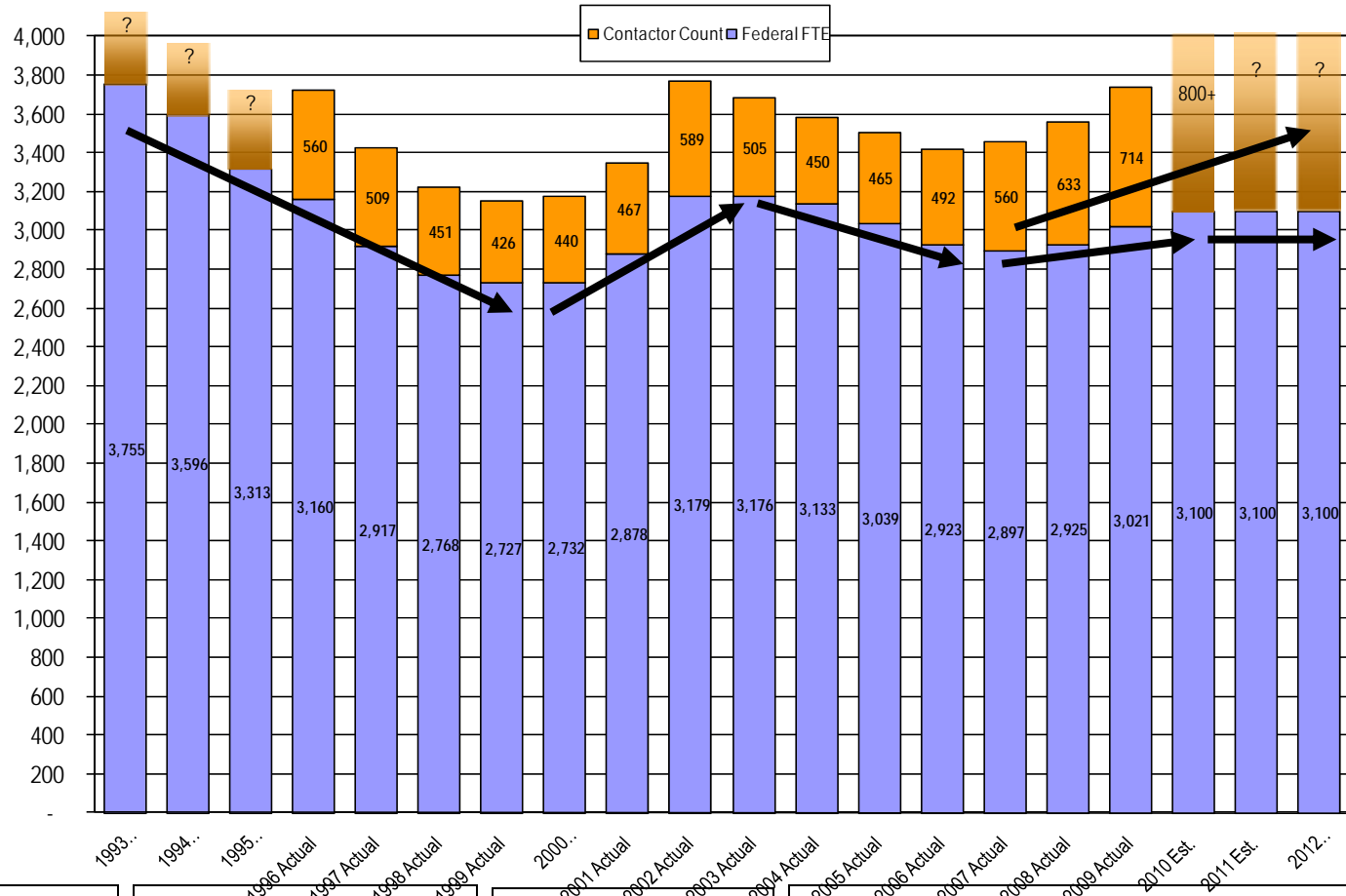


# Transmission and Supply Chain Staffing Workshop

June 10, 2010  
9-11 AM

	Topic	Slide #	Presenter
9:00	Schedule and Overview		Brian Silverstein
	Transmission Staffing Demographics- historical FTE trends, grade profile, retirement profile, list of critical occupations	2-7	Annette Talbott
9:30	Staffing Benchmarking Methodology	8-14	John Quinata
	Transmission Findings & Conclusions	15-21	John Quinata and by VP functional area
10:15	Supply Chain Findings & Conclusions	22-28	Marty Callaghan
10:45	Next Steps	29	Brian Silverstein

# BPA's Federal Workforce and Contract Workers



## 1994 – 1999

- Completion of 3<sup>rd</sup> AC Intertie ended period of major infrastructure development
- Emphasis on maximizing efficiency of existing assets vs. expansion
- Implementation of cost control measures manifesting in voluntary separation incentives

## 2000 – 2003

- Post West Coast Energy Crisis infrastructure investment (G-9 Projects)
- Post 9/11 physical and cyber security initiatives
- Emphasis on Fish & Wildlife contract management

## 2004 – 2007

- Completion of G-9 projects; commitment to region of 3-year ramp down of Transmission FTE
- Efficiency gains due to EPIP and service consolidation

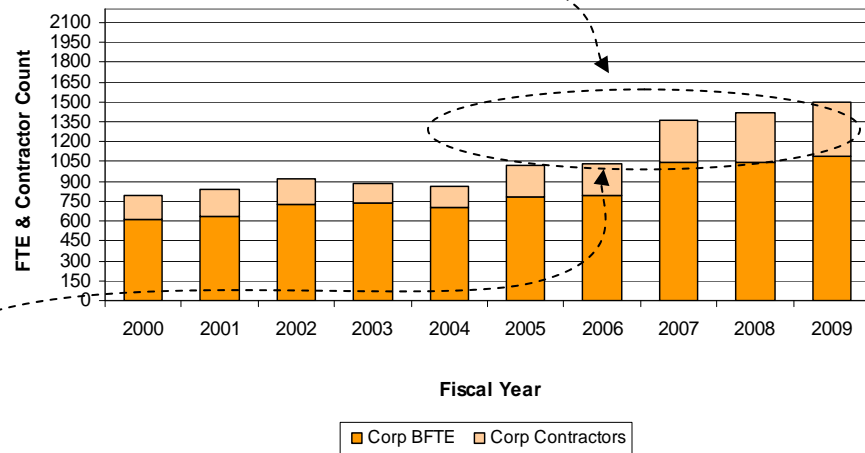
## 2007 – 2012

- Federal FTE roughly flat
- Using contractors (and service contracts) to supplement BFTE to meet major agency objectives
- 270% increase in Transmission capital program (2008 to 2010) for infrastructure development/ expansion
- Doubling of EE targets; Doubling of F&W program
- New Regional Dialogue contracts & systems
- Significant investments in core IT systems
- Ramp up in compliance requirements

