INTEGRATED PROGRAM REVIEW

Information Technology

June 16, 2022

Agenda

- Overview of IT Services

- Historical composition of IT Budget

- BP-24 IPR Proposal

- IT Strategy

- Questions

Overview of IT Services

FY22 BPA IT Operations & Asset Inventory

Business Solutions (Services)

- Physical Access Control & Monitoring
  - NERC/CIP Sites — 74
  - Non NERC — 30
- Data Integration Layer (Hub)
  - Subject Areas — 9
  - Service Interfaces — 23

Business Solutions (Applications)

- Critical Business Apps — 27
  - Integration Interfaces — 89
  - Energy Imbal. Mkt. Interfaces — 111
- Enterprise Business Apps — 137
  - Integration Interfaces — 195
- Total J-org Business Apps — 559

IT Client Services

- Desktops/Laptops — 3,046
- Tablet/2-in-1 — 180
- Thin Clients (myPC) — 1,346
- Mobile Thin (myPC) — 180
- Rugged — 496
- Printers — 537
- Service desk calls/mo. — 2115
  - Resolved in 4 hrs. — 73%
- Trouble tickets/mo. — 2263*
- Queue time — 2:52min
- Abandon rate — 5%
- 1st Tier resolution rate — 71%

* Includes calls and email request

Networking & Communications

- Firewalls — 198
- Total Network Nodes — 21,561
  - Desktop Connections — 20,579
  - Server Connections — 797
  - Wide Area Network Links — 180
  - Internet Links — 5
- Switches/Routers — 478/188
- Cellular Devices — 3,093
  - Smart Phones — 1,670
  - Standard Cell Phone — 223
  - Data Only Devices — 1,086
- Data/Voice Circuits — 382
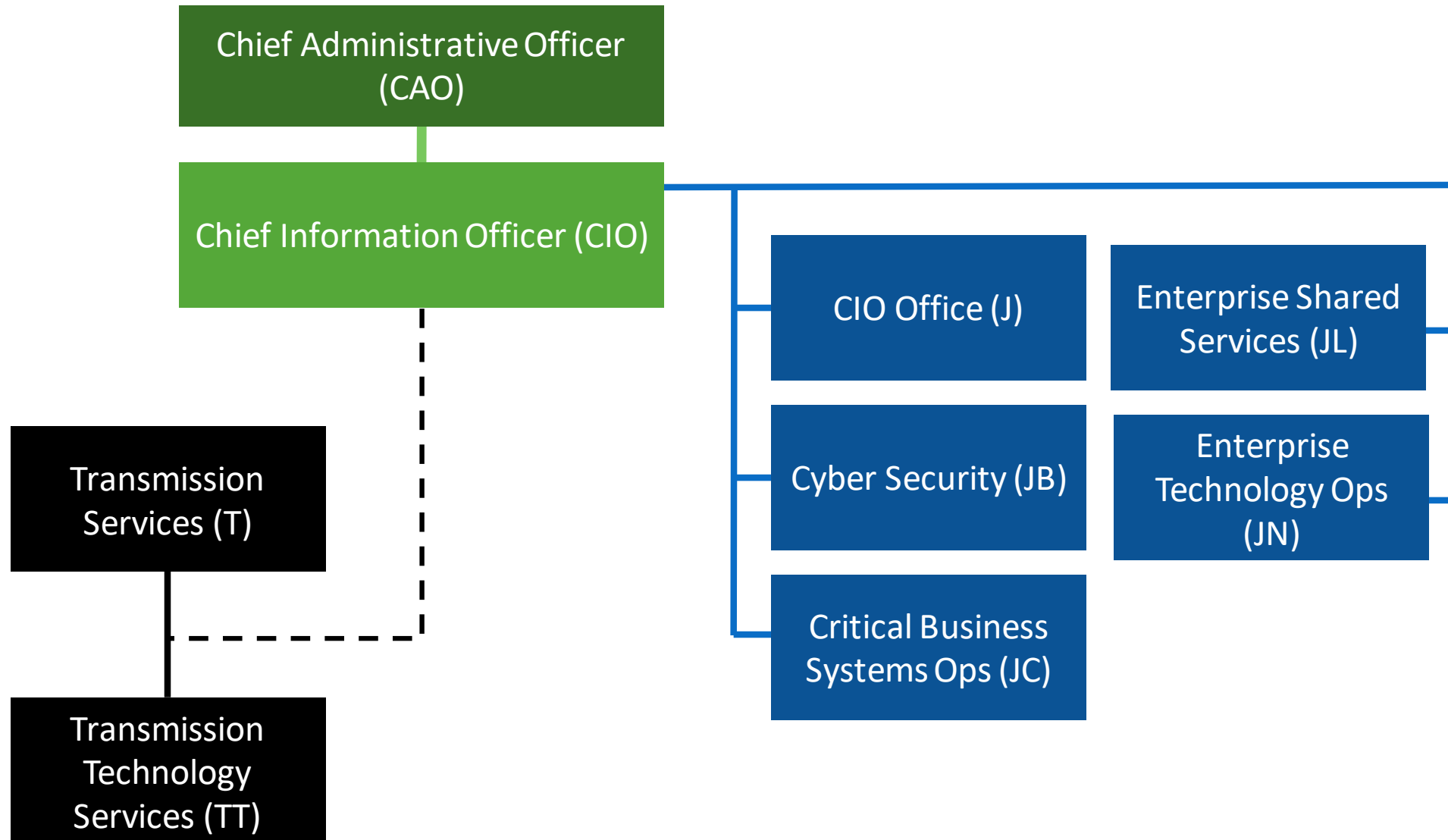- VoIP Desk Telephones — 5,031

