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665.0 PURPOSE


This chapter establishes the responsibilities, process requirements and evaluation criteria for (1) proposing, evaluating, and approving capital projects, (2) setting project implementation targets and reporting on variances during a project's construction phase, and (3) evaluating projects after they have been placed in service.

665.1 DEFINITIONS

- A. Assets:** Plant, machinery, equipment, property, buildings, structures, vehicles, servers, software applications and other items or related systems that have a distinct and quantifiable business function with a useful life expectancy greater than one year.
- B. Asset Category:** A set of assets that deliver business functions or services. BPA has defined seven asset categories: Transmission, Federal Hydro, Facilities, Information Technology (IT), Energy Northwest's Columbia Generating Station, Energy Efficiency, and Environment, Fish & Wildlife. Asset categories are led by Category Asset Managers. This term is also used to refer to business units responsible for managing a set of assets.
- C. Asset Plan:** Asset plans document the condition and capability of assets, predict the demands that will be placed on assets, assess and prioritize risks to meeting long-term outcomes, and recommend investment and risk management actions to be taken over a near and long-term (e.g., 10-year) planning horizon. Asset plans are intended to be "living documents" that are updated as conditions change.
- D. Business Case:** A written proposal for a capital project that demonstrates a business need for investment, determines the project's financial and nonfinancial costs and benefits, assesses risks, evaluates alternatives, establishes project targets and otherwise justifies the capital project.
- E. Capital Cost:** For purposes of this chapter, capital cost is defined as a project's direct capital expenditures plus indirect or overhead costs attributable to the project that the asset category incurs. Corporate overheads and AFUDC are not included in this definition. Capital cost encompasses costs for the project as a whole, i.e. capital expenditures from project inception through placement in service. Only costs properly capitalized under BPA's capitalization policy are included.
- F. Capital Project:** An undertaking representing an investment in time and resources with a specified plan and budget, generally in a specific location, over a discrete period of time, intended to achieve a BPA long-term outcome for assets. Projects are scoped so that they are (1) clearly aligned with business objectives and targets and (2) operationally sound as an asset or set of assets. Depending on the nature of a project, it may consist of one or more work orders. For purposes of this chapter, the term capital project includes capital replacement programs, such as Transmission's wood pole replacement and access road programs, and the energy efficiency capital acquisition program.

665.2 POLICY

- A.** This policy applies to capital projects in these asset categories:


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1. Transmission investment in assets owned or leased by BPA, whether funded by bonds issued to the U.S. Treasury, BPA financial reserves, third party sources (e.g., Northwest Infrastructure Financing Corporation (NIFC)), appropriations, or customer advances (projects funded in advance),
2. Federal hydro investment allocable to power, including capacity additions, replacements, and efficiency improvements,
3. BPA facilities investment, and
4. BPA IT equipment and software application investment.

At the Capital Allocation Board's (CAB) discretion, capital projects in the Energy Efficiency, Fish & Wildlife, and Columbia Generating Station asset categories may be added to the coverage of this policy.

This policy does not apply to reimbursable projects, in which case another utility or entity owns the asset and that entity contracts with BPA to perform construction and other services with full reimbursement to BPA for its costs.

- B.** Capital projects must be directed at meeting reliability standards, adequacy guidelines, availability requirements, business operations needs, or other long-term outcomes that have been established for each asset category in the agency's Asset Management Strategy and documented in asset plans. To be authorized, capital projects must be consistent with the investment needs, strategies, and priorities that are established in asset plans.
- C.** When more than one viable project alternative exists, the least cycle cost alternative should normally be selected. A higher cost alternative may be selected if risks and nonfinancial factors mean that reliability, adequacy, availability, or other long-term outcomes would be better served.
- D.** Capital projects must be evaluated, authorized, and tracked for implementation in an effective and efficient manner that:
 1. Meets the agency's strategic objectives for standardized systems and processes, robust and reasonably balanced internal controls, integrated and risk-informed decision making, and transparent processes, decision making and performance,
 2. Ensures due diligence and satisfies the agency's decision framework. Capital project costs, benefits and risks must be fully understood by those who authorize the projects,
 3. Assigns project implementation targets, and monitors and manages projects to deliver on the targets, and
 4. Meets the agency's standards of conduct and satisfies OMB Circular A-123 requirements for internal controls.
- E.** The business case is the approved vehicle for proposing, evaluating, and authorizing capital projects. Business cases must demonstrate a business need for investment; assess financial and nonfinancial implications and risks; evaluate alternatives; propose project implementation targets; and otherwise justify the capital project.