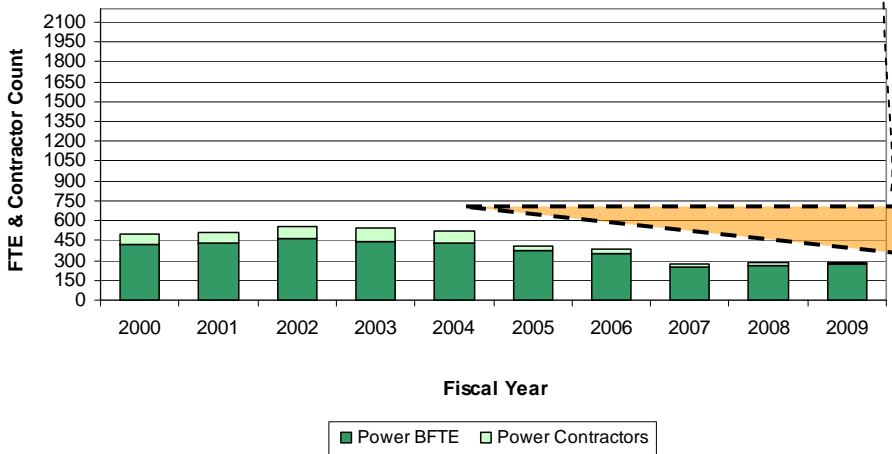
**Transmission FTE & Contractor Count**



**Corporate FTE & Contractor Count**



**Power FTE & Contractor Count**

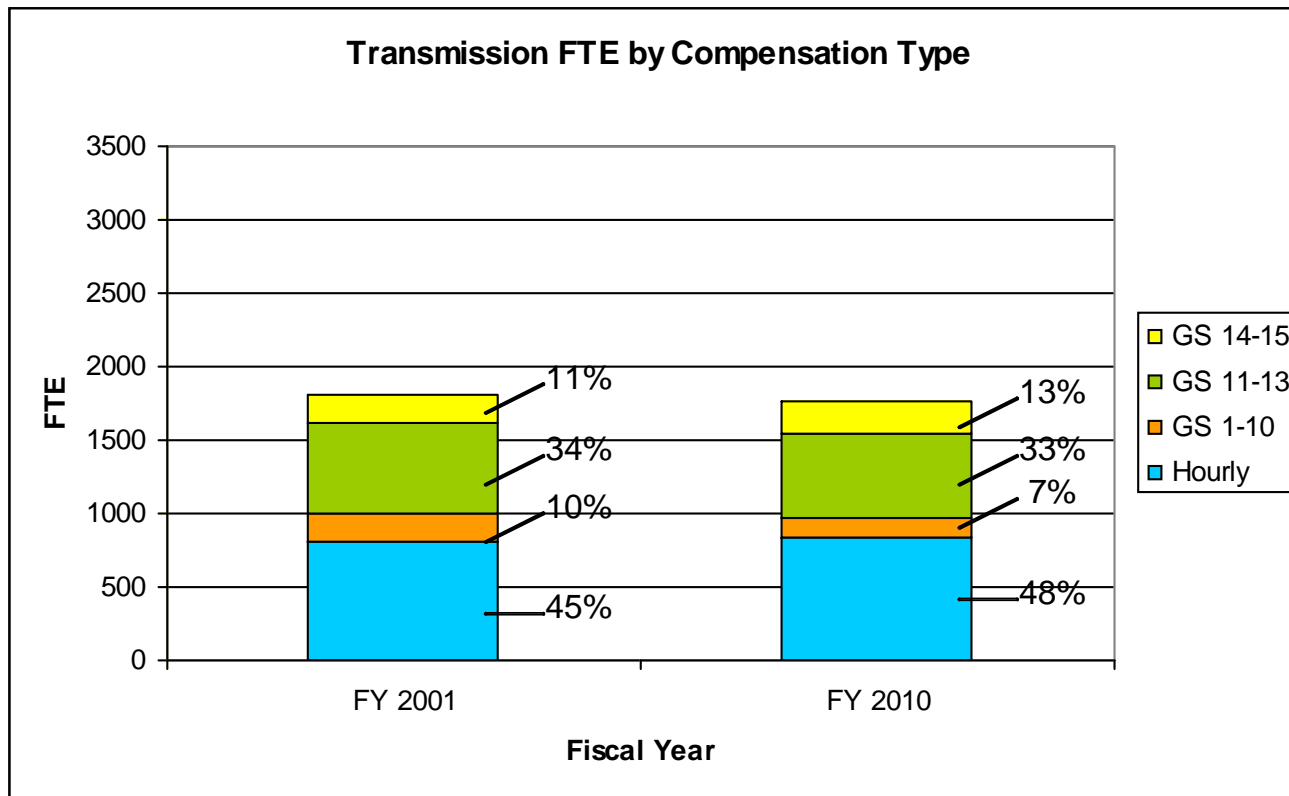


- Relative decrease in Transmission and Power BFTE and contractors and relative increase in Corporate BFTE and contractors reflects the EPIP action of centralizing or moving the following functions:

- IT
- Energy Efficiency
- Supply Chain
- Customer Support Services
- Public Affairs
- Human Capital
- Non-Elec Facilities

- Relative increase in Corporate BFTE and contractors also reflects the expansion of both Governance

# Transmission Grade Profile



- Transmission is a field-intensive production-focused organization, resulting in a pyramid composed largely of hourly workers
- The majority of our administrative and support roles are now provided through service contracts or supplemental labor arrangements, resulting in small numbers of low graded Federal positions

# Retirement Profile -Eligibility

	10/1/2011	10/1/2013	10/1/2016
<b>BPA</b>	22%	31%	40%
<b>Transmission</b>	20%	28%	37%
<b>Power</b>	21%	31%	42%
<b>IBS</b>	21%	31%	42%
<b>Corporate</b>	21%	28%	39%