Infrastructure & Data Center(s)

(Includes Dev, Test and Prod)

- Windows Servers — 2,396
- Unix/Linux Servers — 291
- Virtual Hosts — 155
- Storage Area Network
- SAN Growth/year — 185TB
- Virtual SAN Used — 1.8PB
  - Free — 1.4PB
- Databases — 2,473
- Standard account users — 4,678
- Elevated account users — 612
- E-mails Received/year — 18,420,171
- E-mail Flagged [BULK MAIL] — 46%
- E-mail Viruses Blocked/year — 9,148
- Ransomware Prevented/year — 331
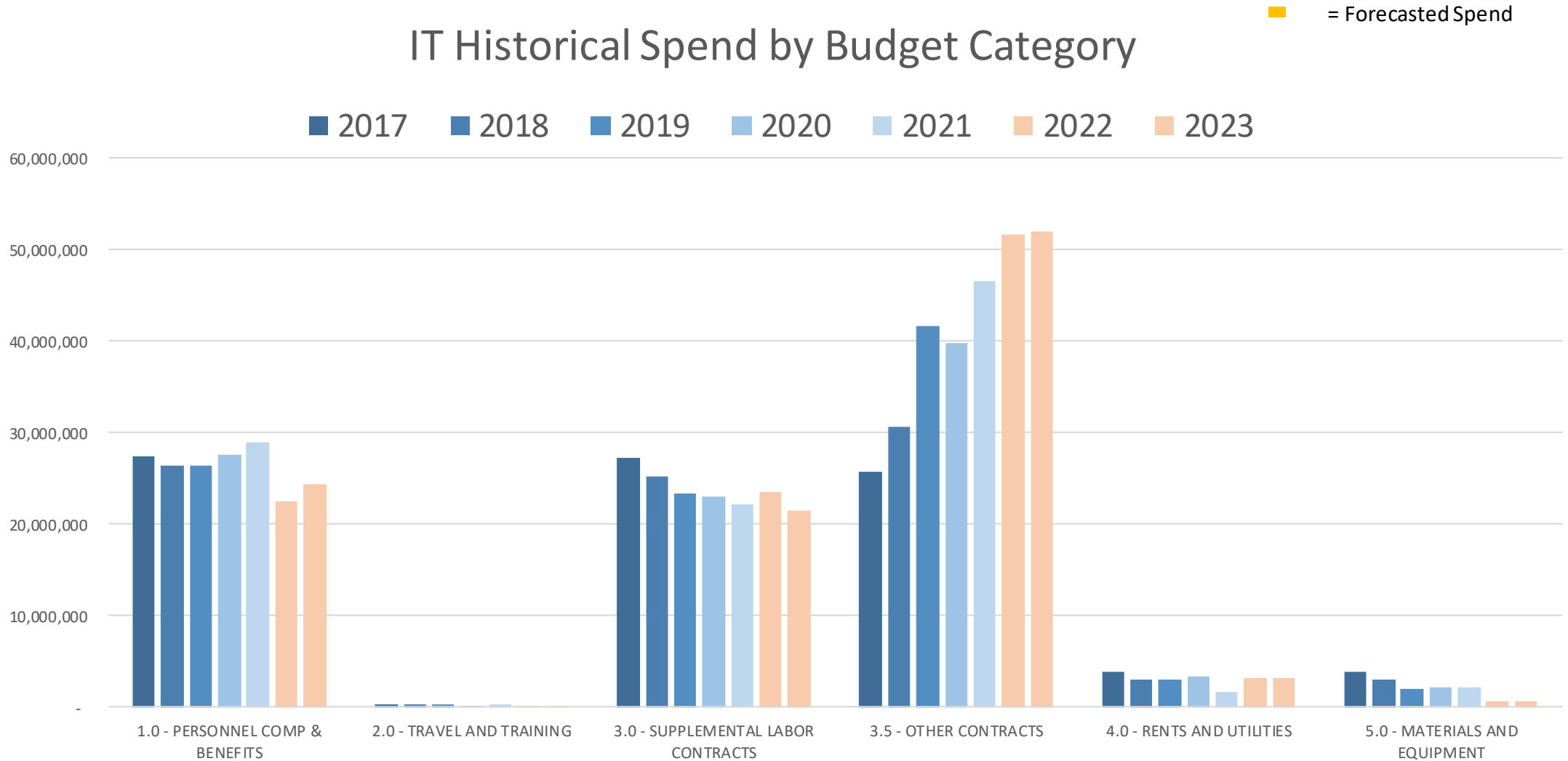
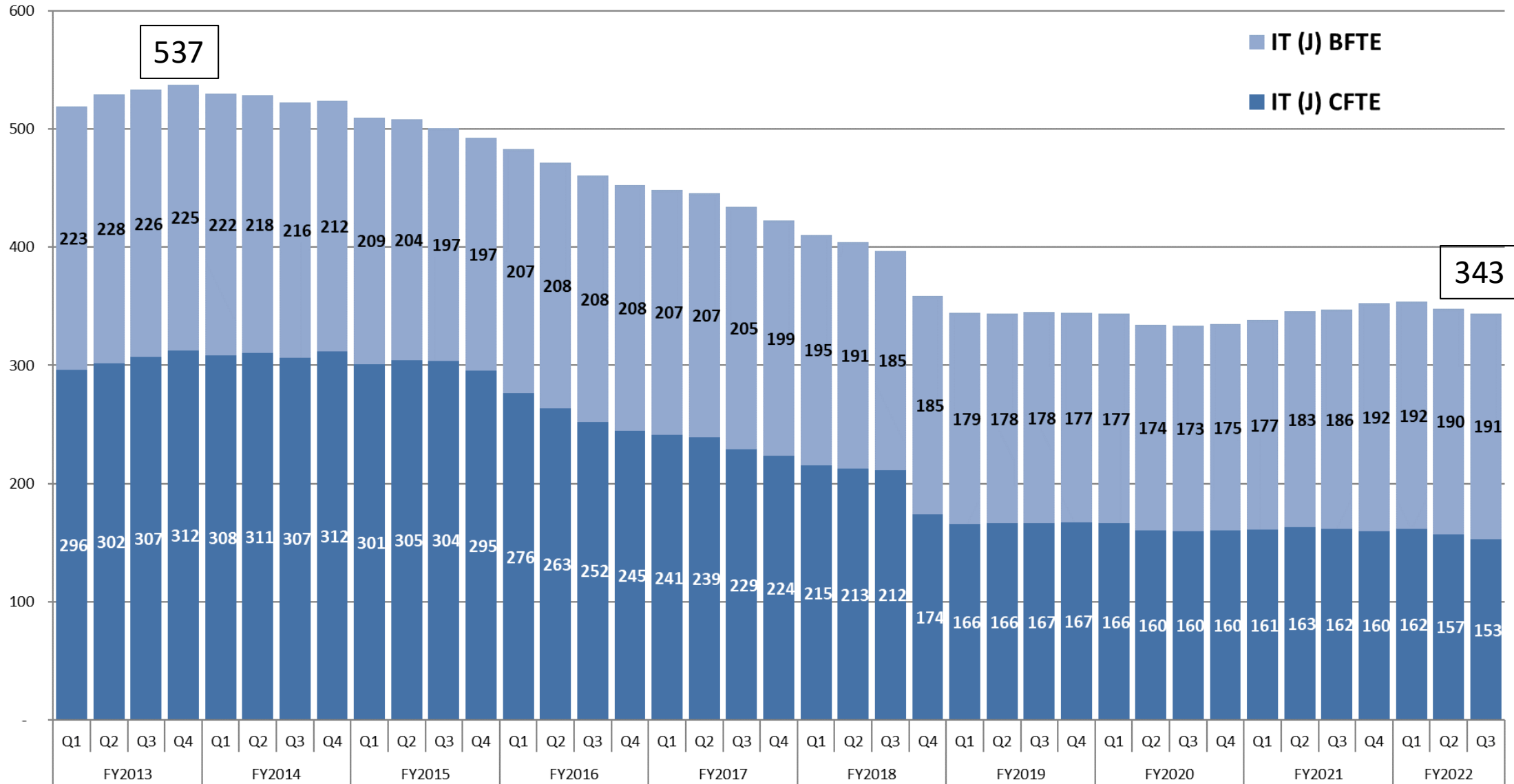BPA Office of the CIO – December 7, 2021

