

Facilities Asset Management Strategy

Integrated Program Review

May 25, 2010



Facilities Strategy Preview

- Non-electric facilities assets, criticality and program vision
- Demands on facilities program
- Facilities asset condition, historical backlog and risks
- FY09 program in review: learnings and continued development
- FY10 program elements: program risks and gaps
- Strategies to close gaps
- The investment strategy
- Defining success

Facilities Program Assets

Building Asset types in order of criticality:

Priority Level	Asset Grouping	Asset Type
1	Utility	Control Center Data Center Control House Microwave
2	Utility	Control House Control/Maintenance Relay House Microwave Engine Generator Buildings
3	Office, Maintenance and Special Purpose	Office - Guard Station Storage - Fuel and Haz Mat Maintenance HQ Administration Office - Business Critical Meter Houses
4	Storage	Other - Pump House Office - Classroom / Training Site Utility Storage General Material & Equipment Vehicle Transportation Research
5	Other	Oil House Other Rental Untanking Tower Abandoned



Non-building asset types:

Pavement Septic Systems Storm Water Drains	Fences Wells	New
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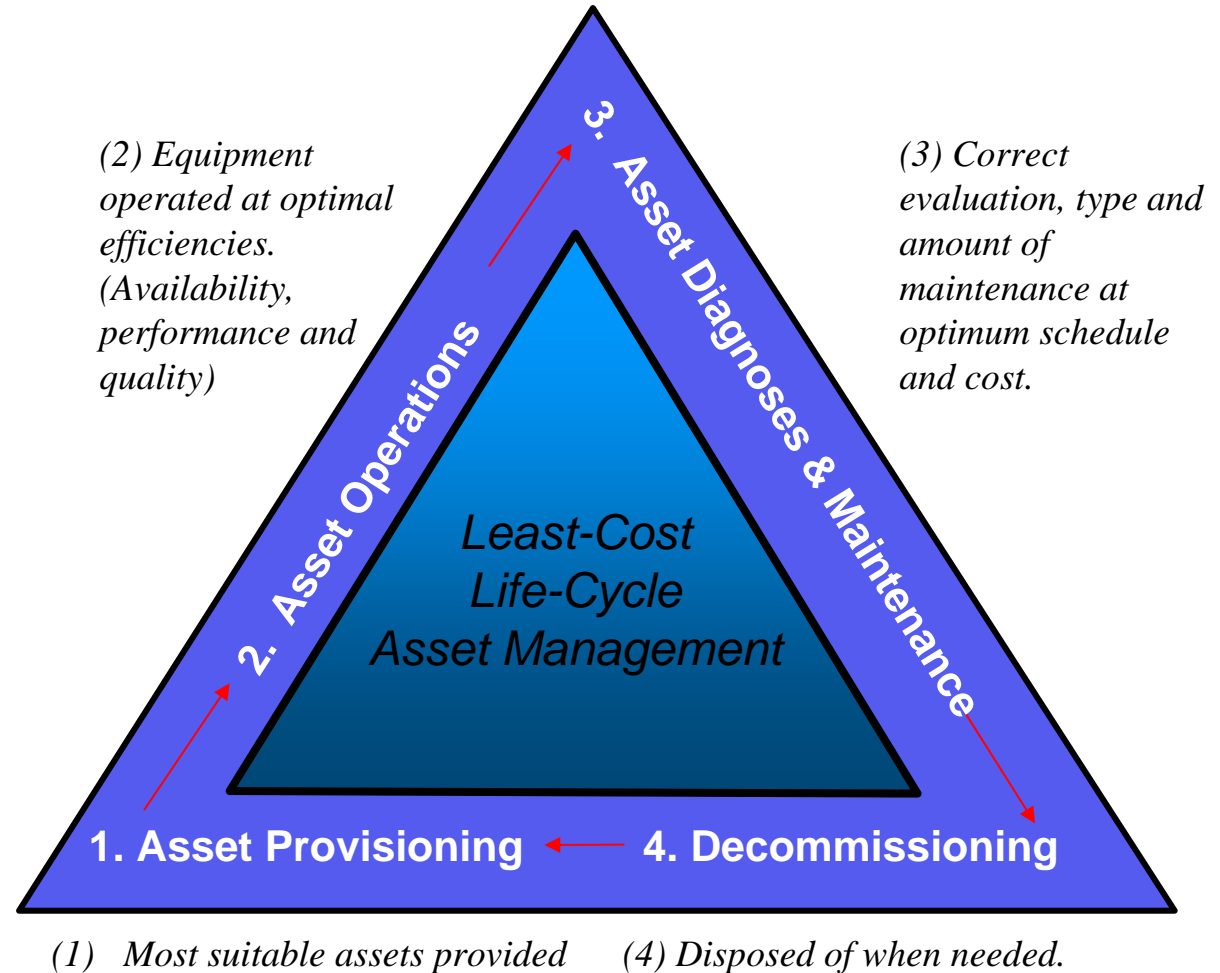