- We have a large number of retirement-eligible employees
- Our retirement eligibility will increase as the baby boomer ‘bubble’ works its way through BPA
- We are actively managing this departure risk through succession planning, knowledge sharing, work allocation and adjustments to career structure in critical skill areas

# Critical Occupations

- Summary of departure risk of O&M skills & success from treatment under the Workforce Plan

Critical O&M Skill	FY06 % Retirement Eligible	FY10 % Retirement Eligible	Summary of Success
Lineman ( <i>risk mitigated</i> )	11%	5%	Risk sufficiently reduced with recruitment and apprentice hiring.
SPC Craftsman	9%	18%	A targeted recruitment strategy has been designed; several positions are presently vacant.
PSC Craftsman	14%	12%	A targeted recruitment strategy has been designed and all vacancies have been filled currently.
Electrician Foreman ( <i>risk mitigated</i> )	24%	29%	While retirement eligibility increased, the risk was sufficiently reduced due to targeted recruitment and apprentice hiring.
Natural Resource Specialists ( <i>risk mitigated</i> )	25%	40%	The risk level is considered acceptable due to an adequate number of students in the pipeline.
Construction Inspectors	10%	33%	Supervisor has been selected and a targeted recruitment strategy is in place. A training program is being developed.
Substation Operator	15%	18%	Substation operator positions are being filled. This position also feeds the Dispatcher pipeline.

Note: Occupations are considered “at risk” if there is a high number of anticipated retirements and no or insufficient mechanisms in place to mitigate the departure risk.

## Identified critical occupations based on departure risks

### High Priority Occupations In FY 2010 Agency Workforce Plan - Transmission

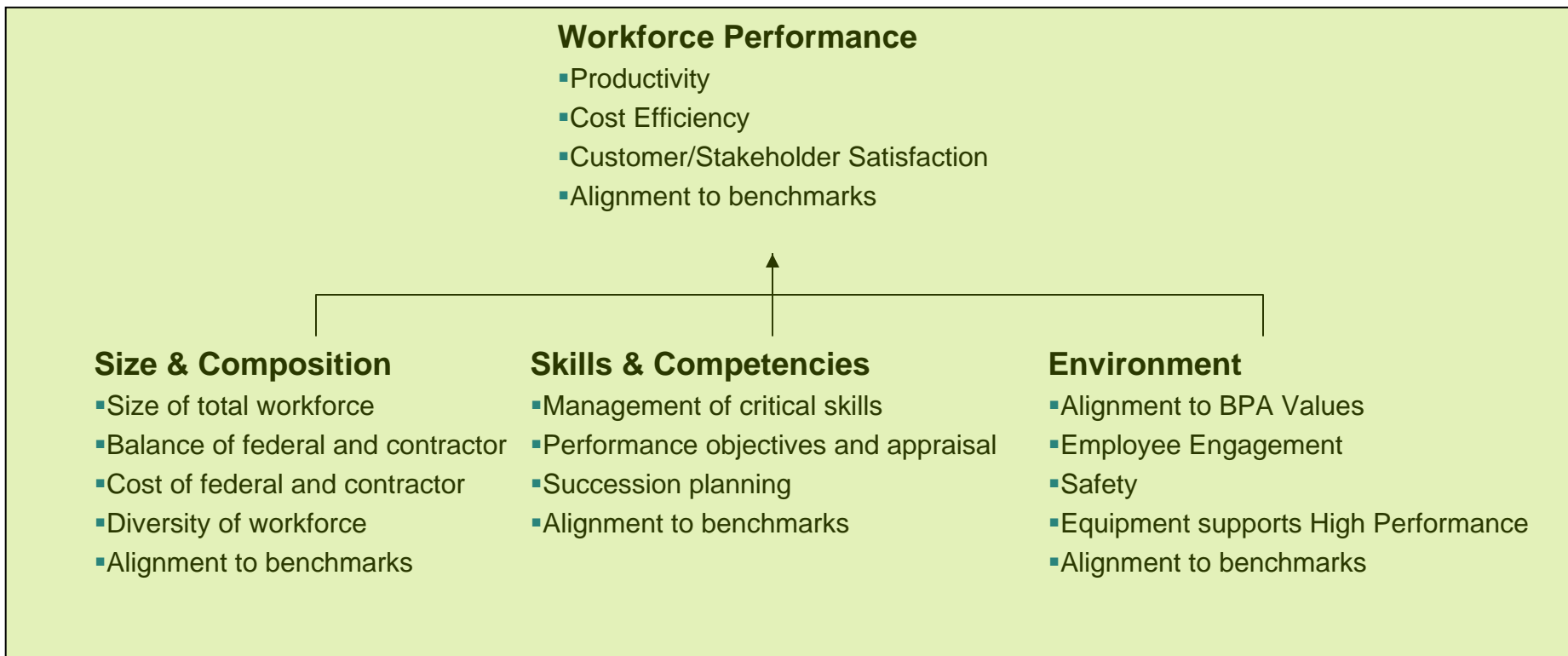
<u>Occupation (# of BFTE)</u>	<u>Organization</u>	<u>IPR Programs</u>
Mechanical Engineers (18)	(TE)	Engineering, System Maintenance, Business Support, Capital Program
Dispatchers (53)	(TO)	System Operations
SPC Craftsmen (31)	(TF)	System Maintenance, Capital Program
PSC Craftsmen (35)	(TF)	System Maintenance, Capital Program
Land Surveyors (16)	(TERM)	System Maintenance, Business Support, Capital program
Realty Specialists (27)	(TER)	System Maintenance, Business Support, Capital program

Plan Strategies include: Recruitment, Student Hires, Succession Planning, Cross training, Strategic Employee Development Initiatives (SEDI), Attrition Analysis and Forecasting/Modeling.



# Monitoring Condition of Our Workforce

BPA's Talent Management Strategy is asset-minded and risk-informed  
**Talent Management Monitoring Framework**



*Navigant Consulting, Inc.*

# Staffing Benchmarking Report *Executive Summary*

Presented to:



**June 2010**

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1

**Background and Approach**

2

Transmission Findings & Conclusions

3

Supply Chain Findings & Conclusions

## Background...

### Primary Objective - To Benchmark Staffing Against Staffing At Other Utilities

- Staffing benchmarks were developed in 40 transmission work functions and 9 Supply Chain work functions including those performed by:
  - Field organizations
  - Central and corporate groups
- Staffing benchmarks included BPA employees, supplemental labor and contracted services
- Staffing benchmarks were developed at two levels:
  - **Median:** reflects the staffing levels, by job function, of all companies in the database normalized to BPA's system characteristics (e.g., miles of line, service territory size, number of substations, annual construction expenditures, etc.)
  - **Lowest Quartile** (lowest staffed quartile): reflects the median of the subset of companies who are in the lowest half staffing levels of the benchmarking database, normalized to BPA system characteristics.

