

# **WAPA Annual Customer Meeting 2019**

**Dec. 9, 2019**

**8:30 am – 12:30 pm MST**

**Hilton Garden Inn, Downtown Denver**

# **Welcome and Introductions**

**Teresa Waugh**  
**Chief Public Affairs Officer**

# Opening Remarks

**Mark A. Gabriel**  
**Administrator and CEO**

# 2019 accomplishments

Transitioned to new reliability coordinators

Assessed future fiber needs with customers

CPI surpasses \$90M in cost avoidance, savings

Awarded for organizational transparency

Successfully operated & maintained grid

Published 1st Asset Management almanac

Co-hosted DOE's CyberCon

Lowered or maintained rates for 80% of customers

Implemented Decision Framework

Returned \$281 million to Treasury

Met 100% of physical security improvements

Exceeded operational goals

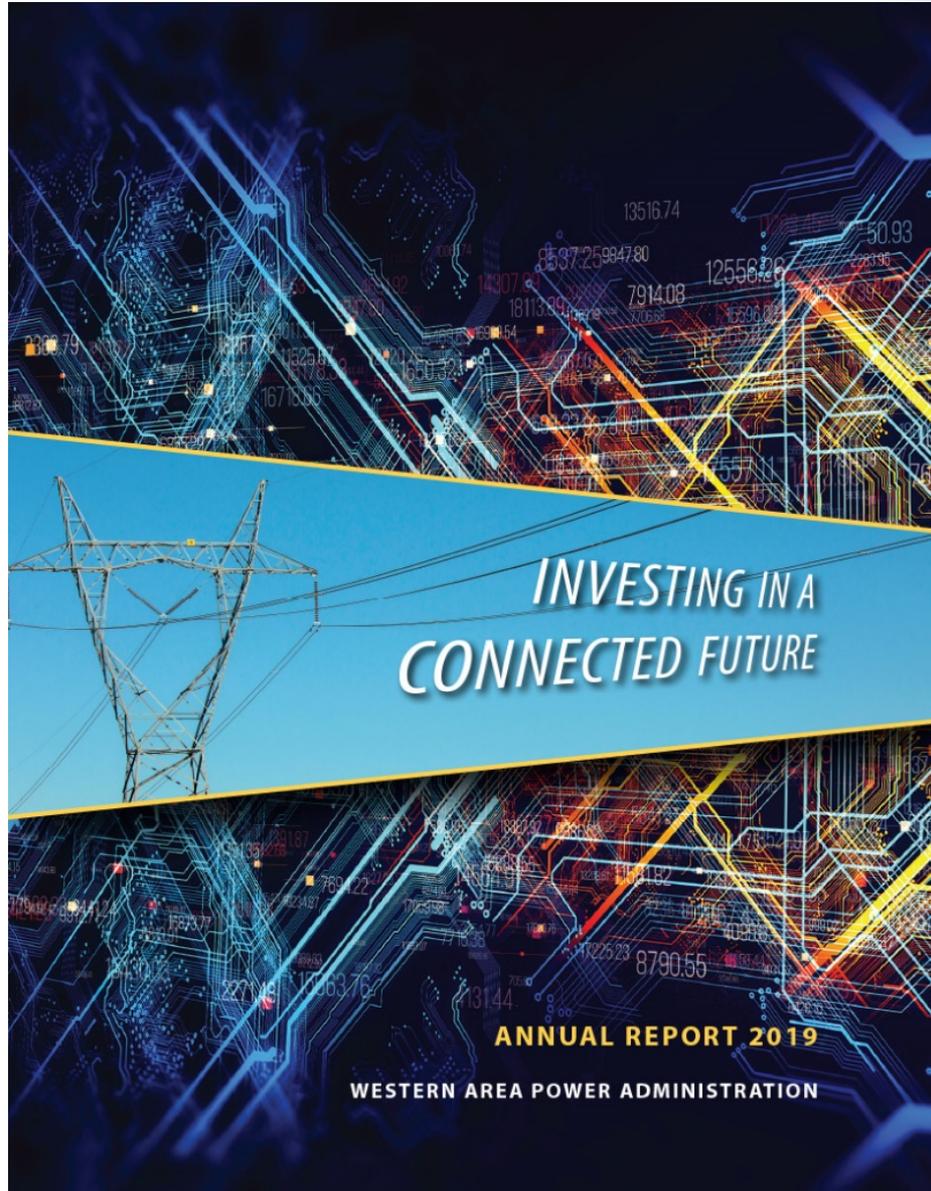
Completed Phase 1 of OAM efforts

Explored energy imbalance management alternatives

Submitted PPW report to Congress

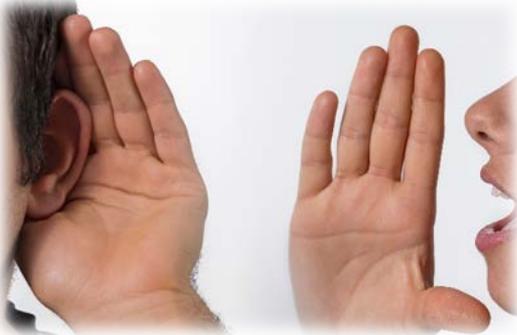
Expanded transparency efforts

Initiated Human Performance & Just Culture



# 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.**

# FEVS results

| 2019  |  Western Area Power Administration | YoY '18-'19 | 5-year trend |