Facilities Program Vision

Facility Assets 10 year Vision Statement

"By 2020 or sooner, the Facilities Asset Management program at BPA will provide a sustainable, non-electric portfolio that fully meets current and known future Agency business needs, performance and condition standards and is compliant with all applicable standards while minimizing life cycle costs. The scope of this program will cover the entire life cycle of said assets (Create/acquire, operate and maintain, renew/dispose)

We will deliver on this vision by creating a cross-agency program that employs a tightly defined set of criteria for making asset-related decisions, specificity around roles and responsibilities for asset planning and care, and tight linkage between the asset and the strategic objectives of the organization."



Demands on Facilities Program

- **Safety codes**
 - Bringing older facilities up to current code
- **Hazardous building materials**
 - Identify and abate prior to upgrades
- **Sustainability and energy efficiency upgrades**
 - Replacement of inefficient facility systems
- **Business continuity needs**
 - Critical seismic upgrades
- **Functionally outdated facilities**
 - New and larger equipment can not be accommodated in some facilities
- **Historical requirements**
 - Efforts required to preserve historical integrity while balancing facility needs

Facilities Asset Condition

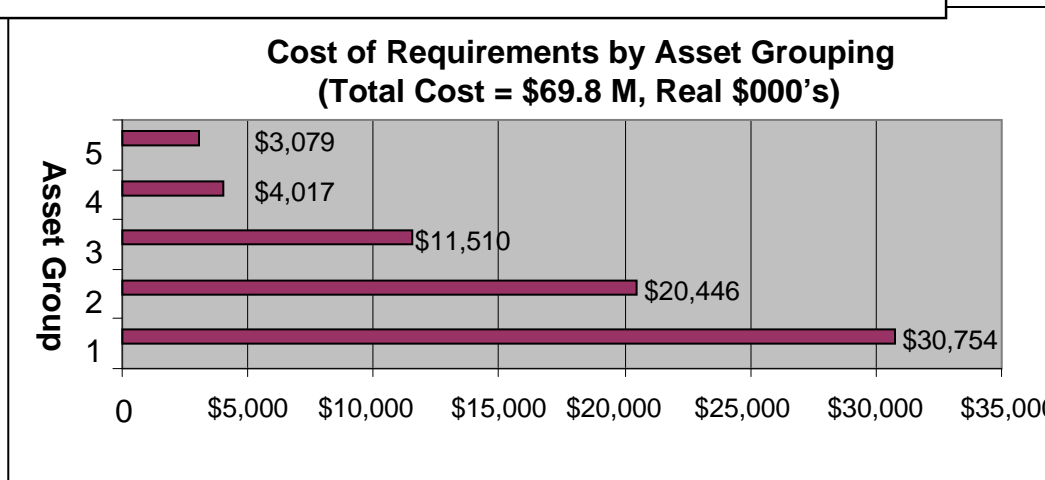
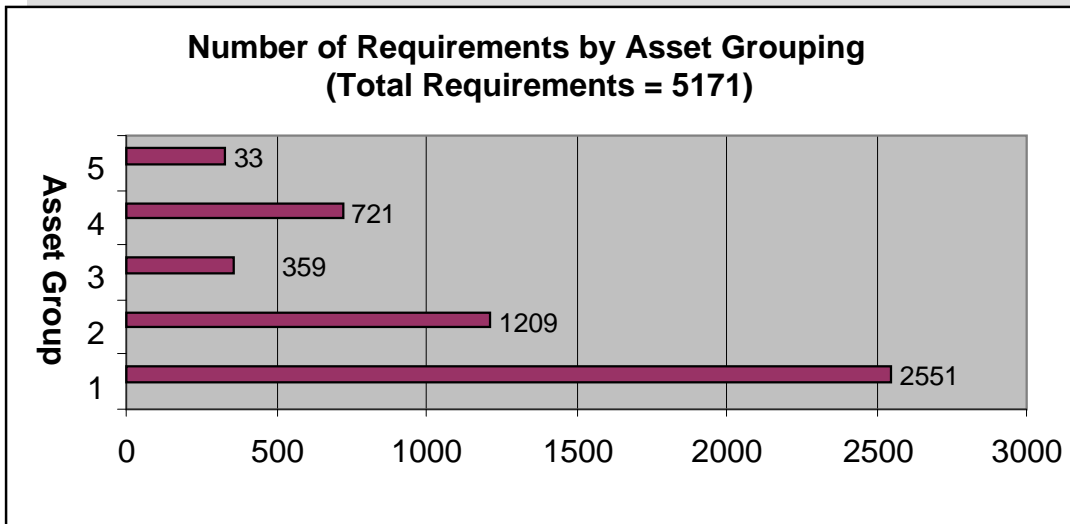
Current Condition Assessments

