WAPA Annual Customer Meeting
2018

Dec. 10, 2018
8:30 am – noon MST
Hilton Garden Inn, Downtown Denver
Welcome and Introductions

Teresa Waugh
Chief Public Affairs Officer
Opening Remarks

Mark A. Gabriel
Administrator and Chief Executive Officer
FY 2018 accomplishments

- Completed the Power Repayment Study
- Held rates flat for nine years for 25% of customers
- Increased net market revenues by $42M in SPP
- Responded to the Carr Fire in northern California
- Expanded transparency efforts
- Returned $16M to customers after settling 17-year-old litigation
- Supported the delisting of two fish, one plant species
- Refreshed WAPA's core values
- $70+ million in cost avoidance through CPI program
- Hosted Technology and Security Symposium
- Participated in GridEx
- Lowered rates two years in a row for 50% of customers
- Selected new Reliability Coordinators
- Welcomed 57th powerplant to our system
- Responded to volcano Kilauea on Hawaii
- Responded to hurricanes in the USVI and Puerto Rico
- Generated 27,308 GWh of energy, or 106% of average
- Resolved 97% of cyber issues in two days or less
- Expanded Hoover hydro to reach 58 new allottees
- Trained and added real-time engineers to operations
Mission breakout

**RELIABILITY**
- 651 people
- and
- 28 percent
  of dollars invested in maintenance and related areas

**MARKETING**
- including purchase power and wheeling
- 158 people
- and
- 42 percent
  of dollars committed to power marketing areas

**DELIVERY**
- 334 people
- and
- 22 percent
  of dollars dedicated to power operations and engineering areas

**COST-BASED**
- and related services
- 298 people
- and
- 8 percent
  of dollars applied to support the mission
## FEVS results

<table>
<thead>
<tr>
<th>Question</th>
<th>FY18 Positive</th>
<th>5-year trend (FY14 thru FY18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Rates</td>
<td>65.0%</td>
<td></td>
</tr>
<tr>
<td>Employee Engagement: Overall</td>
<td>70.7%</td>
<td></td>
</tr>
<tr>
<td>Employee Engagement: Leaders Lead</td>
<td>56.6%</td>
<td></td>
</tr>
<tr>
<td>Employee Engagement: Supervisors</td>
<td>78.6%</td>
<td></td>
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<tr>
<td>Employee Engagement: Intrinsic Work Experience</td>
<td>76.8%</td>
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<tr>
<td>Global Satisfaction</td>
<td>71.8%</td>
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<tr>
<td>New IQ: Overall</td>
<td>63.6%</td>
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<tr>
<td>New IQ: Fair</td>
<td>50.7%</td>
<td></td>
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<tr>
<td>New IQ: Open</td>
<td>61.0%</td>
<td></td>
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<tr>
<td>New IQ: Cooperative</td>
<td>59.3%</td>
<td></td>
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<tr>
<td>New IQ: Supportive</td>
<td>80.6%</td>
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<tr>
<td>New IQ: Empowering</td>
<td>66.6%</td>
<td></td>
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</tbody>
</table>
Core Values

- Listen to understand, speak with purpose
- Seek. Share. Partner.
- Be curious, learn more, do better. Repeat.

- Respect self, others and environment.
- Do what is right. Do what is safe.
- Serve like your lights depend on it.
Preparing for the future
A connected WAPA
Tactical Action Plan & Roadmap

- Third TAP since 2014
- Activities & areas of focus for 2-3 years to progress along Roadmap
- Basis of annual performance targets
2019 Tactical Action Plan

Mission Critical Customer Services in an Evolving Industry
- Preparing for Markets
- Organizational Approach to Markets

Asset Management 2.0
- Major Assets Life Cycle Management
- Additional Assets Life Cycle Management
- Data as a Strategic Asset

Grid Resilience
- Physical Security
- Cyber Security
- Emergency Management
- Strategic Transformer Management
- Fiber Exploration

People and Organization
- Human Performance and Just Culture
- Leadership Development
- Program and Budget Integration
- Acquisition Management
Human Performance & Just Culture

• HP: The people side of process
  – Three-way checks
  – Near-miss reporting
  – Job hazard briefings /tailboards

• Just Culture: Handling HP in a fair & objective way
  – Human
  – At-Risk
  – Reckless
COO/CAO realignment

Kevin Howard

Tracey LeBeau
Staffing changes

• VP of IT – Network: Gary Harmon
• VP of Asset Management: Chris Lyles

Career broadening:

• DSW VP of Trans Sys AM Jimmy Kendrick switched with DSW VP of Power Marketing Jack Murray
• SN VP of Trans Sys AM Arun Sethi switched with SN VP of Power Marketing Sonja Anderson
• RM VP of Operations Darren Buck switched to VP of Trans Sys AM
New RM regional manager