|-------|---|-------------|--------------|
| 70.7% | <b>Response Rates</b>   | ↗ 5.7%      | ↗ 0.2%       |
| 73.7% | <b>Employee engagement: Overall</b>   | ↗ 3.0%      | ↗ 7.5%       |
| 62.3% | <b>Employee Engagement: Leaders lead</b>  | ↗ 5.7%      | ↗ 12.2%      |
| 74.0% | <b>Global Satisfaction</b>  | ↗ 2.2%      | ↗ 9.2%       |
| 67.2% | <b>New IQ: Overall</b>  | ↗ 3.5%      | ↗ 7.0%       |
| 66.1% | <b>New IQ: Cooperative</b>  | ↗ 6.8%      | ↗ 12.8%      |



# Carbon constraints/capacity conflict

- Demand for new power sources will outstrip capacity
- Demand for clean energy will outstrip the capacity
- Public perception contrasts with the reality of the system
- Renewables are being promoted the only answer
- Cost of renewables creates financial challenges



# Change is upon us

## WIND PEAK

17,595.1 MW AT 8:42 P.M. ON OCT. 17, 2019

## WIND PENETRATION

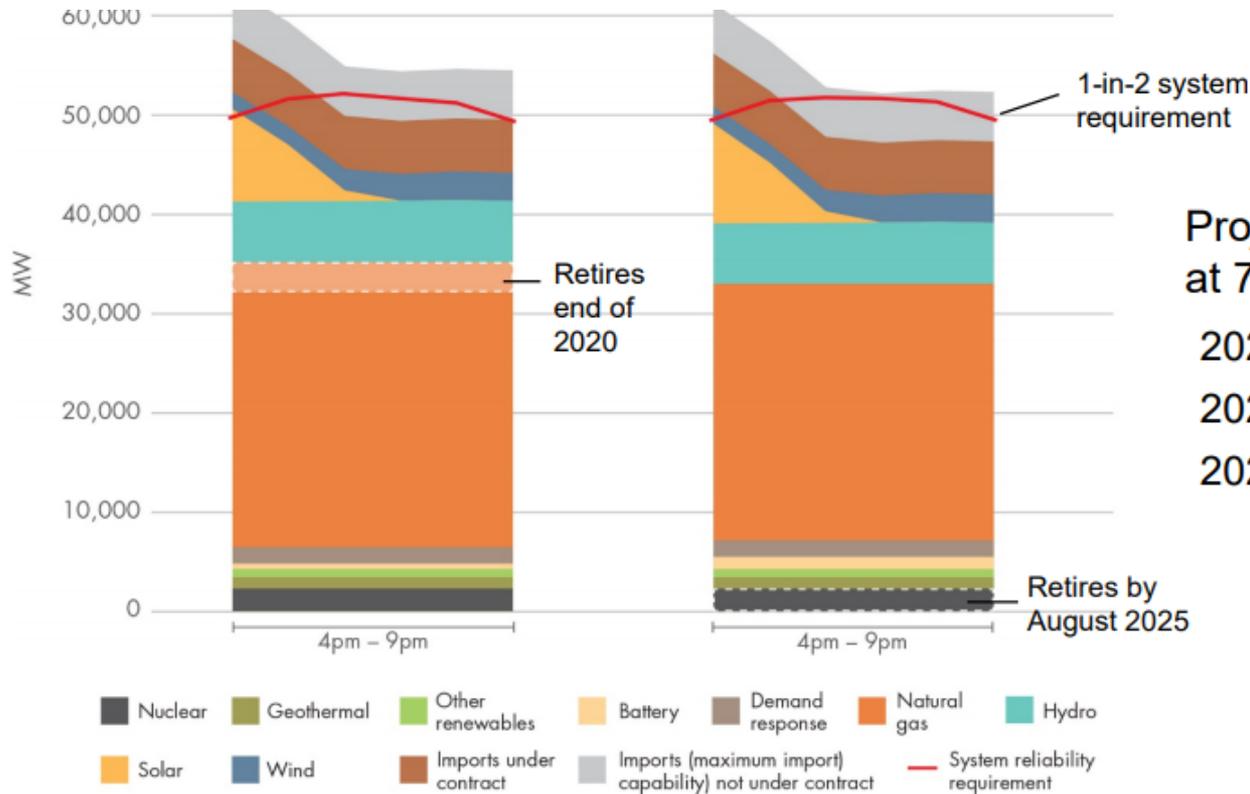
68.78% AT 1:37 A.M. ON OCT. 18, 2019

## RENEWABLE PENETRATION

76.94% AT 3:01 A.M. ON OCT. 18, 2019



# CAISO's expected resource shortage



Projected shortfalls at 7 p.m.:

