, processing, or assembling of items categorized as personal property.

Construction/As-built Services. Those activities required to assure that the project is constructed in accordance with the plans and specifications (e.g., construction inspection), and that the quality of materials and workmanship is consistent with the requirements of the project (e.g., materials testing). (See DEAR 936.605(c)(3) and (4), and DEAR 952.236.70 for additional details.)

Construction Completion Date. The date on which work normally performed by construction forces (including installation of equipment by operating contractors or others) is accepted by the Government. This includes the completion of all building items, the erection and/or installation of mechanical units and/or processing equipment, and the installation of all furnishings as required to make a full

functioning building, facility, or process. Correction of minor deficiencies and exceptions may be accomplished after the recorded date.

Construction Management. Services that encompass a wide range of professional services relating to the management of a project during the pre-design, design, and/or construction phases. The types of services include development of project strategy, design review relating to cost and time consequences, value engineering, budgeting, cost estimating, scheduling, monitoring of cost and schedule trends, procurement, observation to assure that workmanship and materials comply with plans and specifications, contract administration, labor relations, construction methodology and coordination, and other management efforts related to the acquisition of construction.

Contingency. The amount budgeted to cover costs that may result from incomplete design, unforeseen and unpredictable conditions, or uncertainties. The amount of the contingency is a risk-based calculation that will depend on the status of design, procurement, and construction, and the complexity and uncertainty of the component parts of the project. Contingency is not to be used to avoid making an accurate assessment of expected cost.

Contingency Planning. The development of a management plan that identifies alternative strategies to be used to ensure project success if specified risk events occur.

Contract. A contract is a mutually binding agreement that obligates the seller to provide the specified product and obligates the buyer to pay for it. It includes all types of commitments that obligate the Government to an expenditure of funds and which, except as otherwise authorized, are in writing. In addition to a two-signature document, it includes all transactions resulting from acceptance of offers by awards or notices of awards; agreements and job orders or task orders issued thereunder; letter contracts; letters of intent; and orders, such as purchase orders under which the contract becomes effective by written acceptance or performance. It also includes contract modifications. Contracts generally fall into one of three broad categories: (a) Fixed price or lump sum contracts—this category of contract involves a fixed total price for a well-defined product. Fixed price contracts may also include incentives for meeting or exceeding selected project objectives such as schedule targets. (b) Cost reimbursable contracts—this category of contract involves payment (reimbursement) to the contractor for its actual costs. Costs are usually classified as direct costs (costs incurred directly by the project, such as wages for members of the project team) and indirect costs (costs allocated to the project by the performing organization as a cost of doing business, such as salaries for corporate executives). Indirect costs are usually calculated as a per-

centage of direct costs. Cost-reimbursable contracts often include incentives for meeting or exceeding selected project objectives such as schedule targets or total cost. (c) Unit price contracts—the contractor is paid a preset amount per unit of service (e.g., \$70 per hour for professional services or \$1.08 per cubic yard of earth removed) and the total value of the contract is a function of the quantities needed to complete the work.

Contract Administration. Managing the relationship with the seller.

Contract Advance Funding. Obligations to a contract or project, to cover future work or materials not yet ordered. The value of advanced funding is the difference between uncosted obligation and unfilled orders outstanding.

Contract Close-Out. Completion and settlement of the contract, including resolution of all outstanding items.

Contracting Officer. A person designated to enter into and/or review, modify, or terminate any contracts, financial assistance awards, and sales contracts, and make related determinations and findings.

Contracting Officer’s Technical Representative. The individual in DOE who is assigned responsibility for overall technical monitoring of a contract and identified as such in the contract. The contracting officer’s technical representative monitors the technical work performed under the contract, evaluates the contractor’s performance, provides the contractor and the contracting officer with technical guidance, reports on contract status to DOE program and project management, and recommends corrective action when necessary.

Contractor. The term “contractor” is intended to mean and include all persons, organizations, departments, divisions, and companies having contracts, agreements, or a memorandum of understanding with DOE.

Control. The process of comparing actual performance with planned performance, analyzing variances, evaluating possible alternatives, and taking appropriate corrective action as needed.

Control (Cost) Account. The management control point at which actual costs are accumulated and performance determined. It represents the defined work assigned to one responsible organizational element for the lowest level work breakdown structure element and must contain the specific scope of work, definite schedule, assigned budget, unique identification, and method of measuring performance.

Control Charts. Control charts are a graphic display of the results, over time and against established control limits, of a process. They are used to determine if the process is “in control” or in need of adjustment.

Corrective Action. Changes made to bring expected future performance of the project into line with the plan.

Cost Budgeting. Allocating the cost estimates to individual project components.

Cost Control. Controlling changes to the project budget.

Cost Estimate. A documented statement of costs estimated to be incurred to complete the project. Cost estimates provide baselines against which cost comparisons are made during the life of a project.

Cost Estimating. Estimating the cost of the resources needed to complete project activities.

Cost Plus Fixed Fee (CPFF) Contract. A type of contract where the buyer reimburses the seller for the seller's allowable costs (allowable costs are defined by the contract) plus a fixed amount of profit (fee).

Cost Plus Incentive Fee (CPIF) Contract. A type of contract where the buyer reimburses the seller for the seller's allowable costs (allowable costs are defined by the contract), and the seller earns its profit if it meets defined performance criteria.