Overview of IT Services

Chief Administrative Officer (CAO)

Chief Information Officer (CIO)

Transmission Services (T)

Transmission Technology Services (TT)

CIO Office (J)

Enterprise Shared Services (JL)

Cyber Security (JB)

Enterprise Technology Ops (JN)

Critical Business Systems Ops (JC)

Historical Composition of IT Costs

IT Historical Costs by Budget Category

IT Historical Spend by Budget Category

= Forecasted Spend

Legend: 2017, 2018, 2019, 2020, 2021, 2022, 2023

Categories: 1.0 - PERSONNEL COMP & BENEFITS, 2.0 - TRAVEL AND TRAINING, 3.0 - SUPPLEMENTAL LABOR CONTRACTS, 3.5 - OTHER CONTRACTS, 4.0 - RENTS AND UTILITIES, 5.0 - MATERIALS AND EQUIPMENT

IT Labor Count

IT Federal Labor Costs

J Only Federal Labor Costs & Headcount

Legend: J Federal Labor Cost | J Federal Labor Headcount | Projected J Federal Labor Cost

Headcount values: 199 (2017), 180 (2018), 178 (2019), 173 (2020), 180 (2021), 191 (2022), 207 (2023), 227 (2024), 237 (2025)

Categories: Historical Actuals (2017–2021), BP 22 Rate Case (2022–2023), Proposed IPR BP 24 (2024–2025)
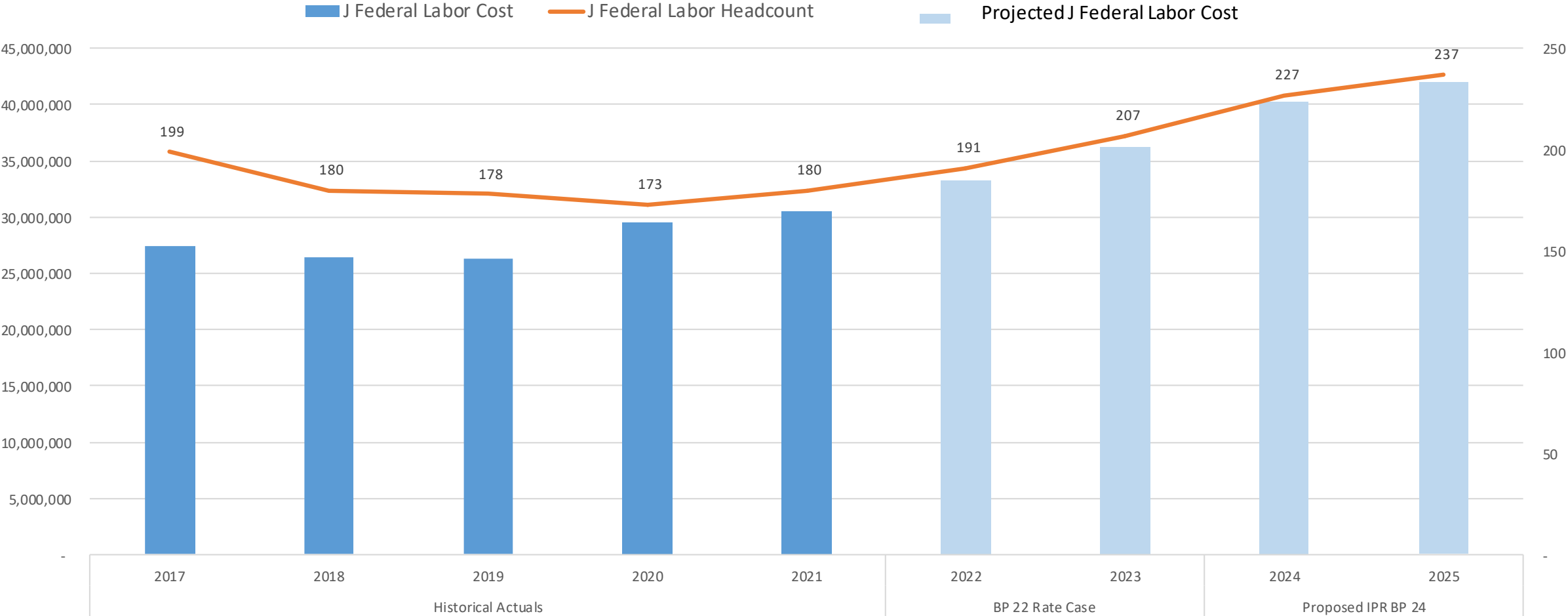
IT Supplemental Labor Costs

IT Supplemental Labor

Legend: ■ IT Supplemental Labor Cost — IT Supplemental Labor Headcount ■ Projected IT Supplemental Labor Cost

