

Agency Services

(Security , Facilities, and Information Technology)

Long Term Capital Investment Strategy

September 19, 2011
4:00pm – 4:30pm

Rates Hearing Room
911 N.E. 11th Ave, Portland, OR 97232

Participants may participate via phone by dialing 503-230-5566, after the double beep enter 0124#



- **This discussion focuses on strategic review of the Security Emergency Response (SER) Asset Strategies and the following components:**
 - Asset Strategy
 - New Strategic Initiatives and Drivers
 - Program Prioritization
 - Evaluation Criteria and Capital Decision Factors
 - Strategic Reductions to Capital Projects
 - Long-Term Forecasted Spending Levels (Sept 2010 IPR vs. 2011 Strategy Update)
 - Conclusion

Fiscal Year	2012	2013	2014	2015	2016	2017
Corpt Facilities and Business Continuity (Unlapsed), Base	29,943	25,904	32,727	24,989	22,949	21,575
Corpt Facilities and Business Continuity (Lapsed), Base	25,452	22,018	27,818	21,241	19,507	18,339
Corpt Facilities and Business Continuit (Lapsed, 10% Scenario	25,348	21,913	21,758	16,891	19,207	19,380
Net Increase (Decrease) in Capital Spending (Lapsed)	(104)	(105)	(6,060)	(4,350)	(300)	1,041
IT Capital, Base Scenario	47,000	40,000	41,000	42,000	43,000	44,000
IT Capital, 10% Scenario	47,000	40,000	41,000	42,000	43,000	44,000
Net Increase (Decrease) in Capital Spending	0	0	0	0	0	0
Security Capital (Unlapsed), Base Scenario	5,500	6,500	6,500	6,500	7,500	7,500
Security Capital (Lapsed), Base Scenario	4,675	5,525	5,525	5,525	6,375	6,375
Security Capital (Lapsed), 10% Scenario	4,191	4,949	4,948	4,944	5,701	5,701
Net Increase (Decrease) in Capital Spending	(484)	(576)	(577)	(581)	(674)	(674)

Fiscal Year	2018	2019	2020	2021	10 yr % Reduction	10 yr % Reduction before IT Respread
Corpt Facilities and Business Continuity (Unlapsed), Base	21,575	21,859	22,024	22,026		
Corpt Facilities and Business Continuity (Lapsed), Base	18,339	18,580	18,720	18,722	208,736	208,736
Corpt Facilities and Business Continuit (Lapsed, 10% Scenario	17,582	17,826	16,273	15,843	192,019	193,004
Net Increase (Decrease) in Capital Spending (Lapsed)	(757)	(754)	(2,447)	(2,879)	8.0%	15.7%
IT Capital, Base Scenario	43,400	43,600	43,600	43,600	431,200	423,200
IT Capital, 10% Scenario	43,400	43,600	43,600	43,600	431,200	375,980
Net Increase (Decrease) in Capital Spending	0	0	0	0	0.0%	11.2%
Security Capital (Unlapsed), Base Scenario	8,188	7,147	7,150	7,141		
Security Capital (Lapsed), Base Scenario	6,960	6,075	6,078	6,070	59,183	59,183
Security Capital (Lapsed), 10% Scenario	6,233	5,444	5,446	5,437	52,993	53,268
Net Increase (Decrease) in Capital Spending	(727)	(631)	(632)	(633)	10.5%	10.0%