Cost Variance (CV). (1) Any difference between the estimated cost of an activity and the actual cost of that activity. (2) In earned value, BCWP less ACWP.

Costs to Date. Costs incurred to date by the contractor and reported to DOE, which are recorded as accrued costs. They represent all charges incurred for goods and services received and other assets required, regardless of whether payment for the charges has been made. This includes all completed work and work in process chargeable to the contract. Accrued costs include invoices for: (1) completed work to which the prime contractor has acquired title (2) materials delivered to which the prime contractor has acquired title (3) services rendered (4) costs billed under cost reimbursement, or time and material subcontracts for work to which the prime contractor has acquired title (5) progress payments to subcontractors that have been paid or approved for current payment in the ordinary course of business (as specified in the prime contract) and (6) fee profit allocable to the contract.

Critical Activity. Any activity on a critical path. Most commonly determined by using the critical path method. Although some activities are "critical" in the dictionary sense without being on the critical path, this meaning is seldom used in the project context.

Critical Decision. A formal determination, made by DOE, at a specific point in a project that allows the project to proceed. Critical decisions occur in the course of a project, for example: prior to commencement of conceptual design, commencement of execution and prior to turnover.

Critical Path. In a project network diagram, the series of activities that determines the earliest completion of the project. The critical path will generally change from time to time as activities are completed ahead of or behind schedule. Although normally calculated for the entire project, the critical path can also be determined for a milestone or subproject. The critical path is usually defined as those activities with float less than or equal to a specified value, often zero.

Critical Path Method (CPM). A network analysis technique used to predict project duration by analyzing which sequence of activities (which path) has the least amount of scheduling flexibility (the least amount of float). Early dates are calculated by means of a forward pass using a specified start date. Late dates are calculated by means of a backward pass starting from a specified completion date (usually the forward pass's calculated project early finish date).

Customer. An organization, department, or individual that receives goods and/or services from another organization, department, or individual.

Deliverable. Any measurable, tangible, verifiable outcome, result, or item that must be produced to complete a project or part of a project. A report or product that satisfies one or more objectives and must be delivered to satisfy contractual requirements. Often used more narrowly in reference to an external deliverable, which is a deliverable that is subject to approval by the project sponsor or customer.

Demonstrate. To verify the soundness of the chosen design concept(s) in an environmentally acceptable manner, the technical and economic feasibility of new or advanced equipment, facilities, or processes by designing, constructing, testing, operating, and evaluating near-full-scale modules.

Demonstration. The verification of scale-up, economic, and environmental viability for commercial application, through design, construction, test, and evaluation of large-scale energy systems in operational circumstances.

Development. The development and test of systems and pilot plants judged to be technically and economically desirable as a means of achieving principal Departmental goals. Engineering development concerns itself with processes, preproduction components, equipment, subsystems, and systems. Initiation of work in this category is dependent upon successful demonstration of technical feasibility and economic potential during the technology phase.

Direct Cost. Any cost that can be specifically identified with a particular project or activity, including salaries, travel, equipment, and supplies directly benefiting the project or activity.

Directed Change. A change imposed on a project(s), with direction to implement, that affects one or more of the project's (projects') baselines. Example of directed changes include, but are not limited to: (a) Changes to approved budgets, or funding and (b) Changes resulting from DOE policy directives and regulatory or statutory requirements.

Duration (DU). The number of work periods (not including holidays or other nonworking periods) required to complete an activity or other project element. Usually expressed as workdays or workweeks. Sometimes incorrectly equated with elapsed time. See also EFFORT.

Earned Value (EV). (1) A method for measuring project performance. It compares the amount of work that was planned with what was actually accomplished to determine if cost and schedule performance is as planned. See also ACTUAL COST OF WORK PERFORMED, BUDGETED COST OF WORK SCHEDULED, BUDGETED COST OF WORK PERFORMED, COST VARIANCE, COST PERFORMANCE INDEX, SCHEDULE VARIANCE, AND SCHEDULE PERFORMANCE INDEX. (2) The budgeted cost of work performed for an activity or group of activities.

Engineering Change. An approved change to controlled identification documentation. An Engineering Change Proposal (ECP) is a recommended Engineering Change (EC). There are typically two classes of ECs: a. Class 1. Changes of configuration, which affects Departmental interest and requires approval from the appropriate approval authority or designated representative. Class 1 engineering changes are those which affect: (1) technical baseline requirements and/or (2) nontechnical contractual provisions such as fee, incentives, cost, schedule, guarantees, or deliveries. b. Class 2. Changes to a product that do not affect any of the Class 1 engineering change requirements. The Department's approval prior to implementation is not required, although such changes are subject to post-facto classification review by the project office. Other distinctions may be made at the discretion of the project manager.

Estimate. An assessment of the likely quantitative result. Usually applied to project costs and durations and should always include some indication of accuracy (e.g., $\pm x$ percent). Usually used with a modifier (e.g., preliminary, conceptual, feasibility). Some application areas have specific modifiers that imply particular accuracy ranges (e.g., order-of-magnitude estimate, budget estimate, and definitive estimate in engineering and construction projects).

Estimate At Completion (EAC). The expected total cost of an activity, a group of activities, or of the project when the defined scope of work has been completed. Most techniques for forecasting EAC include some adjustment of the original cost estimate based on project performance to date. Also shown as “estimated at completion.” Often shown as $EAC = \text{Actuals-to-date} + ETC$. See also earned value and estimate to complete.

