BPA Policy 240-2

Asset Management Strategies

Table of Contents

1. Purpose & Background

This policy establishes Bonneville Power Administration's (BPA) policy and framework for developing and reviewing, and maintaining asset management strategies.

2. Policy Owner

The Chief Financial Officer working through the Deputy Chief Financial Officer and the Finance Committee has overall responsibility for monitoring, evaluating, and proposing revisions to this policy.

3. Applicability

This policy applies to the Transmission, Federal Hydro, Facilities, IT, Energy Efficiency and Fish and Wildlife asset categories. The Finance Committee, in consultation with affected business units and the Asset Management Executive Sponsors, determines whether and how this policy should apply to additional asset categories.

4. Terms & Definitions

A. Assets: Plant, machinery, property, buildings, vehicles, hardware and software applications and other items and programs, whether or not the assets are owned by BPA, that provide operational and economic value to BPA and its Federal Columbia River Power System (FCRPS) partners.

B. Asset criticality: Relative importance of an asset or asset system to meeting the agency's reliability, availability, adequacy and other objectives and standards.

C. Asset system: Set of assets that interact and/or are interrelated so as to deliver a required business function or service.

D. Life cycle: The phases of an asset's life, beginning with identifying the need for an asset and ending with disposal (decommissioning, retirement, sale) of the asset. The main stages of an asset's life cycle include: create/acquire, operate, maintain and renew/dispose.

E. Planning levels: Forecasted capital and expense spending levels to implement the investment, maintenance, and other components of asset management strategies.

5. Policy

A. BPA's policy, in concert with its FCRPS partners must manage capital investments and maintenance with a comprehensive understanding of the long-term costs, benefits and risks to the agency and the region. Asset management strategies are key to ensuring that critical assets operate reliably, meet availability requirements, and provide adequate capacity into the future, and that long-term asset costs will be prudent and economic.

B. Asset management strategies must be developed and maintained for Transmission, Federal Hydro, Facilities, Information Technology (IT), Energy Efficiency and Fish and Wildlife. Category Asset Managers (CAMs) are assigned the lead role in their preparation. The strategies must be directed at meeting the agency's Asset Management Policy, which calls for BPA to invest in, maintain, and operate assets to enable reliability standards, availability requirements, regional adequacy guidelines, efficiency needs, environmental requirements, safety and security standards, and other requirements to be met. It also calls for minimizing the life cycle cost of assets when practical. The policy refers to these goals as long-term outcomes, and they are derived from the agency's mission, vision and strategic objectives.

C. Asset management strategies should answer these questions:

1. Which assets are critical to achieving the long-term outcomes?
2. What performance objectives should we set for critical assets?
3. How are our critical assets performing today?
4. What are the performance gaps to meeting the objectives, and which gaps should we close?
5. What are the risks to closing the gaps, and which risks should we manage?
6. What should our strategies be?
7. What are the anticipated costs?

D. Specifically, the asset management strategies must:

1. Assign priority to the most critical assets that are at greatest risk of operating failure, capacity inadequacy, environmental damage or noncompliance, security breach or noncompliance, health and safety issues, or obsolescence. Example factors for determining the criticality of assets are included at Appendix A;
2. Cover all four phases of asset life (create/acquire (investment), operate, maintain, and renew/dispose), with particular focus given to the investment and maintenance phases;
3. Cover a 10-year planning horizon at minimum. A 7-year planning horizon for information technology assets is acceptable due to the shorter lives of these assets;
4. Be driven by long-term, results-oriented performance objectives for assets and by assessments of risk to meeting the objectives. Asset performance objectives must be aligned with the agency's strategic objectives and with the long-term outcomes;
5. Identify and evaluate alternative approaches to meeting the asset performance objectives, with justifications provided for the selection of preferred approaches. The preferred approach should normally be the lowest life cycle cost solution among alternatives that are viable. "Viability" is defined as technically feasible, operationally

sound and achievable in terms of meeting the reliability, availability, adequacy or other asset performance objectives that have been set;

6. Take into account staffing, supply chain, and other constraints on strategy delivery; and
7. Apply the agency's common planning assumptions, such as inflation rate, market price forecast, and load forecast assumptions.