Senior VP and Rocky Mountain Regional Manager
Dawn Roth Lindell
What to expect

• Early predictions are coming to fruition
• Two sets of roundtable discussions

10-year roll up and appropriations from 2014 meeting
Contact/follow me

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Mark Gabriel
WesternAreaPower1
westernareapower
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Financial Strategy Update

Colin Marquez
Acting Senior VP and Chief Financial Officer
Financial strategies

• Reserve balances strategy progress
• Transparency update
• Fiscal Year 2021 strategic budget guidance
# Reserve balances strategy

Sustainable funding tool in support of WAPA’s mission

<table>
<thead>
<tr>
<th></th>
<th>Annual O&amp;M</th>
<th>Capital funding</th>
<th>Purchase power &amp; wheeling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example</strong></td>
<td>Salaries, supplies and equipment</td>
<td>Building new transmission lines and related structures</td>
<td>Buying power on behalf of customers when water conditions require it</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Allows WAPA to sustain operations during emergencies, continuing resolutions or lapses in appropriations</td>
<td>Provides funding in advance of starting capital construction projects and flexibility with schedule / priority changes in collaboration with customers</td>
<td>Improves both WAPA and customer cash management, allowing for continued funding of critical capital construction and maintenance projects</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td>Retain 31% of annual funding need</td>
<td>Retain sufficient funding to cover up to 3 years of capital investments</td>
<td>Retain 3 years estimated funding during drought</td>
</tr>
</tbody>
</table>

Carrying reserve balances does not impact power rates
Fiscal year-end 2018 reserve balances summary of all accounts

- **Strategy progress: 2016-18**
  - Annual: Reduced ~ $64M
  - Capital: Reduced ~ $182M
  - PPW: Increased ~ $142M

- **Returns to U.S. Treasury Reclamation Fund**
  - 2016: $328M
  - 2017: $338M
  - 2018: $266M
### Planned FYE 18 targets/actions

**CROM account strategies**

<table>
<thead>
<tr>
<th>Program</th>
<th>FYE 18 Balance</th>
<th>Strategy Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual O&amp;M</strong></td>
<td></td>
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<tr>
<td>• FY18 enacted budget authorized ~$44M use of PY balance</td>
<td>$66.7M</td>
<td>$68.5M</td>
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<tr>
<td>• Target changes annually based on program year</td>
<td></td>
<td></td>
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<tr>
<td>• Use of PY balances through budget formulation as needed</td>
<td></td>
<td></td>
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<tr>
<td><strong>Capital</strong></td>
<td></td>
<td></td>
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<tr>
<td>• Regions collaborate with customers on amount to retain</td>
<td>$133.5M</td>
<td>$166.1M</td>
</tr>
<tr>
<td>• Target changes annually based on rolling 10-year plans</td>
<td></td>
<td></td>
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<tr>
<td>• Returns to Treasury as needed</td>
<td></td>
<td></td>
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<tr>
<td><strong>Purchase Power &amp; Wheeling</strong></td>
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<tr>
<td>• Executed incremental increase of ~$45M</td>
<td>$290.8M</td>
<td>$393.0M</td>
</tr>
<tr>
<td>• Reach target by FYE 2020</td>
<td></td>
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<tr>
<td>• Requires solution to CBO budget authority “scoring” issue</td>
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</table>

** Does not include CROM “Other,” CRBPMF, TIP, Falcon-Amistad, Emergency Fund
Transparency

• Created “The Source” in 2016
• Expanded financial data in May 2018
• Ongoing enhancements to capital and annual “work plan” reviews
• Programmatic insight
FY21 Administrator’s budget guidance

• Investment drivers
• Assumptions / constraints

Read more:

The Source – Budget Allocation
Investment drivers

• Tactical Action Plan
• Strategic Target Areas
  – Mission-critical Customer Services in Evolving Industry
  – Asset Management 2.0
  – Grid Resilience
  – People and Organization
Assumptions / constraints

• Investment drivers must be offset
• FTE neutral
• Inflation at 2% for labor / non-labor
• Training and leadership development at 2% of payroll
• Increases over FY 2020 work plan require Administrator approval
• Physical security to meet risk assessments and remediation plans
Budget Timeline

**Capital Planning**
- Regional/HQ 10-Year Capital Plan Process
- Multiple Customer Interactions

**Annual Expense Planning**
- Annual Expense Process
- Senior Review of Annual O&M Work Plan
- Customer Work Plan Meetings
- Final Changes to Work Plan

**Submission Process**
- Submit Budget Request to DOE
WAPA 10-Year Capital Plan

Colin Marquez
Acting Senior VP and Chief Financial Officer
WAPA-wide Capital Plan overview
Fiscal Years 19–28

