

2004 Programs In Review

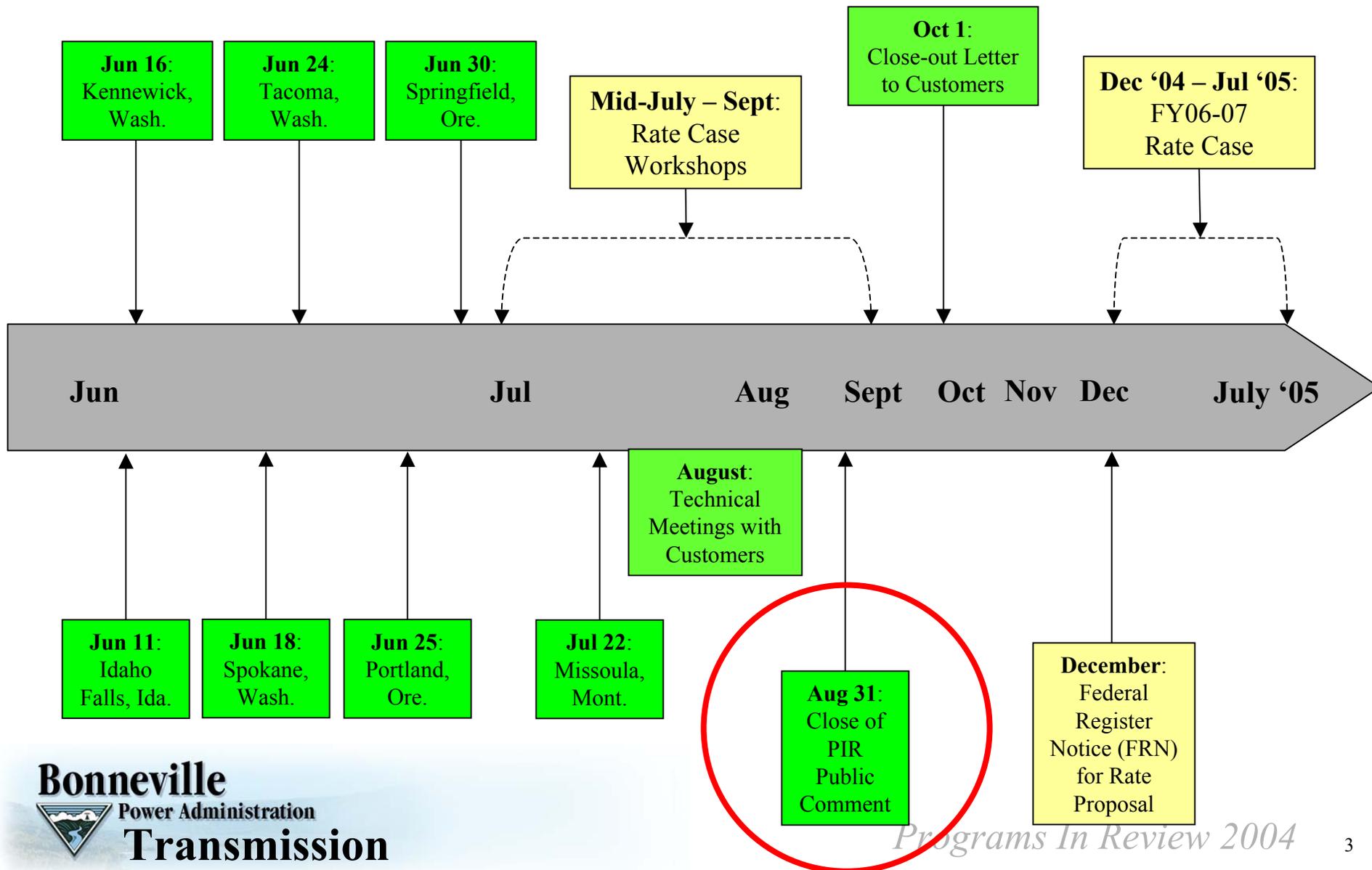
For 2006-07 Rate Period

Continuing to Deliver

Programs In Review

- A public process to deliver projected capital and operating expense program levels for the next rate period (FY06-07).
- 7 public meetings across the Northwest open to all interested parties.
- Opportunity to provide input and help shape TBL program levels.
- Program levels determine revenue requirements for FY06-07.
- Level of programs will not be discussed or reviewed in rate case.

Programs In Review Timeline



BPA Strategic Focus

- High system reliability.
 - Available and adequate transmission system (short-term and long-term) through effective management.
- Low rates consistent with sound business practices.
 - Rates that are predictable with low volatility.
- Responsible environmental stewardship.
 - BPA is a steward of the region.
- Accountability to the region.
 - Increased transparency and collaborative partnerships with regional customers and interests.

Then... - Build, Build, Build

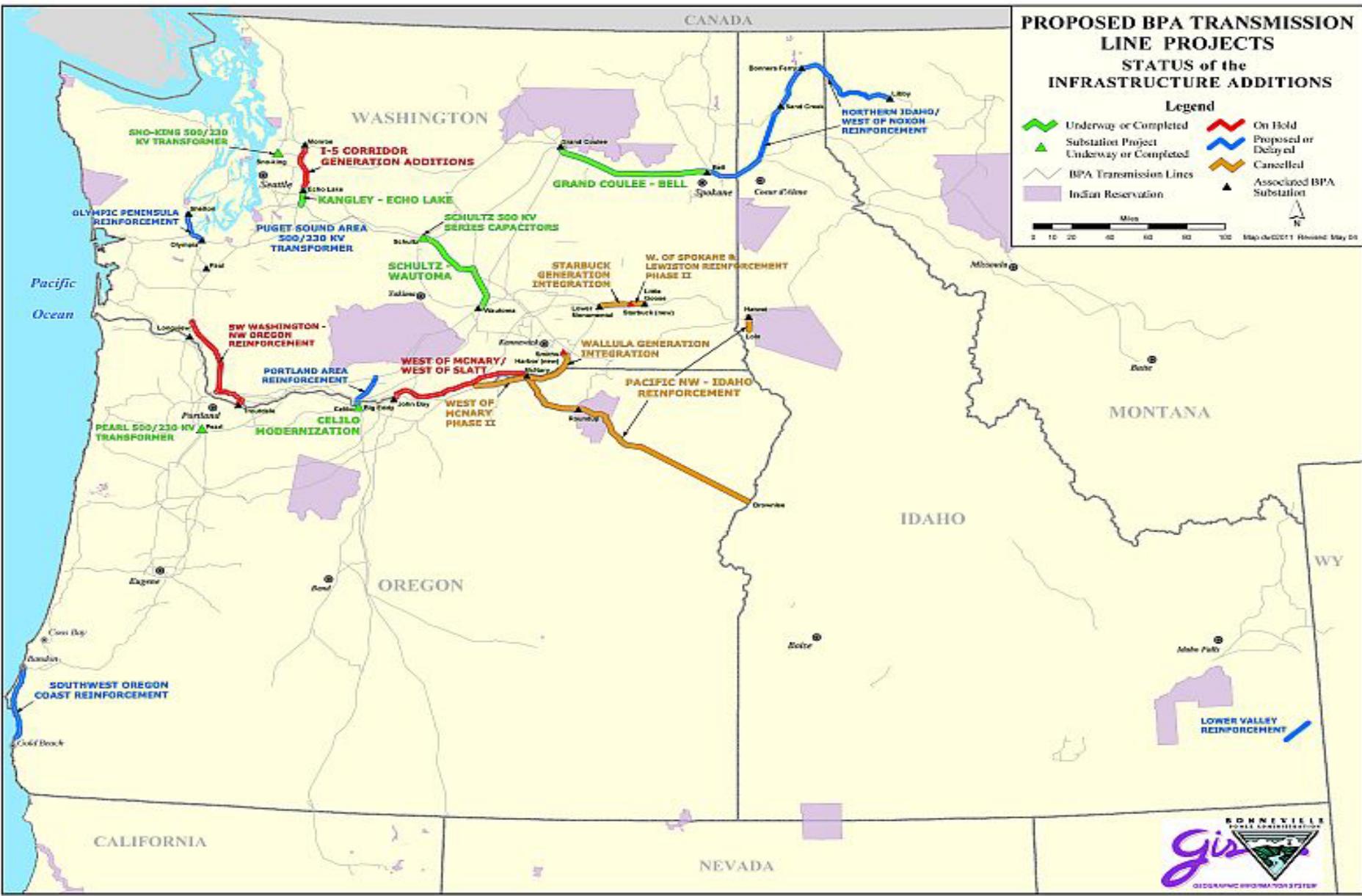
- Northwest was focused on power and generation.
 - TBL agreed to move forward on integration of new generators if non-federal funding was secured.
- Reliability.
- Everyone buying transmission.
- TBL proposed 20 infrastructure projects.
- Hold operating cost increases to less than the rate of inflation.

... and Now – Re-focus on Reliability

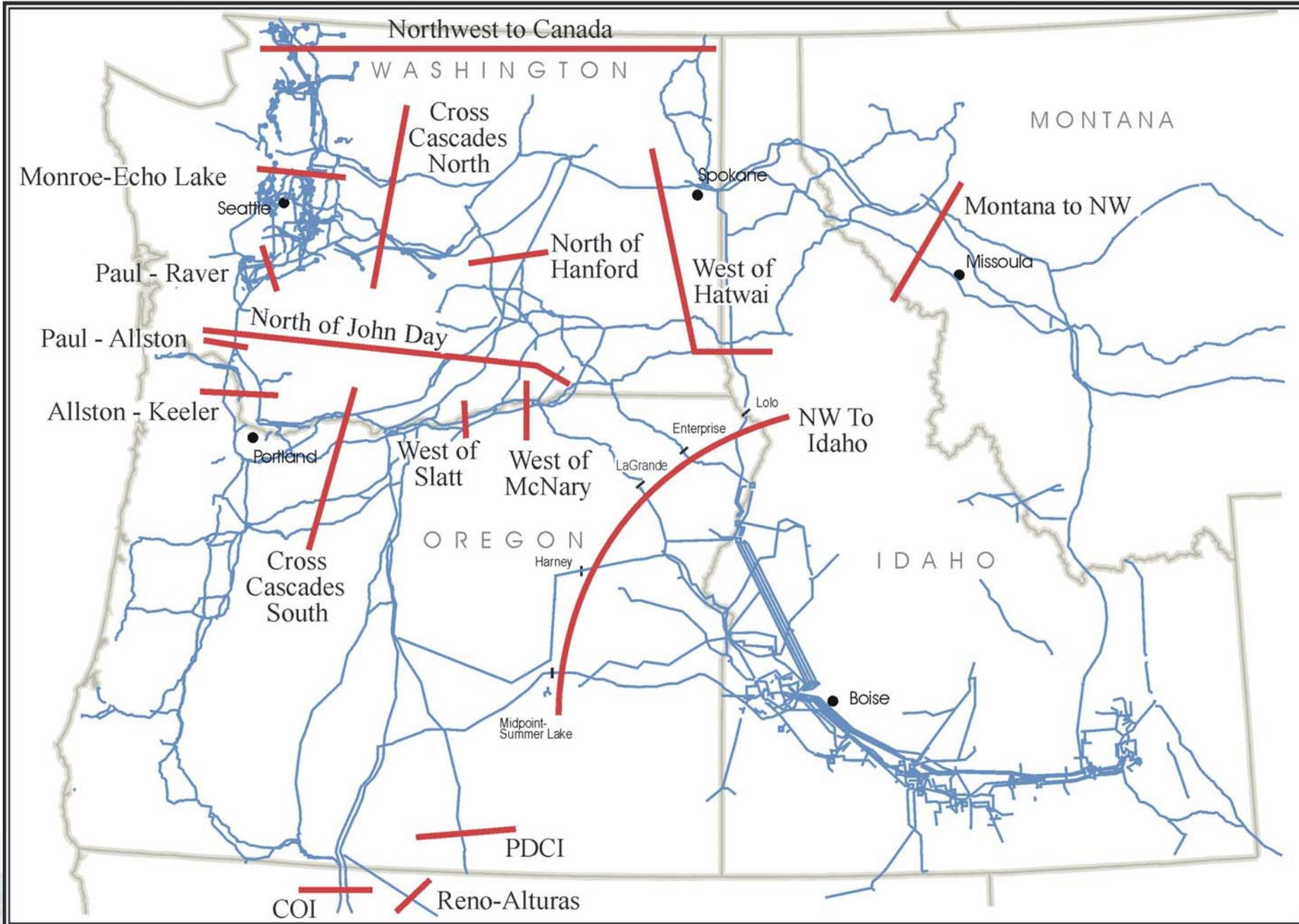
- Reliability – need to maintain/replace aging system.
- Increase in regulatory pressures and policies.
- Need for cost controls.
- Generation development has dried up across nation.
- More efficient use of existing transmission contracts.



Lights out in NYC, August 14, 2003



Constrained Paths on Bonneville Network



Note: Other Potentially Constrained Paths may be identified over time.