Estimate To Complete (ETC). The expected additional cost needed to complete an activity, a group of activities, or the project. Most techniques for forecasting ETC include some adjustment to the original estimate based on project performance to date. Also called “estimated to complete.” See also earned value and estimate at completion.

Facilities. Buildings and other structures; their functional systems and equipment, including site development features such as landscaping, roads, walks, and parking areas; outside lighting and communications systems; central utility plants; utilities supply and distribution systems; and other physical plant features.

Field Office (FO). The designation for the nine major Departmental offices responsible for day-to-day management of designated functional activities.

Final Design. This continues the development of the project based on approved preliminary design. Definitive design includes any revisions required of the preliminary effort; preparation of final working drawings, specifications, bidding documents, cost estimates, and coordination with all parties that might affect the project; development of firm construction and procurement schedules; and assistance in analyzing proposals or bids. For a detailed description of the services provided during definitive design, see DEAR 936.605(c)(3) and (4), and DEAR 952.236.70.

Fast Tracking. Compressing the project schedule by overlapping activities that would normally be done in sequence, such as design and construction. Sometimes confused with concurrent engineering.

Final Acceptance. A written statement by the contracting officer or designee that the work performed by the construction contractor has been accepted as being in accordance with approved plans and specifications. The operating contractor should also be included in the final acceptance, if applicable, indicating acceptance of the facilities as constructed and the date the facilities are to be occupied or available for the use of the operating contractor.

Fixed Price Contracts. Fixed price contracts provide for a firm price or, under appropriate circumstances, may provide for an adjustable price for the supplies or services that are being procured. In providing for an adjustable price, the contract may fix a ceiling price, target price (including target cost), or minimum price. Unless otherwise provided in the contract, any such ceiling, target, or minimum price is subject to adjustment only if required by the operation of any contract clause that provides for equitable adjustment, escalation, or other revision of the contract price upon the occurrence of an event or a contingency.

Fixed Price Incentive Fee (FPIF) Contract. A type of contract where the buyer pays the seller a set amount (as defined by the contract), and the seller can earn an additional amount if it meets defined performance criteria.

Functional Manager. A manager responsible for activities in a specialized department or function (e.g., engineering, manufacturing, marketing).

Functional Organization. An organization structure in which staff are grouped hierarchically by specialty (e.g., production, marketing, engineering, and accounting at the top level; with engineering, further divided into mechanical, electrical, and others).

General Plant Projects (GPP). Congress has recognized DOE's need to provide for miscellaneous construction items that are required during the fiscal year and which cannot be specifically identified beforehand. Congress provides, annually, an amount for these purposes under the title of General Plant Projects.

Government Estimates. Estimates are used to determine the reasonableness of competitive bids received in connection with formally advertised construction contracts, and serve as a control in evaluating cost and pricing data in negotiated contracts. Normally, the Title II design estimate, after being reviewed and approved by the Government, is the basis for the Government estimate. However, the services of an operating contractor, architect-engineer, cost-plus-fixed-fee construction contractor (with respect to subcontracts), or construction manager may be used appropriately to prepare, review, or revise the Government estimate prior to Government approval (refer to FAR 36.203). Cost-type contractors shall be required to follow cost estimate procedures when subcontracting for construction services. Government review and approval of the Government estimate is not required when the estimate is within the limits established by the Government's approval of the cost-type contractors procurement system. The specifics of a Government estimate vary with the size and type of contract.

Incurred Costs. Costs are applied to the performance of the project. All costs incurred for a project are reported whether they arise from payments, cost accruals, or transfers of costs from other DOE locations or Federal agencies. Any time costs are incurred by cost-type contractors, the amount will be included in that period. Incurred costs also comprise payments made or due to date, including any retained percentages, and lump-sum and unit price contracts based on payment estimates approved by the contracting officer and designated representative for the purpose of making the progress or final payments on work performed to date. Costs shall not be accrued on the basis of a percentage of physical completion, unless the amounts of such costs are approved by the contracting officer or his or her designated representative as progress or partial payments.

Independent Assessment (Review). An assessment, made outside the normal advocacy chain, of a project's status or condition. In the project management system, it is made by the Office of Program/Project Management in its role of independent monitoring. It will consist of independent evaluation of all pertinent factors in order to provide a condition rating or detailed analysis of the project or system situation. Independent assessments will typically be provided in conjunction with Headquarters reporting to senior DOE management; advisory board decision reviews; or other purposes associated with the program planning and budgeting system, acquisition, or other DOE management control and direction processes. These independent evaluations must be based on knowledge of the actual project and related institutional matters. The Office of Program/Project Management will obtain this knowledge through reports from the project management and program organizations; conduct of field and Headquarters reviews with the program organization, the Departmental managing office, and principal contractors; and direct communication and discussion of project matters with the DOE managing and program offices.

Independent Cost Estimate. A documented cost estimate that has the express purpose of serving as an analytical tool to validate, cross-check, or analyze estimates developed by proponents of a project. An independent cost estimate also serves as a basis for verifying risk assessments. It is usually performed by an independent contractor.

Indirect Cost. A cost incurred by an organization for common or joint objectives and which cannot be identified specifically with a particular project or activity. See 10 CFR 600.