SECURITY EMERGENCY RESPONSE



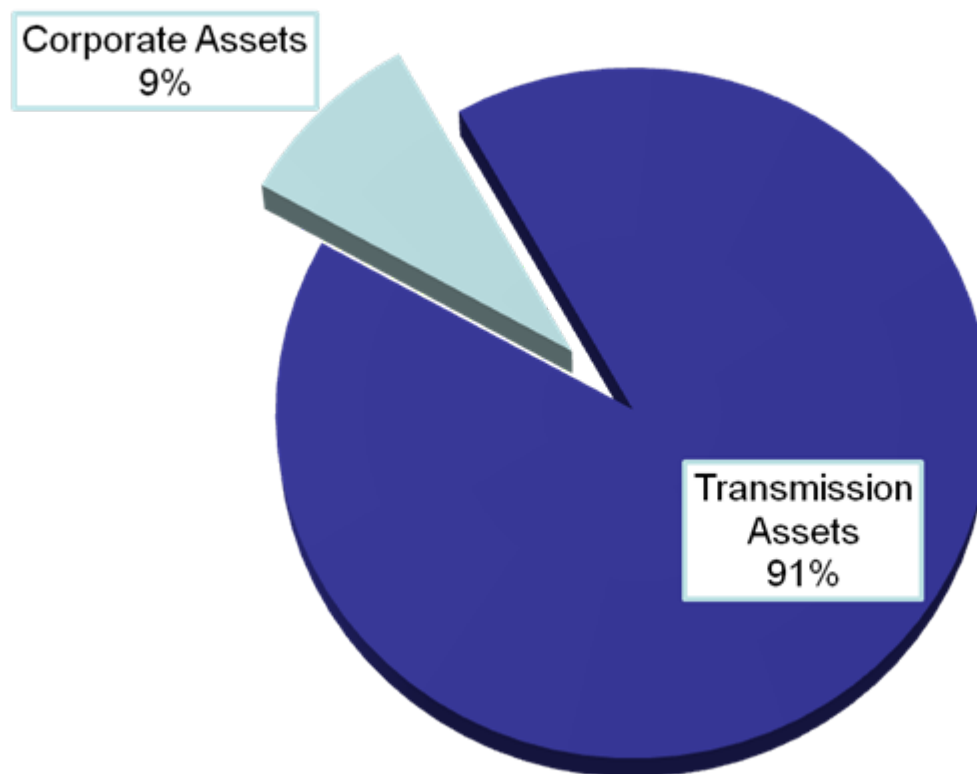
Security and Emergency Response (SER) Asset Strategy

- SER's Asset Management Strategy is driven by the need to protect Transmission assets that support the reliability of the NW bulk electric system as well as provide a safe and secure work environment.

Distribution of Investments

- Greater than 90% of SER's capital budget supports transmission and is solely used in protecting Transmission's Critical Assets.

Distribution of Security Capital



SER's Long Term Goals & Strategic Initiatives

Goals

- **Protection**
 - Ensure risk appropriate protection and the security of BPA's people, information and infrastructure.

- **Compliance**
 - Ensure BPA's compliance with security requirements.