• Invest $1.6B in transmission system
  – Decreased $29M or 2%; Average $160M/year
  – HQ plan: WAPA-wide vs. Regional allocations
  – Drivers

• Significant reimbursable work with customers and Federal partners

• Status of capital appropriations
Key Investment Drivers

- T-Lines = 36%
- Subs = 36%
- Comm = 7%
- IT = 8%
- Mobile/Heavy Equip = 8%
- Aviation = 1%
**WAPA-wide 10-Year Capital Investment Plan (by region)**

**Change by Region**
- CRSP -8% (-$10.8M)
- DSW -4% (-$13.0M)
- RM -3% (-$6.7M)
- SN -2% (-$3.3M)
- UGP +1% (+$7.7M)
- HQ* -3% (-$2.5M)

* HQ = WAPA-wide Investments
What drives the plan?

• Safety and security
• Reliability through asset management
• IT lifecycle management and business needs
• Statutory and regulatory compliance
Work for Others
10-Year Capital Investment Plan
(by category)

In addition to WAPA investment of $1.6B, another $961M in reimbursable Work for Others (WFO) is planned

Key Projects
• San Luis (SN)
  - $324M total project cost
  - FY19 $114M, FY20 $88M, FY21 $64M, FY22-24 $49M
• Colusa Sutter (SN)
  - $263M total project cost
  - FY19 $1M, FY20 $66M, FY21 $98M, FY22-24 $94M
• Southline (DSW)
  - $202M total project cost
  - FY19 $10M, FY20 $152M, FY21 $30M, FY22-23 $10M
Status of appropriations

Capital Appropriations
FY 2010 - FY 2021

<table>
<thead>
<tr>
<th>FY</th>
<th>Enacted</th>
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<tbody>
<tr>
<td>2010</td>
<td>109</td>
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<td>2011</td>
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<td>2020</td>
<td>89</td>
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<td>2021</td>
<td>89</td>
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- Approps
- 2% Inflation

Millions
Status of appropriations

Capital Appropriations
FY 2017 - FY 2021

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<tr>
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<tbody>
<tr>
<td>Capital C&amp;R</td>
<td>62</td>
<td>52</td>
<td>33</td>
<td>46</td>
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<tr>
<td>Capital O&amp;M</td>
<td>42</td>
<td>40</td>
<td>43</td>
<td>39</td>
</tr>
<tr>
<td>Capital PD</td>
<td>35</td>
<td>42</td>
<td>41</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>139</strong></td>
<td><strong>134</strong></td>
<td><strong>116</strong></td>
<td><strong>129</strong></td>
</tr>
<tr>
<td><strong>•••• Approps</strong></td>
<td><strong>96</strong></td>
<td><strong>93</strong></td>
<td><strong>89</strong></td>
<td><strong>89</strong></td>
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Status of appropriations

• Continued pressure on appropriation levels
• FY21: Currently formulating budget request
  • $0 appropriations anticipated for C&R
  • $8M appropriation shortfall anticipated for capital O&M
• C&R average appropriation over last 5 years: ~$8.3M/year
Capital appropriations allocation planning in FY 2017

• Issue – declining appropriations & increased costs of maintaining system requires a process for funding allocation decisions

• Approach – assembled team to develop process & recommendations

• Input – received customer input in February 2017 and posted final plan in June 2017 (Plan posted on The Source)
Capital appropriations allocation plan

- **FULL NEED $137M**
  - **TIER 5**
  - **TIER 4**
  - **TIER 3**
  - **TIER 2**
  - **TIER 1**

- **GAP $48M**
  - **APPROP. $89M**

- **$40M** Construction and Rehabilitation
- **$42M** Region-Specific Capital O&M (RRADS)
- **$5M** Multi-region WAPA initiatives/projects
- **$X** Critical Need Contingency
- **$50M** Program Direction (salaries and other related costs)
Total Capital Committee (TCC)

Purpose
- Develop recommendations by early March

WAPA participants
- Cross-regional
- Cross-functional
- Subject matter experts

Decision criteria
- Ability to execute
- Cash flow
- Customer bill limitations
- Project risk
• SLIDES FOR REFERENCE ONLY
CRSP MC
10-Year Capital Investment Plan
(by category)

- Invest $118M in transmission system, FY19-FY28
  - Decrease of $10.8M from FY18-27 (Dec. 2017) plan

Key Investment Drivers
- Subs – 57%
- Comm – 17%

Key Projects
- Ault 345/230-kV transformer replacement - $7.8M
- Blue Mesa reactor and 115/12.47-kV transformer replacement - $5M
- Pinnacle Peak shunt capacitor bank replacement - $10.5M
DSW
10-Year Capital Investment Plan
(by category)

• Invest $321M in transmission system, FY19-FY28
  - Decrease of $13M from FY18-27 (Dec. 2017) plan