Inspection. The survey of a unit, facility or area to determine overall compliance with contract drawings and specifications. It may vary from inspection of detailed

items to extensive testing of operating equipment (which must be provided for in the contract). It may also serve in making a determination of the adequacy of the design effort. It includes a preliminary inspection to fix the number of work items remaining to be completed (list of exceptions or “punch list”), and a final inspection to accept the completed construction.

Integrated Project Team. The Integrated Project Team (IPT) is approved by the appropriate SAE or AE and, at a minimum, consists of the program manager, the Federal project manager (once assigned), and a contracting officer (provided or approved by the director of procurement). The IPT is led by the Federal project manager and is responsible for managing the project. The IPT should consist of personnel having appropriate background and experience, in addition to contracting, fiscal, legal, and technical personnel. The makeup of the team would change/evolve with the project life cycle.

Invitation for Bid (IFB). Generally, this term is equivalent to request for proposal. However, in some application areas it may have a narrower or more specific meaning.

Lead Program Secretarial Officer (LPSO). The individual assigned line management responsibility and accountability for Headquarters and field operations and to which one or more multiprogram field offices directly report.

Level of Effort (LOE). Support-type activity (e.g., vendor or customer liaison) that does not readily lend itself to measurement of discrete accomplishment. It is generally characterized by a uniform rate of activity over a specific period of time.

Life-Cycle Cost (LCC). The sum total of the direct, indirect, recurring, nonrecurring, and other related costs incurred or estimated to be incurred in the design, development, production, operation, maintenance, support, and final disposition of a major system over its anticipated useful life span. Where system or project planning anticipates use of existing sites or facilities, restoration, and refurbishment costs should be included.

Life-cycle Costing. The concept of including acquisition, operating, and disposal costs when evaluating various alternatives.

Line Item Projects. Projects that are specifically reviewed and approved by Congress. Projects with a total project cost greater than \$5 million are categorized as line item projects.

Line Manager. (1) The manager of any group that actually makes a product or performs a service. (2) A functional manager.

Long Leadtime Procurement Items. Those items of equipment and/or construction materials that require an order date prior to the estimated physical construction start to assure availability at the time needed so as not to delay the construction performance.

Major System (MS) Projects. Any project or system of projects with a TPC of \$400M or greater, or any other project so designated by the Deputy Secretary. Projects may be classified as MS either solely by the Deputy Secretary or by the Deputy Secretary in response to recommendations from the appropriate Under Secretary. OECM maintains and periodically publishes a list of MS projects.

Master Schedule. A summary-level schedule that identifies the major activities and key milestones. See also MILESTONE SCHEDULE.

Matrix Organization. Any organizational structure in which the project manager shares responsibility with the functional managers for assigning priorities and for directing the work of individuals assigned to the project.

Milestone Schedule. A summary-level schedule that identifies the major milestones. See also MASTER SCHEDULE.

Milestone. A significant event in the project, usually completion of a major deliverable. An important or critical event and/or activity that must occur in the project cycle in order to achieve the project objective(s).

Mission Need. A required capability within DOE's overall purpose, including cost and schedule considerations. When the mission analysis, or studies directed by appropriate executive or legislative authority, identify a deficiency in existing capabilities or an opportunity, this will be set forth as justification for purposes of system acquisition approvals, planning, programming, and budget formulation.

Missions.

a. Responsibilities assigned to the Department of Energy meeting national needs. Agency missions are defined by the Comptroller General of the United States in Budgeting Definitions, November 1975, as: "Those responsibilities for meeting national needs assigned to a specific agency. Agency missions are expressed in terms of the purpose to be served by the programs authorized to carry out functions or subfunctions which, by law, are the responsibility of that agency and its component organizations. (See Section 201 of the Budget and Accounting Act, 1921, as amended.)" b. Additionally, Section 601(i) of the Congressional Budget Act of 1974 (Public Law 93-344) requires that: "The Budget..." shall contain a presentation of budget authority, proposed outlays, and descriptive information in terms of: (1) a detailed structure of national needs that shall be used to reference

all agency missions and programs; (2) agency missions; and (3) basic programs. “To the extent practicable, each agency shall furnish information in support of its budget requests in accordance with its assigned missions in terms of Federal functions and subfunctions, including mission responsibilities of component organizations, and shall relate its programs to agency missions.”

Mitigation. Taking steps to lessen risk by lowering the probability of a risk event’s occurrence or reducing its effect should it occur.

Monitoring. The capture, analysis, and reporting of project performance, usually as compared to plan.

Monte Carlo Analysis. A schedule risk assessment technique that performs a project simulation many times in order to calculate a distribution of likely results.

Organizational Breakdown Structure (OBS). A depiction of the project organization arranged so as to relate work packages to organizational units.

Organizational Planning. Identifying, documenting, and assigning project roles, responsibilities, and reporting relationships.

Original Estimate. The first total estimated and total project cost that are shown: (1) in a project data sheet submitted to the Congress for line item projects; or (2) in a project data sheet submitted to OMB for contingency type projects; or (3) in the initial authorization for general plant, operating-funded, equipment-funded, or other contingency-type projects.

Original Schedule Dates. The start and finish dates of design, construction, procurement, and operation submitted in conjunction with the original estimate or in the first approved schedule.

Other Project. Any project with a TPC less than \$400M and not designated as an MS project, including line item projects, general plant projects, and capital equipment, information technology, whether funded by capital or operating funds.

Overall Change Control. Coordinating changes across the entire project.