Strategic Initiatives

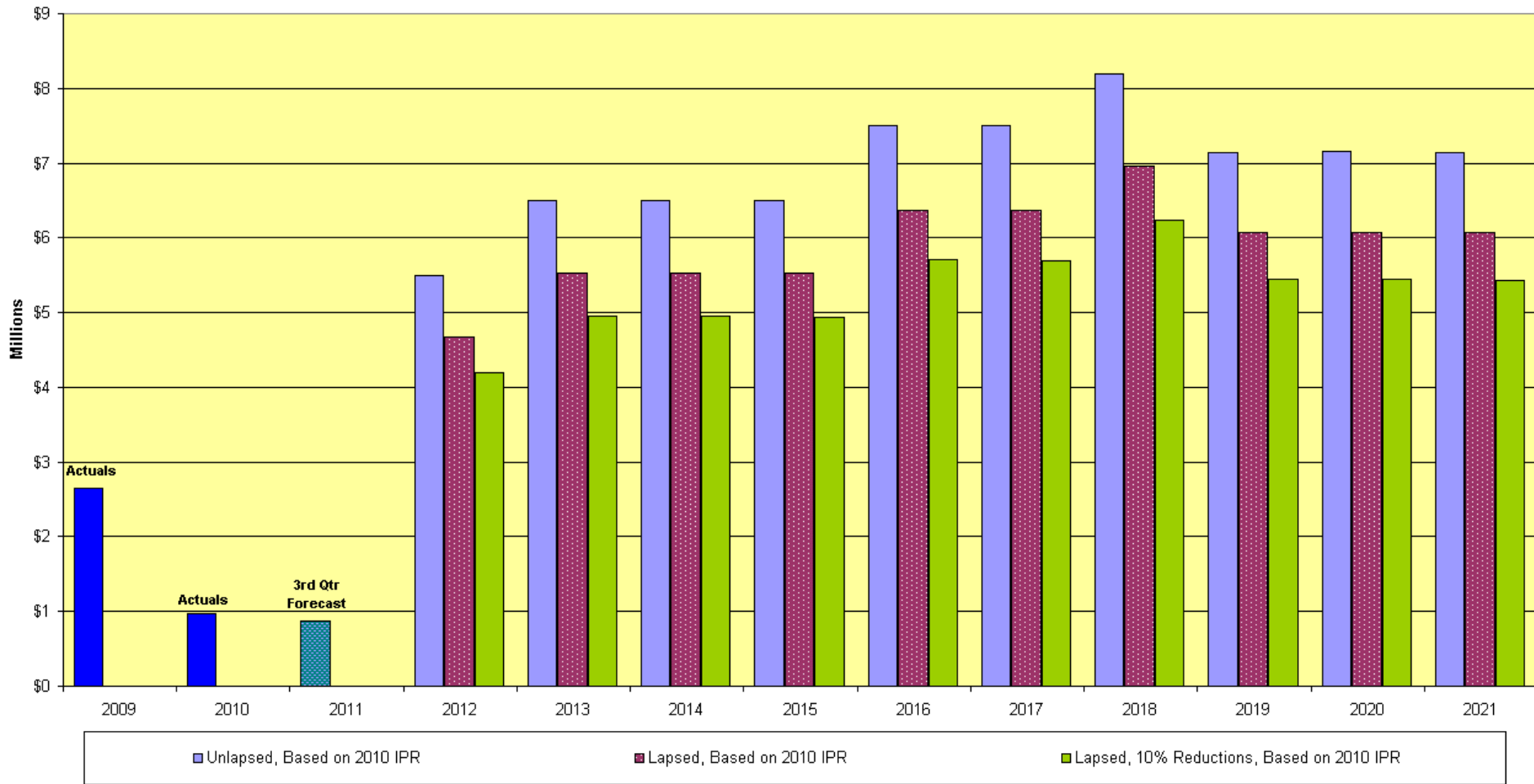
- **Improve the ability to protect BPA's critical assets** – Partner with stakeholders to ensure the effective implementation of security enhancements in accordance with BPA's Critical Asset Security Plan (CASP).

- **Understand and integrate new programs and regulations** – Monitor, assess impact, prepare for and adopt requirements and their effective integration.

New SER Strategic Initiatives

- **Other drivers that may impact the Capital program in the future include an increase in the number of Critical Assets due to:**
 - New Construction associated with grid expansion and other drivers
 - Aurora Project
 - PMU Project
 - Revisions of the NERC standards

Security Capital Spending Forecast



Strategic Reductions in Long Term SER Capital Spending

- **Several reduction options were considered and assessed, using risk based analysis, to determine which scenario would cause the least amount of impact to the overall integrity of the security system without increasing costs in the future. It was determined that toggling the construction schedule to be in alignment with available capital was the best choice.**
- **Under the reduced funding model (10%) it will take 19 years to upgrade BPA's critical assets, which adds two years to the previous schedule.**
- **While this pace is still subject to criticism, it can be considered reasonable under the current funding limitations.**