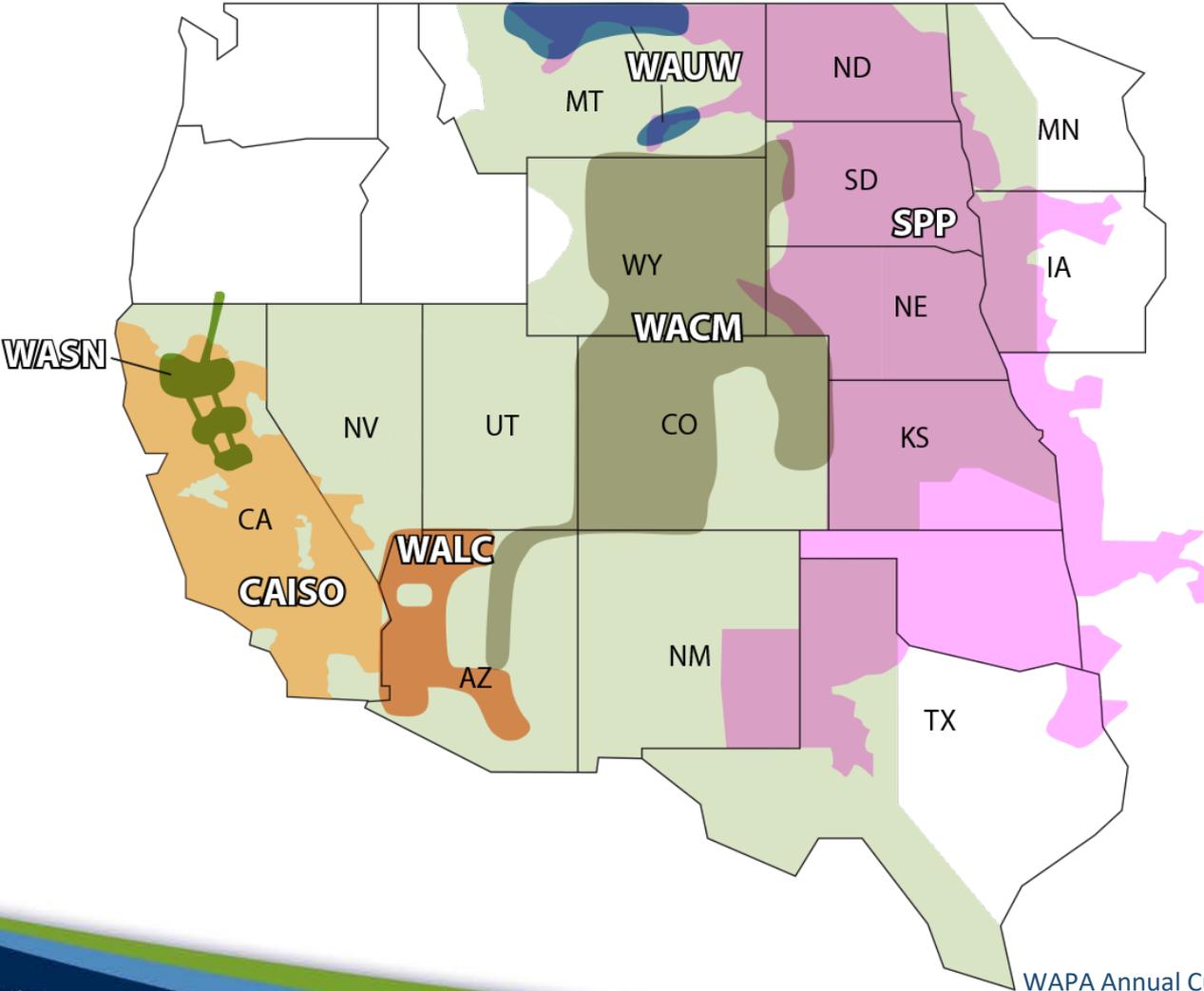
2020 = **2,300 MW**

2021 = **4,400 MW**

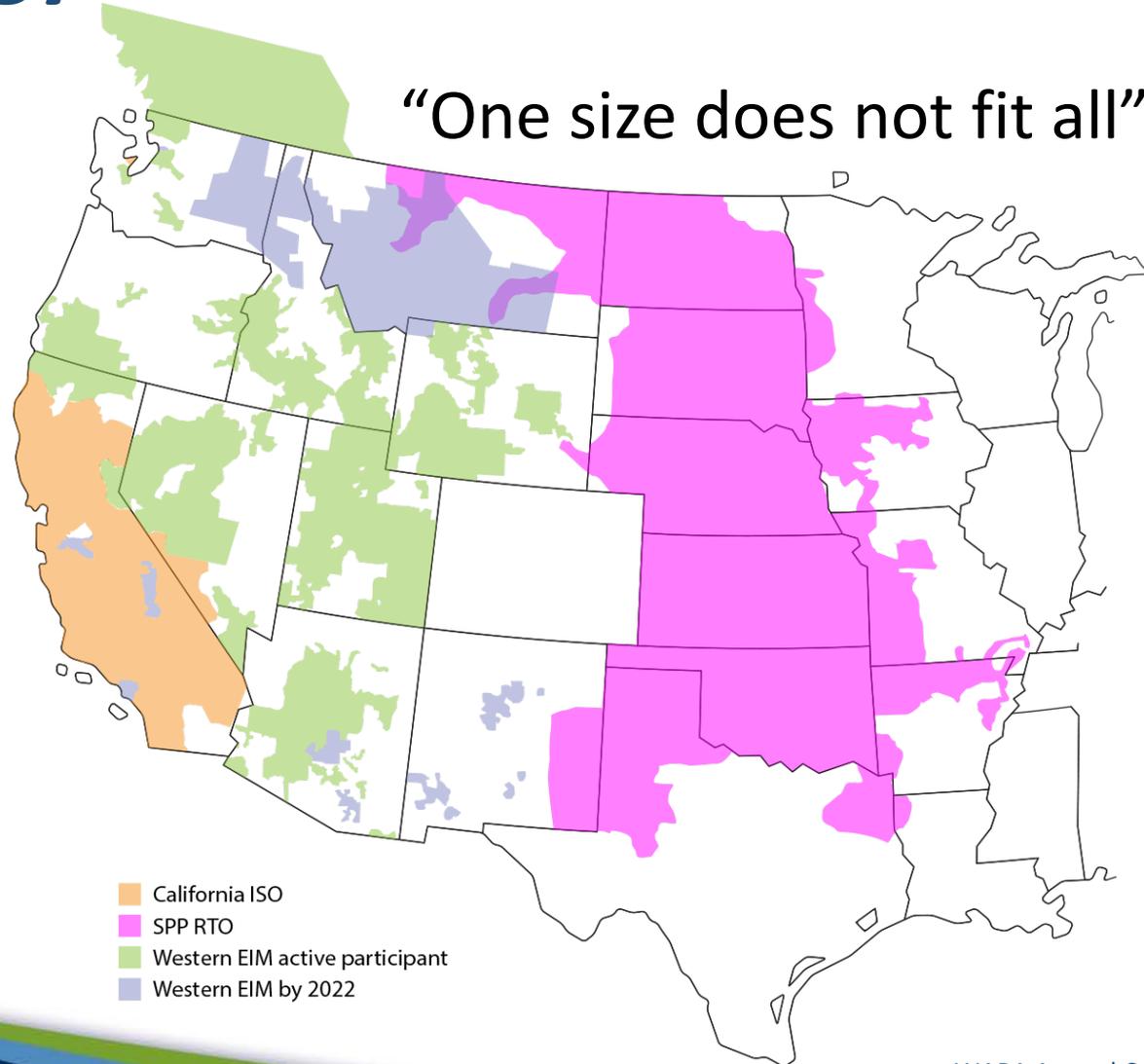
2022 = **4,700 MW**

<sup>1</sup> Assumes no transmission outages or other significant events affecting availability of generation