- During 2007 - 2008, condition assessments were conducted on over 1000 BPA owned buildings. The purpose of the assessments was to determine the general condition of each building and its' associated components (facility systems). The work currently needed to repair or replace a system was identified and recorded as a *"requirement"*. The work associated with anticipated future replacements were recorded as system renewals.
- Backlog of maintenance and repair (BMAR) equates to approximately \$70M of expense funding
- In aggregate, non electric buildings fall well below a facility condition index (FCI) rating of "poor"

Historical Backlog

The volume of requirements documented are a result of the backlog of maintenance and repair that has accumulated over 10+ years.

Priority Level	Asset Grouping
1	Utility
2	Utility
3	Office, Maintenance and Special Purpose
4	Storage
5	Other



Facilities Asset Condition Risk Map

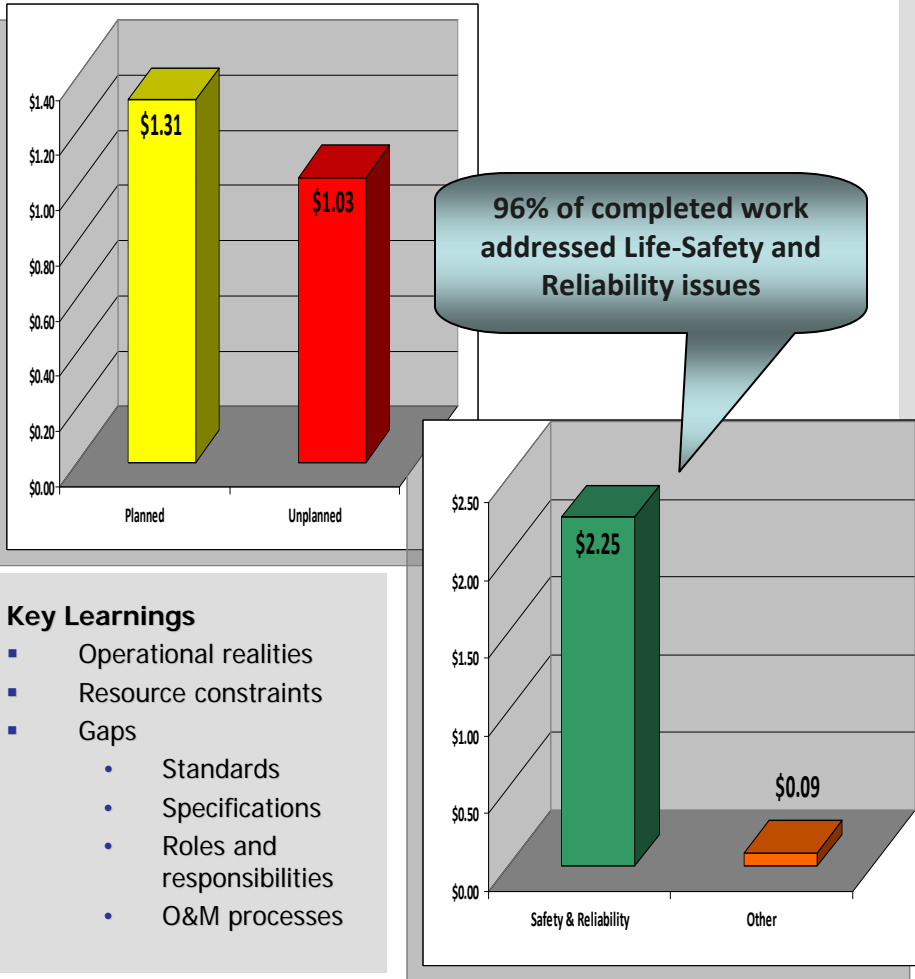
The prioritization process for risk incorporates ranking of facilities, systems, and the urgency of addressing requirements. The result is a plan that will address the most critical requirements as a priority. The table below illustrates the requirement funding levels associated with each asset priority level at each system priority level. The red indicates the identification of the highest risk area.