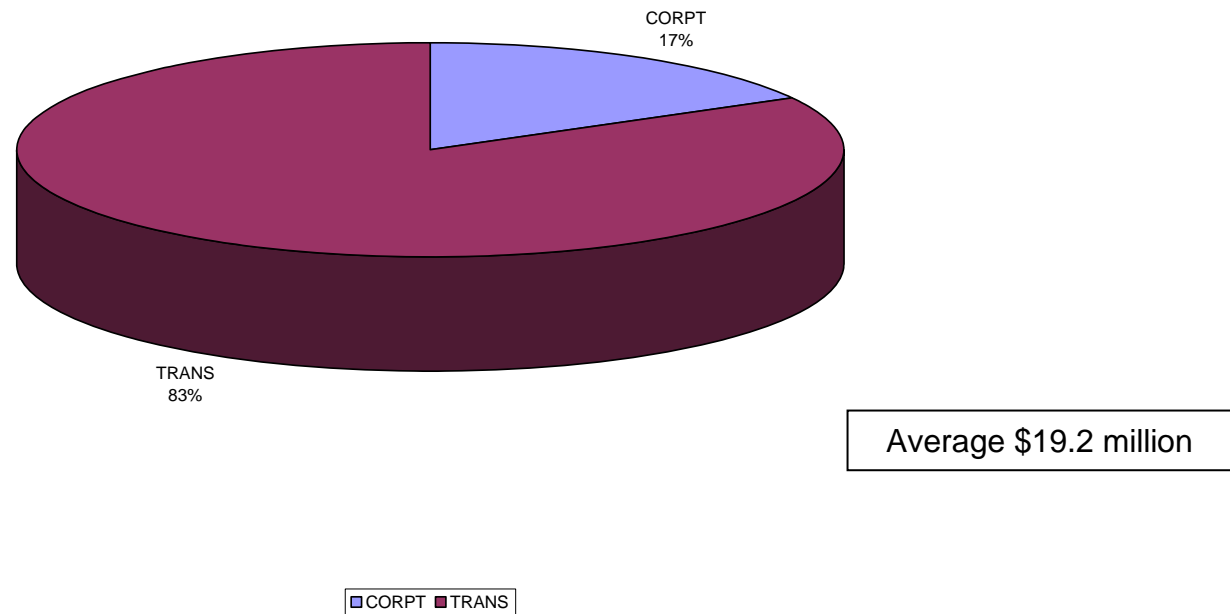
Facilities Asset Management

Facilities Asset Strategy

- The Facilities Asset Management (FAM) Long Term Investment Strategy 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.
 - Performance and condition standards for assets
 - Set design policies, construction standards and maintenance service levels/procedures in order to meet the long term outcomes of compliance and lowest cost of ownership. Establish an objective and repeatable means of determining the health of our asset portfolio which drives a prioritized work plan as a means to manage the facilities-related risks to the Agency.
 - Safety
 - Place primary focus on establishing code-driven life safety standards, identifying and addressing life safety facility issues in the initial years of the plan.
 - Enhanced Decision Making
 - To consistently deliver the best value involves careful evaluation of trade-offs between conflicting factors:
 - FAM has created a tool to consistently prioritize hundreds of project requests.
 - We have also created a cross-agency team to consider project proposals, de-conflict and coordinate projects and make recommendations for approval/disapproval.
 - FAM is currently looking at various industry best practices in order to develop an objective repair/rehab/replace decision making guidance tool.

Distribution of Investments

Facilities Asset Management
Forecasted Average Annual Spending
FY 2012-2021



New Strategic Initiatives

- While budgetary allowances were made for the Continuity of Operations (COOP) and Sustainability programs, specific requirements were not well understood at the time the 2010 IPR was being created. Both programs are currently undergoing strategy development efforts, however there is a risk that the identified project requirements and available funds may not align.

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, Targeted completion - FY17)

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
			Interior finishes, landscape	Specialized equipment	Fixtures, paving, windows	Utilities, elevators, structure	Roof, HVAC, fire systems
			5	4	3	2	1
			System Priority (w/examples)				

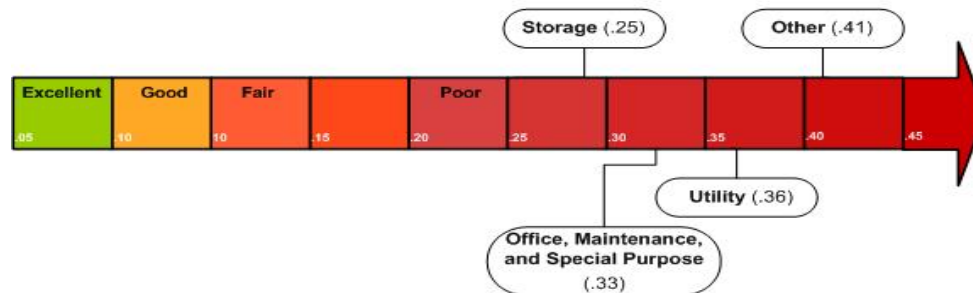
Focus placed on critical requirements linked to critical systems at highest priority assets.