# WAPA balancing authorities & markets



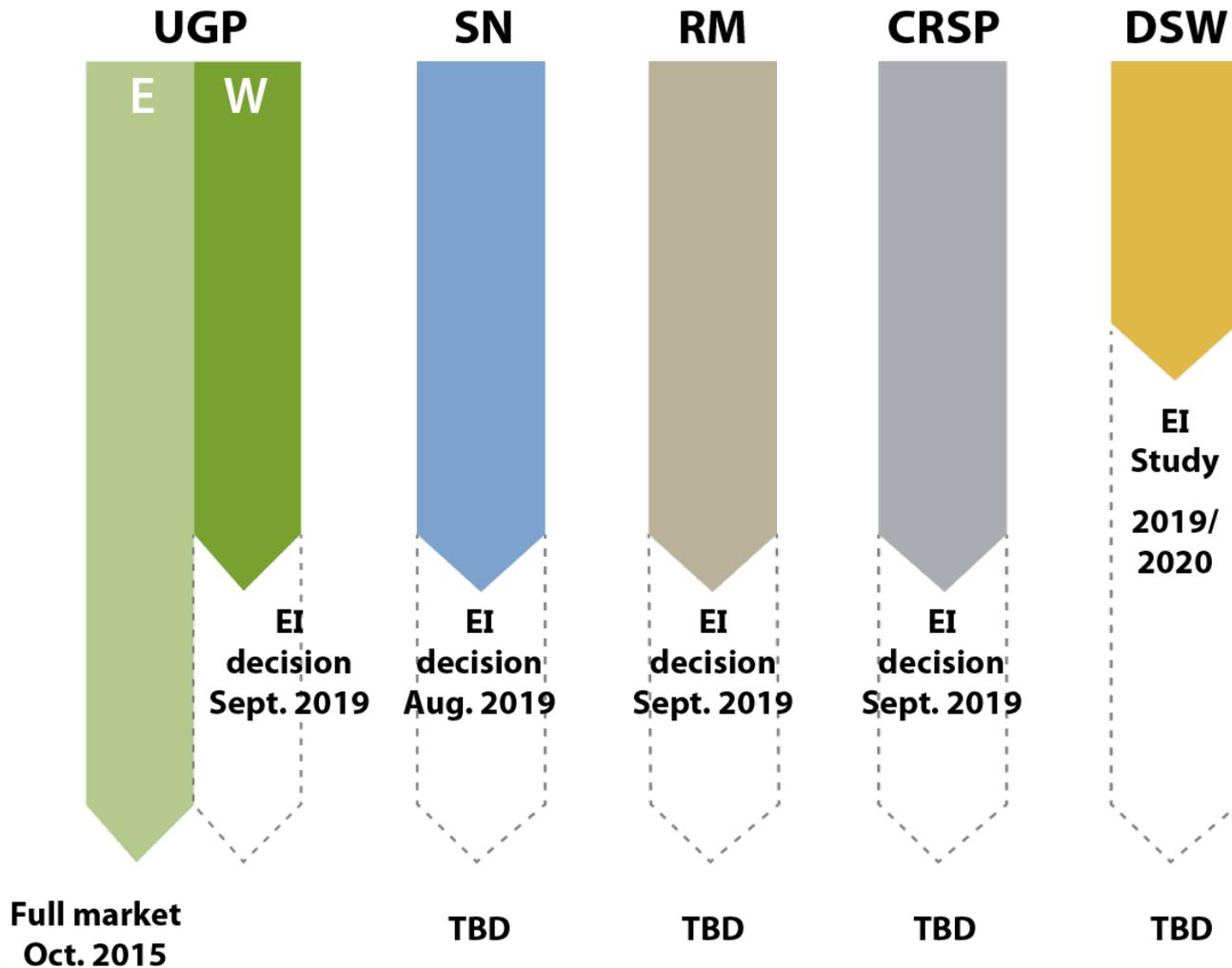
# Energy imbalance decisions



# Energy imbalance objectives

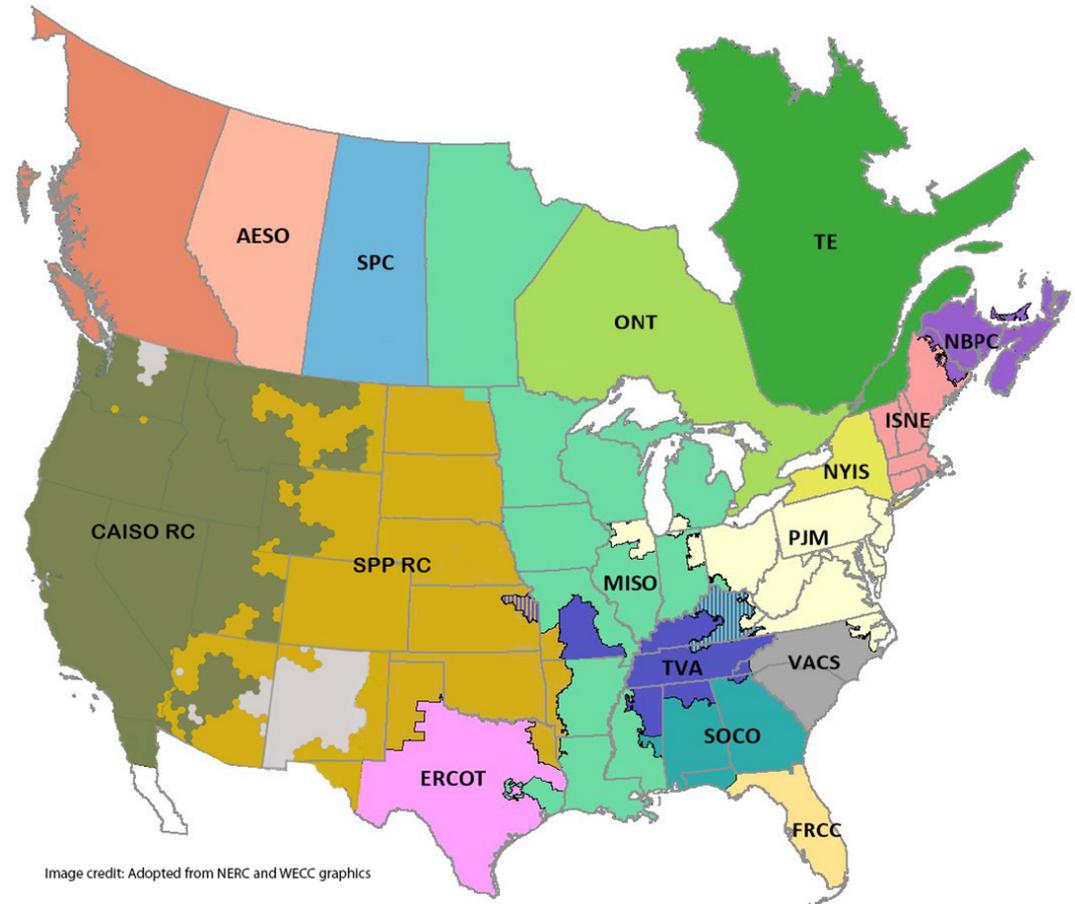
- Ensure reliable delivery of our hydropower while adjusting to a changing energy mix
- Respond to customer feedback requesting WAPA lead organized market discussions
- Address WAPA BA limitations
- Facilitate integration of renewable resources
- Enable participants who want to optimize their resources

