Agenda

• Overview of IT Services
• Historical composition of IT Budget
• BP-22 IPR Proposal
• IT Strategy
• Questions
Overview of IT Services
BONNEVILLE POWER ADMINISTRATION

BPA IT Operations and Services

(IT Administrative Systems, Applications Portfolio)

**Business Solutions (Services)**
- Physical Access Control & Monitoring
  - NERC/CIP Sites 76
  - Non NERC 35
- Data Integration Layer (Hub)
  - Subject Areas 9
  - Service Interfaces 23

**Business Solutions (Applications)**
- Critical Business Apps 23
- Integration Interfaces 92
- Enterprise Business Apps 42
- Integration Interfaces 63
- Total J Business Apps 225

**Networking & Communications**
- Firewalls 300
- Total Network Nodes 12,553
- Desktop Connections 10,719
- Server Connections 1,683
- Wide Area Network Links 146
- Internet Links 5
- Switches/Routers 645/211
- Cellular Devices 3,093
- Smart Phones 1,644
- Standard Cell Phone 395
- Data Only Devices 1,054
- Data/Voice Circuits 382
- VoIP Desk Telephones 5,031

**Infrastructure & Data Center(s)**
- Windows Servers 1,682
- Unix/Linux Servers 91
- Storage Area Network 900TB
  - SAN Growth/year >150TB
  - Virtual SAN 1.8PB
- Databases (Oracle, SQL) 2,620*
- Standard Account Users 4,171
- Elevated Account Users 561
- Emails /mo. Received 3,255,852
- Emails/mo. Legitimate 2,250,324

**Email Security**
- Email Flagged as Spam 8.9%
- Email Blocked (bad sources) 3.0%
- Email Virus blocked /mo. 660

*Includes calls and email request

**IT Client Services**
- Desktops/Laptops 3636
- Tablet/2-in-1 96
- Thin Clients (myPC) 1076
- Mobile Thin (myPC) 351
- Printers 537
- Service desk calls/mo. 3,770
  - Resolved in 4 hrs. 81%
- Trouble tickets/mo. 6218*
- Queue time 160 sec
- Abandon rate 10%
- 1st Tier resolution rate 61%

*Includes calls and email request

BPA Office of the CIO – February 2020
Enterprise Technology Assessment

BONNEVILLE POWER ADMINISTRATION | IPR JUNE 16, 2020
Overview IT Services

Chief Administrative Officer (CAO)

Chief Information Officer (CIO)

CIO Office (J)

Cyber Security (JB)

Critical Business Systems Ops (JC)

Enterprise Shared Services (JL)

Enterprise Technology Ops (JN)
Historical Composition of IT Costs
IT Historical Costs by Budget Category

IT Historical Spend by Budget Category

- 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

- 2017
- 2018
- 2019
- 2020
- 2021

= Forecasted Spend
IT Federal Labor Costs

J Only Federal Labor Costs & Headcount

- J Federal Labor Cost
- J Federal Labor Headcount

Historical Actuals
- 2017: 199
- 2018: 180
- 2019: 178

BP 20 Rate Case
- 2020: 173
- 2021: 180
IT Supplemental Labor Costs

IT Supplemental Labor

2017 2018 2019 2020 2021

IT Supplemental Contract Spend
IT Supplemental Labor Headcount

Forecasted Spend

BONNEVILLE POWER ADMINISTRATION | IPR JUNE 16, 2020
IT Contract Costs

- IT contracts costs are the largest component (39%) of IT’s budget
- When comparing 2017 to 2019, contract costs have increased $19.6 million, far greater than inflation.
  - Many existing contracts increase 10% per year ($4 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
Main drivers for increased contract costs:

1. Increases in software licensing
   – 30% increase for Microsoft SQL server
   – 30% increase for additional storage software and applications (eDiscovery)

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. Increase costs for implementation of new systems beyond the rate of inflation

5. Increased demand for new, on-going projects
BP-22 IT Proposal
### IT BP-22 Proposal

**IT request a $17 million increase from BP20**

#### IT IPR Proposal

<table>
<thead>
<tr>
<th>Year</th>
<th>Historical Actuals</th>
<th>BP 20 Rate Case</th>
<th>Proposed IPR BP 22</th>
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<tbody>
<tr>
<td>2017</td>
<td>88,541,659</td>
<td>83,219,967</td>
<td>100,746,133</td>
</tr>
<tr>
<td>2018</td>
<td>88,376,973</td>
<td>84,251,108</td>
<td>101,195,075</td>
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<td>2019</td>
<td>96,414,537</td>
<td>96,015,797</td>
<td>99,894,835</td>
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<td>2020</td>
<td>83,219,967</td>
<td>97,936,113</td>
<td>101,892,732</td>
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<td>2021</td>
<td>84,251,108</td>
<td>96,251,108</td>
<td>101,195,075</td>
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<td>2022</td>
<td>100,746,133</td>
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</tr>
<tr>
<td>2023</td>
<td>101,195,075</td>
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</tr>
</tbody>
</table>

### J ORGANIZATIONS

- **2% Inflation from FY 16 Actuals**
- **IT BP 20 Forecasted Spend**

IT request a $17 million increase from BP20.
The major drivers for the increase is due to increase contract costs (see slide 11)

IT Historical Spend by Budget Category

- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023

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’s budget was reduced $14.1 million from BP-18 to BP-20 based on three assumptions:

1. $6 million IT underspend in BP-18
   • BP-18 rate case average: $98 million
   • BP-18 average actual spend: $92 million

2. Requests to reduce IT costs through deferral of asset management life-cycle replacements

3. Estimated Enterprise Technology Assessment savings by the end of BP-20
IT’s Enterprise Technology Assessment achieved cost savings from FY 18 to FY 20

The Timeframe: Apr FY 18 – Apr FY 20

The Target: $18.3 million in savings

The results (forecast): $16 million cost avoidance $10 million sustained savings
ETA achievements include:

• Reorganization of Service Management resulting in reduced staff levels and consolidation of common software
• Role-based Provisioning delivers right-sized resources.
• Improved IT Governance increased scrutiny over IT projects, decreased number of new systems.
• IT Contracts Management analysis resulted in some contract eliminations and down-sizing
• Cloud-based service adoption reduced total cost of ownership
  o  Occupational Safety and Health
  o  Library archive
ETA achievements mitigated BP-22 request to increase, however, savings achieved outpaced by increasing contract costs.

1. Increases in software licensing
2. Increased usage of Software-as-a-service
3. New compliance requirements:
4. Increase costs for implementation of new systems
5. Increased demand for new, on-going projects
BP-22 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
- More requests chasing fewer resources

The Widening Gap

DEMAND

SUPPLY
IT will 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
Grid Modernization:

- Metering and Billing
- Integration architecture
- Energy Imbalance Market
- Data Analytics
- Customer Portal
IT Ongoing Initiatives

• **Reduce Costs:**
  - Increase IT cost transparency through IT Service Catalogue
  - Reliability and operational metrics
  - Service level agreements
  - Cloud-based solutions
  - IT Service Management model implementation

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

• **Effectively Manage Assets:** Life cycle updates for existing systems (eliminate break/fix approach)

• **Cyber Security:** Enhance Cyber Security Continuous Monitoring and Mitigation
QUESTIONS?
FINANCIAL DISCLOSURE

This information was publicly available on June 12, 2020, and contains information not sourced directly from BPA financial statements.