- 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

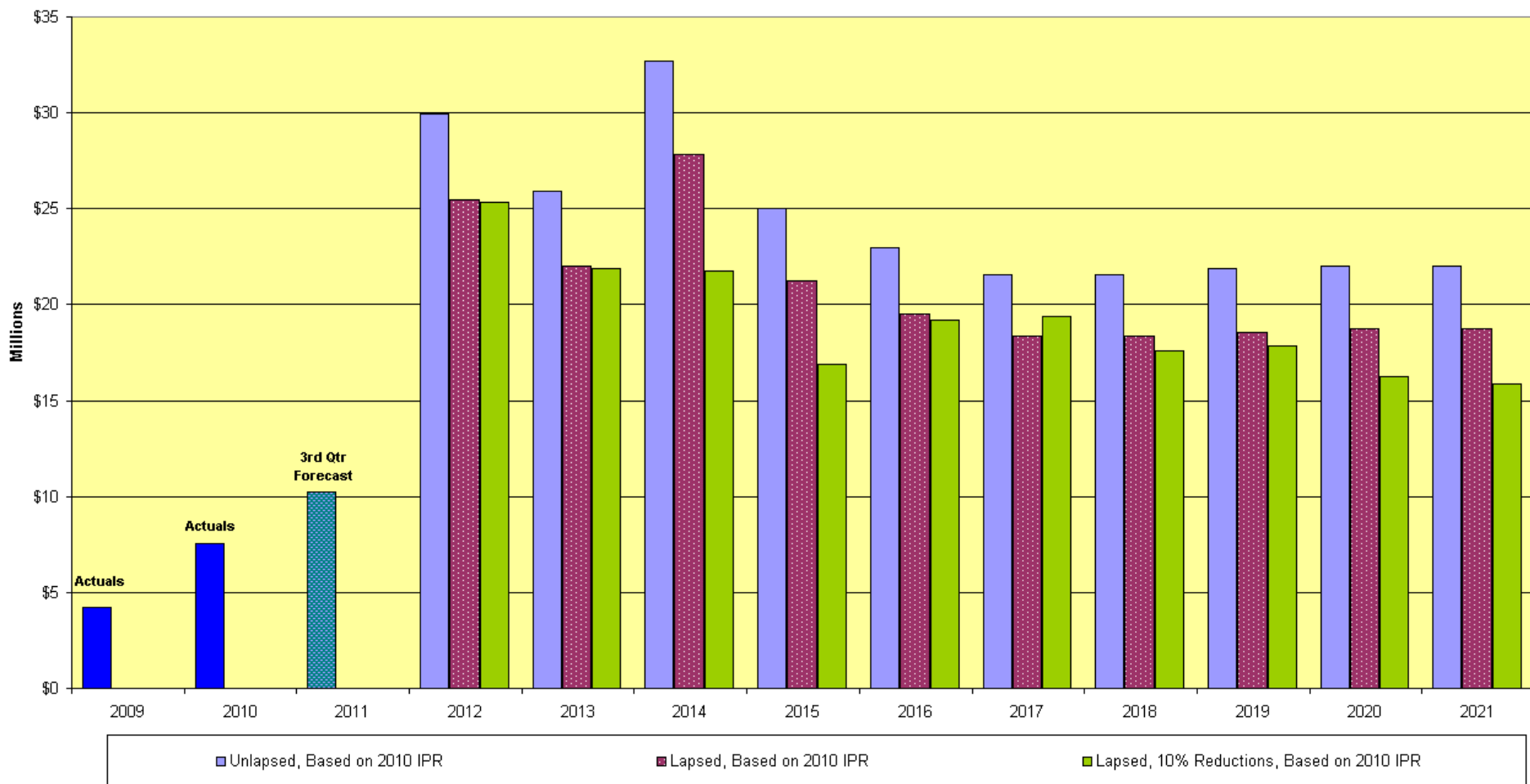
Project Prioritization

- Project Prioritization within Corporate Program – How do you pick projects Now and in the Future?
 - Operational criticality/need
 - Compliance (Safety, code, regulatory, security, policy)
 - COOP
 - Decommissioning
- What evaluation/decision factors are used?
 - Capital Project Evaluation/prioritization tool that assigns points to 14 different criteria.
 - Cross-agency team
 - Facility Condition Index (FCI) is used to provide a benchmark to compare the relative condition of a group of facilities

Average FCI by Asset Grouping



Facilities Capital Spending Forecast



In Summary

- The 2010 IPR forecasted capital strategy and asset management plans targeted investments for meeting long term outcomes in several key areas: life safety improvements, business operations, maintenance activities, business continuity, and sustainability.