# Market status timeline



# RC transition update

- UGP-East – SPP  
10/2015
- SN – CAISO  
7/2019
- DSW/RM/CRSP/  
UGP-West – SPP  
12/2019



# Wildfire prevention & mitigation

- Reviewing vegetation management programs
- Working with landowners & other agencies
- Participating in utility committees



# Importance of vegetation management



Before

After



# Physical security update

- GridEx V
- Implementing new remediation validation process
- Tiered security protection levels focus resources on more critical sites
  - 1,000+ tasks reduced to ~450
- ~94 site assessments done in FY 2019
- 84%+ of planned security remediations done in FY 2019
- Conducting assessments in house in FY 2020 will save over \$378,000



# Cyber threat environment

- Increasing regulations
- Internet of Things
- Scope and breadth of organization
- Asset management nexus
- Continuous communications



# Staffing changes

- Desert Southwest Regional Manager vacancy announcement posted
- Senior VP & CFO Dennis Sullivan departing in February
- Senior VP & acting DSW Regional Manager is Tracey LeBeau
- Acting Senior VP & Chief Administrative Officer is Jennifer Rodgers

# New CIO\*

\*Pending OPM approval



Michael Montoya

# Contact/follow me

**Mark A. Gabriel**

720.962.7705

[gabriel@wapa.gov](mailto:gabriel@wapa.gov)



[wapa.gov](http://wapa.gov)



[@westernareapowr](https://twitter.com/westernareapowr)



[Mark Gabriel](https://www.linkedin.com/in/markgabriel)



[WesternAreaPower1](https://www.youtube.com/channel/UC...)



[westernareapower](https://www.instagram.com/westernareapower)



[wapa.gov](http://wapa.gov)



# Fiber Strategy Update

**Kevin Howard**  
**Executive VP and COO**

# WAPA Chief Financial Officer Updates

**Dennis R. Sullivan**  
**Chief Financial Officer**

# Topics

- Financial updates
- WAPA 10-year capital plan overview
- Customer meetings debrief –  
Financial model complexity



# Financial Updates

- Fiscal year (FY) 2019 results
- Reserve strategy
- FY 2022 budget guidance
- Transparency and collaboration

# FY 2019 WAPA-wide results

- **Annual O&M: \$302M plan**
  - ~\$900K over plan
- **Capital Program: \$172M plan**
  - Executed \$110M or 64%
  - Fully executed appropriations
- **Purchase Power & Wheeling:**
  - Added ~\$80M to CROM reserve
  - Strategy on track for FY20
- **Return to Treasury:**
  - \$281M (\$1.8B over 5 years)
- **Financial Statement Audit:**
  - Anticipate unqualified opinion



# Managed reserve balances strategy

## Sustainable funding tool in support of WAPA's mission

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

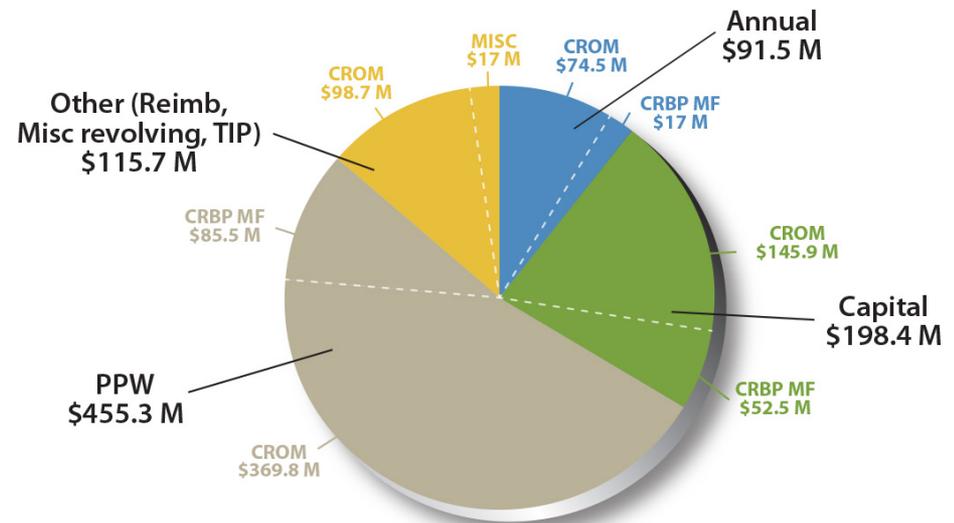
## Carrying reserve balances does not impact power rates

# FY-end (FYE) 2019 managed reserve balances

## Summary of all accounts

- Progress since 2016:
  - **Annual O&M:** Reduced to target level, maintaining
  - **Capital:** Reduced to target level, maintaining
  - **PPW:** Significant progress toward full target
  - **Basin fund:** Aligned with WAPA-wide strategy
- Re-evaluate after FY 2020

FYE 19 Managed Reserve Strategy Balances  
By Purpose: \$745.2 (in Millions)



FYE 19 Unobligated Balances  
Other: \$115.7M (in Millions)