Requirement Funding by Asset Priority and System Priority
(real \$000,000's , Total = \$69.8M)

Asset Priority (by grouping)	1	Utility 1	\$0.99	\$1.79	\$2.95	\$9.59	\$12.01
	2	Utility 2	\$1.09	\$1.58	\$2.75	\$5.93	\$9.93
	3	Office, Maintenance, Special Purpose	\$0.72	\$0.26	\$4.36	\$1.80	\$2.31
	4	Storage			\$0.02	\$0.01	\$0.01
	5	Other	\$0.28	\$0.33	\$1.30	\$2.90	\$6.38
Focus placed on critical requirements linked to critical systems at highest priority assets.			Interior finishes, landscape	Specialized equipment	Fixtures, paving, windows	Utilities, elevators, structure	Roof, HVAC, fire systems
			5	4	3	2	1
			System Priority (w/examples)				

- Poor facility condition increases vulnerability to risks:
 - Operational Risks
 - Failures resulting in loss of transmission availability
 - Interruption of business operations or loss of IT data
 - Hazard Risks
 - Potential for accidents or illnesses
 - Inability to withstand acts of nature
 - Promotes theft, vandalism, and terrorism
 - Regulatory Risks
 - Failure to comply with security, safety, or environmental standards

FY09 Program In Review



Key Learnings

- Operational realities
- Resource constraints
- Gaps
 - Standards
 - Specifications
 - Roles and responsibilities
 - O&M processes

First year of program execution

- Completed initial assessments of 1013 building assets
- Completed over 200 requirements addressing reliability and life safety issues
- Built partnerships with stakeholders
 - Transmission
 - Environment, Cultural Resources
 - Energy Efficiency
 - Other IBS organizations: Security, Safety, Supply Chain, etc
- Process development
- Integrated asset management database into EGIS
- Initiated seismic hardening program
- Operational priorities became focus as year progressed
 - \$3.2M was initially planned
 - \$5.0M was the actual need
 - \$2.3M was completed

FY10 Program Elements

Integrating Operational Excellence

- Processes continued to be developed, monitored, and revised as needed

Focus on investment decision making and O&M

- New teams created for evaluating investments and O&M practices

Emphasis on energy efficiency and sustainability

- Executive Orders 13423, 13514 and economics drive changes in facilities to reduce energy intensity, reduce water use, comply with federal guidelines on new building construction, and sustainable design

Enhanced utilization of cross-functional resources

- Project implementation includes expertise from variety of BPA departments, i.e., Facilities Engineering, Civil Engineering, Environment, Energy Efficiency, Security, Safety, etc.
- Collaborate with Transmission Services on joint projects to optimize efficiency and resources

Transition from the “what” to the “how” and “when”

- Information gathered from 2007/2008 condition assessments inform decisions for appropriate solutions and critical timing of projects

Close gaps identified in learnings

- For example, responsibilities are being better defined between Facilities Asset Management and Transmission Asset Management

Program Risks and Gaps

- **Life Safety**
 - Many of BPA's aging assets contain hazardous building material such as asbestos, PCB's, lead, and mercury. A comprehensive management plan is underway.
 - Some facilities may not be compliant with current life-safety codes

- **Operational**
 - The aged and deteriorated state of the Non Electric Facilities' (NEF) assets continue to present risks to continuity of operations, by generating emergency repairs, thus delaying the execution of original asset plan
 - Many non-building NEF assets (i.e., septic systems, storm water drain systems) have not yet been assessed and therefore funding to repair or replace these assets has not been quantified in the current plan

- **Speed of Program Execution**
 - The availability of project implementation resources, contracting limitations, and constrained funding

- **Further refinement of assessments and estimates**
 - The original assessments conducted in 2007 and 2008 provided general information and estimates based on a philosophy of "replace in kind". This necessitates follow-on, in-depth analysis to accurately develop work plans.

- **Incomplete historical data**
 - BPA has not consistently captured facility O&M costs by asset-specific work orders, thus creating a gap in determining total asset cost of ownership.

Program Risks and Gaps (cont.)

- **Current state of tracking and reporting tools**
 - Current data and reporting systems are not adequate to meet current needs of a successful asset management program and are not integrated with the VFA database.
- **Program scopes/roles and responsibilities not yet fully defined**
- **Need for further development of O&M standards**
 - Standards and procedures that would drive consistent, prioritized investment decisions are not fully in place.
- **Change Management**
 - Implementation of integrated Asset Management at the agency level represents a significant shift in the way BPA had previously managed its substantial infrastructure investment and are changing the way many individuals and departments conduct their activities.