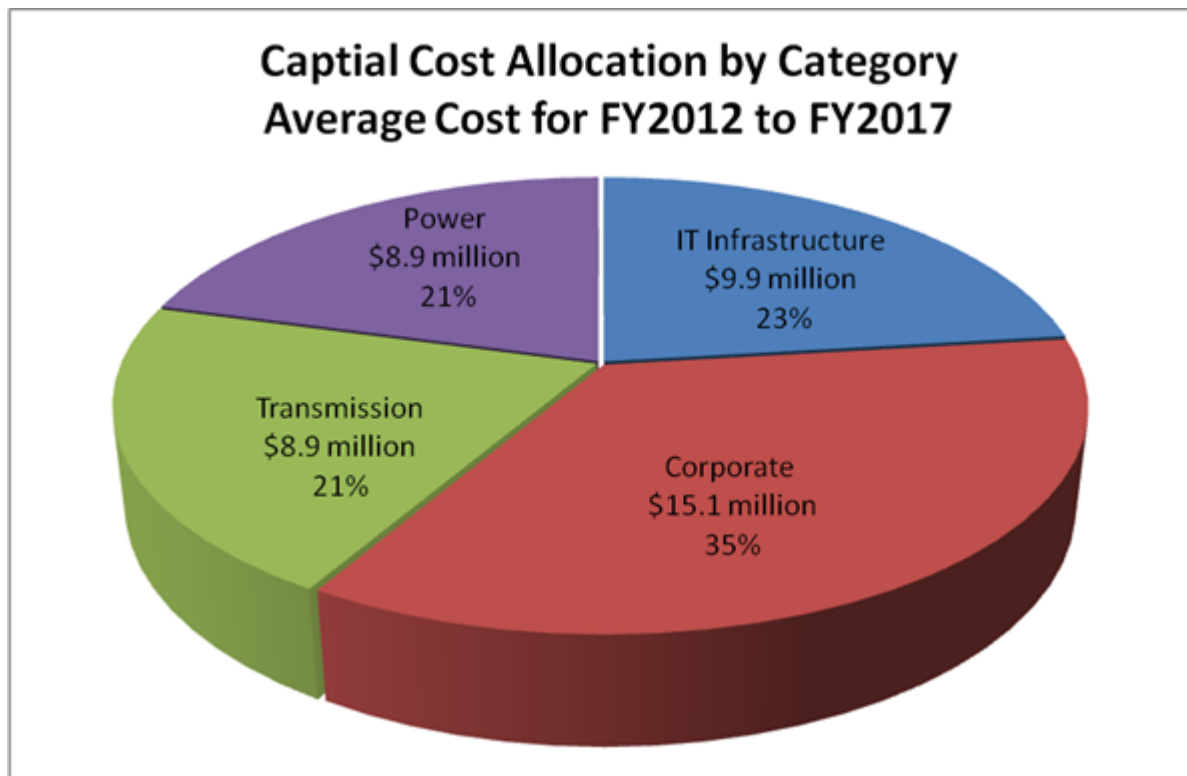
Information Technology

Information Technology Asset Strategy

- IT is striving to partner with the business units to optimize the use of IT resources and assets; enabling the Agency to meet strategic objectives while efficiently performing daily operations, optimizing resources and balancing the individual business units' needs with overarching Agency objectives, while controlling cost.