TBL Programs In Review

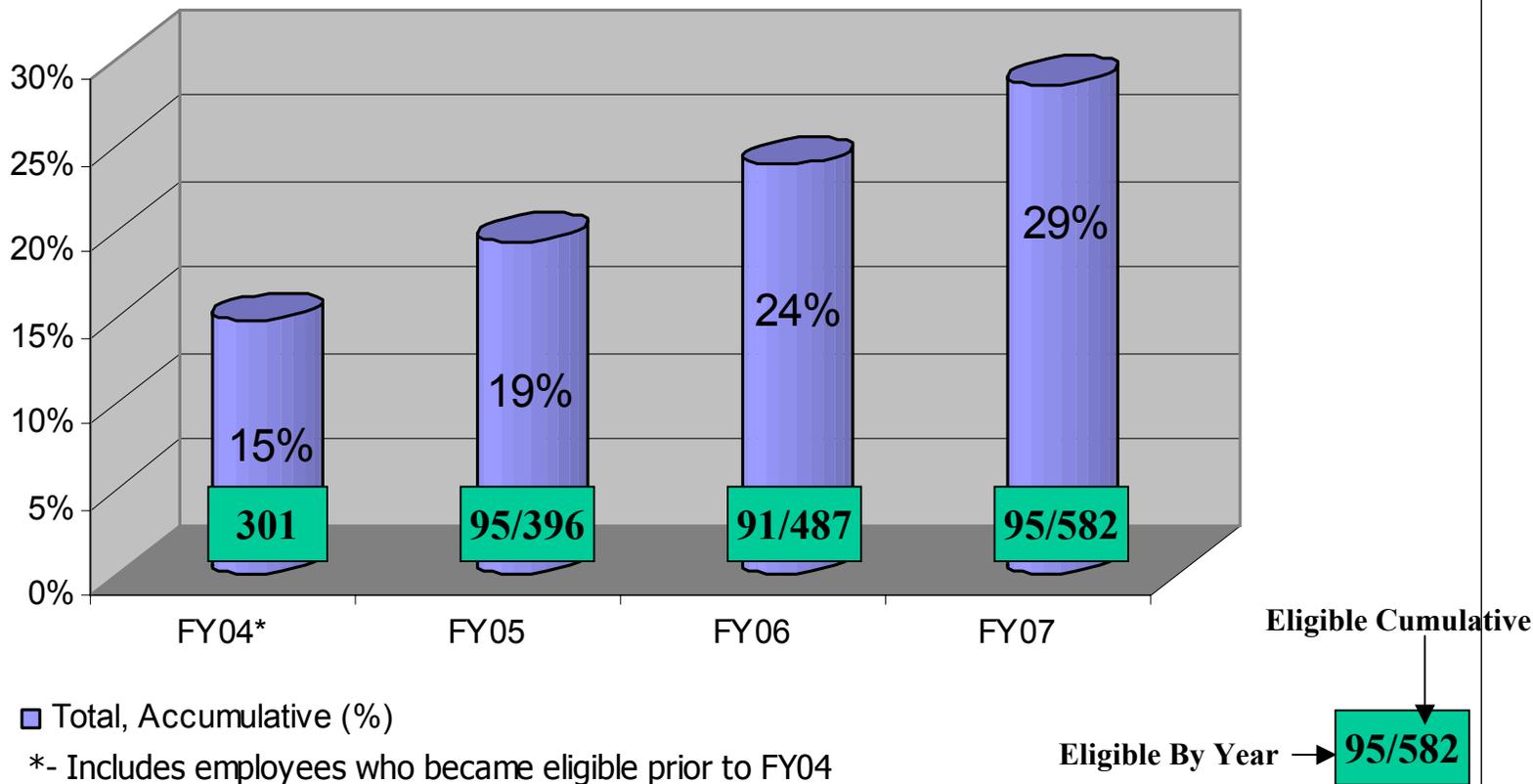
Current Challenges

Access to Capital

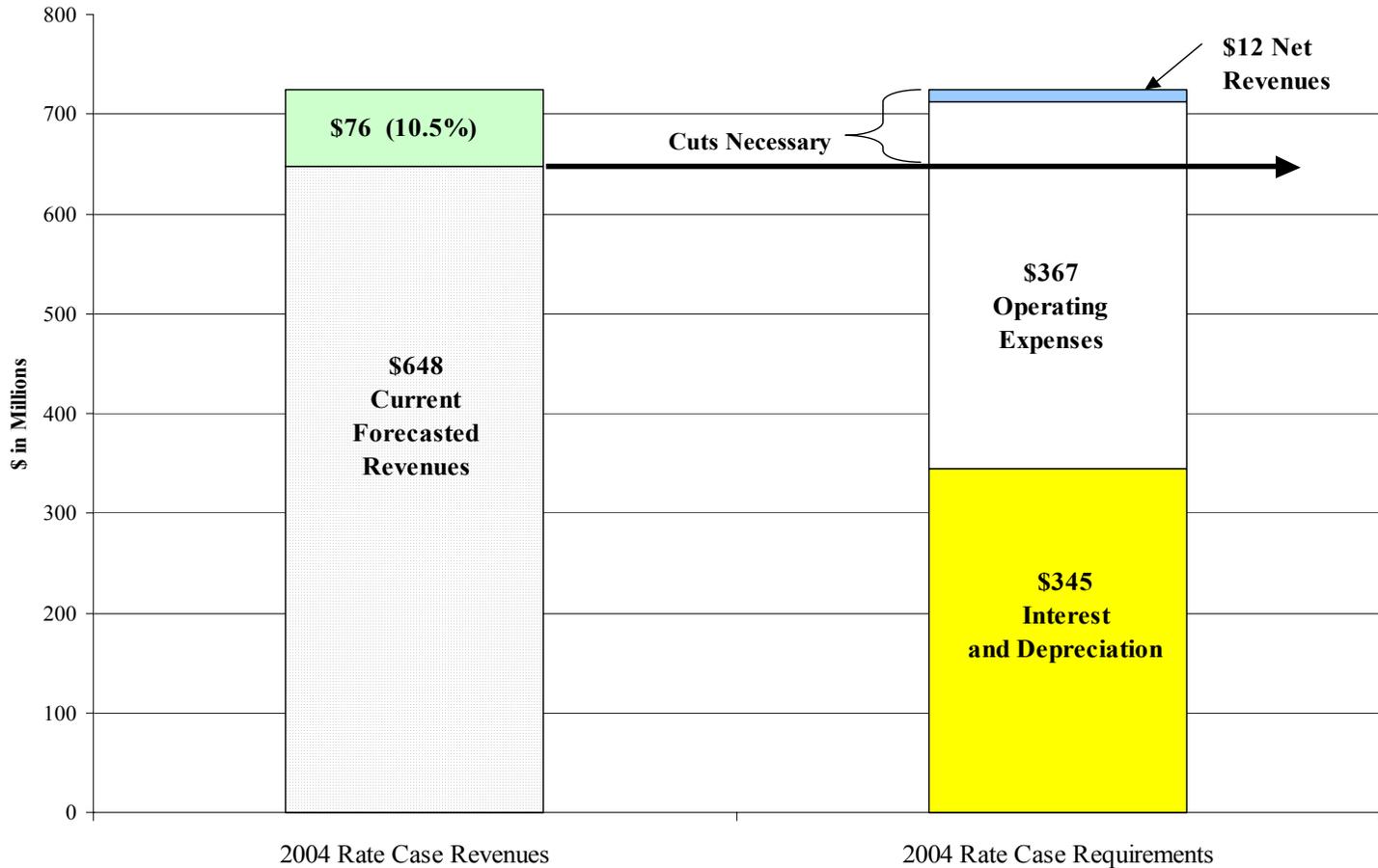
- BPA borrowing authority from Treasury is limited and will not cover proposed capital needs.
- BPA is seeking other low-cost capital sources within its existing authority.
- Sustainable Capital Strategy balances rate impacts, access to capital, and infrastructure needs.

Demographic Challenge

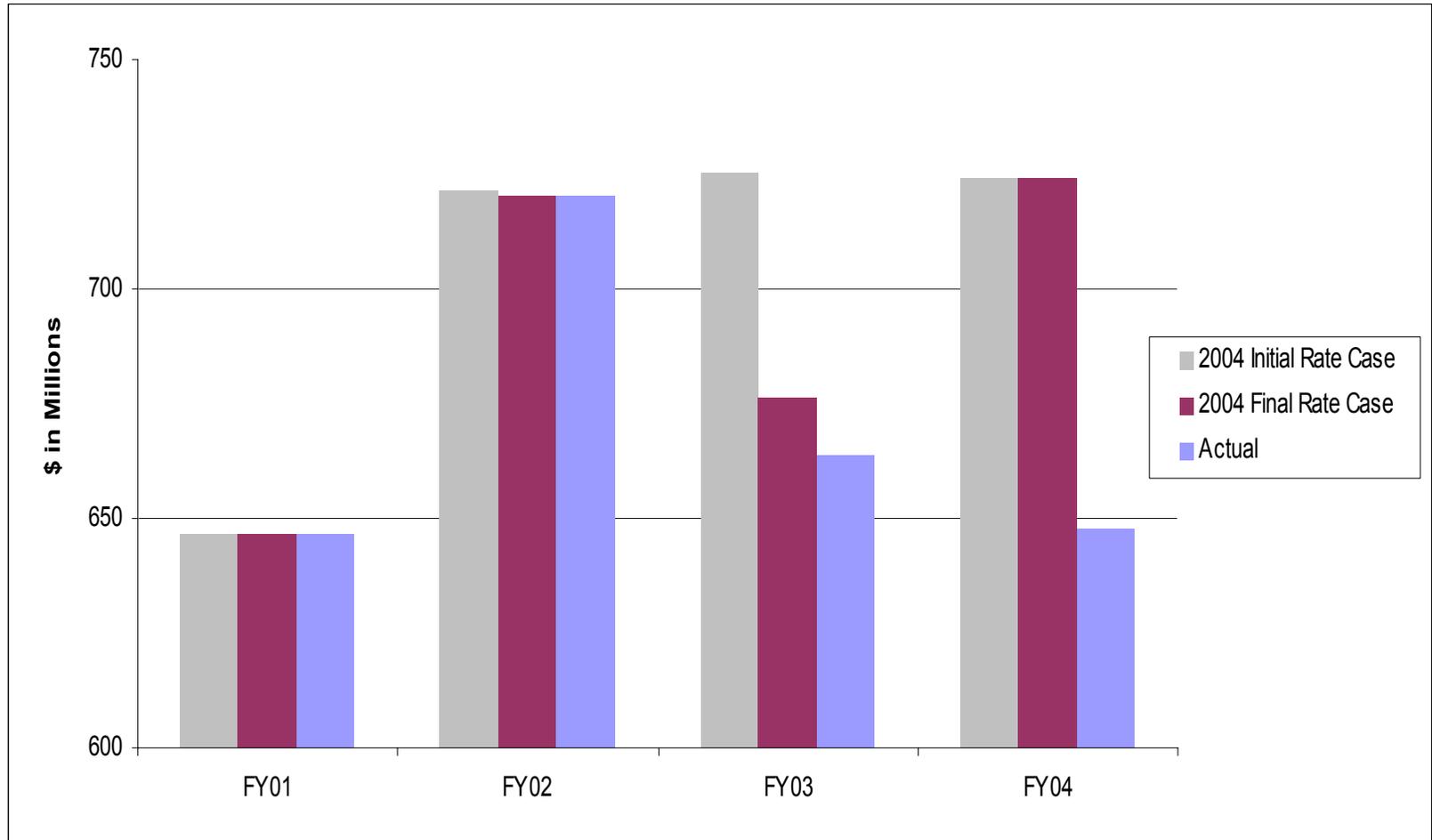
TBL Employees Eligible for Retirement FY04-FY07



TBL FY 2004 Financial Dilemma



Transmission Revenues Are Down



NOTE: For comparability to actuals, rate case numbers have been adjusted to include reimbursable revenue.

TBL Programs In Review

Accomplishments 2002-04

Reliability and Availability

- Recent capital investments added operating margins to transmission system.
- Cooperative effort with other federal agencies to test and tune federal generators to achieve optimum system performance.
- Control center back-up plan regularly exercised.
- TBL participated in national review of East coast blackout and helped develop “no-regrets” recommendations.
- Operate and test system limits within NERC, WECC and BPA reliability criteria.
- Regional outage coordination process to minimize impact of utility outages.

Vegetation Management

- Effective vegetation management program:
 - TBL model being reviewed by NERC and FERC as example of new requirements resulting from East coast blackout.
- Creating a sustainable environment:
 - Wildlife enhancement
 - Noxious weed control
 - Chipping and mulching



↑ Danger Trees Along Right of Way ↑



Urban Forestry →

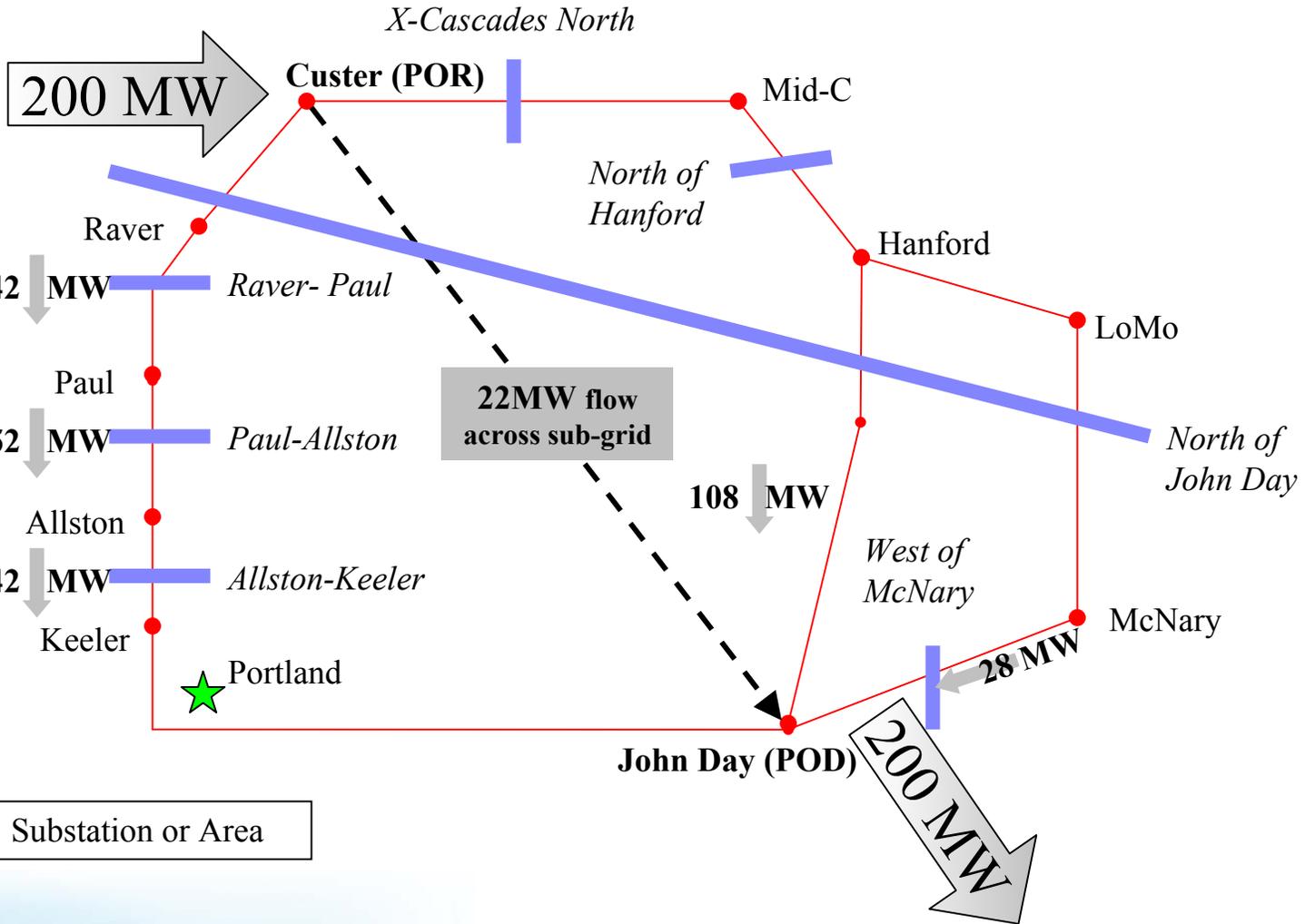
Non-Wires Solutions

- Developed initiative to take a comprehensive look at alternatives to building transmission
- Fully integrating non-wires solutions in TBL's transmission planning process
 - Screening criteria used to evaluate proposed transmission projects.
 - Pilots underway:
 - Distributed Generation Aggregation (Olympic Peninsula, Wash.)
 - Direct Load Control (Ashland, Ore.)
 - Demand Reduction (Olympic Peninsula, Wash.)
 - Commercial Load Dispatch (Richland, Wash.)

Established ATC Methodology for Flow-based Transmission System



Hypothetical Case: 200 MW Custer to John Day



While Paul-Allston can accommodate 52 MW, flow is restricted by limits at Allston-Keeler therefore only 42 MW flows through I-5 corridor.

— Cut-plane • Substation or Area

Kangley-Echo Lake (Puget Sound)

- Reliable service to Puget Sound area
- Environmental Milestones
- Five of nine mile project through Cedar River watershed
- Cooperative efforts with tribal, city, county and state governments



Grand Coulee-Bell (Spokane)

- Relieve constraints for West of Hatwai
- Two year construction project in progress
 - Energization – Dec. 04
- Expansion of Bell and Grand Coulee substation and addition of 84 miles of 500 kV line

Imploding
the lines to
fuse fittings



Tower
Assembly



Schultz-Wautoma (Central Wash.)