### Several Secondary Objectives Were Also Key Part Of This Project

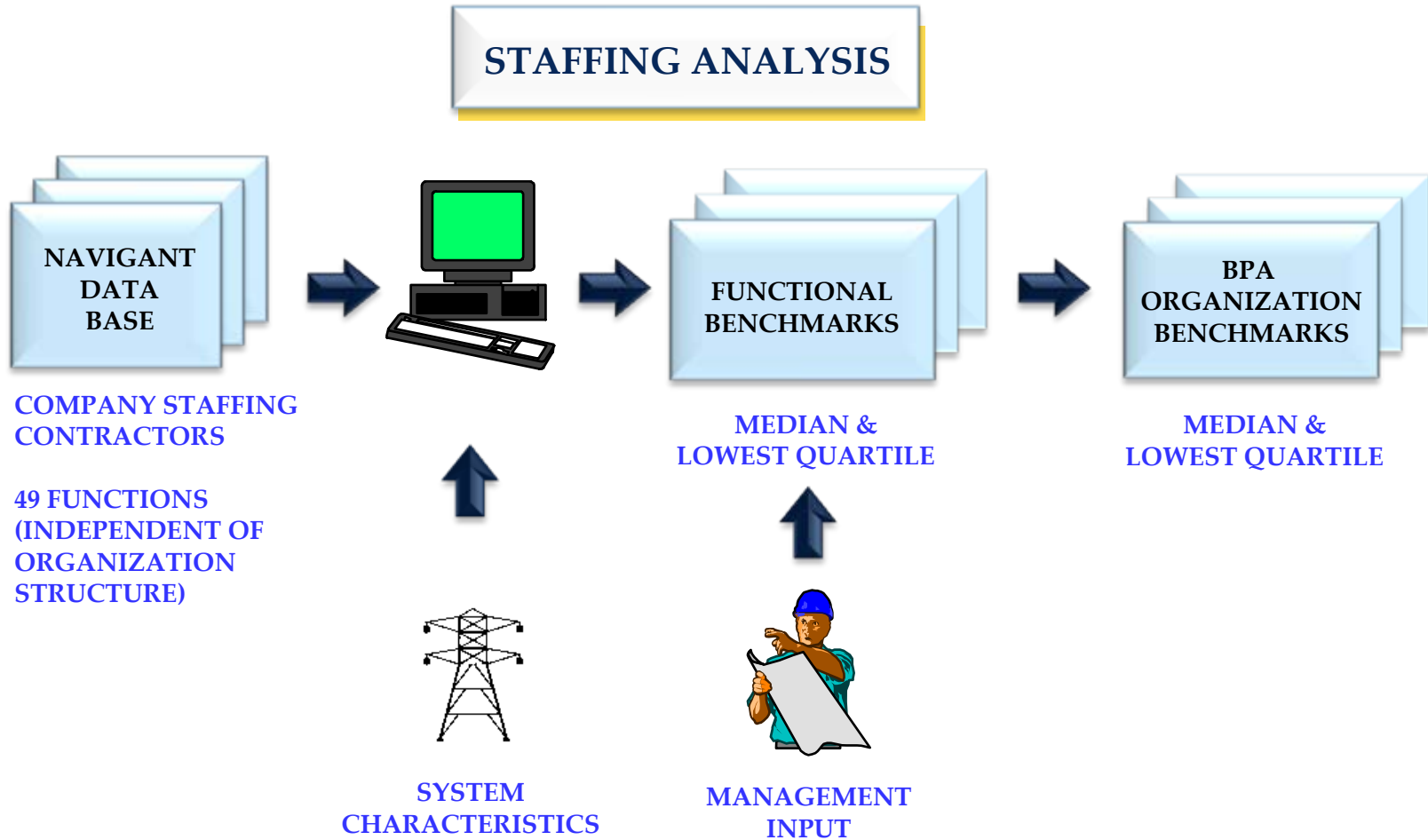
- Compare actual and benchmark staffing to identify gaps
- Review unique conditions and work practices at BPA to identify factors that might help explain variances between the actual and benchmark staffing
- Compare the use of BPA supplemental staff and contractors to their use at other good performing utilities

### Benchmarks Were Based On Several Assumptions

- Condition of BPA assets, management practices, and work processes is typical of the electric utility industry
  - Workers perform with average productivity and have average experience levels
  - Condition of assets is similar to that of other electric utilities (e.g., assets have not been “starved” for maintenance, replacement, and upgrade funding resulting in large work backlogs requiring added staffing)
  - Work environment (e.g., practices, use of automation, leadership, culture) are typical of other companies
- Generally, lowest quartile companies have undertaken and completed their versions of an EPIP.

# Approach...

## Data From Other Companies Was Modeled To BPA System Characteristics To Develop The Staffing Benchmarks



## Approach...

### Benchmarks Used For Transmission & Supply Chain Work Functions

Maintenance & Support	Engineering & Construction	Services
<ul style="list-style-type: none"> <li>Communications Services</li> <li>Facilities</li> <li>Metering &amp; Test</li> <li>Relay Engineering &amp; Test</li> <li>Station Maintenance</li> <li>Station Operations</li> <li>Training</li> <li>Transmission Line Maintenance</li> <li>Vegetation &amp; ROW Clearing</li> <li>Vehicle Maintenance</li> <li>Work Scheduling</li> </ul>	<ul style="list-style-type: none"> <li>Asset Management</li> <li>Communications Engineering</li> <li>Project Management</li> <li>Service Design</li> <li>Standards</li> <li>Station Construction</li> <li>Station Design &amp; Drafting</li> <li>Station Engineering</li> <li>Transmission Engineering</li> <li>Transmission Line Construction</li> </ul>	<ul style="list-style-type: none"> <li>Aviation</li> <li>Forecasting</li> <li>Laboratory</li> <li>Maps, Records &amp; Surveys</li> <li>Power Contracts</li> <li>Rights &amp; Permits</li> <li>Transmission Sales Support</li> <li>Transmission Sales Systems</li> <li>Transmission Sales</li> </ul>
Planning & System Ops	Administration	Supply Chain
<ul style="list-style-type: none"> <li>Grid Planning</li> <li>Non-Utility Generator Planning</li> <li>System Operations Support</li> <li>System Operations</li> <li>Transmission Planning</li> </ul>	<ul style="list-style-type: none"> <li>Administration</li> <li>Business Support</li> <li>Clerical</li> <li>Management Support</li> <li>Management</li> </ul>	<ul style="list-style-type: none"> <li>Clerical</li> <li>Contracts</li> <li>Environmental</li> <li>Facilities</li> <li>Management</li> <li>Materials Management</li> <li>Purchasing</li> <li>Transportation</li> <li>Warehouse</li> </ul>