Parametric Estimating. An estimating technique that uses a statistical relationship between historical data and other variables (e.g., square footage in construction, lines of code in software development) to calculate an estimate.

Pareto Diagram. A histogram, ordered by frequency of occurrence, that shows how many results were generated by each identified cause.

Percent Complete (PC). An estimate, expressed as a percent, of the amount of work that has been completed on an activity or group of activities.

Performance Reporting. Collecting and disseminating information about project performance to help ensure project progress.

Performing Organization. The enterprise whose employees are most directly involved in doing the work of the project.

Phase. See PROJECT PHASE.

Physical Construction Start. For purposes of reporting construction progress, the date on which work at the site physically starts, including work on site preparation, temporary construction, and any earth moving. The start date of construction of permanent facilities should also be indicated.

Planned Finish Date (PF). See SCHEDULED FINISH DATE.

Planned Start Date (PS). See SCHEDULED START DATE.

Planning Estimates. Developed for each project at the time of project identification. Since these are developed prior to conceptual design, they are order of magnitude only and have the least amount of accuracy and lowest confidence level. Care should be exercised in these estimates to assure that the order of magnitude is correct, since a tendency exists to avoid changing this estimate, particularly upward, once established.

Plant Engineering and Design Funds. Appropriated by Congress at the request of the Department for the performance of preliminary and final design prior to authorization and appropriation of construction funds for a project. Plant engineering and design funds are limited to requests for projects that will receive high priority in a future-year budget submittal. Completed conceptual design is a prerequisite for allocation of plant engineering and design funds.

Preliminary Design. Continues the design effort utilizing the conceptual design and the project design criteria as a basis for project development. Title I design develops topographical and subsurface data and determines the requirements and criteria that will govern the definitive design. Tasks include preparation of preliminary planning and engineering studies, preliminary drawings and outline specifications, life-cycle cost analysis, preliminary cost estimates, and scheduling for project completion. Preliminary design provides identification of long-lead procurement items and analysis of risks associated with continued project development. For a detailed description of the services provided during preliminary

design, see Department of Energy Acquisition Regulation (DEAR) 936.605c and 952.236.70.

Preliminary Design Estimates. Estimates prepared upon completion of preliminary design. Through use of plant engineering and design funds, preliminary design may be completed prior to inclusion of the project in the budget. If this should occur, the preliminary design estimate becomes synonymous with the budget estimate.

Preliminary Design Summary. An overview and record document of preliminary engineering and project management planning, reflecting completed preliminary design and usually prepared under architect-engineer services or by the operating contractor. Final design estimates are developed for each project by the designer as part of the preliminary design summary. The estimates, since they are based on the definitive design, are the most accurate and have the highest confidence level of any estimate.

Procurement Planning. Determining what to procure and when.

Product Data Requirement. A contract requirement that directs contractors to collect, organize, prepare, maintain, transmit, deliver, or retain information incident to the design, development, production, operation, preservation, maintenance, or repair of contract end items. Product data includes engineering drawings, product specifications and standards, part breakdown lists, catalog item physical qualities and characteristics, preprocurement data, test plans and reports, and other such data.

Program. An organized set of activities directed toward a common purpose or goal undertaken or proposed in support of an assigned mission area. It is characterized by a strategy for accomplishing a definite objective(s), that identifies the means of accomplishment, particularly in quantitative terms, with respect to manpower, materials, and facilities requirements. Programs usually include an element of ongoing activity and are typically made up of technology base activities, projects, and supporting operations.

Program Assessment. A determination of program condition based on a review of cost, schedule, technical status, and performance in relation to mission area assignments, program objectives, approved strategy, and milestones. Assessments are made by the responsible line program organization and outside the advocacy chain by the Office of Program/Project Management. In all cases, program assessments must be based on knowledge of the actual program status, performance, problems, and significant development in approval; review; and environment, safety, health, and quality assurance processes.

Program Management. Management responsibility and authority for specific programs will normally be delegated by the cognizant Program Secretarial Officer. The Headquarters' functions of program management includes planning and developing the overall program; establishing broad priorities; providing policy and broad program direction; preparing and defending the budget; establishing the technical performance, scope, cost, and schedule requirements for projects; controlling DOE Headquarters-level milestones; integrating all components of the program; providing public and private sector policy liaison; expediting Headquarters interface activities and followup actions; and retaining overall accountability for program success. The field function includes implementing these program activities, controlling field-level milestones, and providing major support to the Headquarters programming budgeting and processes.

Program Manager. An individual in an organization or activity who is responsible for: the management of a specific function or functions, budget formulation, and execution of the approved budget. The Program Manager receives an approved funding program from the Office of the Controller identifying program dollars available to accomplish the assigned function.

Program Objectives. A statement or set of statements defining the purposes and goals to be achieved during performance of a program to fulfill a DOE mission including the technical capabilities, cost, and schedule goals.

Program Office. The Headquarters organizational element responsible for managing a program.

Program Secretarial Officer (PSO). A senior outlay program official which includes the Assistant Secretaries for Conservation and Renewable Energy (CE), Defense Programs (DP), Fossil Energy (FE), Nuclear Energy (NE), Environmental Restoration and Waste Management (EM), and the Directors of Energy Research (ER), Civilian Radioactive Waste Management (RW), and New Production Reactors (NP).