Year	Headcount
2017	218
2018	167
2019	165
2020	158
2021	158
2022	157
2023	141
2024	131
2025	121
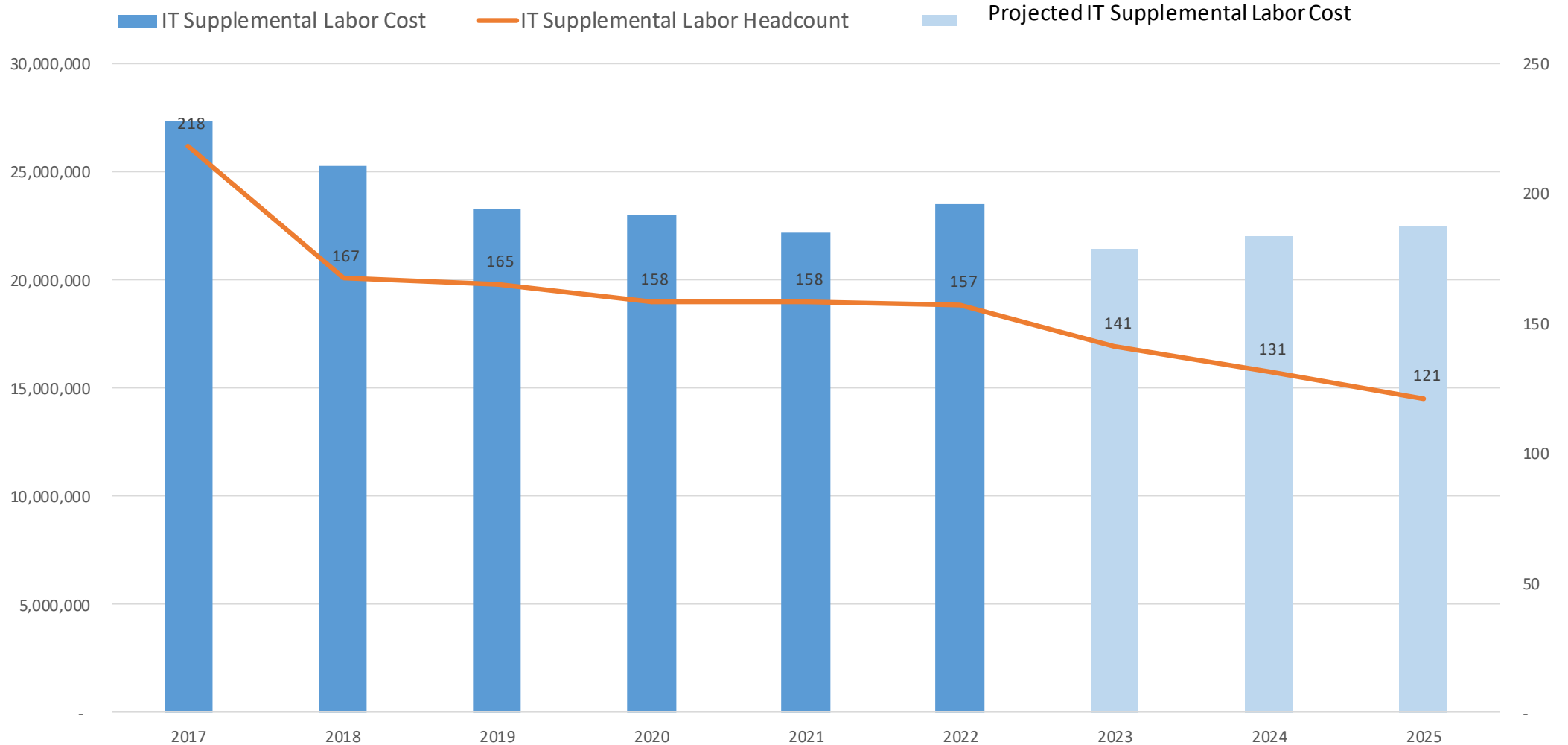
IT Contract Costs

- IT contracts costs are the largest component (46%) of IT's budget
- When comparing 2017 to 2021, contract costs have increased $20.8 million, from $25.8m to $46.6m, far greater than inflation.
  - Many existing contracts increase 10% per year ($4.6 million per year)

Major contract increases, include:
- Microsoft Enterprise Agreement (OS, Office, Visio, SQL, Project …)
- Cisco and Palo Alto networks
- Oracle database
- Dell desktop/laptop equipment leases
- Pacific Office Automation printers
- Telecom circuit providers
- Discovery Core eDiscovery architecture
- Server and storage hardware infrastructure
- Smart Phone capability increases

IT Contract Costs

Main drivers for increased contract costs:

1. Increases in software licensing
   - 30% increase for Microsoft Enterprise software
2. Increased usage of Software-as-a-service
   - Increased costs of subscriptions and annual contracts
   - Projects planned as capital were expensed due to cloud-based solutions
3. New compliance requirements:
   - Mandatory cyber security monitoring
   - Telecom circuits for NERC CIP sites
4. Increased costs for implementation of new systems beyond the rate of inflation
5. Increased demand for new, on-going projects
   - Grid Modernization
   - Energy Imbalance Market (EIM)
   - Asset Suite