- Increase system reliability in the I-5 corridor and southern Interties
- Two year construction project in progress
 - Energization in 2005
 - 64 miles of 500 kV
 - New substation at Wautoma
- Low cost third-party financing
- Complicated river crossings and new right-of-ways



Wautoma Substation

Celilo Modernization (The Dalles)

- Increase long-term reliability for DC Intertie
- Completed April '04
- Replacement of mercury converters with silicon-based thyristor converters
 - Removal of mercury creates less potential environmental impacts
- Built new cooling plant
- Coordinated efforts with southern power entities

New
Converters
→



New
Cooling
Plant
←

Local Area Reinforcement

- Work on main grid is balanced with extensive efforts on the sub-grid:
 - Santiam – Bethel Tap 230 kV line #2 – (Completed 2002)
 - Red Mountain 115 kV sub – (Completed 2002)
 - Pearl 500/230 kV bank – (Completed 2003)
 - Kitsap Peninsula reinforcement – (Completed 2003)
 - Walla Walla 115/69 kV Bank replacement – (Completed 2003)
 - Port Angeles – Fairmont 69-115 kV conversion – (Scheduled 2004)
 - Teton Shunt Cap switcher replacement – (Scheduled 2004)
 - Extensive pole replacements in Spokane and Kennewick areas

Infrastructure Project Specifications

- Preliminary estimates were based on typical costs.
- Detailed plans of service were defined later in the process.
- Magnitude of environmental mitigation grew during the design of projects (via public meetings, EIS, etc).
- Volume of work and availability objectives drove us to a higher level of standardization and increased cost (hot line maintenance capability, single tower design, etc.).
- Volume of work impacting BPA resources led us to a Furnish and Install (F&I) contract concept.

Infrastructure Lessons Learned

- Project Management

- Earlier involvement in the planning process by the project managers.
- Project managers must be an integral part when projects are in the creation phase.

- Estimating

- Project scope must be better defined before detailed project estimates can be adequately prepared.
- Improved alignment of cost estimate structure and project cost structure.

- Risk Assessment

- Establishing a formal process/method for assessing project risks.
- Formal training for key stakeholders led by the project managers.

Bottom Line Accomplishments

In an environment of dropping sales, increased workload and a changing industry, TBL:

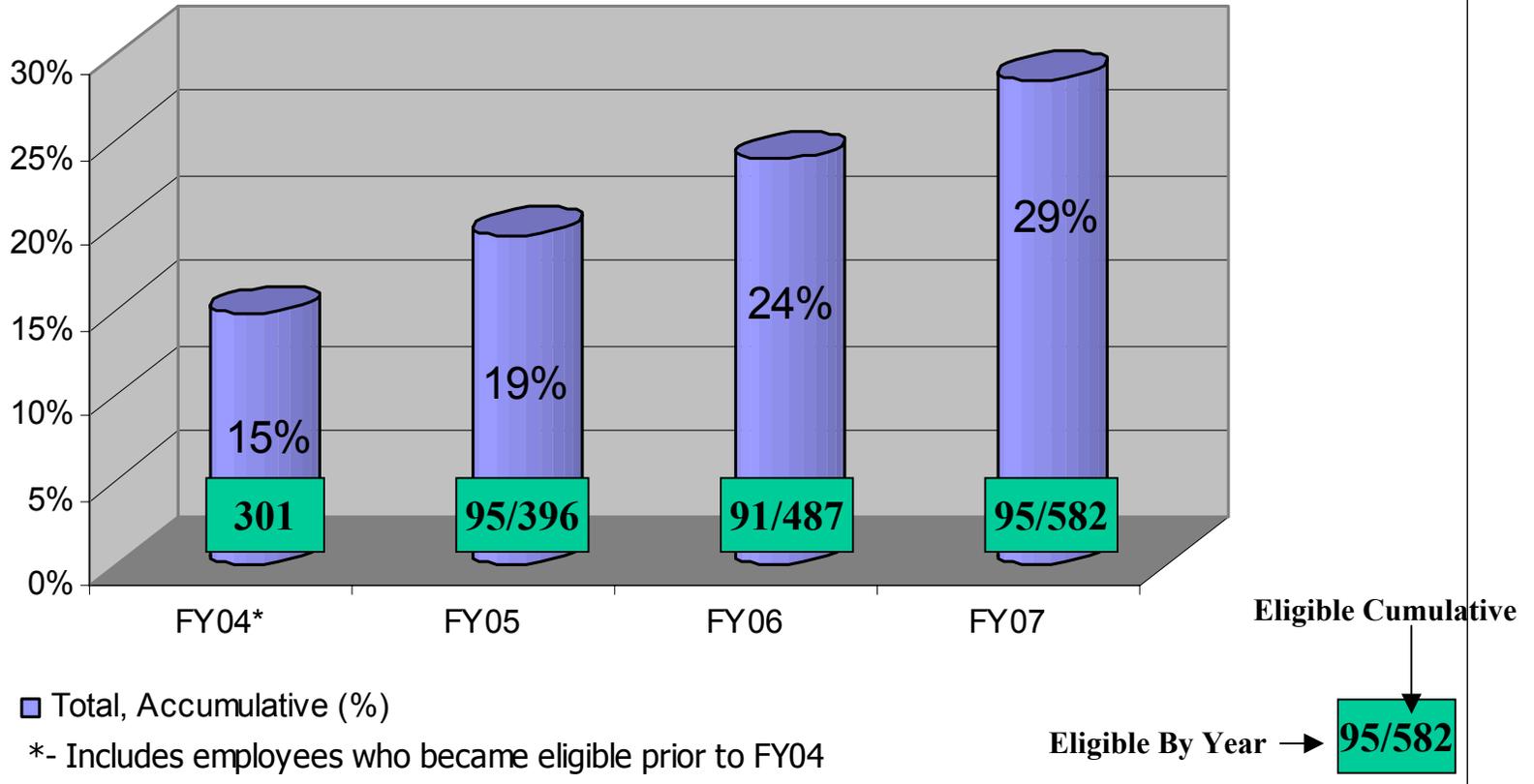
- Cut operating costs significantly by \$26M in FY03 and \$43M in FY04.
- Turned a major forecasted loss of \$63M due to a \$76M drop in sales in FY04 to a loss of \$4-\$10M.
- Will earn a modest margin of \$25M to \$35M for the 3-year period.
 - FY02 saw positive earnings.
 - FY03 about breakeven but positive without one-time adjustments for bond call premium and FY02 sales correction.
 - Forecast for FY04 is to lose about \$4M-\$10M.
- Faces similar sales loss trends and cost pressures in FY05.

New Initiatives

- Sustainable capital strategy.
 - Cornerstone of BPA's capital strategy.
 - Balancing rate impacts, access to capital and infrastructure needs.
- Initiatives and controls being implemented.
 - Risk management.
 - IT consolidation.
 - Supply Chain reorganization.
- Cost reductions and efficiency gains.
 - KEMA study and recommendations.
 - Project Management Office.
 - Asset management.
 - Work practices.
 - Organizational structure.

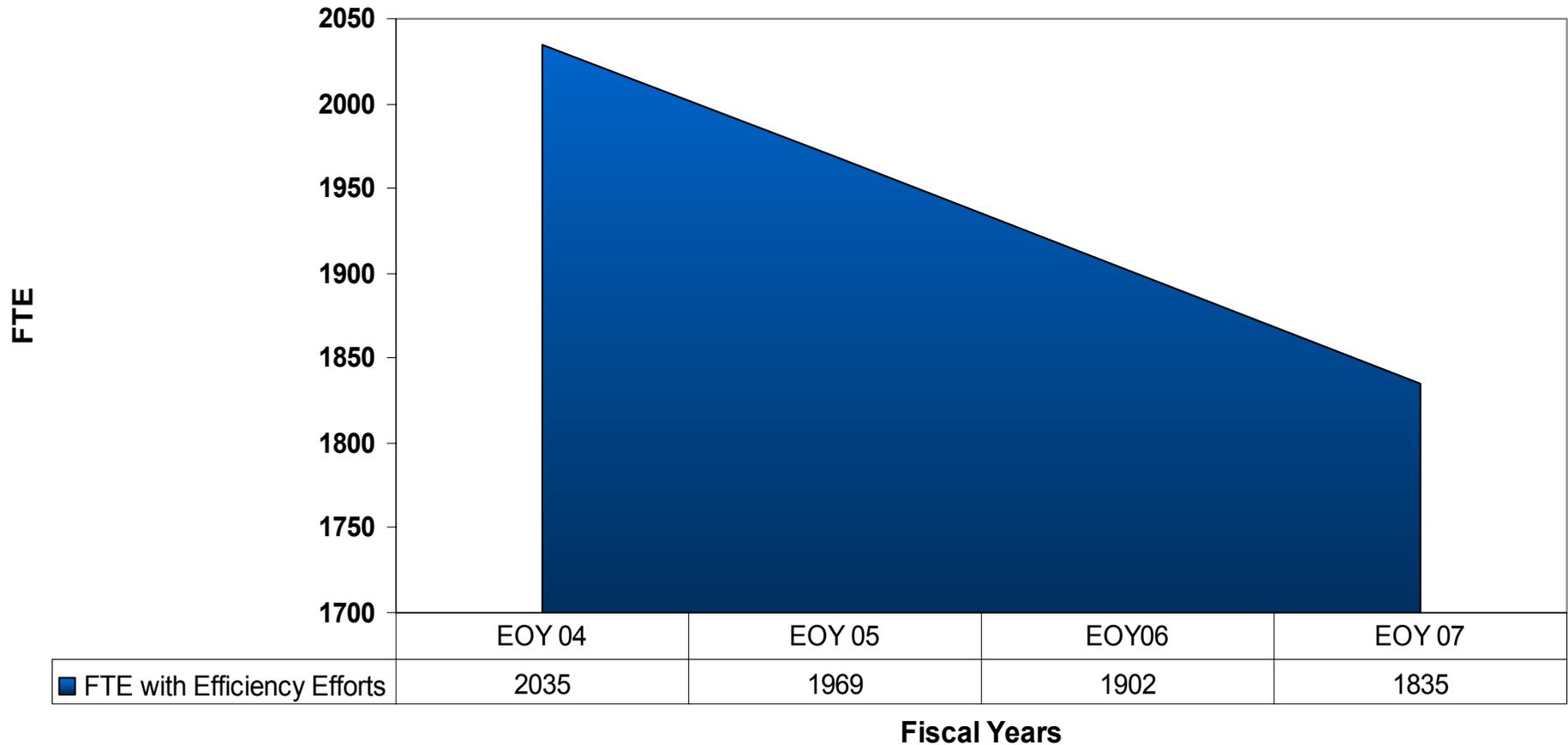
Demographic Opportunity

TBL Employees Eligible for Retirement FY04-FY07



FTE Target

By the end of FY 2007 TBL will reduce 200 FTE driven by efficiencies. The shape of this reduction will be determined by attrition.



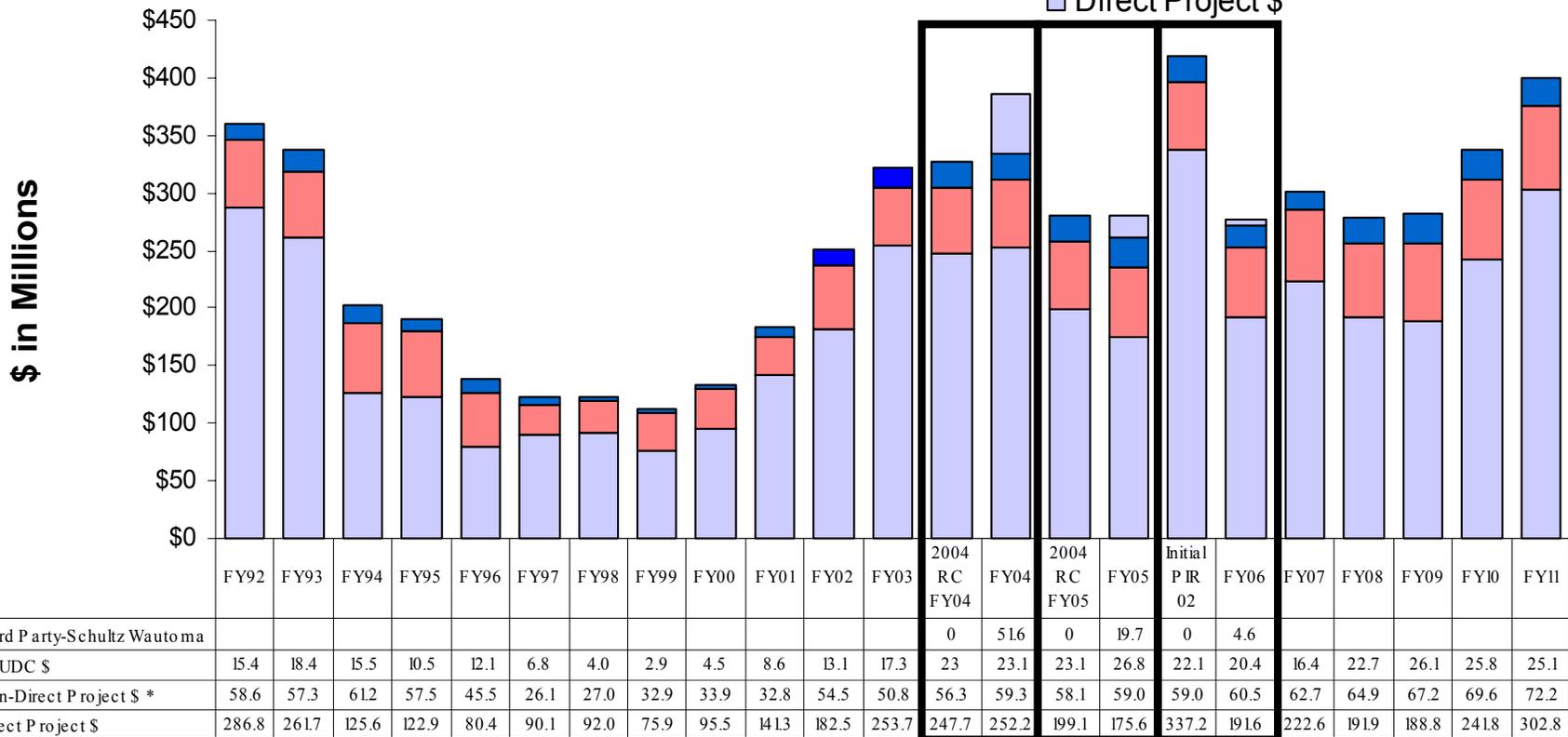
TBL Capital Program

*Measured and Steady
Progress*

Historical Trend of TBL Capital Projects

FY92 – 2003 Actual Costs
 FY04 – 2011 Projected Costs

■ Third Party-Schultz Wautoma
■ AFUDC \$
■ Non-Direct Project \$ *
■ Direct Project \$



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**Non Direct Project \$ include TBL indirects and Corporate overheads
 AFUDC – Allowance for Funds Used During Construction*