E. Strategies should include an integrated approach to maintenance, equipment sparing, and replacements that seeks to minimize life cycle costs. The integrated approach should be condition-based, with priority assigned to the most critical assets at greatest risk of operating failure, environmental damage or noncompliance, or health and safety issues. Assets should be considered for replacement if:

1. Asset health poses an unacceptable risk of operating failure, and the life cycle cost of replacement is lower than the life cycle cost of repair;
2. Asset capability does not meet acceptable performance standards due to premature wear, design problems, changed usage patterns, or changes in system operations;
3. Asset technology is inferior or obsolete, and the life cycle savings from early replacement outweigh the cost of replacement;
4. Replacement parts or technical expertise are no longer available to ensure asset performance to acceptable standards;
5. Security risks, health and safety risks, or environmental risks are unacceptable, and the life cycle cost of replacement is lower than the life cycle cost of refurbishment, repair, or other, viable alternatives; or
6. The agency's business continuity objectives would not otherwise be met, and the life cycle cost of replacement is lower than the life cycle cost of other, viable alternatives; or
7. Risks to meeting statutory, regulatory or other legal obligations are unacceptable, and the life cycle cost of replacement is lower than the life cycle cost of other, viable alternatives.

F. Asset management strategies must be developed using the Framework for Developing Asset Management Strategies in BPA Procedure 240-2-1. The Framework is designed to meet the policy requirements in this policy, and it is based on leading practices and the agency's risk management approach.

6. Policy Exceptions

None

7. Responsibilities

A. Category Asset Managers

BPA has identified seven asset categories: Transmission, Federal Hydro, Facilities, Information Technology, Energy Northwest 's Columbia Generating Station, Energy Efficiency, and Fish & Wildlife. Asset categories are led by Category Asset Managers. Category Asset Managers, along with their staffs, develop and implement asset management strategies, plans, processes, and policies for their asset categories. With regards to this policy, Category Asset Managers are responsible for (1) ensuring that their asset category follows this policy, including the Framework at Appendix A, (2) presenting and communicating strategies and obtaining approvals, and (3) managing the implementation of strategies.

B. Asset Management Category Executives

Asset Management Category Executives serve as executive sponsors for their respective asset category. They seek to ensure the process is adequately resourced and provide top down communication and direction to help embed asset management principles and practices in their organization.

C. Finance Committee

The Finance Committee authorizes large capital investments. It is also responsible for reviewing and concurring with the long-term asset category strategies.

D. Capital Portfolio Management

The Capital Portfolio Management team is comprised of the Agency Asset Manager and staff. Capital Portfolio Management leads the development and monitors implementation of agency-level policies and processes. Capital Portfolio Management advises Category Asset Managers on developing their asset management strategies, establishes the schedule and coordinates the agency-level review process for strategies, and communicates the agency's common planning assumptions.

8. Standards & Procedures

A. Submitting strategies. Capital Portfolio Management will establish a schedule for submitting strategies for agency-level review, normally on a 2-year cycle. The strategy document that Category Asset Managers submit for corporate and external stakeholder review should include:

1. A description of business environment;
2. A summary of asset criticality, including rationale;
3. Asset performance objectives, measures and end-stage targets;
4. A summary of current asset performance (gap analysis);

5. Summary results from risk assessments;
6. Strategies;
7. Proposed planning levels; and
8. Continuous improvement plan.

B. Approving strategies. An asset category's strategy document must be formally approved by the Category Asset Manager and the Vice President, Generation Asset Management; Vice President, Planning & Asset Management; Chief Information Officer; Vice President, Environment, Fish & Wildlife; or the Chief Administrative Officer. The strategy is also subject to concurrence by the Finance Committee.

C. Strategies are subject to review and comment by customers and other stakeholders through the agency's Integrated Program Review or similar public process.

9. Performance & Monitoring

Implementation of this policy is determined through asset performance objectives and metrics that are set through asset strategies and approved capital projects.

10. Authorities & References

A. Asset Management Policy, BPA Policy 240-1

B. Publicly Available Specifications, PAS 55-1 & PAS 55-2, November 2008

C. Asset Management Strategy, September 30, 2007

D. OMB Circular A-123, December 21, 2004

E. GAO Cost Estimating and Assessment Guide, "Best Practices for Developing and Managing Capital Program Costs, March 2009

11. Review

At minimum, this policy will be reviewed at the beginning of the agency's 2-year planning cycle. The Asset Management Executive Sponsors are authorized to modify and re-issue the Framework in BPA Procedure 240-2-1 (Asset Management Strategies) to this policy.

12. Revision History

Version	Issue Date	Description of Change
2	08/25/14	Reformatted into new policy template and created a procedure document.
2.1	3/10/2016	Ownership of policy transferred from Corporate Strategy to Finance. Minor formatting changes.