Distribution of Investments

IT Portfolio Plan Summary FY 2012 Capital Costs By Portfolio



Long Term Goals & Strategic Objectives

IT Asset Goals:

- Enable the Agency to reliably and securely use IT resources to effectively and efficiently perform work while maximizing utilization of IT resources.
- Optimize total cost of ownership by balancing the costs of new investments for upgrades and replacements with operations and maintenance costs.
- Deliver maintainable and cost effective solutions for APSC prioritized projects.
- Services are delivered and asset components maintained in compliance with Federal laws and regulations.

New Strategic Initiatives

- **The BPA IT Capital strategy is providing agency cost savings and efficiencies while striking a balance between meeting emerging business needs, maintaining a secure and reliable computing environment, and achieving and maintaining compliance with regulatory mandates.**
 - The IT Capital spending for FY 2012 is \$47 million, dropping to \$40 million in FY 2013 and growing at the rate of inflation through FY 2017.
 - The FY 2012 forecasted spending is higher than the out years to accommodate a five year cyclic refresh of the data center servers and to meet increasing storage demands.
- **Unfortunately, offsetting the server savings is a dramatic increase in storage requirements.**
 - In FY 2009 BPA was consuming storage at a rate of 1.8TB per month. That rate is currently 5TB per month and growing.
 - Some of the drivers for this storage growth include digitizing transmission line and substation photographs, increase use of LiDAR, and increase creation of photogrammetry images.
 - An additional driver is eDiscovery and the natural increase in creating digital work products and messaging.
 - BPA is pursuing several strategies to control storage costs. These include introducing tiered storage, investigating on premise and off premise archiving, and reviewing data retention policies.