Strategies to Close Gaps

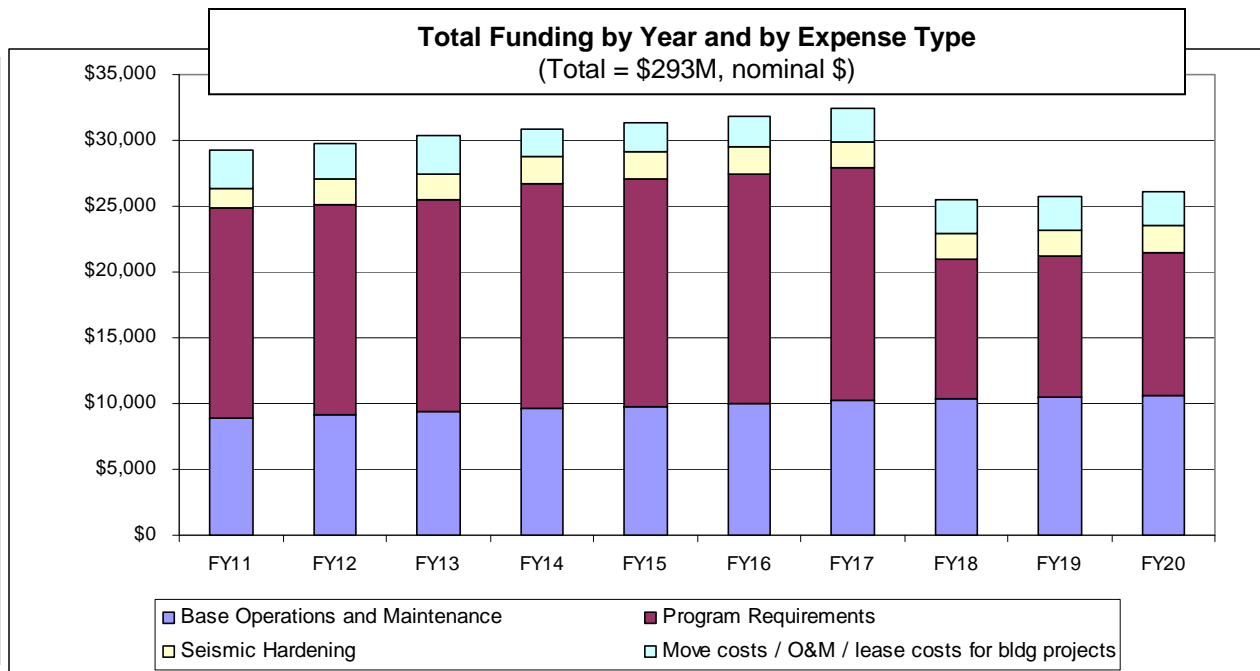
In collaboration with strategic partners, FAM has identified key goals and strategies designed to address gaps, mitigate facilities risks, and achieve the Agency's long term outcomes. To summarize, the Facilities Asset Strategy will:

- Correct facility systems reliability and life-safety deficiencies by implementing a risk-based prioritization methodology;
- Improve investment decision-making by employing a standardized set of evaluation criteria;
- Identify and set standards which integrate into BPA's business processes; responsible environmental stewardship, energy efficiency initiatives and enhanced security and personnel safety efforts;
- Identify and provide adequate implementation resources necessary for successful program execution;
- Optimize life-cycle management of facility assets through the identification and integration of industry best-practices, cost-effective solutions and operational and maintenance imperatives; and
- Analyze work practices and space needs in order to optimize requirements for major renovations or new building construction.

The Investment Plan - Expense

In addition to addressing the backlog of maintenance and repair, the expense plan also includes funding for:

- Continued base level maintenance
- Funding for facility-related business continuity initiatives, including seismic hardening studies and implementation of facilities hardening program
- One time and ongoing expense costs for new building projects



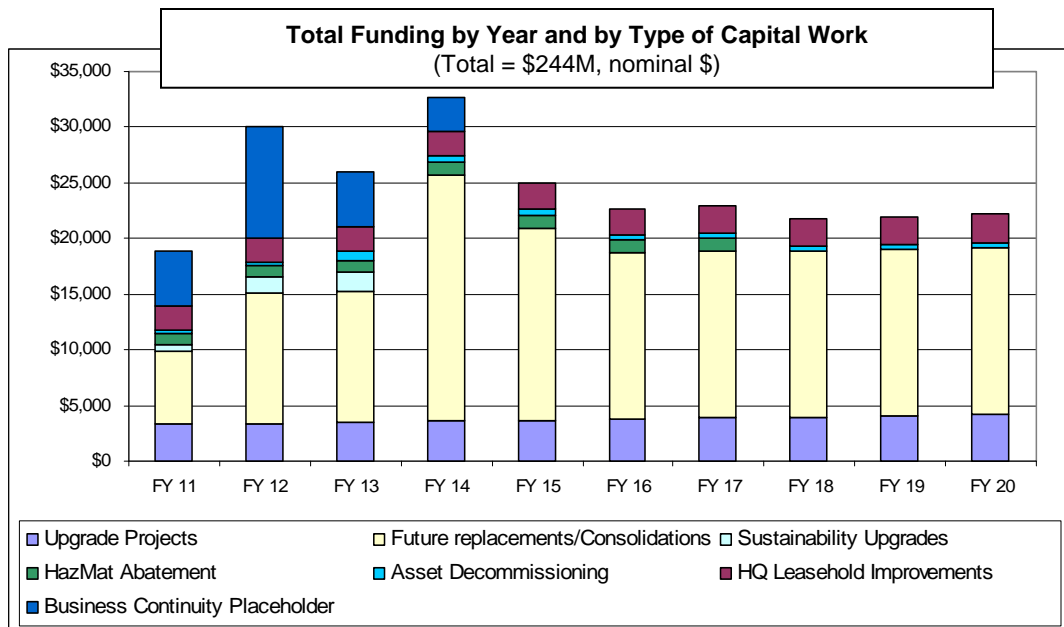
Expense Plan for Facilities, FY 11 - FY 20 (Nominal \$000's)