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665.3 RESPONSIBILITIES

Key roles and responsibilities for implementing the capital project authorization process follow:

A. Agency Asset Manager (AAM)

The Agency Asset Manager leads the development and monitors implementation of agency-level asset strategies, processes, and policies. The AAM advises the Category Asset Managers on developing asset plans and evaluates plan implementation. In addition, the AAM recommends improvements to the capital project authorization process to the Chief Financial Officer (CFO), and chairs the Asset Management Council and the Agency Capital Project Review Team.

B. Asset Management Council (AMC)

The AMC develops, recommends and monitors asset management strategies, policies and processes; ensures that practices in the business units reflect sound asset management, risk management and financial principles, promotes the capital authorization policy, and promotes adherence to the agency's standards of conduct. The AMC is comprised of the Category Asset Managers, Chief Risk Officer designee, CFO designee, and the AAM.

C. Agency Capital Project Review Team (ACPRT)


The ACPRT works under the direction of the Capital Allocation Board (CAB) to review the business merits of the agency's large or strategically sensitive capital projects. Upon review, the ACPRT either approves the project or remands the proposal back to the asset category for reconsideration. If a project approved by the ACPRT meets the agency's threshold for CAB review, the capital project is elevated to the CAB for final authorization. The ACPRT works with the asset categories to ensure that appropriate analytical rigor is brought to the project authorization process, and monitors project implementation. The ACPRT is chartered and comprised of senior staff from Finance, Enterprise Risk Management, and Agency Asset Management. Upon authorization of a project, Finance works with the project sponsor if necessary to determine the preferred financing approach.

D. Capital Allocation Board (CAB)

All capital decisions, regardless of source of funding, related to budgeting and allocations are within the scope of the CAB, although some elements may be delegated to other decision-making forums. In addition, the CAB serves as the final level of review and authorization for capital projects that are large or strategically sensitive, or that meet other criteria set forth by the CAB. The CAB is responsible for records management of both the business case and project requirements documentation. In addition, the CAB may prescribe corrective actions if previously authorized projects encounter unforeseen difficulties or opportunities, including project expansion, redirection, or termination actions. The CAB is chartered and comprised of the Administrator, Deputy Administrator, Chief Operating Officer, the CFO, the Chief Risk Officer, and the Corporate Strategy Officer.

E. Category Asset Managers

Category Asset Managers develop and implement asset management strategies, plans, processes and policies for their asset categories. With regards to this chapter, Category Asset Managers promote the effective and efficient implementation of the capital project authorization policy; ensure that the asset category's capital project review team is chartered and operating efficiently and effectively; ensure that

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business cases are properly developed, evaluated and approved in the business unit; ensure controls are in place so that capital projects are implemented on target and that variances are reported promptly; and ensure that post project reviews are completed consistent with this chapter.

F. Project Sponsors

Project sponsors are the person or persons responsible for developing and justifying capital project proposals, obtaining necessary approvals for capital projects, and evaluating and reporting variances from approved targets during the course of the project. A project sponsor is typically the project's manager.

665.4 PROCEDURES

A. Process Responsibilities


1. Category Asset Managers are charged with developing and maintaining the process by which capital projects in their categories are proposed, evaluated, authorized, and tracked for implementation. The process must be consistent with this chapter.

In addition, Category Asset Managers are responsible for establishing a capital review team that is authorized to review and approve capital projects in the asset category. The capital review team must be chartered, with the charter reviewed by the ACPRT.

2. Project sponsors must be assigned to each capital project.
3. The CAB is authorized to modify the business case and project authorization requirements in Appendix A. Modifications to Appendix A are treated as administrative updates and do not require this Chapter to be re-issued.
4. The AAM is responsible for informing internal stakeholders promptly after a CAB decision that modifies Appendix A, normally within 5 business days. The AAM is also responsible for evaluating the effectiveness and policy conformance of asset category processes, and for developing and maintaining the process by which projects are reviewed and authorized at the agency level.