Project. In general, a unique effort that supports a program mission, having defined start and end points, undertaken to create a product, facility, or system, and containing interdependent activities planned to meet a common objective or mission. A project is a basic building block in relation to a program that is individually planned, approved, and managed. A project is not constrained to any specific element of the budget structure (e.g., operating expense or plant and capital equipment). Construction, if required, is part of the total project. Authorized, and at least partially appropriated, projects will be divided into three categories.

ries: major system acquisitions, major projects, and other projects. Projects include planning and execution of construction, renovation, modification, environmental restoration, decontamination and decommissioning efforts, and large capital equipment or technology development activities. Tasks that do not include the above elements, such as basic research, grants, ordinary repairs, maintenance of facilities, and operations are not considered projects.

Project Charter. A document issued by senior management that provides the project manager with the authority to apply organizational resources to project activities.

Project Communications Management. A subset of project management that includes the processes required to ensure proper collection and dissemination of project information. It consists of communications planning, information distribution, performance reporting, and administrative closure.

Project Cost Management. A subset of project management that includes the processes required to ensure that the project is completed within the approved budget. It consists of resource planning, cost estimating, cost budgeting, and cost control.

Project Data Sheet. A generic term defining the document that contains summary project data and the justification required to include the entire project effort as a part of the Departmental budget. Specific instructions on the format and content of the project data sheet are contained in the annual budget call, and DOE O 5100.3, Field Budget Process.

Project Design Criteria. Those technical data and other project information developed during the project identification, conceptual design, and/or preliminary design phases. They define the project scope, construction features and requirements, and design parameters; applicable design codes, standards, and regulations; applicable health, safety, fire protection, safeguards, security, energy conservation, and quality assurance requirements; and other requirements. The project design criteria are normally consolidated into a document which provides the technical base for any further design performed after the criteria are developed.

Project Execution Plan. The Project Execution Plan is the primary agreement on project planning and objectives between the Headquarters Program Office and the Field, which establishes roles and responsibilities and defines how the project will be executed. The Project Execution Plan, once approved, becomes a significant tool for the project manager through the life of the project. The Headquarters or Field program manager and/or the Federal project manager initiates a Project

Execution Plan. Development of the preliminary Project Execution Plan can be started by the prime contractor or M&O/M&I at the same time as development of the Acquisition Plan or shortly after. The two plans should be synchronized. If the approved Acquisition Plan indicates that the M&O/M&I contractor has a role in the acquisition of the project as prime contractor/integrator, the M&O/M&I contractor may participate with DOE in development of the final Project Execution Plan.

Project Human Resource Management. A subset of project management that includes the processes required to make the most effective use of the people involved with the project. It consists of organizational planning, staff acquisition, and team development.

Project Integration Management. A subset of project management that includes the processes required to ensure that the various elements of the project are properly coordinated. It consists of project plan development, project plan execution, and overall change control.

Project Life Cycle. A collection of generally sequential project phases whose name and number are determined by the control needs of the organization or organizations involved in the project.

Project Management (PM). The application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project.

Project Management Body of Knowledge (PMBOK[®]). An inclusive term that describes the sum of knowledge within the profession of project management. As with other professions such as law, medicine, and accounting, the body of knowledge rests with the practitioners and academics who apply and advance it. The PMBOK[®] includes proven, traditional practices that are widely applied as well as innovative, and advanced practices that have seen more limited use.

Project Management. A management approach in which authority and responsibility for execution are vested in a single individual, at a level below the general manager, to provide focus on the planning, organizing, directing, and controlling of all activities within the project. In general terms, project management functions include assisting the program manager in preparing Headquarters documents and establishing key milestones and overall schedules. Other activities include developing and maintaining the project management plan; managing project resources; establishing and implementing management systems, including performance measurement systems; and approving and implementing changes to project base-

lines.

Project Manager (PM). An official who has been assigned responsibility for accomplishing a specifically designated unit of work effort or group of closely related efforts established to achieve stated or designated objectives, defined tasks, or other units of related effort on a schedule for performing the stated work funded as part of the project. The project manager is responsible for the planning, controlling, and reporting of the project.

Project Office. The organization responsible for administration of the project management system, maintenance of project files and documents, and staff support for officials throughout the project life cycle.

Project Phase. A collection of logically related project activities, usually culminating in the completion of a major deliverable.

Project Procurement Management. A subset of project management that includes the processes required to acquire goods and services from outside the performing organization. It consists of procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout.

Project Quality Management. A subset of project management that includes the processes required to ensure that the project will satisfy the needs for which it was undertaken. It consists of quality planning, quality assurance, and quality control.

Project Risk Management. A subset of project management that includes the processes concerned with identifying, analyzing, and responding to project risk. It consists of risk identification, risk quantification, risk response development, and risk response control.

Project Schedule. The planned dates for performing activities and the planned dates for meeting milestones.

Project Scope Management. A subset of project management that includes the processes required to ensure that the project includes all of the work required, and only the work required, to complete the project successfully. It consists of initiation, scope planning, scope definition, scope verification, and scope change control.

Project Summary Work Breakdown Structure. A summary work breakdown structure tailored by project management to the specific project with the addition of the elements unique to the project. Generally, the project summary work break-

down structure will identify project elements through the third level.