BP-24 IT Proposal

IT requested a $17 million increase from BP20
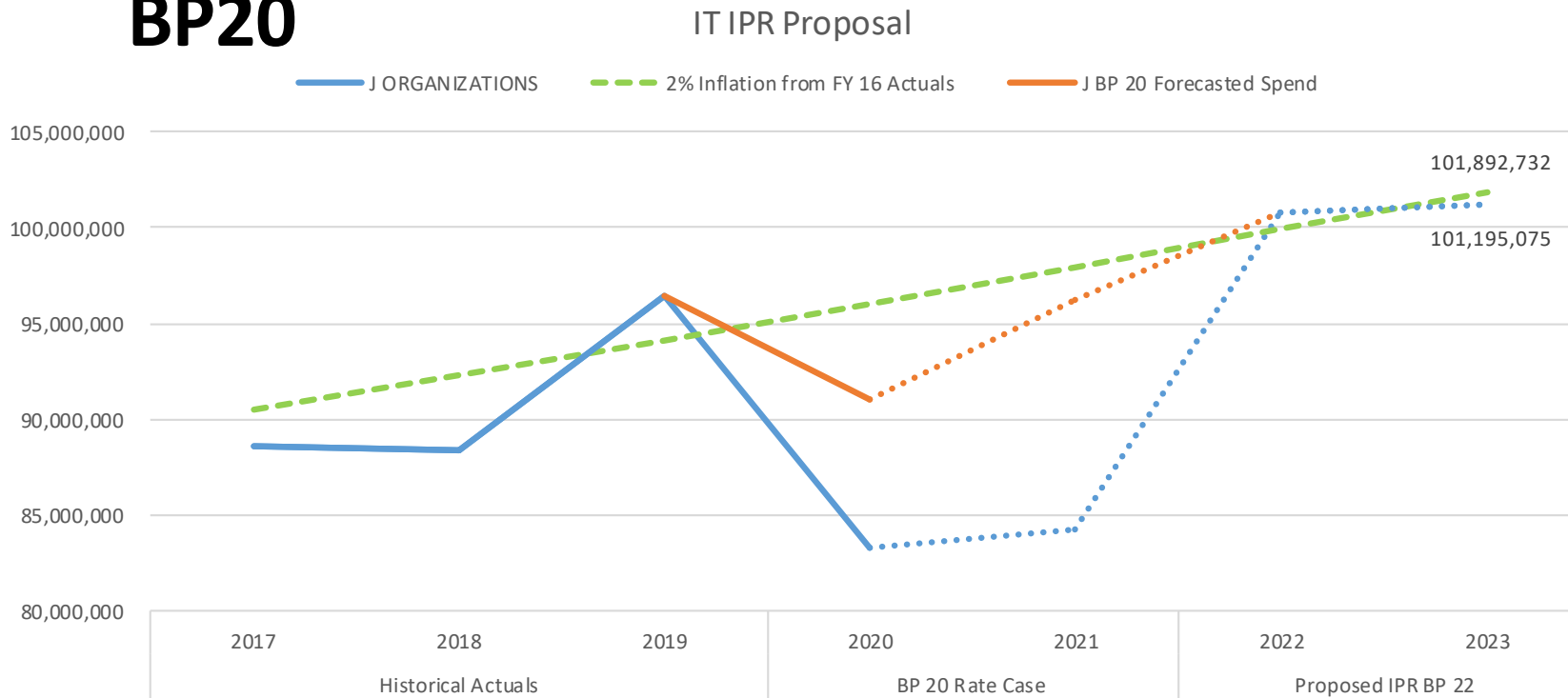
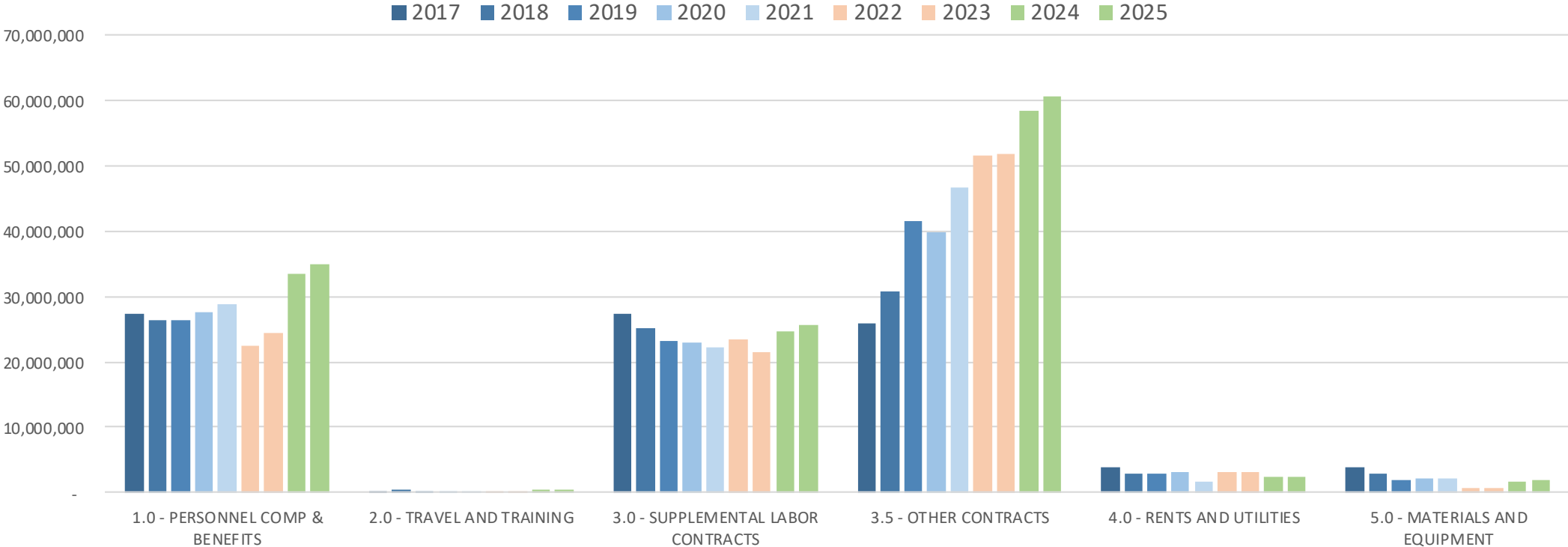**IT IPR Proposal**