B. Business Case Requirements

1. Capital projects must be justified using the agency's standardized business case format. The ACPRT is responsible for maintaining the standardized format and for providing training on its use. The ACPRT shall ensure that the format meets the purpose and requirements of the agency's decision framework (BPA Manual Chapter 21.5). Asset Categories may propose an alternative to the agency standardized format, however, any such alternative must meet 1) the agency's decision framework and 2) the financial analysis and risk assessment requirements in the standardized format. Alternative formats must be approved by the ACPRT before use.
2. A business case must demonstrate that the capital project is consistent with the investment needs, strategies, and priorities in the asset category's asset plan.
3. Business cases must identify the key assumptions that are used to justify the project. Business cases must employ the agency's common planning assumptions when they are applicable to a

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project. Common planning assumptions include economic or financial assumptions, such as load forecast, market price forecast, inflation forecast, and discount rate assumptions. (Engineering planning assumptions are not included.) The AAM is responsible for maintaining an intranet site for ready access to common planning assumptions.

4. Project costs and benefits should be quantified when feasible. Business cases must include an assessment of a project's life cycle costs and benefits. Life cycle costs are to be measured in terms of cash expenditures or savings that would accrue from the investment on a mean probable or expected basis. For new capital projects, life cycle cash expenditures often include capital costs, corporate overheads, Allowance for Funds Used During Construction (AFUDC), annual operating and maintenance (O&M) expenses after the asset is placed in service, future refurbishment costs, avoided annual O&M or capital costs (savings), revenue impacts, and end-of-life disposal costs and revenues (e.g., decommissioning, salvage, proceeds from a sale transfer).

Life cycle costs and benefits must encompass not only the impact on the business unit that sponsors the project, but also the impact on the agency and the interconnected power and transmission system when applicable.

5. When more than one viable project alternative exists, the project alternative with the least life cycle cost should be selected. A project alternative is deemed to be viable if it is technically sound from a design and operational perspective. The determination of least life cycle cost should be made on the basis of the financial metrics in Appendix A to this chapter. A higher cost alternative may be selected if the assessment of risks or nonfinancial factors in the business case demonstrates that reliability, adequacy, availability, or other long-term outcomes would be better served.
6. For projects requiring agency-level authorization, the financial metrics specified in Appendix A should be applied to all technically viable alternatives before selecting a preferred and next best alternative.

C. Project Authorizations

1. Projects should normally be proposed and authorized on a total project basis, including projects that span more than one fiscal year. In the case of ongoing capital programs, such as the wood pole replacement and access road programs, and the energy efficiency capital acquisition, the program should normally be authorized for a period that extends through the next rate period.
2. Capital projects must be authorized before funding is made available and capital expenditures for a project occur. An exception is made for emergency or urgent capital spending needs (see below). The Chief Financial Officer may authorize other exceptions.
3. All capital projects must be authorized by a business unit Vice President or delegate.
4. Additional levels of authorization are required by the asset category's capital review team and by the ACPRT and CAB, depending on the capital cost of the project, as specified in Appendix A. In addition, projects, regardless of capital cost, that the Category Asset Manager deems to be strategically sensitive or technologically unique, or that have significant agency-wide implications, must be submitted to the ACPRT for approval. The ACPRT, in consultation with the Category Asset Manager, will determine if such projects should be advanced to the CAB for final authorization.