Key Investment Drivers
• T-Lines – 69%
• Subs – 13%

Key Projects
• Gila Substation rebuild - $3M
  - Improves reliability of Yuma area transmission system
  - Improvements on aged components
• Bouse-Kofa rebuild - $27M
  - Addresses NERC violations
  - Replaces 82 wood poles in poor health
RM
10-Year Capital Investment Plan (by category)

- Invest $260M in transmission system, FY19-FY28
  - Decrease of $6.7M from FY18-27 (Dec. 2017) plan

Key Investment Drivers
- T-Lines – 46%
- Subs – 27%
- Comm – 13%

Key Projects
- Estes-Flatiron Transmission Line rebuild - $19.5M
- Lovell-Yellowtail Transmission Line rebuild (Phase III) - $10.3M
SN
10-Year Capital Investment Plan
(by category)

• Invest **$214M** in transmission system, FY19-FY28
  - Decrease of **$3.3M** from FY18-27 (Dec. 2017) plan

**Key Investment Drivers**
- Subs – 49%
- T-Lines – 39%

**Key Projects**
- Substation Service upgrades (7 substations) - $13.94M
- Folsom Office Station Service - $3.52M
- Keswick Airport Cottonwood Substation upgrade - $3.14M
- Folsom Transformer Project - $4.21M
UGP

10-Year Capital Investment Plan
(by category)

• Invest **$594M** in transmission system, FY19-FY28
  - Increase of **$7.7M** from FY18-27 (Dec. 2017) plan

**Key Investment Drivers**
• Subs – 51%
• T-Lines – 25%
• Mobile/Heavy Equip – 10%

**Key Projects**
• Priority on movable property replacements up 30% - 63 major pieces scheduled replacement by 2025
• Keystone sites are included for planning, but work is pending at most locations
HQ-managed (WAPA-wide) 10-Year Capital Investment Plan
(by category)

• Invest $99M in transmission system, FY19-FY28
  - Decrease of $2.5M from FY18-27 (Dec. 2017) plan

Key Investment Drivers
• IT – 83%
• Aviation – 16%

Key Projects
• Common SCADA/EMS vendor
  - $12.5M FY19-21 & FY23
• Power Billing software
  - Updated estimate of $6M FY24-FY25
Contact

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Asset Management Program Update

Chris Lyles
VP of Asset Management
Topics for discussion today

• T-line structures as assets
• Transformer acquisition process
• Transformer strategy for high-impact low frequency (HILF) events
Transmission line assets

• Asset Management formally launched in 2015
• 581 transmission line segments considered assets
• Age was used for determining health
• 178,000 individual structures are now assets
• Individual structure condition determines health
Transformer acquisition process

• Goal: Reduce lead-time from 24 months to 9-12 months
• Team interviewed 3 transformer vendors
• Long-term contract with standard specifications
• Improved process for typical capital replacements and emergency needs
• Timeframe for implementation
Transformer strategy for HILF events

- Scope and methodology for strategy
- WAPA-wide mitigation vs. regional
- Anticipated path forward
- Anticipated outcome: Purchase and store
  - Partner with other utilities
  - Rely on new acquisition strategy
Contact

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Power Repayment Study

Software Update

Rodney Bailey
Power Marketing Advisor
Power Repayment Study completion

- On time and within budget
- Project closeout on May 3, 2018
- Total cost $3.85M vs. estimated $3.99M
- All 15 WAPA Power Systems are using the new platform for 2018 final PRS
Validation process

• Validate against FY 2016 final studies
• Roll forward and parallel testing with FY 2017 studies
• Roll forward FY 2018 parallel testing
• Use new software for FY 2018 studies
Responses from users

• “The new platform is excellent and a monumental leap forward for the PRS.”
• “A great balance of versatility, data integrity, and usability.”
• “Data entry is a snap. Users can upload, hand input, or cut and paste data. No more checking links and correcting formulas.”
• “All regions are on the same page and using standard methodologies.”
• “The process was open and flexible so everyone could participate. This helped gain user buy-in, produce a better platform, and develop the next generation of PRS experts.”
We met our goals

• WAPA-wide single platform
• Sustainable for next 15-20 years
• Customer access
• Transparent and auditable
• Built-in data validation functions
• Compliant with DOE and WAPA policies
Contact

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Roundtable Discussion
Kick-off

Jennifer Rodgers
Chief Strategy Officer
Roundtable discussions

• Two rounds of open discussion
  – 30 minutes of discussion
  – 10 minutes report out
• Both rounds have the same topics; select the topic of your choice for each round
• Two WAPA leaders at each table to kick off discussions
Roundtable topics

- Renewables and Energy Storage
- Markets and WAPA’s Role
- Cost Management
- Customer Communications
Closing Remarks

Mark A. Gabriel
Administrator and Chief Executive Officer