Projections. Estimates of budget authority, outlays, receipts, or other budget amounts that extend a minimum of 5 years beyond the current year. Projections generally are intended to indicate the budget implications of continuing current or currently proposed programs and legislation for an indefinite period of time. These include alternative program and policy strategies and ranges of possible budget amounts. Projects should be regarded neither as firm estimates of what actually will occur in future years nor as recommendations regarding future budget decisions.

Projectized Organization. Any organizational structure in which the project manager has full authority to assign priorities and to direct the work of individuals assigned to the project.

Quality Assurance (QA). (1) The process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards. (2) The organizational unit that is assigned responsibility for quality assurance. All the planned and systematic actions necessary to provide adequate confidence that a facility, structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises all those actions necessary to control and verify the features and characteristics of a material, process, product, or service to specified requirements.

Quality Control (QC). (1) The process of monitoring specific project results to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance. (2) The organizational unit that is assigned responsibility for quality control.

Quality Planning. Identifying which quality standards are relevant to the project and determining how to satisfy them.

Real Property. Land and/or improvements including interests therein, except public domain land.

Remaining Duration (RDU). The time needed to complete an activity.

Request for Proposal (RFP). A type of bid document used to solicit proposals from prospective sellers of products or services. In some application areas it may have a narrower or more specific meaning.

Request for Quotation (RFQ). Generally, this term is equivalent to REQUEST FOR PROPOSAL. However, in some application areas it may have a narrower or

more specific meaning.

Reserve. A provision in the project plan to mitigate cost and/or schedule risk. Often used with a modifier (e.g., management reserve, contingency reserve) to provide further detail on what types of risk are meant to be mitigated. The specific meaning of the modified term varies by application area.

Resource Leveling. Any form of network analysis in which scheduling decisions (start and finish dates) are driven by resource management concerns (e.g., limited resource availability or difficult-to-manage changes in resource levels).

Resource Planning. Determining what resources (people, equipment, materials) are needed in what quantities to perform project activities.

Resource-Limited Schedule. A project schedule whose start and finish dates reflect expected resource availability. The final project schedule should always be resource-limited.

Responsibility. The requirement or obligation that an individual is answerable for and accepts the consequences of their actions, activities, decisions, and obligations. In a project setting, responsibility is inseparable from authority and accountability.

Responsibility Assignment Matrix (RAM). A structure that relates the project organization structure to the work breakdown structure to help ensure that each element of the project's scope of work is assigned to a responsible individual.

Responsibility Chart. See RESPONSIBILITY ASSIGNMENT MATRIX.

Responsibility Matrix. See RESPONSIBILITY ASSIGNMENT MATRIX.

Retainage. A portion of a contract payment that is held until contract completion in order to ensure full performance of the contract terms.

Reviews. A determination of project or system acquisition conditions based on a review of project cost, schedule, technical status, and performance in relation to program objectives, approved requirements, and baseline project plans. Reviews are authorized by the SAE, AE, PSO responsible line managers, operations/field office manager or program managers. In all cases, reviews must be based on knowledge of the actual project status, performance, problems, and significant development in both the actual execution activities as well as required institutional approval, licensing, review, and environmental processes.

Risk Event. A discrete occurrence that may affect the project for better or worse.

Risk Identification. Determining which risk events are likely to affect the project.

Risk Quantification. Evaluating the probability of risk event occurrence and effect.

Risk Response Control. Responding to changes in risk over the course of the project.

Risk Response Development. Defining enhancement steps for opportunities and mitigation steps for threats.

Schedule Control. Controlling changes to the project schedule.

Schedule Development. Analyzing activity sequences, activity durations, and resource requirements to create the project schedule.

Schedule Variance (SV). (1) Any difference between the scheduled completion of an activity and the actual completion of that activity. (2) In earned value, BCWP less BCWS.

Scope Baseline. A configuration identification document or a set of such documents formally designated and approved at a specific time. (The time need not be the same for each document in the set.) Scope baselines, plus approved changes to those baselines, constitute the current configuration identification.

Scope Change. Any change to the project scope. A scope change almost always requires an adjustment to the project cost or schedule.

Scope Definition. Decomposing the major deliverables into smaller, more manageable components to provide better control.

Scope Planning. Developing a written scope statement that includes the project justification, major deliverables, and project objectives.

Scope Verification. Ensuring that all identified project deliverables have been completed satisfactorily.

Scope. In baseline management terminology, the term “scope” refers to those performance and design requirements, criteria, and characteristics derived from mission needs that provide the basis for project direction and execution. In budget terminology, the term “scope” refers to the Congressionally approved project parameter/tasks as defined in the Congressional Project Data Sheet. The sum of the products and services to be provided as a project.

S-Curve. Graphic display of cumulative costs, labor hours, or other quantities

plotted against time. The name derives from the S-like shape of the curve (flatter at the beginning and end, steeper in the middle) produced on a project that starts slowly, accelerates, and then tails off.

Site. A geographic entity comprising land, buildings, and other facilities required to perform program objectives. Generally a site has, organizationally, all the required facilities management functions. That is, it is not a satellite of some other site.

Solicitation. Obtaining quotations, bids, offers, or proposals as appropriate.

Source Selection. Choosing from among potential contractors.

Staff Acquisition. Getting the human resources needed assigned to and working on the project.

Stakeholder. Individuals and organizations who are involved in or may be affected by project activities.

Statement of Work (SOW). A narrative description of products or services to be supplied under contract.