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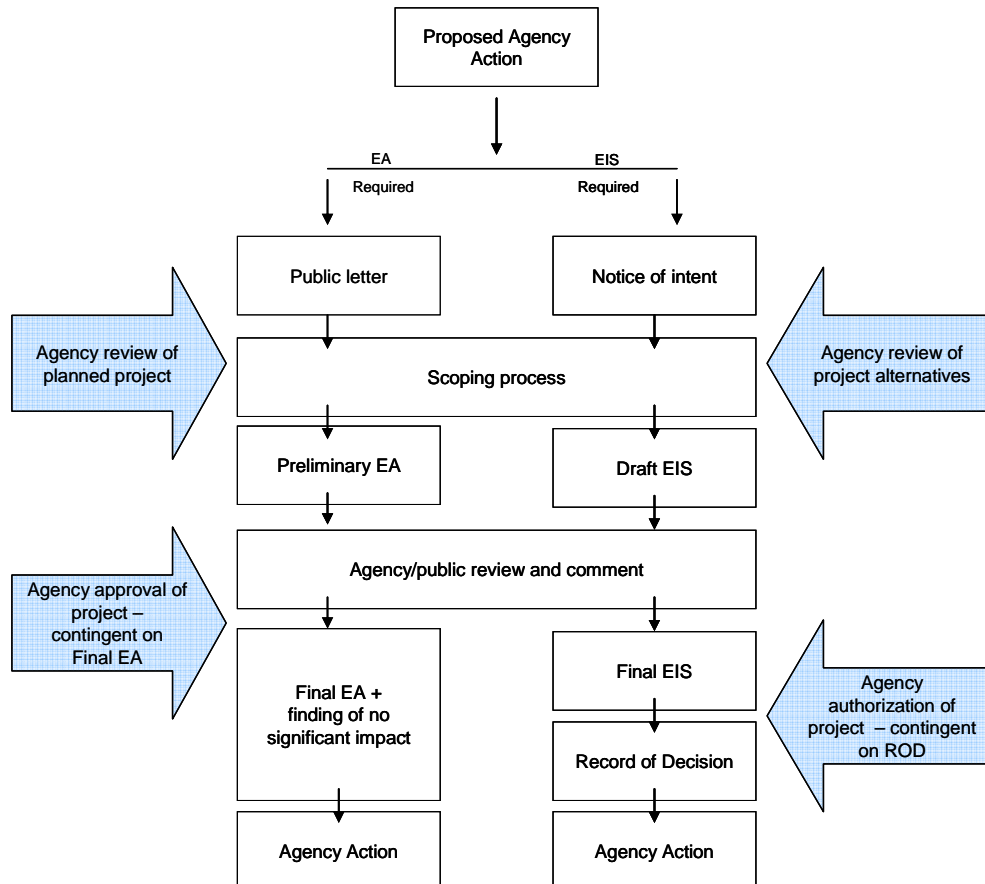
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5. If a project is subject to an environmental review that requires an environmental assessment (EA) or environmental impact statement (EIS) under the National Environmental Policy Act (NEPA), and the project's capital cost meets the threshold for agency-level authorization in Appendix A, the agency-level process will typically include two steps. The first step entails a review of project alternatives by the ACPRT and CAB at the front-end of the scoping phase, as depicted below. This review will identify and evaluate on a preliminary basis the business implications of the project alternatives, including financial, nonfinancial, and risk implications of the alternatives. In the first step, direction may be given on the scope and evaluation of alternatives to ensure business impacts are considered as the NEPA process proceeds. The second step entails preparing a business case and reviewing and authorizing the project consistent with item 4 above. Such authorizations will be contingent on the agency's decision in the EA or EIS; contingent authorizations will not commit BPA to implement the preferred alternative project. After the EA or EIS process is completed, the asset category will notify the ACPRT if the agency's final action is significantly different than was anticipated when the project was authorized.

NEPA Environmental Review Process




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6. For stage-gate projects that require agency-level authorization but do not entail an EA or EIS process, the project business case is prepared and submitted for agency authorization once the project has been scoped and defined.
7. If a capital project would cause the business unit to exceed its start of year (SOY) budget, the business unit must first obtain approval of the budget increase from Finance and the CAB before the project is authorized. Among other purposes, this requirement helps to ensure conformance with federal budget rules.
8. Asset categories are authorized to approve replacements in kind in emergency or urgent situations without submitting a business case for agency-level authorization in advance of expending capital. Emergency or urgent situations are caused by severe weather, sudden equipment failure, or other unforeseen events for which investment must be made without delay in order to:
 - a. restore load service,
 - b. avoid imminent unplanned outage or curtailment,
 - c. mitigate environmental emergency, or
 - d. mitigate safety or security emergency, or avoid significant financial loss to the agency.

In such situations, an abbreviated business case should be prepared and submitted as soon as feasible. The abbreviated business case must include a description of the project, an explanation of the emergency or urgent situation, an assessment of the project's financial costs and benefits, and project implementation targets and thresholds. The abbreviated business case should be submitted to Finance, at which time Finance will address the allocation of funds.

D. Project Implementation Targets for project cost, schedule and scope/capability must be adopted as part of a project's authorization. Project implementation targets must be specific, measurable, attainable, relevant, and time definite (SMART), and they must be consistent with the project's business case. For larger or strategically sensitive projects, thresholds for reporting variances from the cost, schedule and scope/capability targets must also be set. Requirements for project implementation targets and thresholds are explained below and in Appendix A.