1

Background and Approach

2

Transmission Findings & Conclusions

3

Supply Chain Findings & Conclusions



### Benchmarks Were Developed By Normalizing Industry Data To BPA System Characteristics Using Several Variables

#### Variables Used To Normalize Staffing (2009 Values And 3-Year Average Changes)

Miles of Overhead Transmission Line

Miles of Underground Transmission Cable

Number of Substations

Operating Revenue

Population Served

Power Purchased, Received & Delivered

Substation kVA

Territory Size

Transformer Capacity

Transmission Plant Construction Expenditures

Transmission Plant Capital Budget

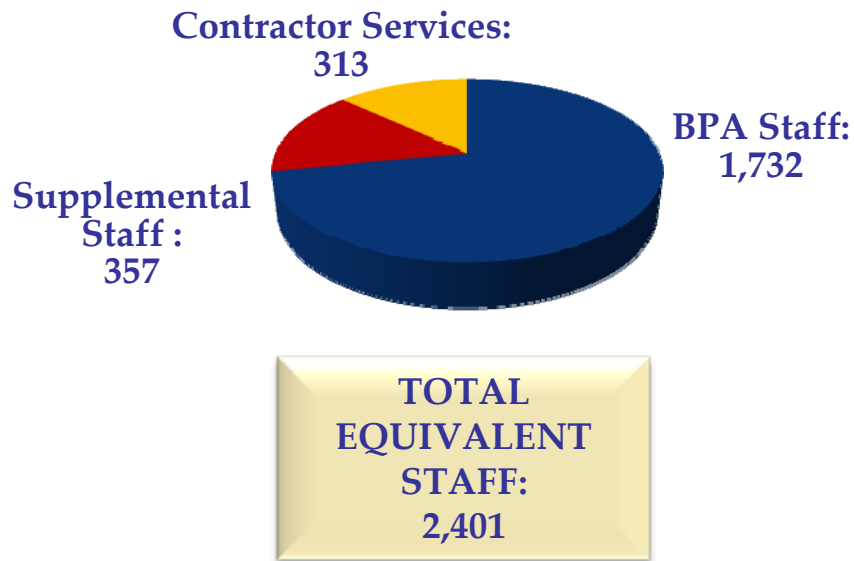
## Findings and Conclusions... Adjustments

### Benchmarks Were Increased For A Number Of Factors Unique To BPA

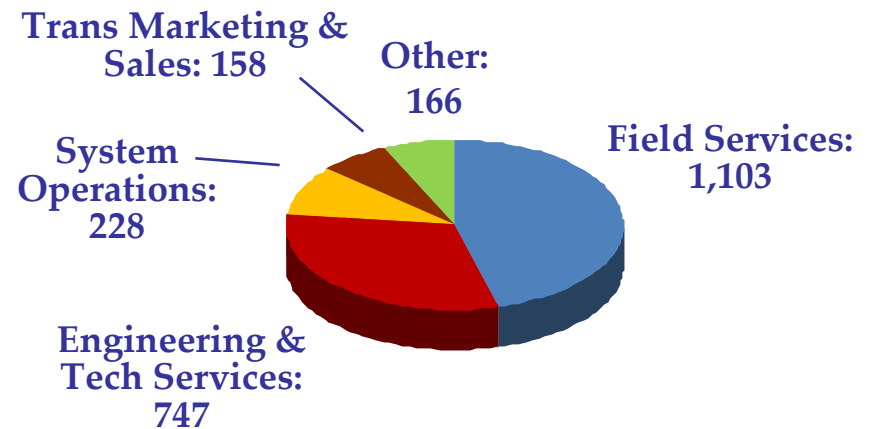
Function Affected	Reason for Benchmark Increase	FTE Increase
Communications Engineering	Unique frequency management issues	3
Maps, Records & Surveys	Work performed for Fish & Wildlife	7
Rights & Permits	Work performed for Fish & Wildlife	2
Station Engineering	3 <sup>rd</sup> party leased equipment	2
Station Maintenance	DC transmission line	8
Station Maintenance	Work performed on customer equipment	4
Station Operations	DC transmission line	11
System Operations	RTO responsibilities	5
System Operations	Two control centers	29
System Operations Support	RTO responsibilities	21

## Findings & Conclusions...

### 2,401 BPA Staff, Supplemental Labor Staff, And Equivalent Staff from Contractor Services Were Found To Be Working On Or Supporting The BPA Transmission System