Capital Program

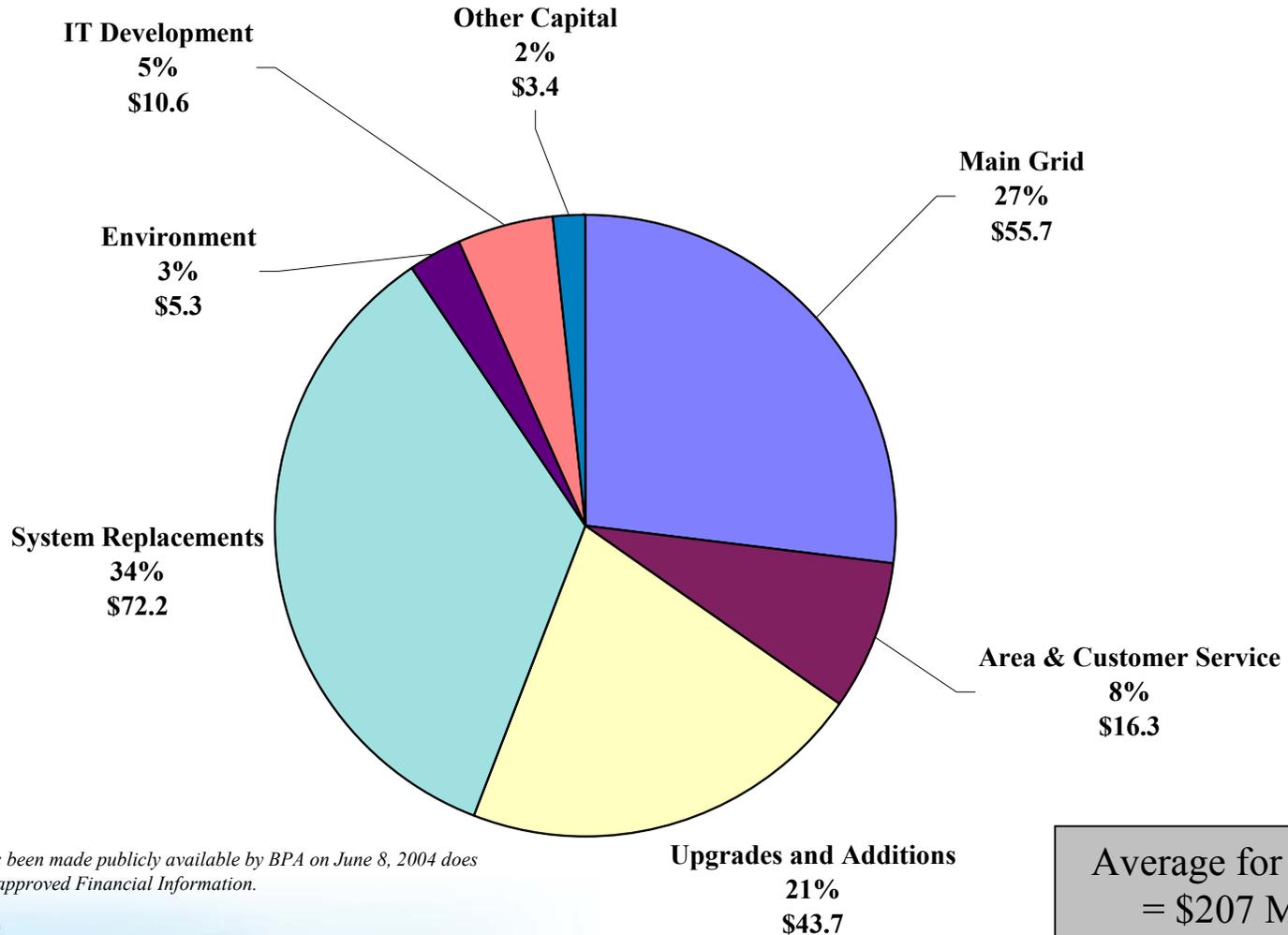
- In 2001, TBL embarked on the largest capital program in more than 10 years.
 - Six infrastructure projects completed or underway
 - New business system development and implementation underway
- Today different drivers require adjustments in the infrastructure and capital program.
- Completed capital programs through '07 impact depreciation and interest levels for FY06-07.

Capital Program Drivers

2002 PIR	2004 PIR
Reliability – keep the lights on	Reliability – keep the lights on Respond to new standards from NE blackout.
Interconnect new generation	Many generation projects on hold
Remove constraints limiting economic trade and ability to maintain system	Remove constraints and increase availability of transmission system.
Capital replacements	Implement Asset Management
Develop business systems (scheduling and billing)	Complete and implement business systems

Direct Capital Programs

FY06-07 Average



Average for FY06-07
= \$207 Million

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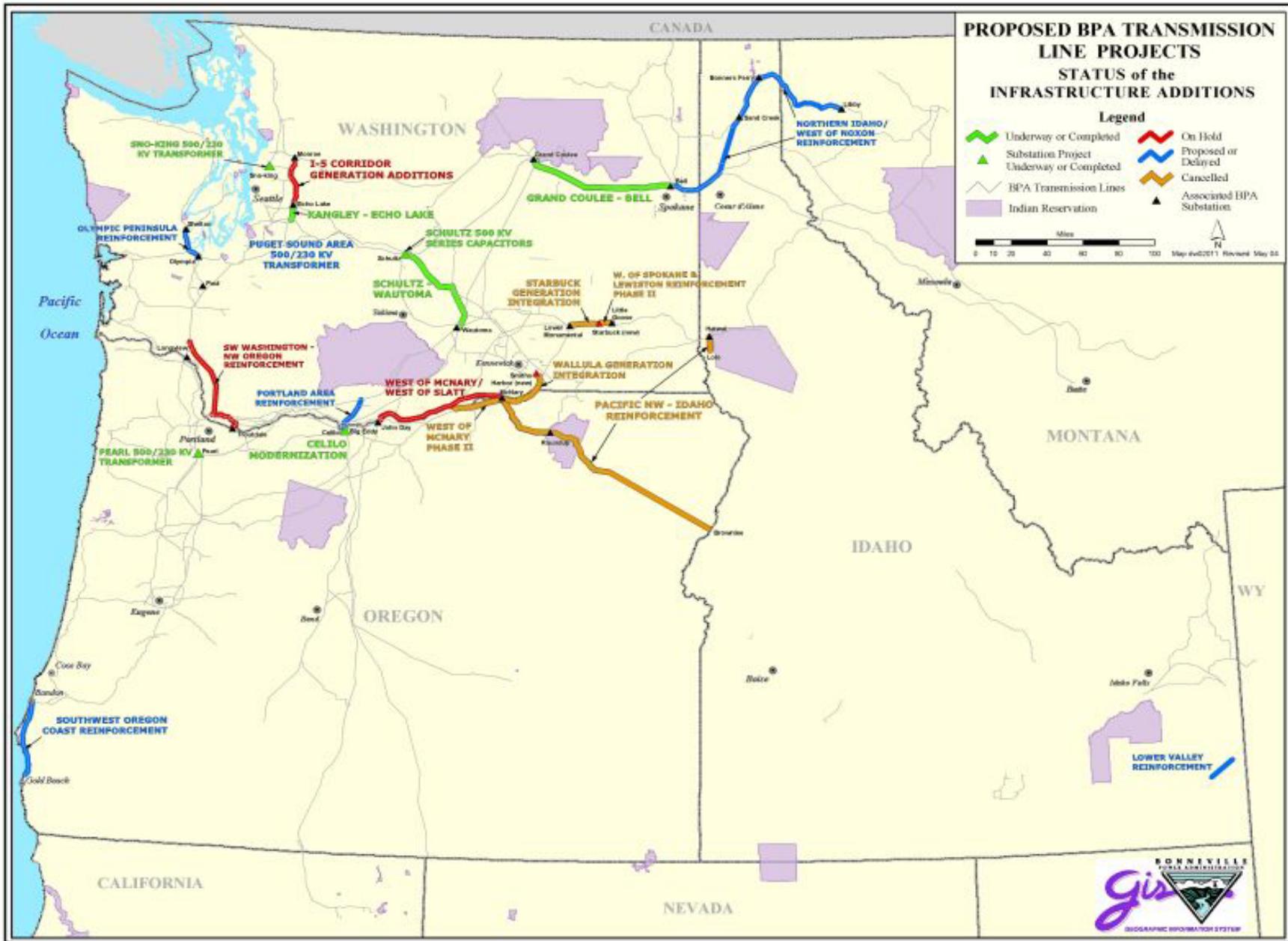
Main Grid Area & Customer Service Upgrades and Additions

New Infrastructure Focus

- Strategy – Keep the momentum going
 - Measured but steady progress
- Focus on completing two major projects underway
 - Coulee-Bell
 - Schultz-Wautoma
- Launching two major projects in FY2005 (possible non-wire solutions)
 - Olympic Peninsula Reinforcement Project (Washington)
 - Lower Valley Transmission Project (Idaho/Wyoming)

Planning a Better System

- **Public Review:** Review BPA's infrastructure proposal designs and prioritize improvement projects in a manner that will provide the most cost-effective and reliable service for the region's consumers.
 - TBL will review projects over \$10 million through the Northwest Power Pool Transmission Planning Committee.
 - This is a continuation of public review started in 2001 through the Infrastructure Technical Review Committee.
- **Adequacy Standards:** define an adequate, efficient and reliable transmission system to make cost-effective investments to ensure transmission availability and reliability to meet current and future needs.
 - Necessary to assess and plan for future transmission system expansions, and to provide for adequate transmission services for the region.
 - Determine scope of BPA's responsibilities and appropriate response to congestion.



Load Service Projects

- Olympic Peninsula
- Lower Valley Reinforcement
- Southwest Oregon Coast Reinforcement
- Portland Area Reinforcement
- Northern Idaho Reinforcement
- Load area Transformers
 - 500/230 kV
 - 230/115 kV

Remove Constraints

- Examine smaller infrastructure fixes to respond to incremental generation development
 - I-5 Corridor
 - West of McNary
 - West of Slatt
 - Northern Intertie
 - West of Noxon
- Several larger infrastructure projects are on hold pending generation development.

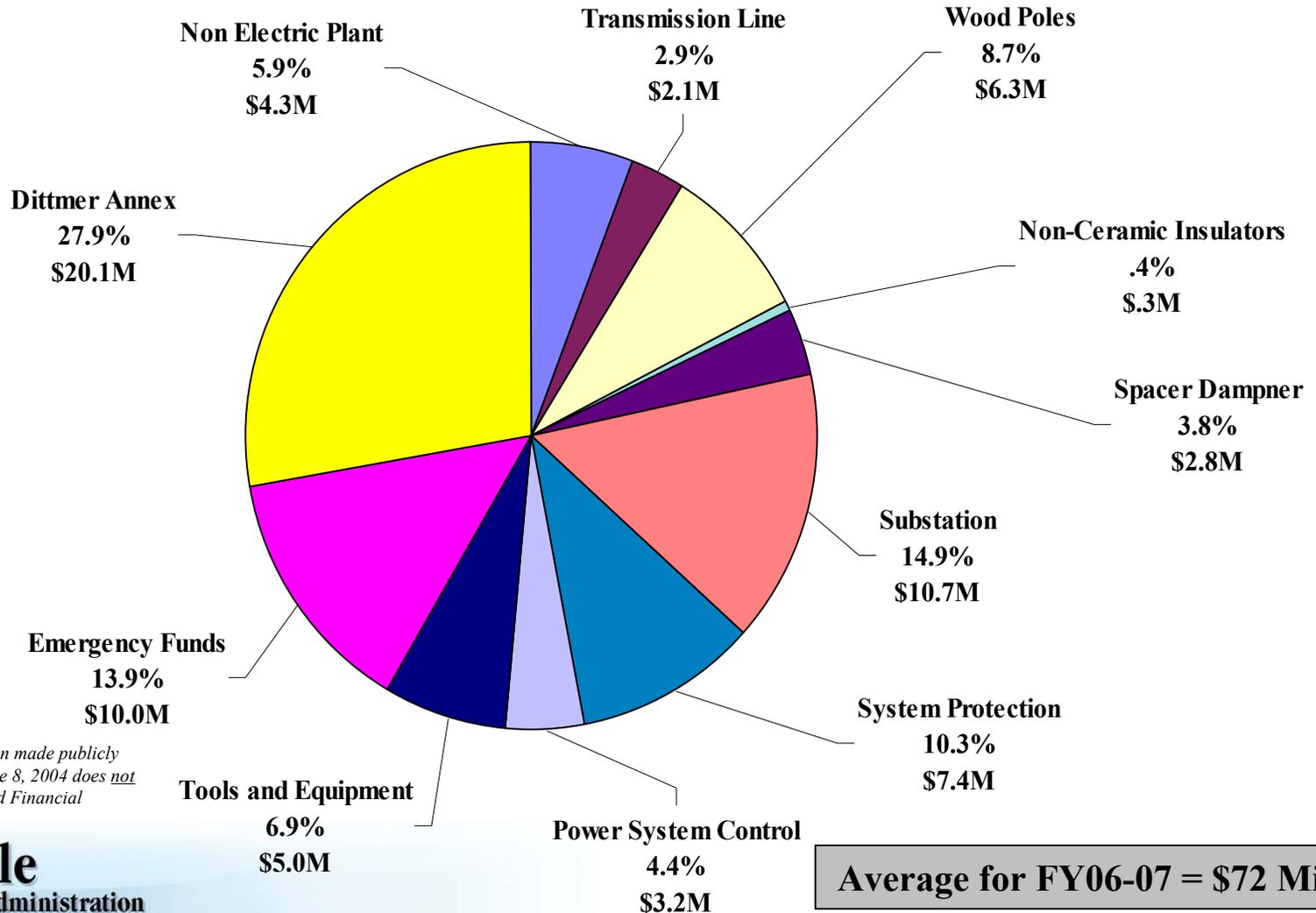
Meet Reliability Criteria

- Reliability response to East Coast blackout
- Line upgrades
- Sectionalizing breaker additions
- Remedial actions and safety nets
- Other fixes as identified