	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	Total
Program Requirements	\$15,923	\$15,957	\$16,129	\$17,174	\$17,342	\$17,496	\$17,685	\$10,568	\$10,704	\$10,843	\$149,821
Base Operations and Maintenance	\$8,959	\$9,159	\$9,367	\$9,575	\$9,788	\$10,002	\$10,233	\$10,365	\$10,498	\$10,634	\$98,580
Facilities Seismic Hardening	\$1,500	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$19,500
Move costs / O&M / lease costs for bldg projects	\$2,926	\$2,674	\$2,814	\$2,066	\$2,196	\$2,327	\$2,467	\$2,499	\$2,531	\$2,564	\$25,063
Total Facilities Expense Plan	\$29,308	\$29,790	\$30,310	\$30,815	\$31,326	\$31,825	\$32,385	\$25,432	\$25,733	\$26,041	\$292,964

Total Investment Plan - Capital

Capital Plan Includes:

- Upgrade projects
- Placeholders for future replacements and consolidations
- Sustainability upgrades
- HazMat abatement
- Asset decommissioning
- Business Continuity and leasehold improvements



Capital Plan for Facilities, FY 11 to FY 20 (Nominal \$000s)

	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	Total
Upgrade Projects	\$3,273	\$3,372	\$3,472	\$3,575	\$3,682	\$3,792	\$3,905	\$3,936	\$4,054	\$4,175	\$37,236
Future replacements/Consolidations	\$6,618	\$11,722	\$11,716	\$22,185	\$17,251	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$144,492
Sustainability Upgrades	\$551	\$1,451	\$1,801								\$3,803
HazMat Abatement	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159	\$1,194				\$7,663
Asset Decommissioning	\$309	\$318	\$764	\$538	\$548	\$358	\$369	\$380	\$391	\$403	\$4,378
HQ Leasehold Improvements	\$2,155	\$2,198	\$2,242	\$2,287	\$2,333	\$2,379	\$2,427	\$2,475	\$2,525	\$2,575	\$23,596
Business Continuity Placeholder	\$5,000	\$10,000	\$5,000	\$3,000							\$23,000
Total Capital Plan	\$18,906	\$30,091	\$26,056	\$32,678	\$24,940	\$22,688	\$22,895	\$21,791	\$21,970	\$22,153	\$244,168

Defining Success

- **Program efficiencies realized**
 - Effective use of agency and contracted resources to execute on strategy and work plan
 - Post investment audits validate forecasted benefits

- **Facilities related risks reduced**
 - Proactively addressing facility system requirements thereby reducing number of asset-related unplanned and emergent projects

- **Life cycle of facility systems optimized**
 - Increase reliance on preventative maintenance and reduce expensive corrective maintenance
 - Replacement of assets when no longer economically viable

- **Budget Stabilized**
 - Backlog of deferred maintenance is addressed

- **Facilities metrics identified and utilized in asset portfolio**
 - Evaluating use of FCI and SCI
 - FCI, Facility Condition Index, a lagging indicator of relative condition of asset
 - SCI, System Condition Index, indicator of condition of critical systems identifies risk associated with failure

Security and Emergency Response Asset Strategy

Security and Emergency Response Asset Management

Key Focus on Security Enhancements

The primary focus of BPA's Security and Emergency Response initiatives is to protect BPA's Critical Assets within the infrastructure of 300 sites, and protection of the workforce.

The intent is that BPA maintains system reliability and achieves its mission of creating and delivering the best value for our customers and constituents, while keeping the workforce safe and protecting the physical assets.