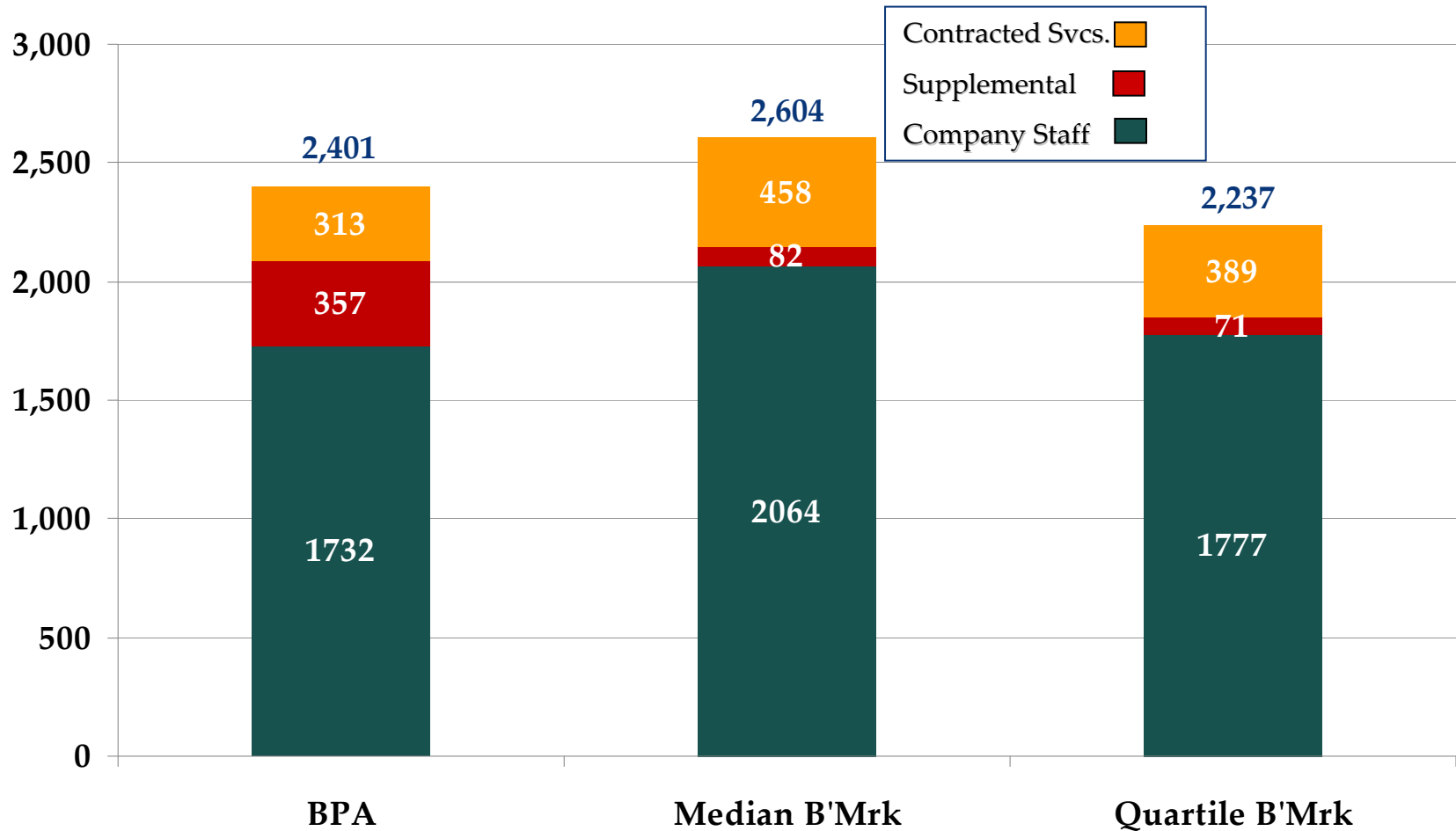


*Due to rounding, numbers do not add up exactly*



## Findings & Conclusions...

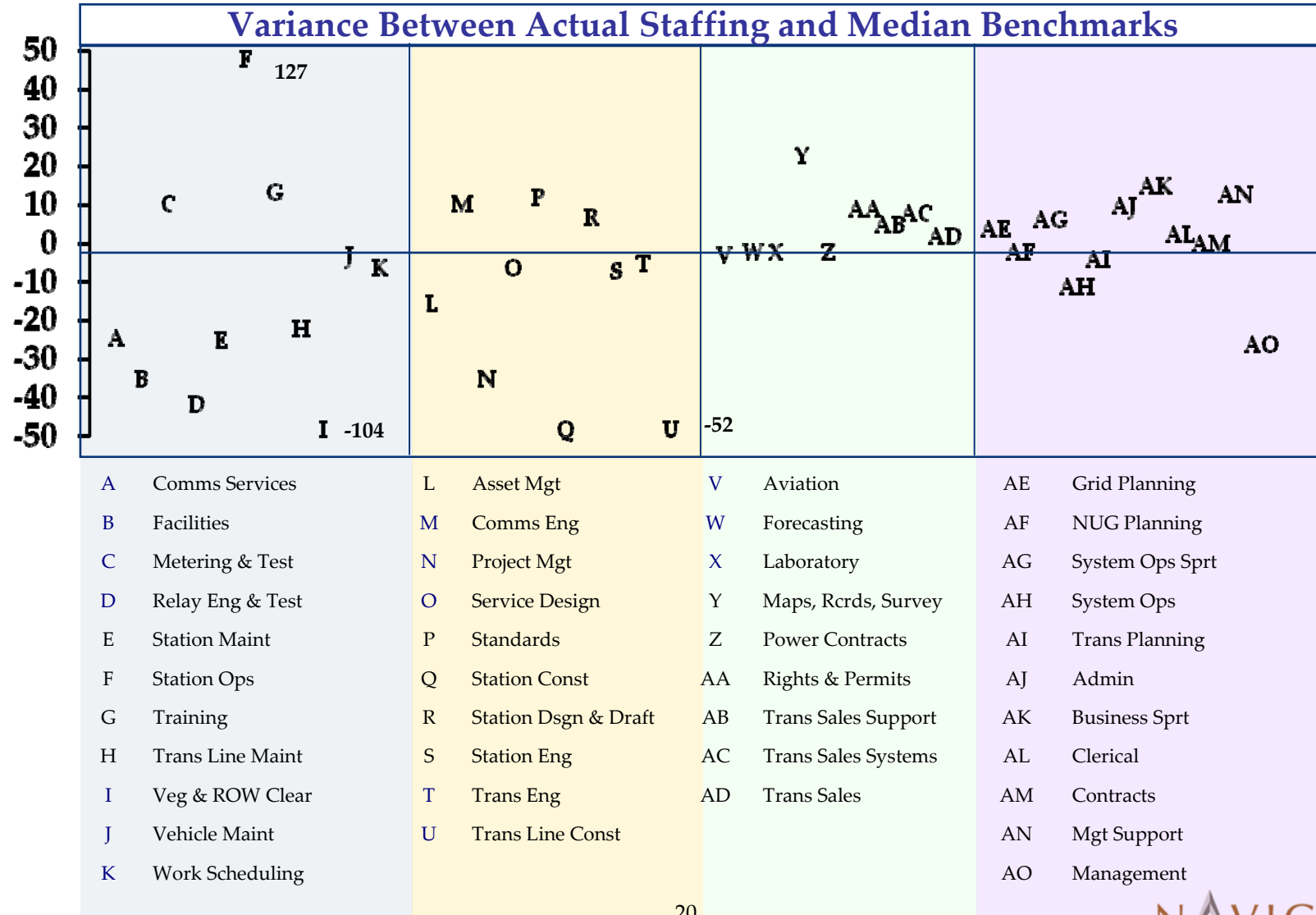
### Total Transmission Staffing Is Between The Median And Quartile Benchmarks



Note: Total benchmarks are based on regression analysis; split of benchmark among company, supplemental, and contracted services staff is based on industry averages, not regression analysis. Due to rounding, numbers may not add up exactly.