System Replacements

System Replacement Program

FY06-07 Average



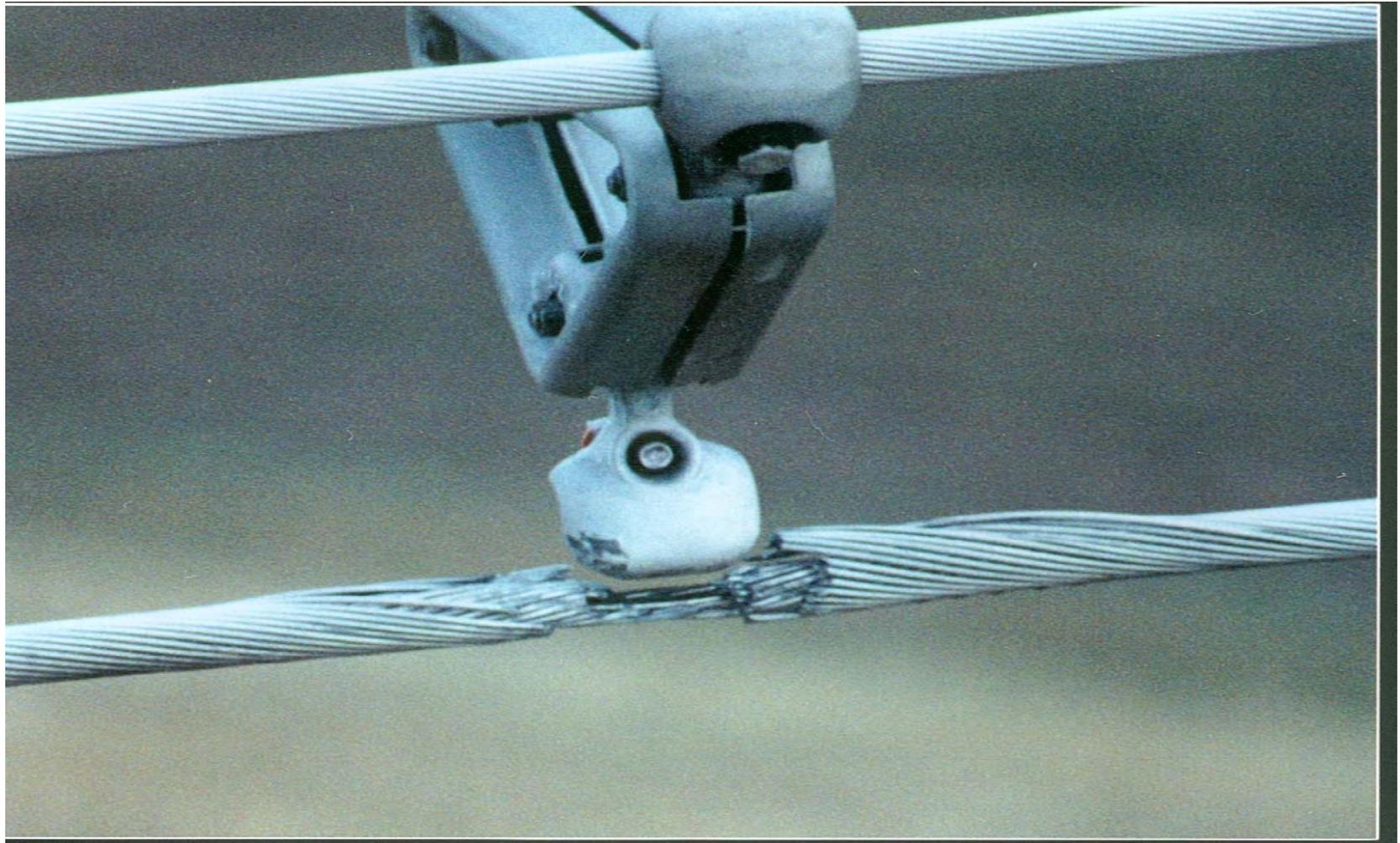
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Average for FY06-07 = \$72 Million

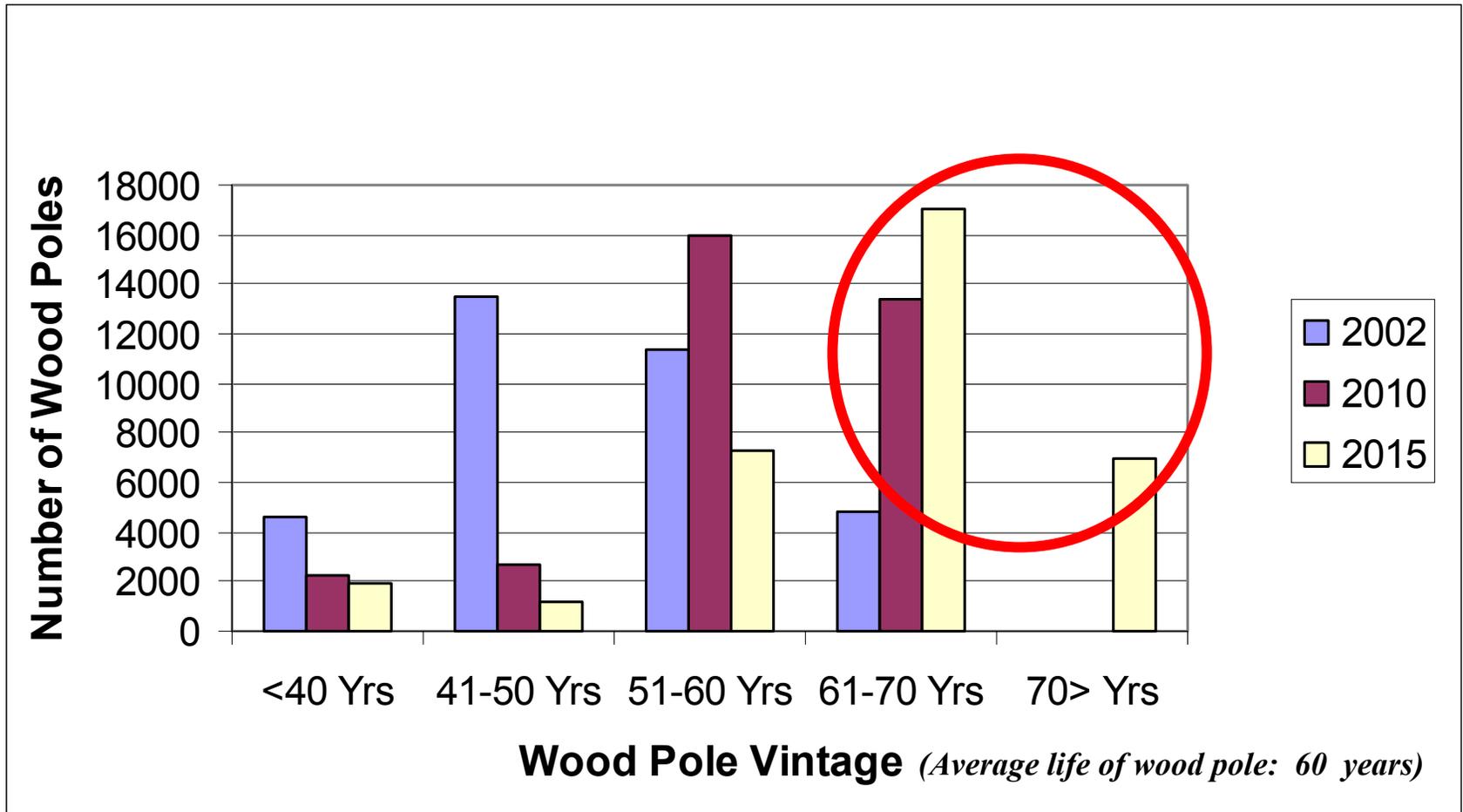
System Replacement Overview

- System replacement program will average \$72 million for FY06-07.
 - Annual replacement budget include \$10 million for emergency.
- System replacements based on 10-year Replacement Plan 2001-2011 (developed in 1999).
 - Replacement plan based on vintage, maintenance cost, availability of spare parts and condition of facilities.
- Consolidation of work force through facility expansion.
 - Replacement of VanMall leases with least cost option to improve security and work force efficiency.

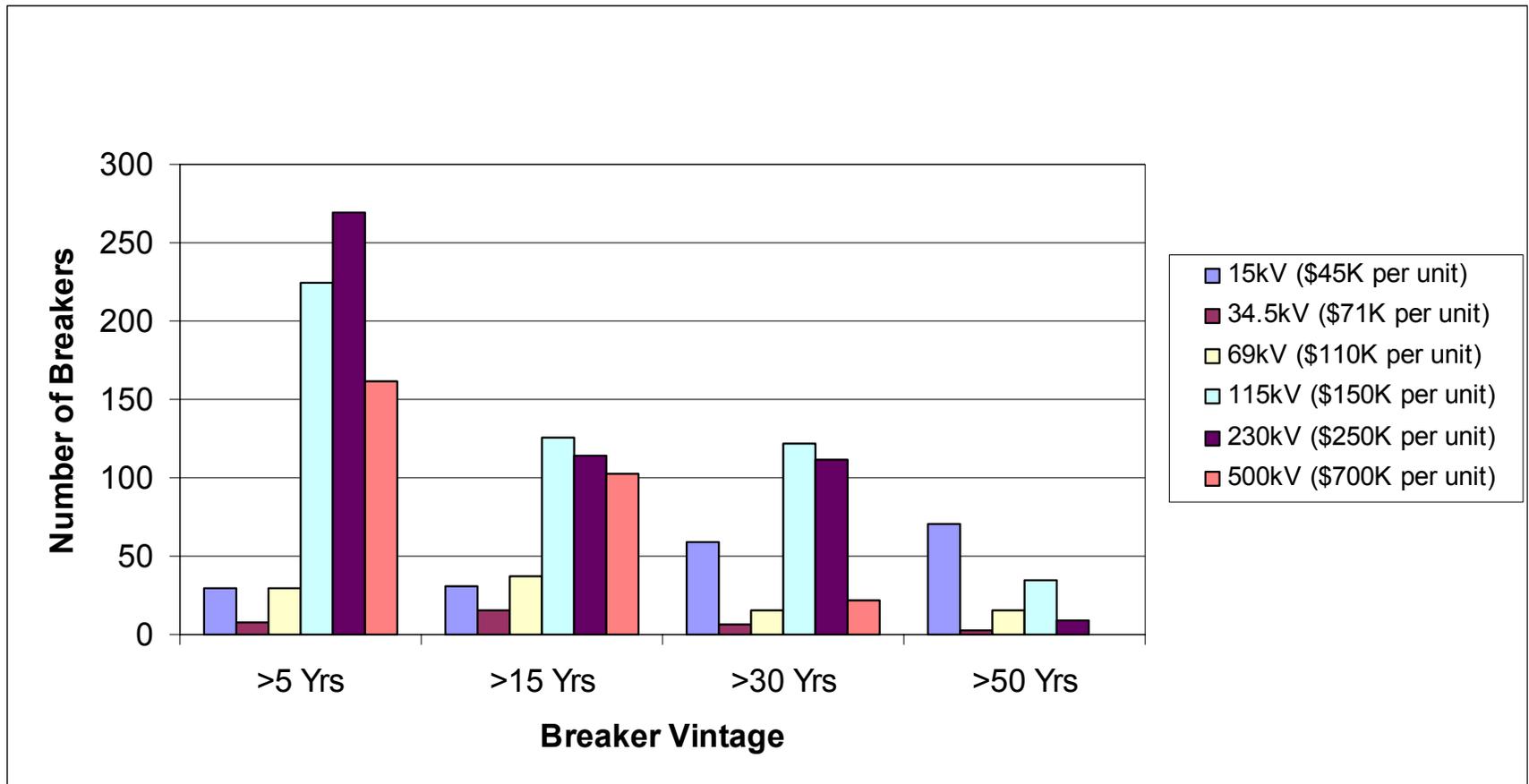
Example of Wear and Tear



Wood Pole Replacement Strategy

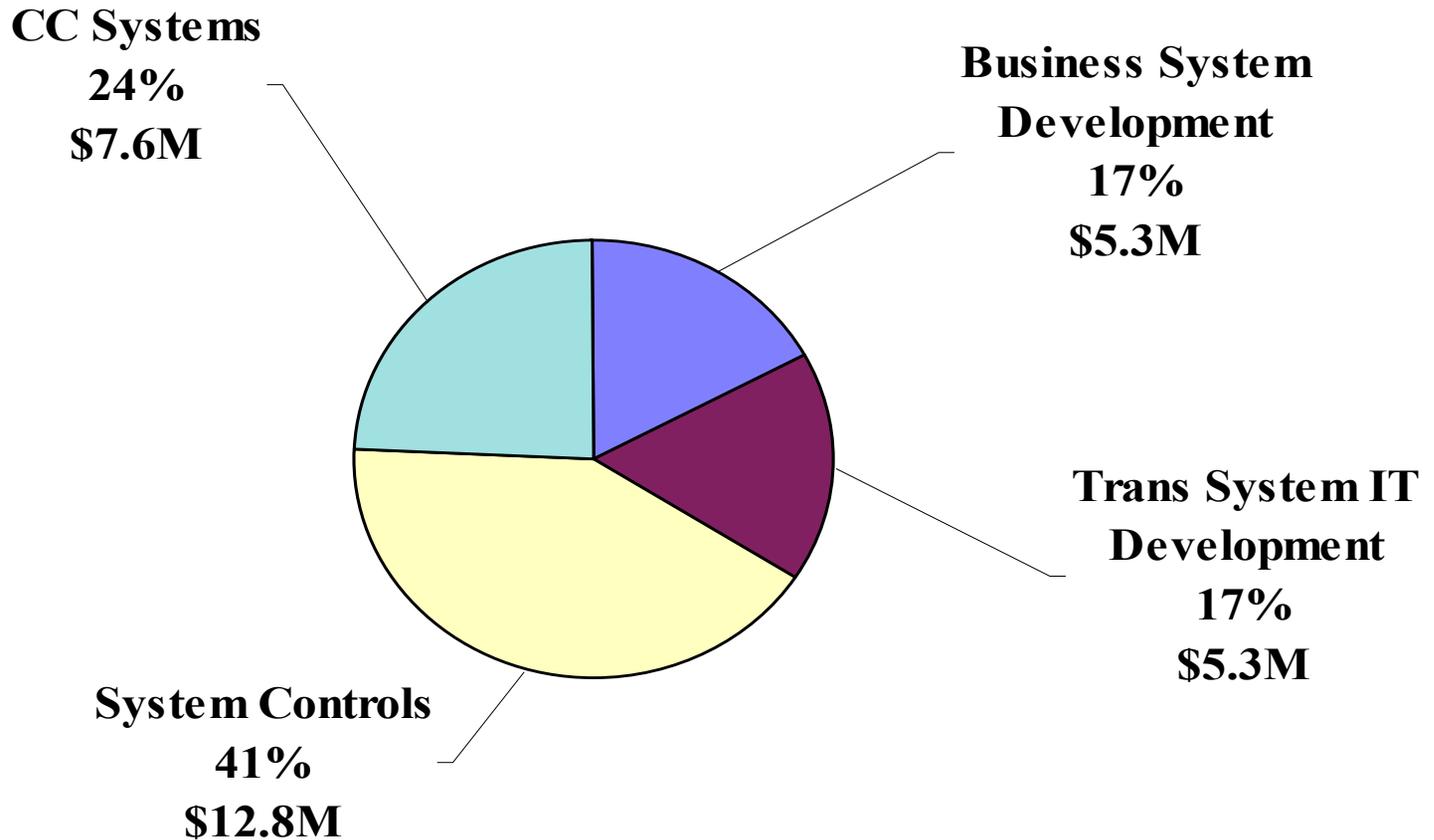


Breaker Replacement Strategy



Grid Operations and Business Systems

Grid Operations and Business Systems Program



Average for FY06-07 = \$30.9

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Grid Operations and Business Systems Overview

● Grid Operations

- Control Center Systems: Grid operation systems require major multi-year upgrades due to vendor platform changes.
- System Controls: Replacements, enhancements and additions to provide greater flexibility in operating grid and low-cost increases in transfer capability.

● Business Systems

- IT system investments: Providing essential information technology services to TBL employees.
- Business system development: Scheduling automation and commercial capabilities remain a high priority.