Key Drivers

The industry and Pacific Northwest expectation for BPA is to ensure protection of its people and physical assets by adhering to regulatory requirements and maintaining security standards for critical operations, as driven by:

- NERC Critical Infrastructure Protection Standards (NERC CIP)
- U.S. Department of Energy Requirements
- U.S. Department of Homeland Security requirements (via Presidential Directives)
- Prioritized critical asset assessments determined by BPA's Transmission Business Line
- Accurate and comprehensive Security risk assessments based on the application of the Risk Assessment Methodology for Transmission (RAM-T)
- Historical criminal activities such as thefts, vandalisms, and other adversarial acts committed against the Agency's systems, operations, or posing safety risks to the workforce
- Security threat information obtained from the Intelligence Community

Security and Emergency Response Asset Management

Long-term Plan

Our plan is to conduct prudent security system analyses of critical assets and workplace safety, and install effective security system solutions to address:

- The protection of critical assets and the workforce
- Essential system support systems
- Regulatory compliance
- Risk mitigation
- Offset the need for increases in costly manpower (e.g. security officers)

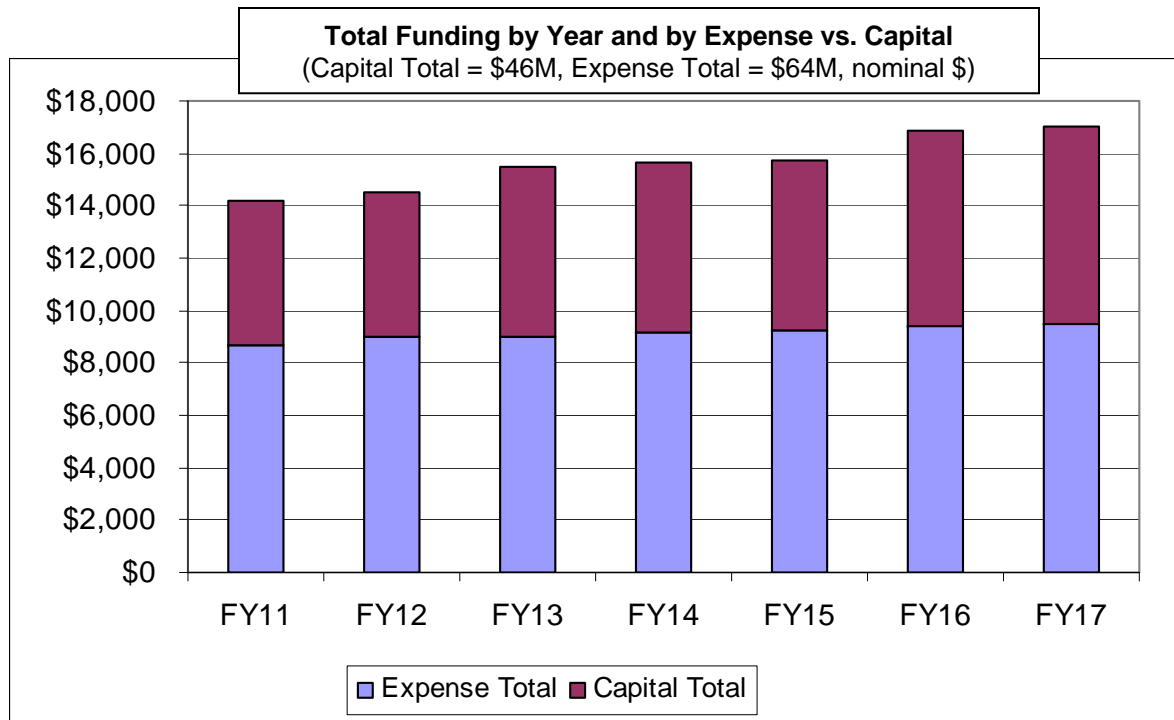
Graded Security Protection Strategy

BPA will install standardized security systems commensurate with the importance level of its assets, using a four-tiered graded approach that applies more resources and robust security systems to the highest risks and greatest valued assets.

Security and Emergency Response Asset Management

Capital and Expense Investment Strategies

- Investments in security and emergency response systems should enable BPA to continue with existing security staff and security officer manpower levels to achieve adequate workforce and asset protection.
- Further compliance and risk mitigation requirements are expected to be accomplished by installing efficient targeted security enhancements contingent on any significant emerging threat conditions or new requirements.