1. Capital cost targets and thresholds. Capital cost targets are set for the capital project as a whole. For projects that require ACPRT or CAB authorization, capital cost targets are also set for each fiscal year if the project spans more than one fiscal year. Thresholds for reporting variances are typically set as a dollar amount above and below the target.
2. Schedule targets and thresholds. Schedule targets are set for the project as whole, and they include an estimated completion, energization, or in-service date. For projects that require ACPRT or CAB authorization, schedule targets are also set for two or more significant milestones. Examples of milestones include contract award, design completion, construction start, or project closeout. Thresholds for reporting schedule variances must also be set, typically as a fixed date after the target date(s).
3. Project scope/capability targets and thresholds. Project scope/capability targets include a short statement of the project's scope, capability or intended output. For projects that require ACPRT or

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CAB authorization, thresholds for reporting variances must also be set. Thresholds are typically stated in terms of a fundamental change in the project's scope, capability, or output from what was planned when the project was authorized.

E. Project Implementation Tracking is the responsibility of project sponsors. This includes monitoring a project's progress in meeting the project implementation targets and for reporting variances to the asset category's capital review team and, originally authorized at the agency level, the ACPRT. Investment review team(s) may make projects subject to reauthorization or to corrective actions if large variances occur.

Forecasts of project schedule and cost should be updated on a quarterly basis. Variance reports should be submitted generally within one month of exceeding the threshold, and they should contain:

1. The cost, schedule or scope/capability variance,
2. Cause(s) for the variance,
3. Recommended actions, and
4. Revised forecasts with respect to project cost, schedule and scope/capability targets.

F. Post Project Reviews of capital projects after they are placed in service will be performed. Projects are selected and reviews conducted on a schedule established jointly by the Category Asset Managers and the AAM. Post project reviews shall include:

1. An assessment of whether objectives, costs and benefits projected at the time the project was authorized were actually delivered,
2. An assessment of causes for large variances, if any,
3. Lessons learned for delivering future capital projects, and
4. Action plan for lessons learned on future projects.

Once completed, post project reviews will be submitted to the asset category's capital review team and the ACPRT.

665.5 REFERENCES

- A. **Asset Management Strategy**, September 30, 2007
- B. **Asset Management EPIP**, January 17, 2006
- C. **Capital Allocation Board (CAB) Charter**, October 25, 2007
- D. **Agency Capital Project Review Team (ACPRT) Charter**, May 28, 2008
- E. **Publicly Available Specifications PAS 55-1 & PASS 55-2**, April 30, 2004
- F. **OMB Circular A-123**
- G. **OMB Circular A-11**, July 2007



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Appendix A

Business case requirements and project authorizations

This table includes minimum requirements; asset categories may request additional analysis for internal decision making

Projects with capital cost of:	Evaluate Alternatives	Financial Metrics*		Risk Assessment	Project Implementation Targets and Thresholds for Reporting Variances	Authorizations			
		With Revenue Credit / Savings	Without Revenue Credit / Savings			Asset Category Capital Review Team	ACPRT	CAB	
< \$500K	Analysis required of preferred alternative only	NPV, NCR	PV	No risk assessment required	Targets for project schedule, cost, and scope/capability. No thresholds	Asset Category VP only	No	No	No
\$500K - \$3M	Analysis of the preferred and do nothing / status quo alternatives are included in business case	NPV, NCR	PV	Do nothing / status quo alternative	Targets for project schedule, cost, and scope/capability. Thresholds for cost and schedule only	Yes	No	No	No
\$3M - \$7M	Analysis of preferred, do nothing /status quo, and next best alternatives are included in business case	NPV, NCR	PV	Do nothing / status quo, preferred, and next best alternatives. Also, assessment of risks to meeting project implementation targets	Targets and thresholds for project schedule, cost and scope/capability required prior to agency level approval	Yes	Yes	No	No
> \$7M	Analysis of preferred, do nothing /status quo, and next best alternatives are included in business case	NPV, NCR, PVRR*	PV, PVRR*	Do nothing / status quo, preferred, and next best alternatives. Also, assessment of risks to meeting project implementation targets	Targets and thresholds for schedule, cost and scope/capability required prior to agency level approval	Yes	Yes	Yes	Yes
Projects, regardless of cost, that are strategically important or technologically unique or that have significant agency implications	Analysis of alternatives commensurate with the project's capital cost (see above)								
Projects that are not represented in an approved Asset Plan or SOY budget	Analysis of alternatives commensurate with the project's capital cost (see above)								

* Necessity of this metric is determined by Finance on a case-by-case basis