# Findings and Conclusions ... Functional Benchmarks

## Most Functions Are Staffed Near Or Below The Median Benchmarks



## Findings and Conclusions ... Organizational Structure

### Compared To Other Utilities, A Greater Percent Of BPA Managers And Supervisors Have A Large Span of Control Or A Small Span of Control

Organization	Number of Managers & Supervisors With Spans Of Control Of:						
	<4	4-5	6-7	8-9	10-11	12-20	>20
Eng & Tech Svcs	0	1	2	2	3	12	12
Field Services	47	36	34	13	7	23	1
Asset Performance	0	0	2	0	1	0	0
Operations	10	5	0	0	0	2	4
Planning	0	0	1	0	0	1	3
Marketing & Sales	1	1	1	3	0	5	2
Other	0	2	0	0	0	2	0
BPA Total	58	45	40	18	11	45	22
BPA Percent	24%	19%	17%	8%	5%	19%	9%
Industry Average	14%	30%	17%	19%	14%	6%	0%

In the industry about 2/3 of spans of control are in this range, while at BPA it is less than half

- In the utility industry, companies have:
  - Increased spans of control that were small by combining organizations
  - Decreased spans of control that were large by dividing organizations into smaller groups which at times also resulted in more layers of management

1

Background and Approach

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Transmission Findings & Conclusions

3

Supply Chain Findings & Conclusions

### Benchmarks Were Developed By Normalizing Industry Data To BPA System Characteristics Using Several Variables

#### Variables Used To Normalize Staffing (2009 Values And 3-Year Average Changes)

Miles of Overhead Transmission and Distribution Line

Number of Generating Plants

Number of Substations

Operating Revenue

Population Served

Power Purchased, Received & Delivered

Power Generated (MWHrs)

Territory Size

Total Number of Company Employees

Transmission and Distribution Plant Construction Expenditures

Generation Plant Construction Expenditures



## Findings and Conclusions... Adjustments

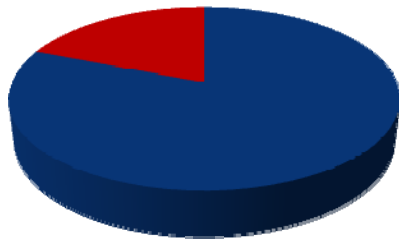
### Benchmarks Were Increased For A Number Of Factors Unique To BPA

Function Affected	Reason for Benchmark Increase	FTE Increase
Contracts	Fish & Wildlife support	5
Warehouse	Non-Transmission Materials Handling	1
Contracts	Bonneville Purchasing Instructions (used FAR adjustment)	2
Purchasing	Bonneville Purchasing Instructions (used FAR adjustment)	2
Transportation	Federal fuels regulatory compliance	1