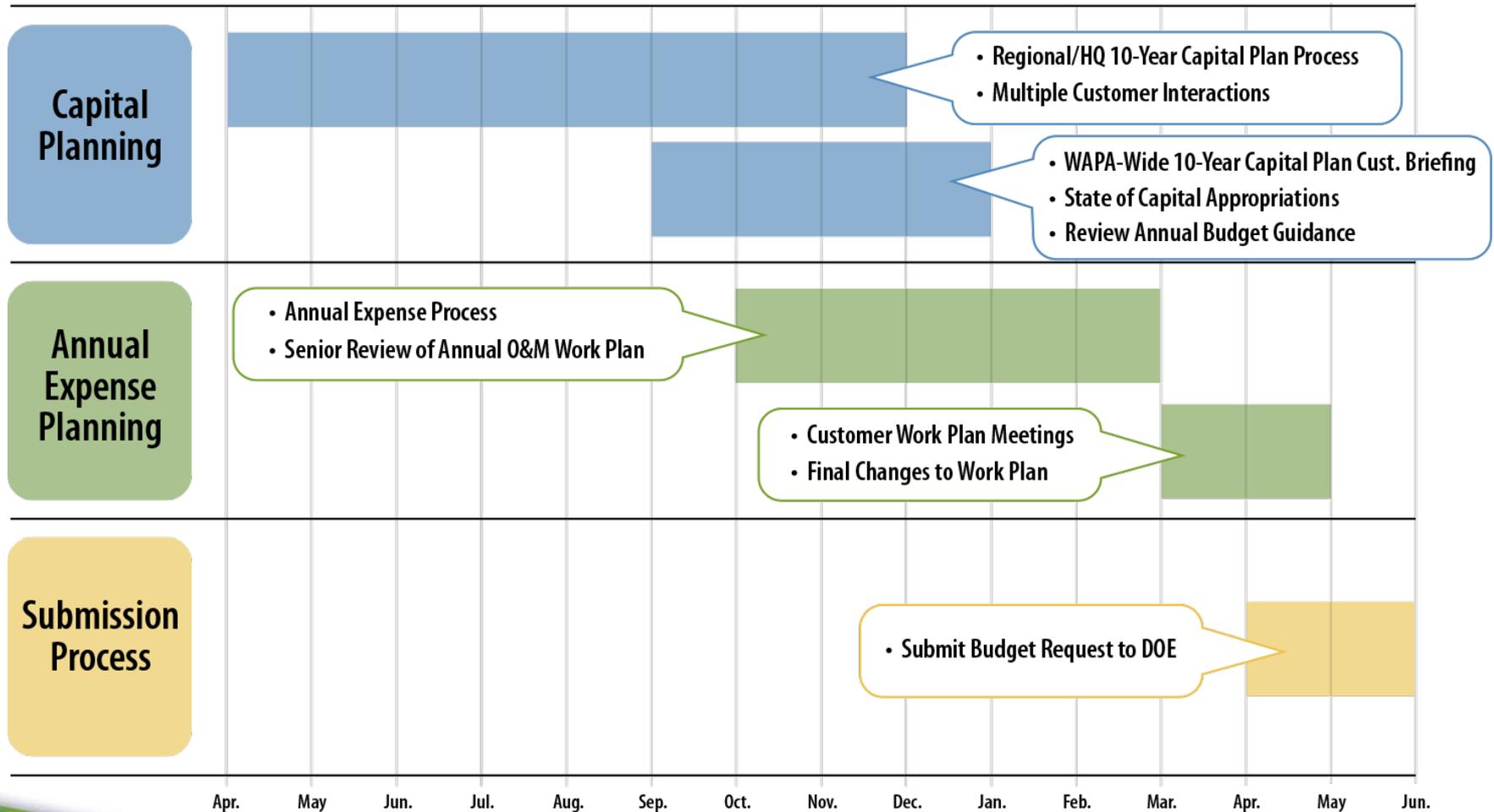
# Planned FYE 2019 targets/actions

## CROM account managed strategies\*\*

| Program   | FYE 19 Balance  | Strategy Target |
|---|-----------------|-----------------|
| <b>Annual O&amp;M</b> <ul style="list-style-type: none"> <li>Target changes annually based on program year</li> <li>Use of PY balances through budget formulation as needed</li> <li>FY20 President's budget includes \$5M use of PY balance</li> </ul> | <b>\$74.5M</b>  | <b>\$69.8M</b>  |
| <b>Capital</b> <ul style="list-style-type: none"> <li>Target changes annually based on rolling 10-year plans</li> <li>Regions collaborate with customers on amount to retain</li> <li>Returns to treasury as needed</li> </ul>                          | <b>\$145.9M</b> | <b>\$139.7M</b> |
| <b>Purchase Power &amp; Wheeling</b> <ul style="list-style-type: none"> <li>Executed incremental increase of ~\$80M</li> <li>Reach target by FYE 2020</li> <li>Requires solution to CBO budget authority "scoring" issue</li> </ul>                     | <b>\$369.8M</b> | <b>\$393.0M</b> |