TBL Program Expenses

Continuing to Deliver

Aggregated Income Statement FY01-04

<i>\$ in Millions</i>	FY01 Actuals	FY02 Actuals	FY03 Actuals	FY04 Rate Case	EOY04 2nd Qtr
Operating Revenues	646.7	720.4	663.6	724.0	647.6
<i>Minus:</i>					
Operating Expense	283.0	364.5	326.3	366.9	322.9
<i>Equals:</i>					
Net Operating Margin	363.7	355.9	337.3	357.1	324.7
<i>Less:</i>					
Depreciation	154.7	161.0	171.1	178.8	182.6
Net Interest	165.4	150.7	169.0	166.1	145.9
<i>Equals:</i>					
NET REVENUES	43.6	44.1	(2.8)	12.2	(3.9)



2004 Rate Case Compared to FY06-07 Averages

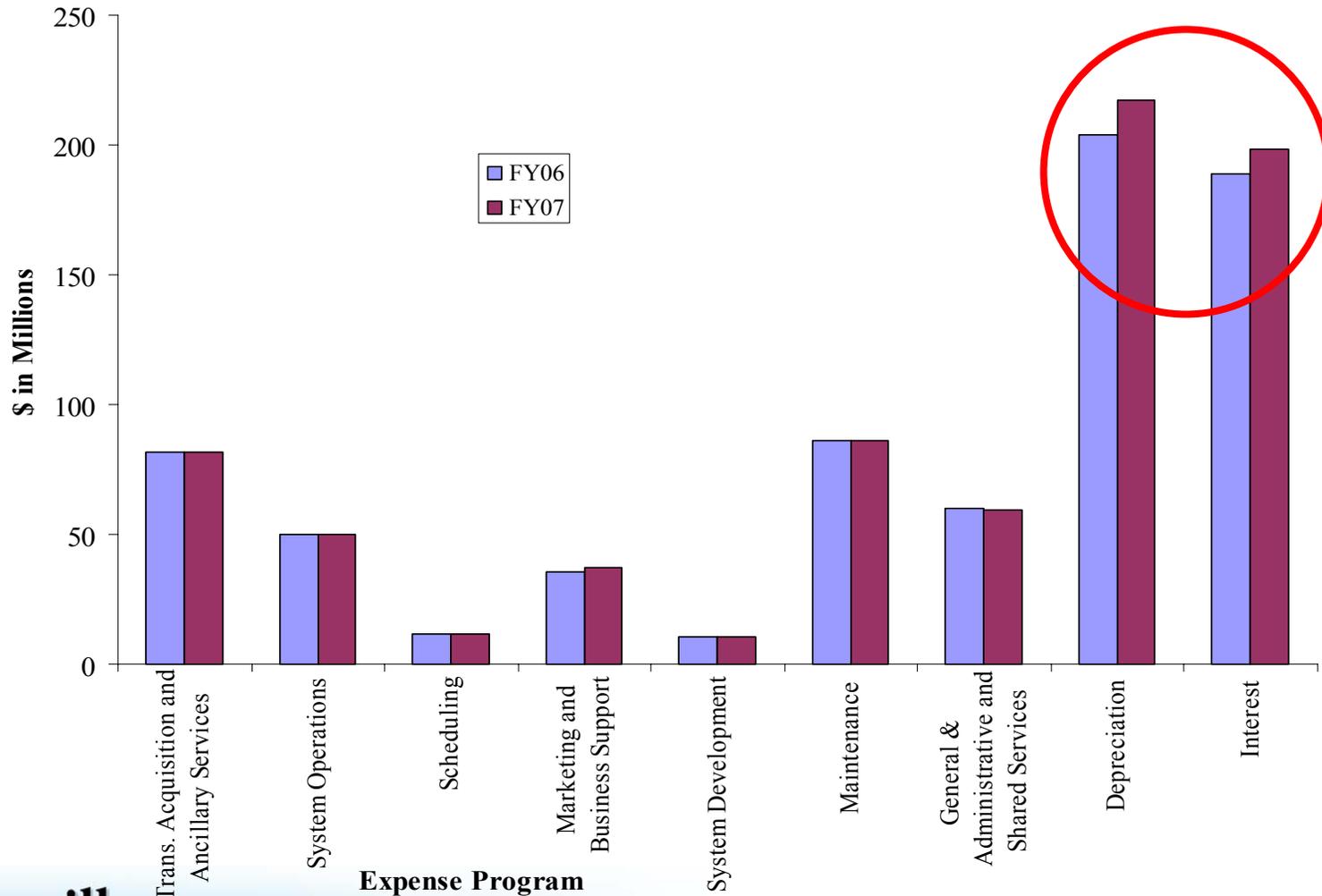
Programs (total expenses) <i>\$ in Millions</i>	FY04-05 (from Rate Case)	FY06-07 Averages (Projected)	
		\$ Delta	%
Depreciation	184.8	25.8	14
Net Interest	171.2	22.6	13
Transmission Programs	281.2	(6.6)	(2)
Transmission Acquisition & Ancillary Services (Generation Inputs)*	88.7	TBD*	TBD*

\$ Delta = difference between FY04-05 and FY06-07 average.

% = delta in relation to FY04-05.

* Acquisitions & Ancillary Services will be determined in upcoming Power rate case

Breakout of Proposed Program Expenses FY06 and FY07

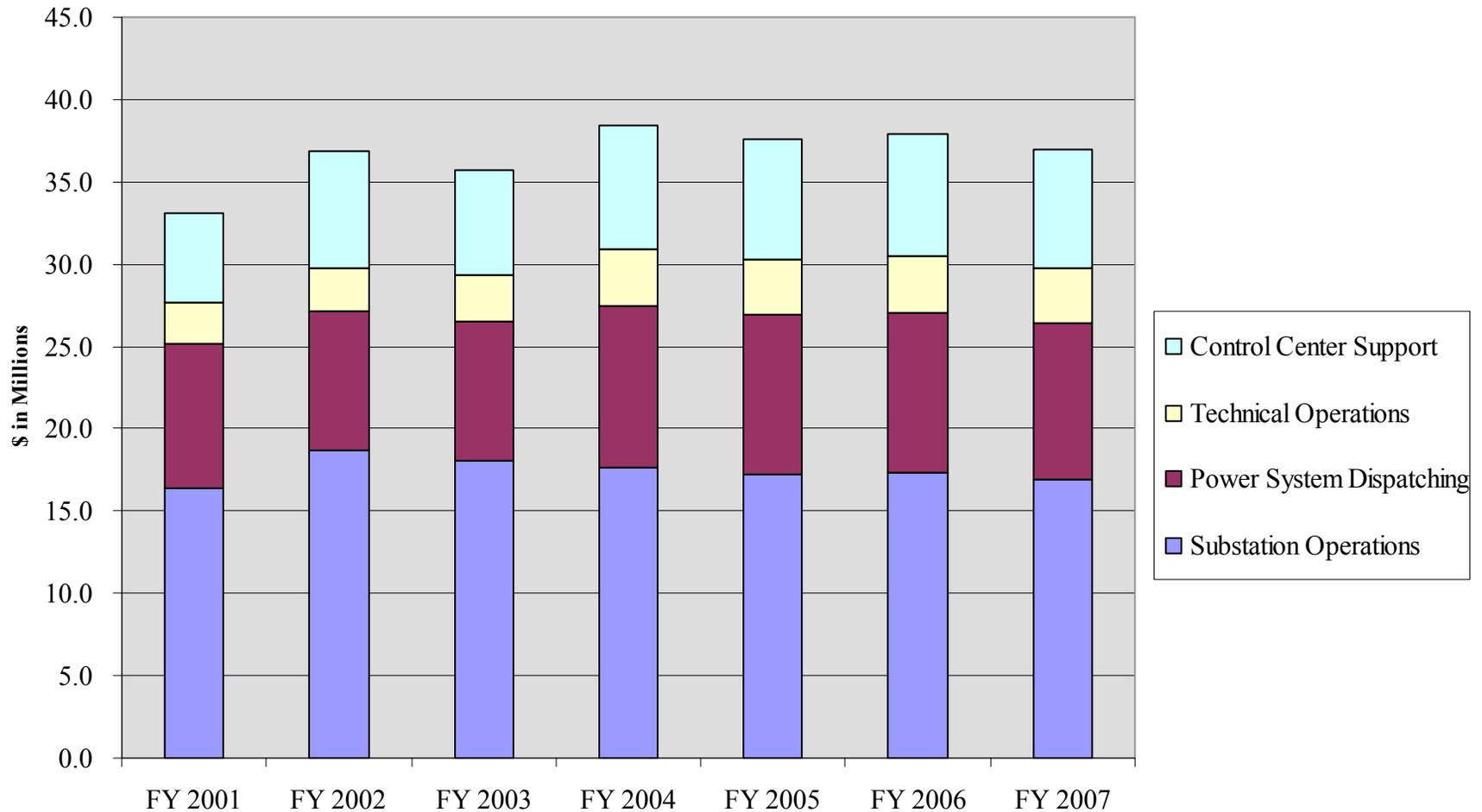


TBL Expense Programs

- System Operations
- Scheduling
- Maintenance
- Marketing & Sales
- Transmission Acquisition & Ancillary Services
- Business Support
- Transmission Systems Development
- General Administrative & Shared Services

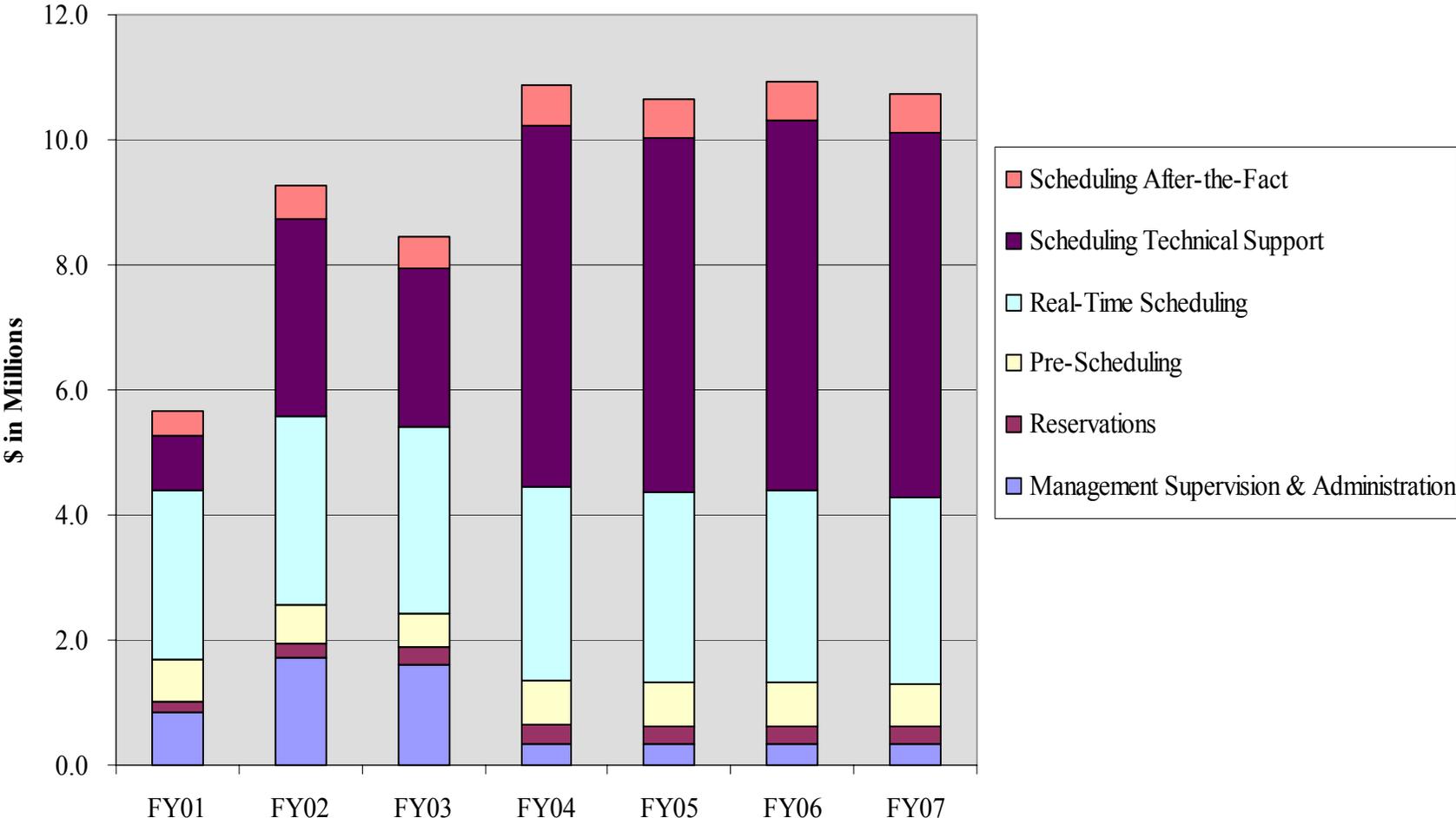
System Operations

(FY04 Dollars)



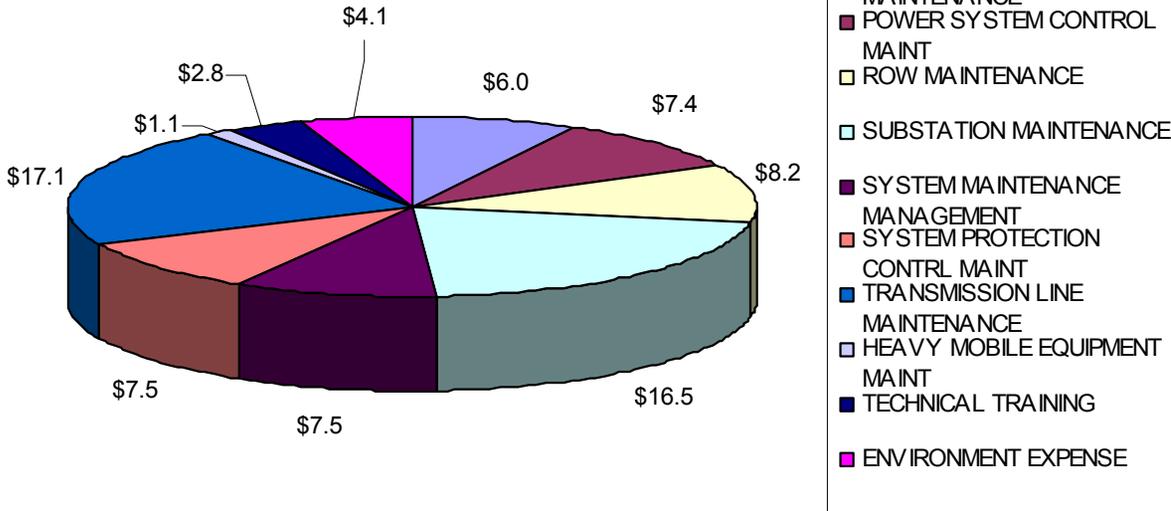
Scheduling

(FY04 Dollars)