IT IPR Proposal							
	Historical Actuals			**BP 20 Rate Case**		**Proposed IPR BP 22**	
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
J ORGANIZATIONS	88,541,659	88,376,973	96,414,537	83,219,967	84,251,108	100,746,133	101,195,075
2% Inflation from FY 16 Actuals	90,477,830	92,287,387	94,133,134	96,015,797	97,936,113	99,894,835	101,892,732
J BP 20 Forecasted Spend	88,541,659	88,376,973	96,414,537	**91,064,000**	**96,251,108**	100,746,133	101,195,075

The major drivers for the increase is due to increased contract costs (see slide 12), **and increased labor costs.**
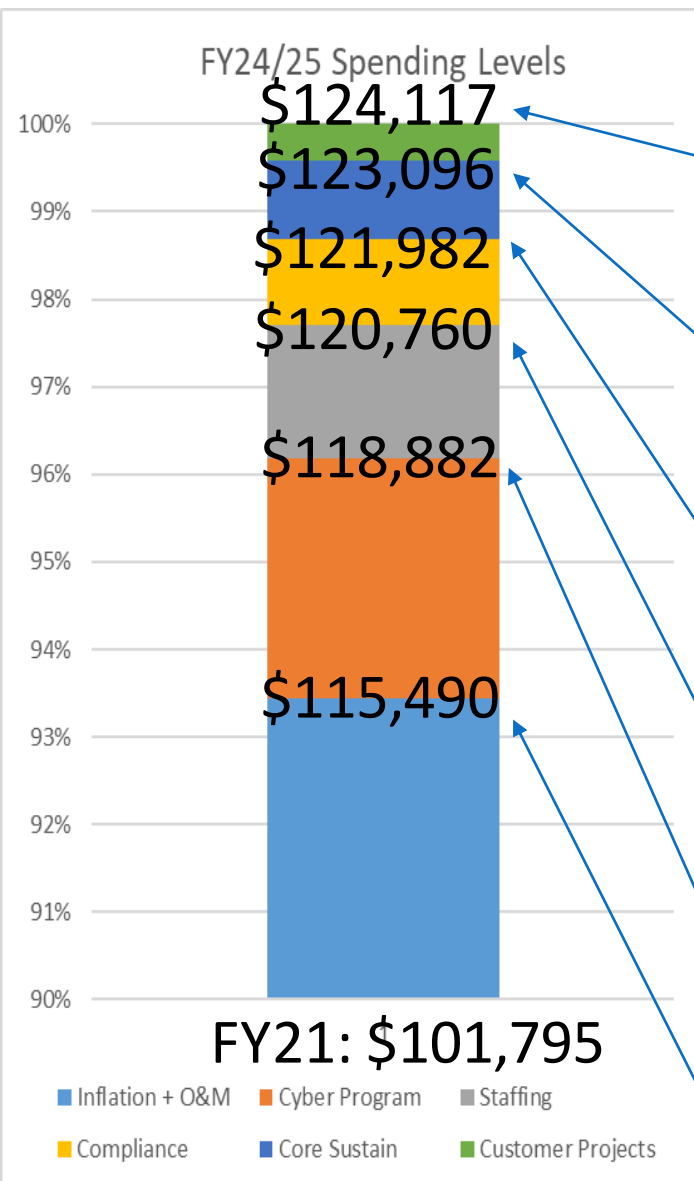

IT Historical Spend by Budget Category

Legend: 2017 2018 2019 2020 2021 2022 2023 2024 2025

Categories: 1.0 - PERSONNEL COMP & BENEFITS, 2.0 - TRAVEL AND TRAINING, 3.0 - SUPPLEMENTAL LABOR CONTRACTS, 3.5 - OTHER CONTRACTS, 4.0 - RENTS AND UTILITIES, 5.0 - MATERIALS AND EQUIPMENT

IT BP 24 Proposal

IT was able to meet BP20 rate case funding levels, and will do so for BP22 as well, but at a cost of:

1. Deferring federal and contractor position backfills
   - Increased risk due to single points of failure
2. Deferring customer requests for new systems
3. Deferring some life cycle refresh activities
4. Slowing continuity for corporate systems

BP-24 IT Strategy

IT as a Customer Service Organization

Are we working on the right things?