Subcontract. Any agreement or arrangement between a contractor and any person (in which the parties do not stand in the relationship of an employer and an employee): (a) For the furnishing of supplies or services or for the use of real or personal property, including lease arrangements, which, in total or in part, is necessary to the performance of any one or more contracts; or (b) Under which any portion of the contractor's obligation under any one or more contracts is performed, undertaken, or assumed.

System. A collection of interdependent equipment and procedures assembled and integrated to perform a well-defined purpose. It is an assembly of procedures, processes, methods, routines, or techniques united by some form of regulated interaction to form an organized whole.

Tailoring. A flexible approach to most aspects of the acquisition process, including program documentation, acquisition phases, and the timing, scope, and level of decision reviews. In a tailored approach to program oversight and review, project criteria are applied based on the program's size, risk, and complexity.

Team Development. Developing individual and group skills to enhance project performance.

Technical Direction. The monitoring or surveillance of the scientific, engineering, and other technical aspects of a work program, as distinguished from the administrative and business management aspects.

Technology Base. The equipment and facilities produced for, and the accumulated results and skills produced by, the conduct of basic research, applied research and technology development.

Technology. A demonstration by experiment of the technical feasibility of alternative inventive concepts. This category may concern itself with processes, components, equipment, subsystems, or an initial system prototype, and may encompass: experimental exploitation and refinement of a known phenomenon; demonstration of the acceptability of the technical and operational characteristics of one or more specific concepts; and preliminary system studies responsive to a particular problem including system analysis, tradeoff, preliminary cost/benefit studies, and planning and programming studies.

Total Estimated Costs (TEC) and Total Project Costs (TPC). Definitions for TEC and TPC are provided in DOE 5100.3, FIELD BUDGET PROCESS and 5700.2C, COST ESTIMATING, ANALYSIS AND STANDARDIZATION. The below listed definitions, extracted from these documents form the basis for development of standardized cost estimates. On occasion, there may be projects that cannot comply with these definitions and guidance. For these projects, variances must be requested by the project and approved by the Office of Program/Project Management prior to Key Decision No. 1 when establishing project baselines and requesting line item funding.

1. TEC. TEC includes the following estimated costs:

- Land, land rights, depletable resources, and improvements to land.
- Engineering, design, and inspection.
- Construction Management of main plant, balance of plant, other facilities, other structures and significant alterations, additions, and improvements to structures (excluding normal maintenance).
- Utilities—including water and sewage systems, heating, ventilation, and air conditioning, power systems, communication systems, and fire prevention systems.
- Quality Assurance.
- Preoperational construction changes shown to be required during integrated systems testing and hot-start testing.

- Safeguards and security systems.
- Project and construction management.
- Direct and indirect construction costs.
- Standard and special facilities.
- All equipment, furniture, and systems contained in main, balance of plant facilities, and administrative areas to render the facility useable.
- Computer systems, if dedicated to the project.
- Contingency and economic escalation.
- Decontamination and/or disposal cost of equipment and construction rubble when the purpose of the project is to replace existing facilities.

2. *TPC*. TPC includes all research and development (R&D), operating, plant, and capital equipment costs specifically associated with project construction up to the point of routine operations, which will include, but not be limited to:

- Total Estimated Costs.
- Pre-Preliminary activities, such as:
 - Conceptual Design Reports (CDR).
 - Preliminary Safety Analysis Report, if initiated prior to KD-1.
 - Preparation of Project Data Sheets, design criteria, National Environmental Policy Act (NEPA) documentation, and formulations of Quality Assurance Criteria.
- R&D necessary for fabrication, testing, and rework of prototype equipment.
- R&D (scale-up or demonstration plants of high-risk technology) required prior to start of construction.
- One-time costs related to testing, startup, operator training, and commissioning.
- Initial inventories and spare parts.
- Site suitability testing and evaluation.
- Quality Assurance related to site suitability and testing.
- Regulation compliance.
- Grant to state and local governments.
- Payments equal to taxes.
- Systems studies and selected systems engineering services.
- Institutional activities related to facility siting and external interactions.
- Decontamination and decommissioning costs.

- Economic escalation.
- Contingency (applicable to TPC).

Total Quality Management (TQM). A common approach to implementing a quality improvement program within an organization.

User. The entity that ultimately will operate or otherwise use the system being developed. When the project objective is to demonstrate to the private sector the utility or feasibility of a given system for commercial application, the identity of the ultimate user may not be known. In such case, only the most likely type of user (utility, constructor, energy supplier) may be identifiable.

Validation. The process of evaluating project planning, development, baselines and proposed funding prior to inclusion of new project or system acquisition in the DOE budget. It requires a review of project planning and conceptual development documentation, as well as discussion with the program or field element and principle contributing contractors to determine the source basis, procedures, and validity of proposed requirements, scope, cost schedule, funding, and so forth. Findings and recommendations resulting from the validation process will be provided for use in the annual budget formulation.

Value Engineering. The structured process of evaluating alternatives in a manner that yields the greatest cost savings, particularly when applied during the planning and design phases of a project. Value engineering should also be used during the construction phase of project.

Work Breakdown Structure (WBS). A deliverable-oriented grouping of project elements that organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of a project component. Project components may be products or services.

Work Package. A deliverable at the lowest level of the work breakdown structure. A work package may be divided into activities.

Workaround. A response to a negative risk event. Distinguished from contingency plan in that a workaround is not planned in advance of the occurrence of the risk event.