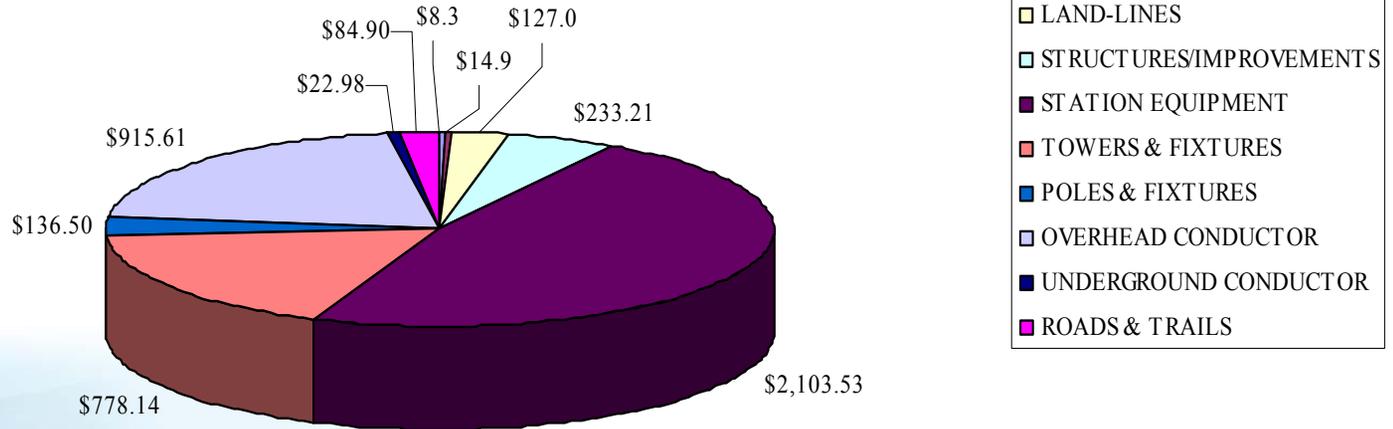


Maintenance

FY03 Maintenance Program
Dollars in Millions



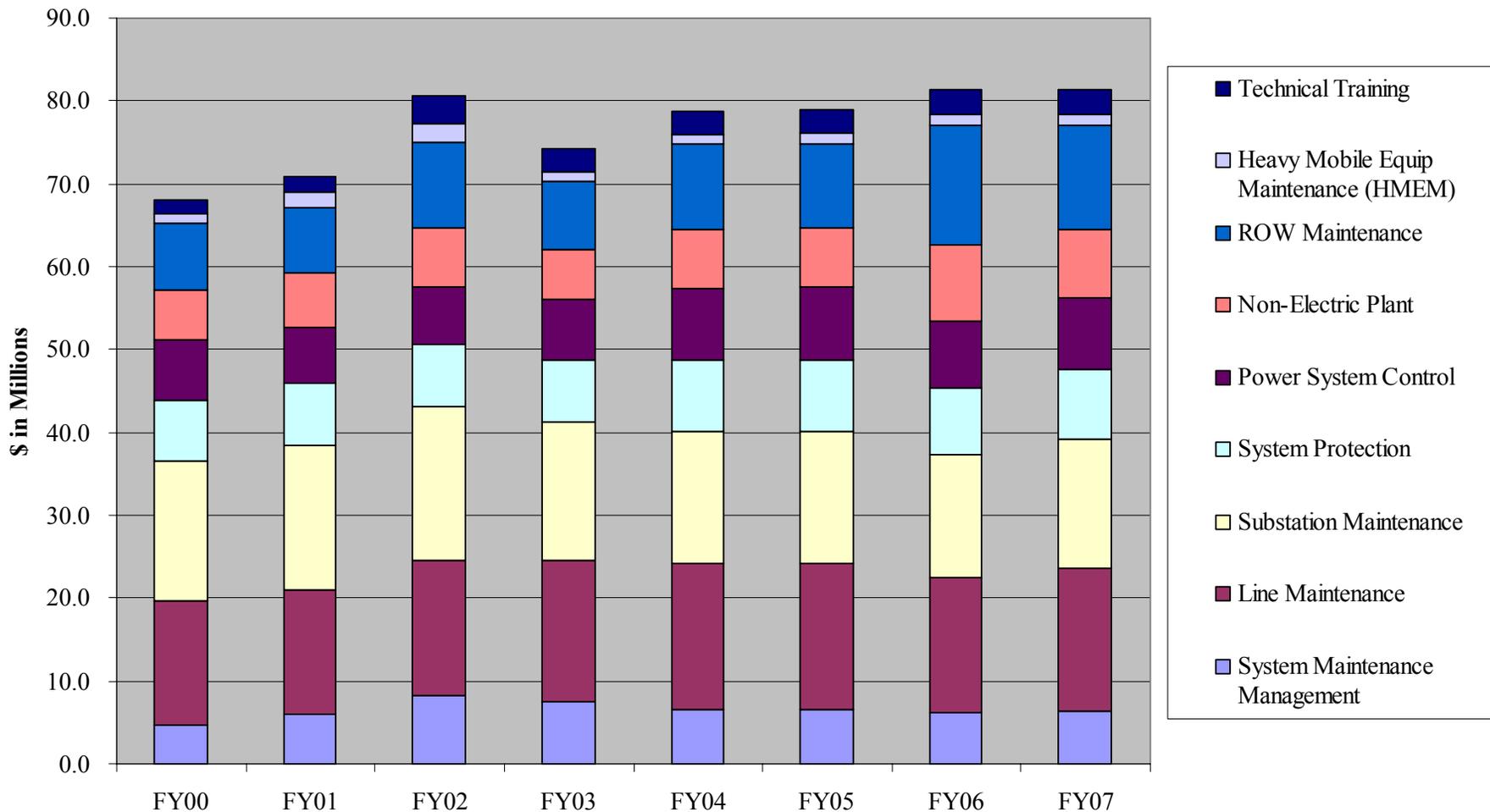
Transmission Plant in Investment as of 9/30/03
Dollars in Millions



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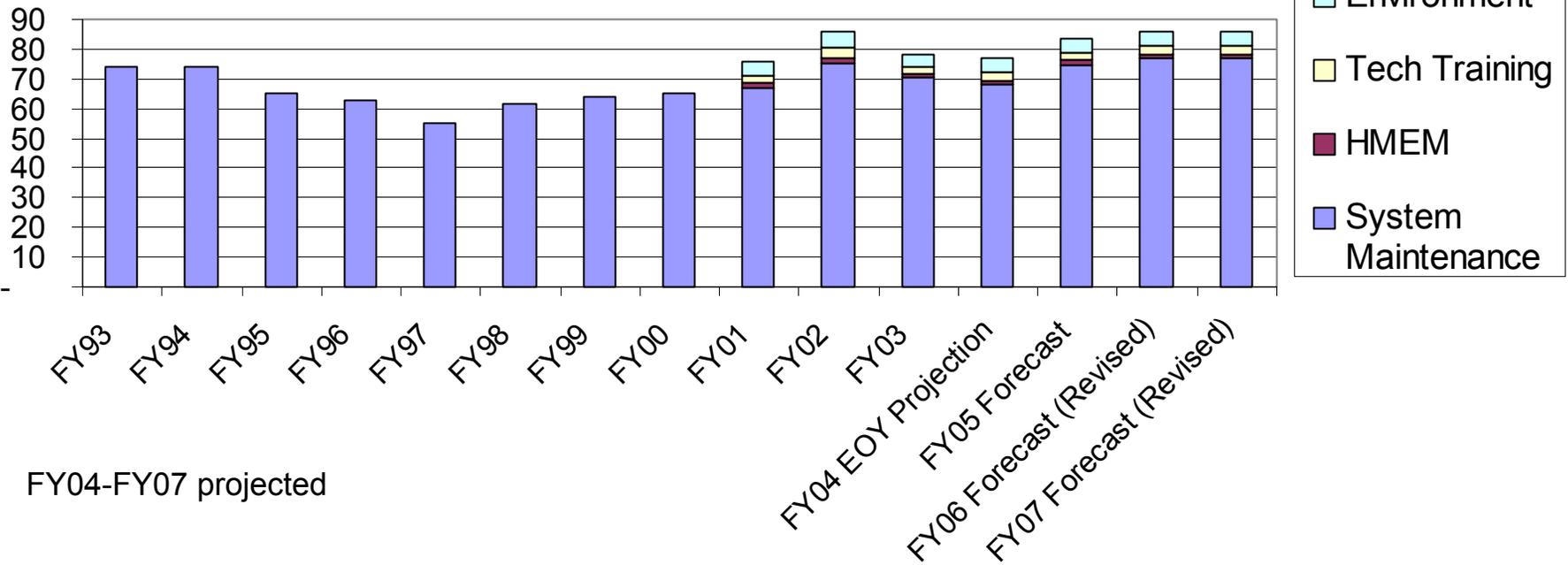
Maintenance

(FY04 Dollars)



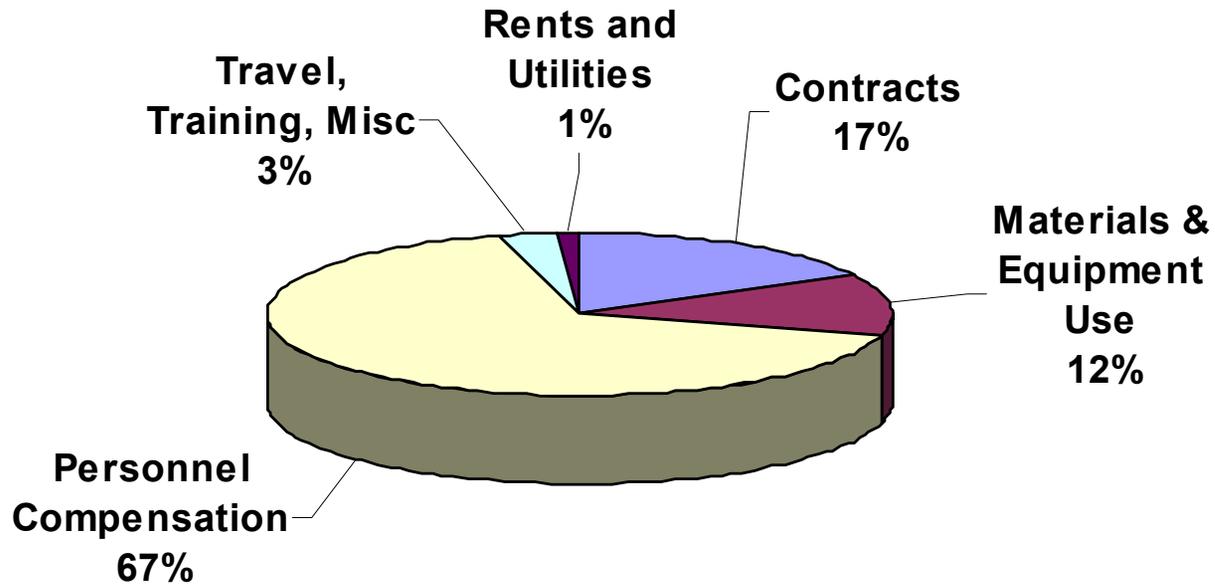
Maintenance History and Projections

**Maintenance Direct Expenses
Actual Dollars in Millions**



HMEM = Heavy Mobile Equipment Maintenance

Maintenance – FY03 Resource Breakdown



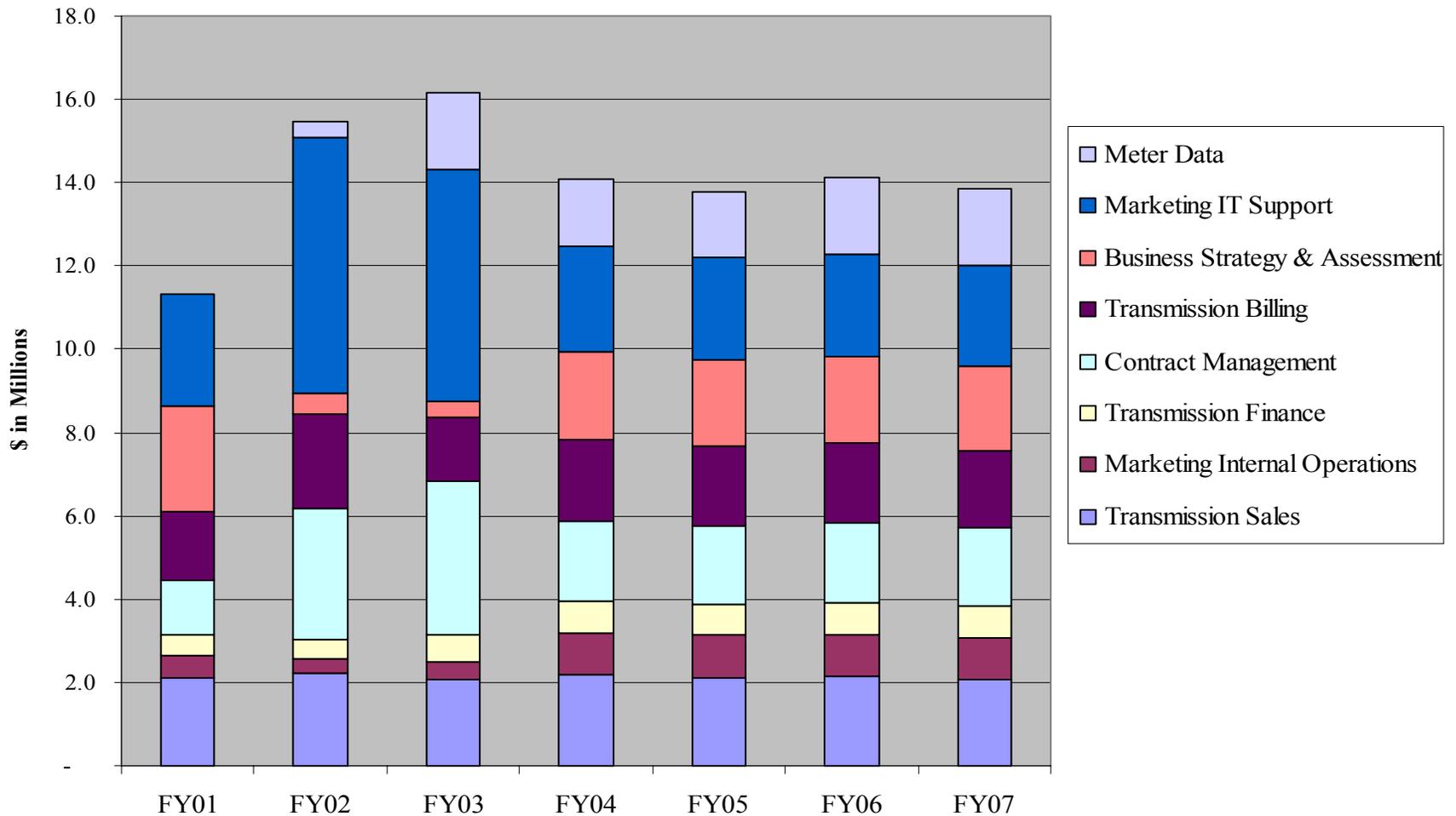
Pressures to Maintenance Program

- Compliance of cyclical vegetation management with new FERC/NERC reliability criteria.
- Access Road Management Plan to maximize response time (reduce outage time) and ensure environmental compliance.
- Delayed Non-Electric Plant Maintenance has created the need to take care of facilities now.
- Constrained system limits planned outages for regular maintenance.