Expense and Capital Plan for Security, FY 11-FY 17 (Nominal \$000s)

	FY11	FY12	FY13	FY14	FY15	FY16	FY17	Total
Expense Total	\$8,668	\$8,975	\$9,012	\$9,130	\$9,259	\$9,382	\$9,524	\$63,950
Capital Total	\$5,500	\$5,500	\$6,500	\$6,500	\$6,500	\$7,500	\$7,500	\$45,500
Total Security Plan	\$14,168	\$14,475	\$15,512	\$15,630	\$15,759	\$16,882	\$17,024	\$109,450

Next Steps

Detailed Workshop Schedule

2010 Integrated Program Review (IPR) Workshop Schedule

All workshops are subject to change as necessary

	Workshop Topic	Date	Time
-	Asset Management Overview <i>Pre-IPR meeting held at the Quarterly Business Review</i>	May 3, 2010	3:00-4:00 PM
1	Executive Welcome and Overview <i>Executive Welcome, Introductions, Process Overview Power, Transmission, Corporate overview</i>	May 10, 2010	9:00-1:00 PM
2	Federal Hydro Asset Strategy & Capital Discussion <i>FCRPS Hydro Asset Strategy Federal Hydro Capital Program for FY 2012-17</i>	May 13, 2010	9:00-12:00 PM
3	Transmission Asset Strategies & Capital Discussion <i>Transmission Asset Strategies Transmission Capital Programs for FY 2012-17</i>	May 17, 2010	9:00-4:00 PM
4	Transmission Expense <i>Transmission Expense Programs for FY 2012-13</i>	May 18, 2010	9:00-12:00 PM
5	Transmission Overflow <i>Discuss Remaining Topics, Follow Ups, Etc.</i>		1:00-4:00 PM
6	Power Internal Operating Costs, Acquisition/Ancillary Services & Residential Exchange <i>Power Internal Operating Cost for FY 2012-13 Power Acquisition and Ancillary Services for FY 2012-13 Residential Exchange Program for FY 2012-13</i>	May 19, 2010	9:00-12:00 PM
7	Columbia Generating Station (CGS) <i>CGS Expense and Capital Program for FY 2012-17</i>		1:00-4:00 PM



Detailed Workshop Schedule

2010 Integrated Program Review (IPR) Workshop Schedule

All workshops are subject to change as necessary

	Workshop Topic	Date	Time
8	FCRPS Hydro Operation & Maintenance Program and Cultural Resources <i>FCRPS Hydro O&M Program for FY 2012-13</i> <i>Cultural Resources Program</i>	May 20, 2010	9:00-12:00 PM
9	Fish & Wildlife, Lower Snake River Comp (LSRC) and Northwest Power Planning Council (NWPPC) <i>F&W Expense & Capital Program for FY 2012-17</i> <i>LSRC Program for FY 2012-13</i> <i>NWPPC Expense Program for FY 2012-13</i> <i>Columbia River Fish Mitigation (CRFM) FY 2012-17</i>		1:00-4:00 PM
10	Power Overflow <i>Discuss Remaining Topics, Follow Ups, Etc.</i>	May 24, 2010	9:00-12:00 PM
11	Energy Efficiency & Renewable Resources <i>Energy Efficiency Expense & Capital Program for FY 2012-17</i> <i>Renewable Resources for FY 2012-13</i>		1:00-4:00 PM
12	Facilities Asset Strategy <i>Facilities Asset Strategy</i>	May 25, 2010	9:00-10:30 AM
13	Information Technology (IT) Asset Strategy <i>IT Asset Strategy</i>		10:30-12:00 PM
14	Agency Services <i>Agency Services Expense & Capital Programs for FY 2012-2017</i>		1:00-4:00 PM
15	General Manager Meeting	June 8, 2010	9:00-12:00 PM
16	General Manager Meeting	July 13, 2010	9:00-12:00 PM



Ways to Participate

- All forums are open to the public and will be noticed on the Integrated Program Review (IPR) external website at: <http://www.bpa.gov/corporate/Finance/IBR/IPR/>.
- Representatives from the Corps of Engineers, Bureau of Reclamation and Energy Northwest will be participating in the IPR process including presentations.
- All technical and managerial workshops will be held at BPA Headquarters.
- If participating by phone please dial into the bridge at 503-230-5566, then any time during or after the message and the double beep, enter 3981#. Presentation material will be posted on the IPR external website prior to the workshop taking place.
- The IPR process will include a public comment period for proposed program spending levels. The comment period opens May 10, 2010 and will close on July 29, 2010.
- Comments can be submitted at any of the scheduled workshops or submitted in writing to:
 - Bonneville Power Administration, P.O. Box 14428, Portland, OR 97293-4428,
 - Email to comment@bpa.gov,
 - Faxed to (503) 230-3285



BPA's Financial Disclosure Information

- All FY 2010-2017 information has been made publicly available by BPA on May 20, 2010 and does not contain Agency-approved Financial Information.
- All FY 2009 information has been made publicly available by BPA and contains Agency-approved Financial Information.
- All FY 2011 Rate Case data has been developed for publication in rates proceeding documents and is being provided by BPA.