Increasing cost of information availability

Ability to deliver through shrinking budgets

More business online
More applications
More data

DEMAND

The Widening Gap

SUPPLY

More requests chasing fewer resources
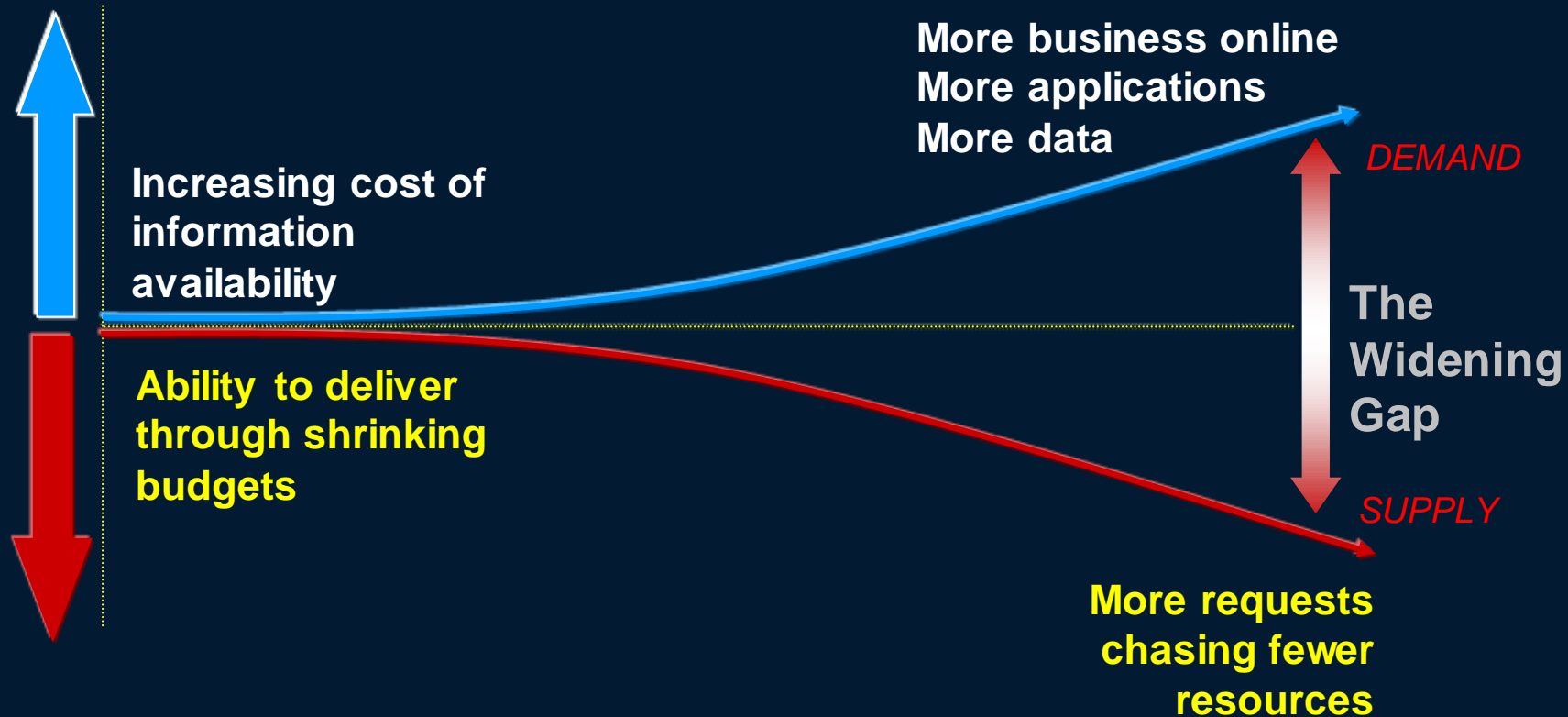
IT as a Customer Service Organization

IT continues to focus on maturing effective customer service. A customer-oriented culture will:

- Help cut costs

- Increase productivity

- Improve interdepartmental communication and cooperation

- Boost employee morale

- Align goals

- Harmonize processes and procedures

- Deliver continuous measureable improved service to our customers

IT Support for Agency Initiatives

Increased O&M for Grid Modernization

- Metering and Billing
- Energy Imbalance Market (EIM)
- Data Analytics
- Customer Portal

New Initiatives

- Internet Protocol Version 6 (IPv6)
- Datacenter Consolidation to Vancouver Control Center
- Grand Coulee Dam Yard Acquisition
- Asset Management

IT Ongoing Initiatives

- **Reduce Costs:**
  - Increase IT cost transparency through IT Service Catalogue
  - Maintain reliability and operational metrics
  - Execute on service level agreements
  - Increase cloud-based solutions
  - Implement IT Service Management model

- **Improve Continuity:** Strengthen continuity for Enterprise Business Systems

- **Effectively Manage Assets:** Conduct life cycle updates for existing systems (eliminate break/fix approach)

- **Enhance Cyber Security and Compliance through:**
  - Zero Trust Architecture (scope to be determined)
  - Continuous Monitoring and Mitigation
  - System Assessments and Upgrades

QUESTIONS?

FINANCIAL DISCLOSURE

This information was publicly available on
June 9, 2022, and contains information not sourced
directly from BPA financial statements.