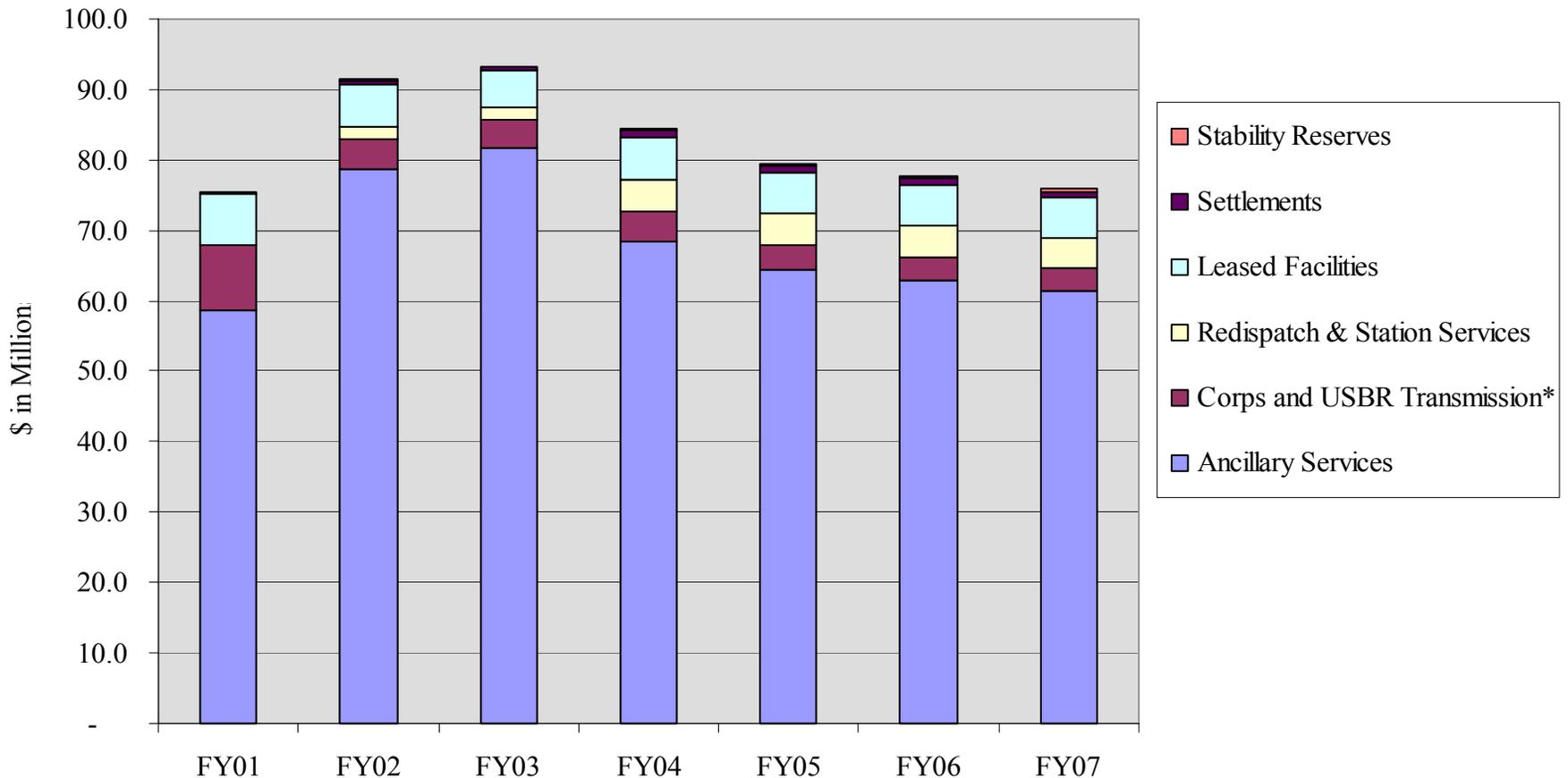
Maximizing Use of Resources

- Use existing resources and implement new work practices such as live line work.
- Focus on maintenance for critical facilities in the Northwest.
- Determine workload and staffing based on equipment inventories and emergency response levels.
- Supplement crews with contractors during peak season work.

Marketing (FY04 Dollars)



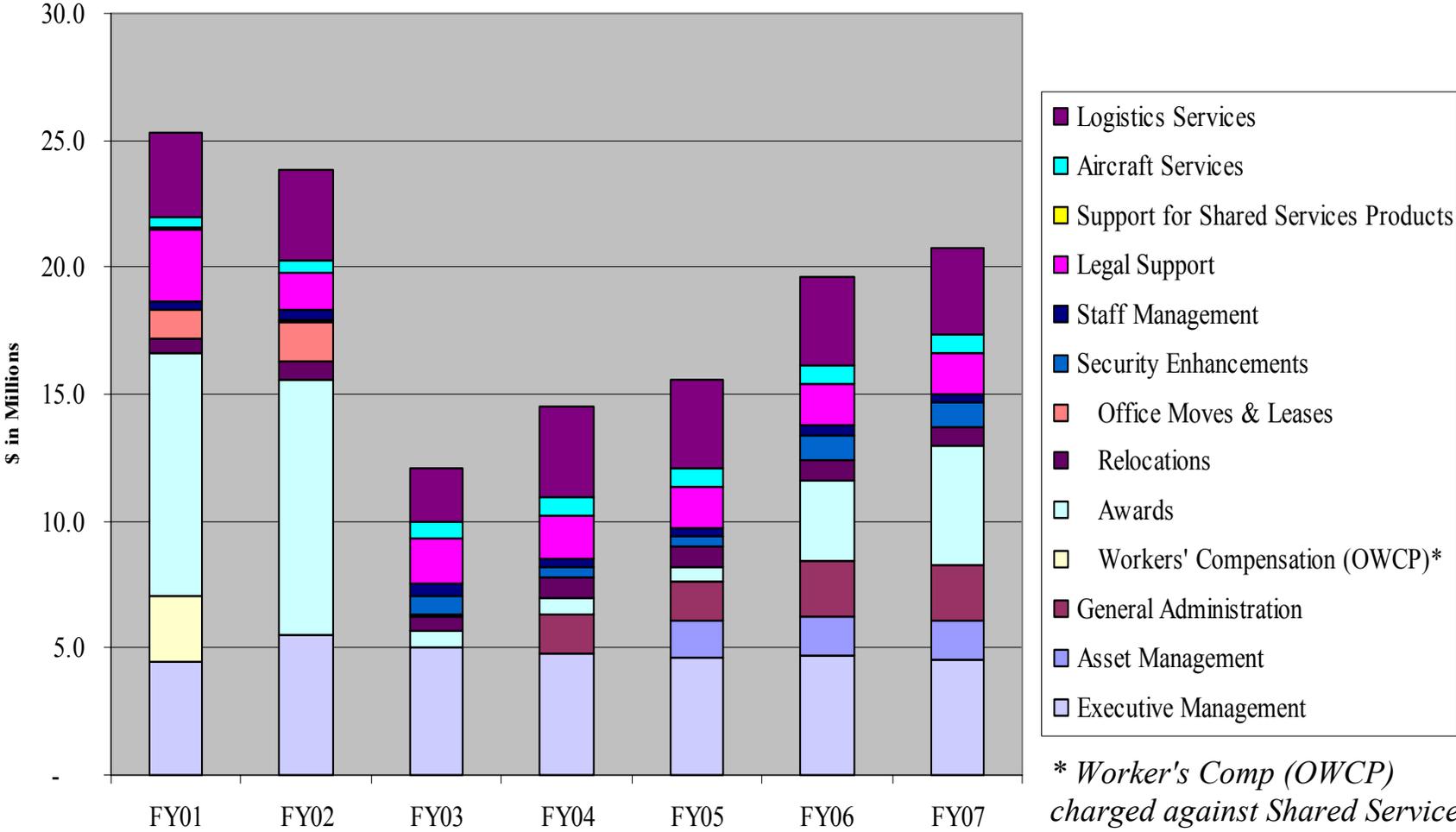
Transmission Acquisition & Ancillary Services (FY04 Dollars)



** Payments to PBL for Corps and USBR Transmission Facilities*

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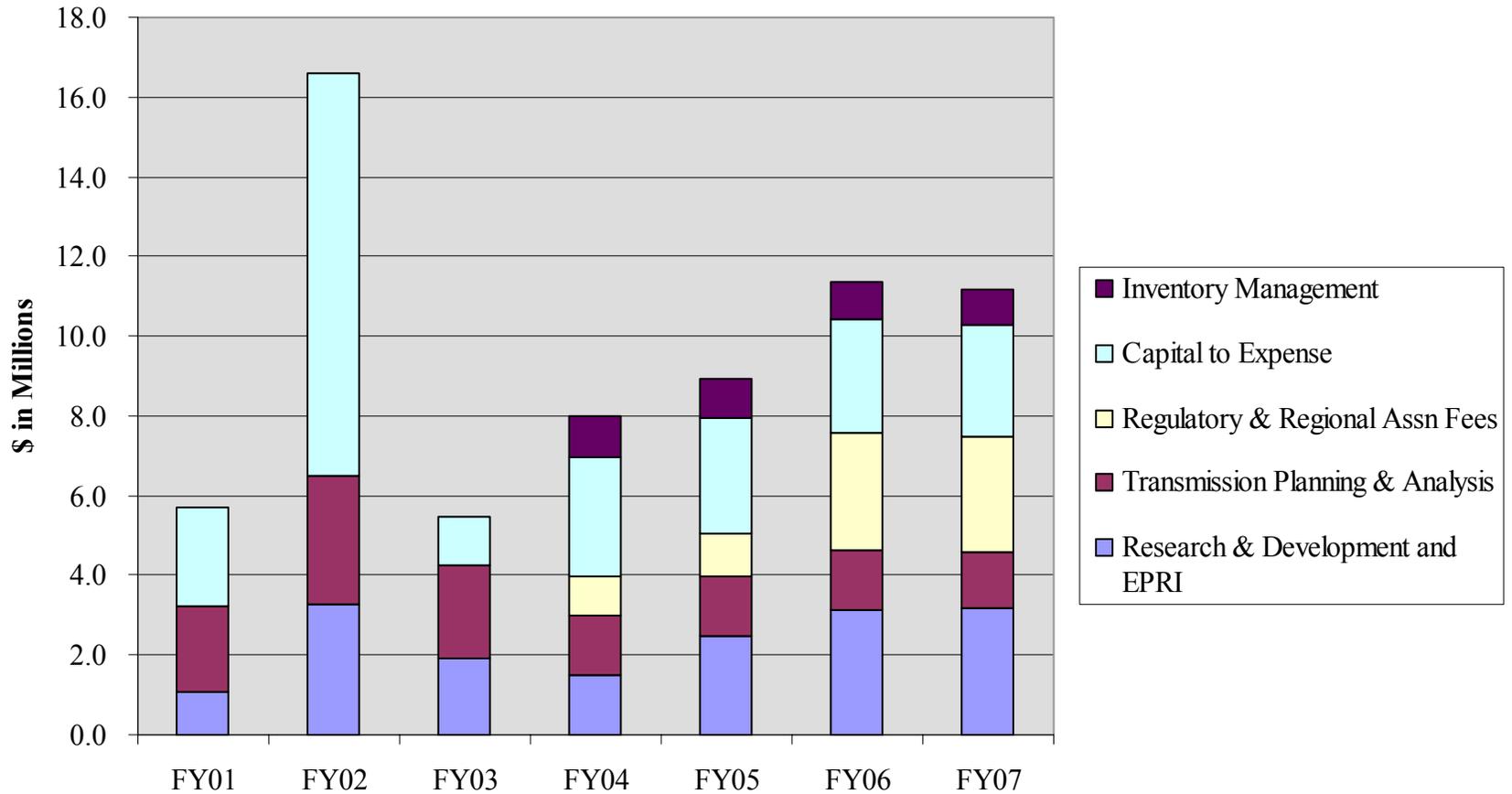
Business Support (FY04 Dollars)



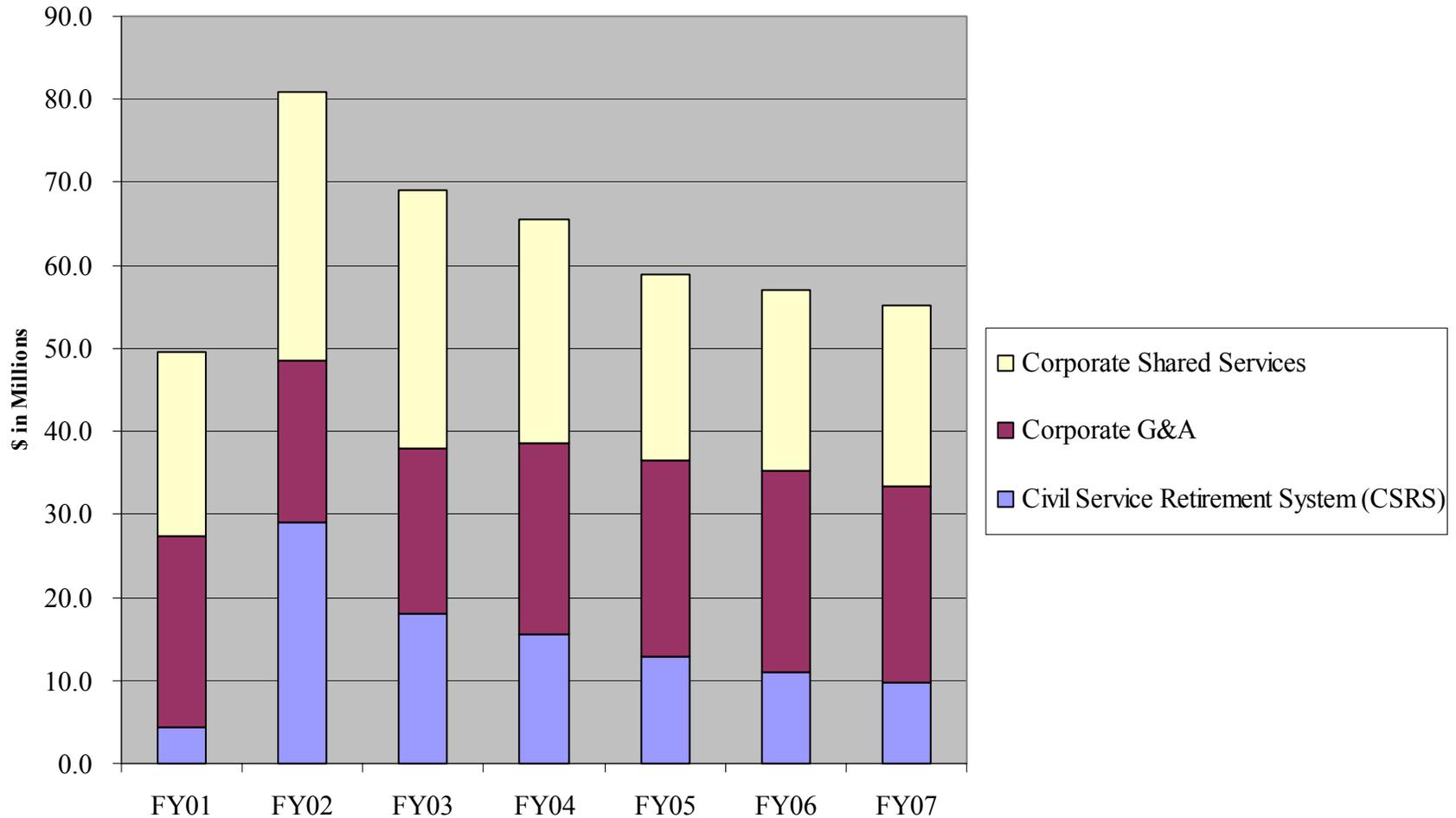
* *Worker's Comp (OWCP) charged against Shared Services after FY 2001*

Transmission System Development

(FY04 Dollars)



General Administrative & Shared Services (FY04 Dollars)



TBL Programs In Review

Conclusion and Next Steps

TBL Contact Information

- For more information on PIR:
 - Web site:
http://www.transmission.bpa.gov/Business/Customer_Forum_and_Feedback/Programs_in_Review/pir2004.cfm
 - Phone: (888) 276-7790
- To submit comments
 - Email: tblfeedback@bpa.gov
 - Mail to: Programs In Review – T-DITT2
Bonneville Power Administration
P.O. Box 491
Vancouver, WA 98666

Programs In Review Timeline