## Findings & Conclusions...

### 162 BPA And Supplemental Labor Staff Were Found To Be Working On Or Supporting The BPA Supply Chain

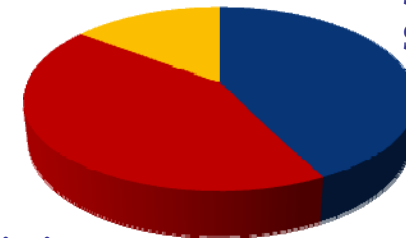
Supplemental  
Staff: 31



BPA Staff:  
131

**TOTAL  
EQUIVALENT  
STAFF:  
162**

Other: 24

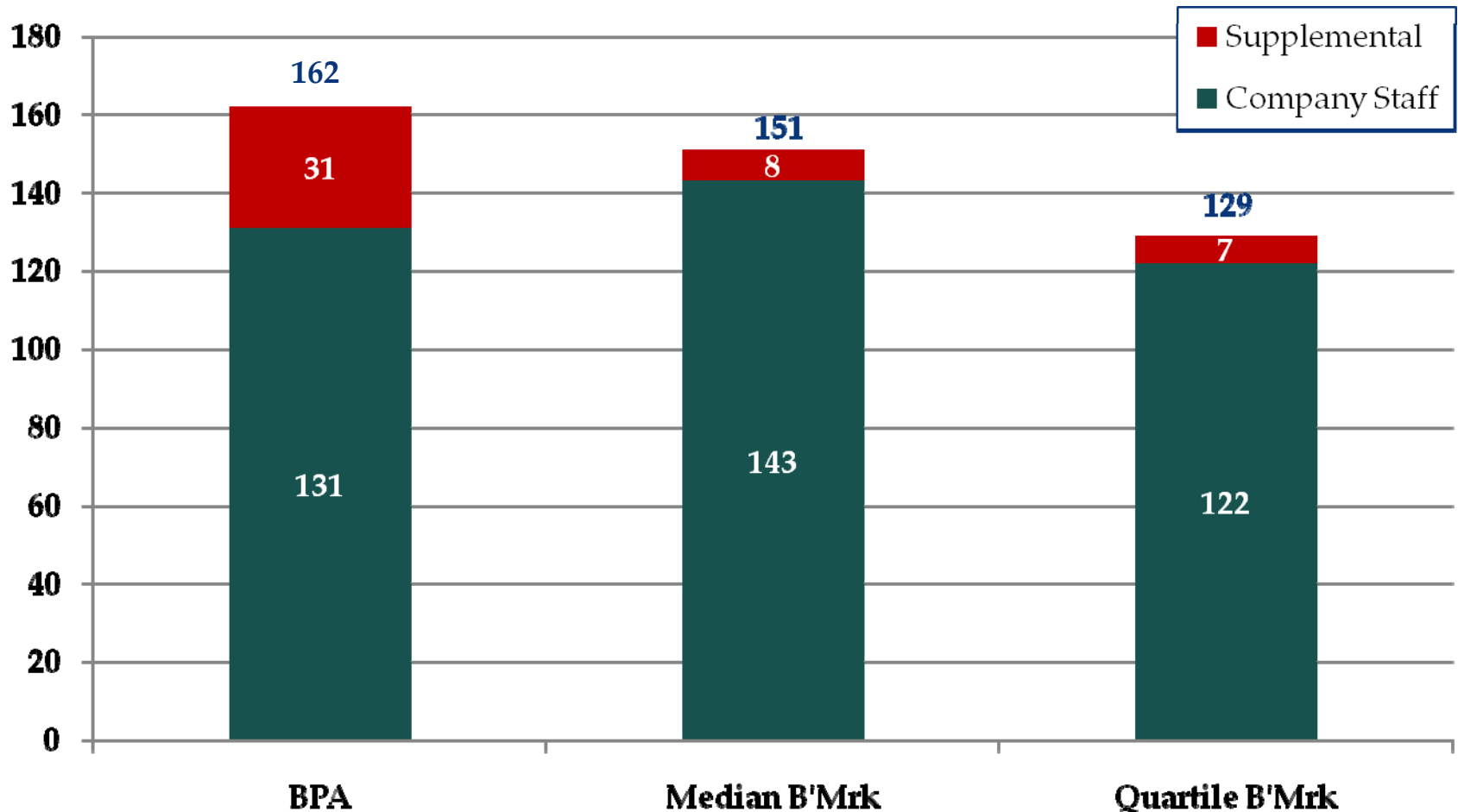


Sourcing  
Services: 69

Logistics  
Management:  
69

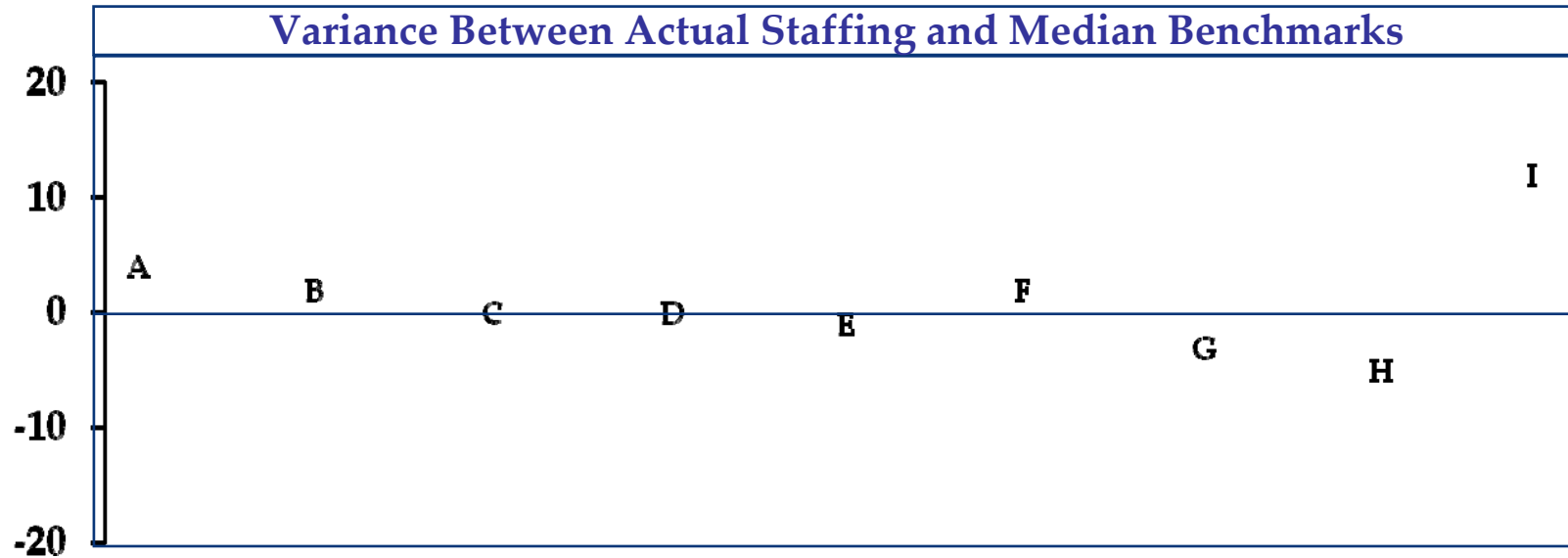
## Findings and Conclusions... Total Benchmarks

### Total Supply Chain Staffing Is Above The Median Benchmark



## Findings and Conclusions... Functional Benchmarks

### Most Functions Are Staffed Near Or Below The Median Benchmarks

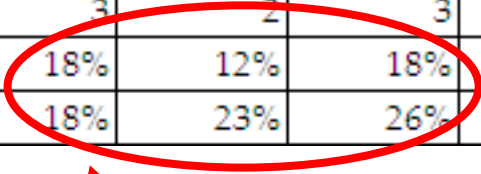


- A Clerical
- B Contracts
- C Environmental
- D Facilities
- E Management
- F Materials Mgt
- G Purchasing
- H Transportation
- I Warehouse

## Findings and Conclusions... Organizational Structure

### More BPA Managers And Supervisors Have Longer Spans Of Control Than The Industry Supply Chain Average

Organization	Number of Managers & Supervisors With Spans Of Control Of:						
	<4	4-5	6-7	8-9	10-11	12-20	>20
Supply Chain Total	2	3	2	3	4	3	0
BPA Percent	12%	18%	12%	18%	24%	18%	0%
Industry Average	8%	18%	23%	26%	19%	6%	0%

 In the industry about 2/3 of spans of control are in this range while at BPA it is less than half

- In the utility industry, companies have:
  - Increased spans of control that were small by combining organizations
  - Decreased spans of control that were large by dividing organizations into smaller groups which at times also resulted in more layers of management

### **Study Results, Consider Risks and Conduct Thorough Analysis of Impacts and Alternatives**

- Study all the functions, benchmarks and observations
  - Identify the reasons for differences between BPA and the study results
- Identify any existing risks associated with functions that are currently staffed below and above the benchmarks
  - Also identify risks from the current mix of resources between BFTE, CFTE and contracted services
- Consider how potential changes to staffing levels or resource mix could address and mitigate such risks
- Any decisions on future changes to staffing levels should be made only following careful and thorough analysis of benefits and costs