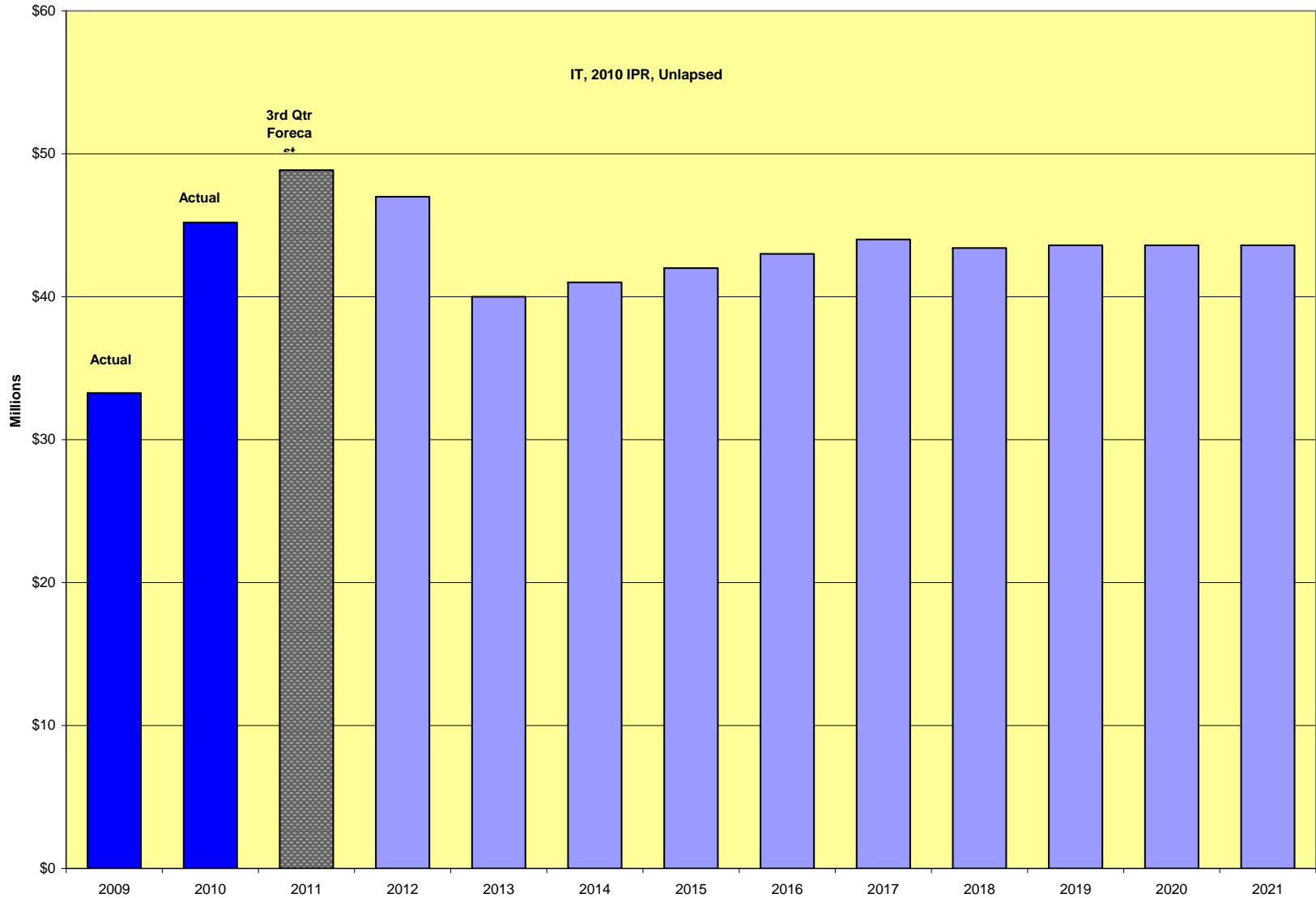
New Strategic Initiatives

- **Between FY 2012 to 2017, the following activities are planned to maintain a secure and reliable IT infrastructure:**
 - Desktop modernization (FY2012-FY2013)
 - PBX replacement (FY2013)
 - Network modernization and migration to IPv6 (FY2014-FY2015)
 - Data center modernization (FY2017-FY2018)
- **The recently signed Telecommuting Act of 2010 may place additional pressure on office automation and data center asset category to enable teleworking.**
 - IT is pursuing initiatives such as Light Weight Portable Security which will allow use of non-BPA equipment to access network resources, these approaches are still being tested for use at BPA (these solutions are successfully being used by the U.S. Air Forces and other federal agencies).
 - The Agency has not defined the full range of capabilities that need to be provided to teleworkers (e.g. collaboration, voice, conferencing, etc.). This category's asset plan will need to be updated to incorporate emerging teleworking requirements.
 - Remote access capabilities (e.g. Citrix Servers, etc.) may need to be expanded to accommodate increased number of teleworkers.

Project Prioritization

- **Business Lines and IT developed IT Project Portfolio Plans versus just submitting individual project requests.**
- **IT Portfolio Plans:**
 - Included a mapping of strategy and business drivers to current and potential IT projects & enhancements
 - Provided a multi-year roadmap and prioritized project list along with projected costs by Fiscal Year
 - Plans are reviewed and updated quarterly with the business line
 - New projects must be part of an approved IT Portfolio Plan
 - Costs are managed at the portfolio level – i.e. if a project overruns or a new project is requested, it must be absorbed within that portfolio
- **High Level Timeline for Creating and Maintaining IT Project Portfolio Plans**
 - January - IT creates templates and instructions; sends announcement and materials to business lines
 - February –Business Lines present their IT Portfolio Plans to the Agency Prioritization Steering Committee (APSC)
 - April – IT PMO resource loads all new projects, confirms budget impacts, presents the proposed next Fiscal Year work plan and receives APSC approval
 - July – The next FY IT Capital Work Plan is presented to the Bonneville Operations Board (BOB)

IT Capital Spending Forecast



Strategic Reductions in Long Term Capital Spending

- **The IT Capital Strategy is designed to balance the demands of meeting emerging business needs, maintaining a secure and reliable computing environment, and achieving and maintaining compliance with regulatory mandates.**
- **Approximately 70% of IT Capital investments directly benefit BPA's customers and business lines by either delivering new capabilities or increasing efficiencies of existing capabilities.**
- **Approximately 30% of the IT Capital is allocated to maintaining a secure and reliable computing environment.**
- **In recognition of the business value and the benefits automation provides the Agency, coupled with the need to maintain a secure and reliable IT infrastructure to conduct its business, the Agency collectively decided not to reduce the IT forecasted Capital spending, making equivalent offsetting reductions in other parts of the Agency.**

Financial Disclosure

This information has been made publicly available by BPA on September 12, 2011 and contains information not reported in agency financial statements.