\*\* Does not include: CROM "Other"; CRBPMF; TIP; Falcon & Amistad; Emergency Fund

# Budget timeline



# FY 2022 Administrator's budget guidance

- Investment drivers
- Assumptions / constraints

Read more:

[The Source – Budget Allocation](#)

... FY 2022 Administrator's budget guidance

## Investment drivers



- Tactical Action Plan
- Strategic Target Areas
  - Mission-critical customer services in evolving industry
  - Asset management 2.0
  - Grid resiliency
  - People and organization

... FY22 Administrator's budget guidance

## Assumptions / constraints



- Investment drivers must be offset
- FTE neutral – evaluate, repurpose
- Inflation at 2% for labor / non-labor
- Training and leadership development at 2% of payroll
- Physical security to meet risk assessments and remediation plans
- Information technology life cycle management with emphasis on cost containment
- Increases over FY21 work plan require Administrator approval

# Financial transparency / program collaboration

- Enhanced financial reviews
  - Work plans
  - Execution reviews
  - HQ 10YP
  - WAPA program leaders
- Expanded “The Source”
  - Access to historical data
- Technology & Security Symposium
- Financial transparency vs. Programmatic insight?

## Financial Transparency



- Sharing historical and planned budget/execution
  - Provide opportunity for input/feedback
  - Answers: what, why, how much, value-delivered
- Results:** Common understanding of investment drivers

# WAPA 10-Year Capital Plan

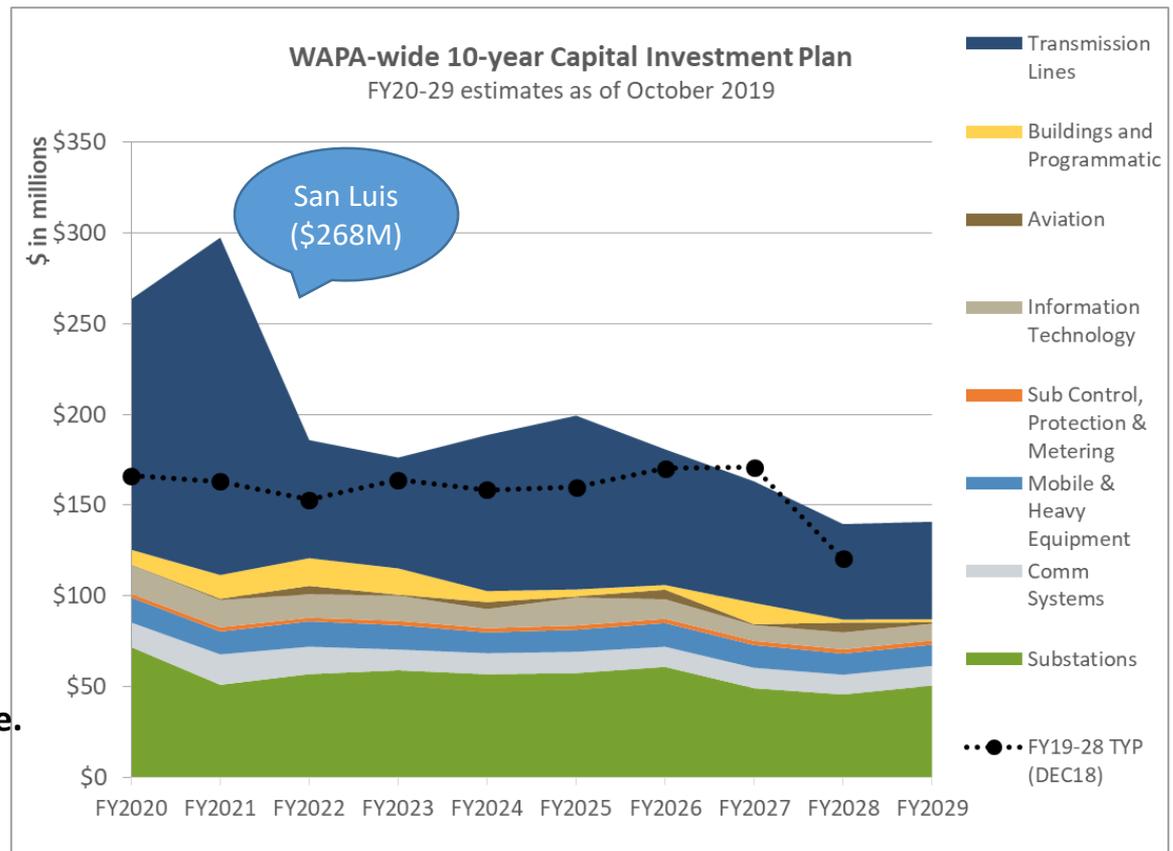
- Overview
- What drives the plan
- Status of appropriations

# WAPA-wide 10-Year Capital Investment Plan (By category)

## Key Investment Drivers

- T-Lines = 46%
- Subs = 29%
- Mobile/Heavy Equip = 7%
- Comm = 6%
- IT = 6%
- Aviation = 1%

**Note: San Luis reporting shift from work-for-others to power. Project concept does not impact power rate.**

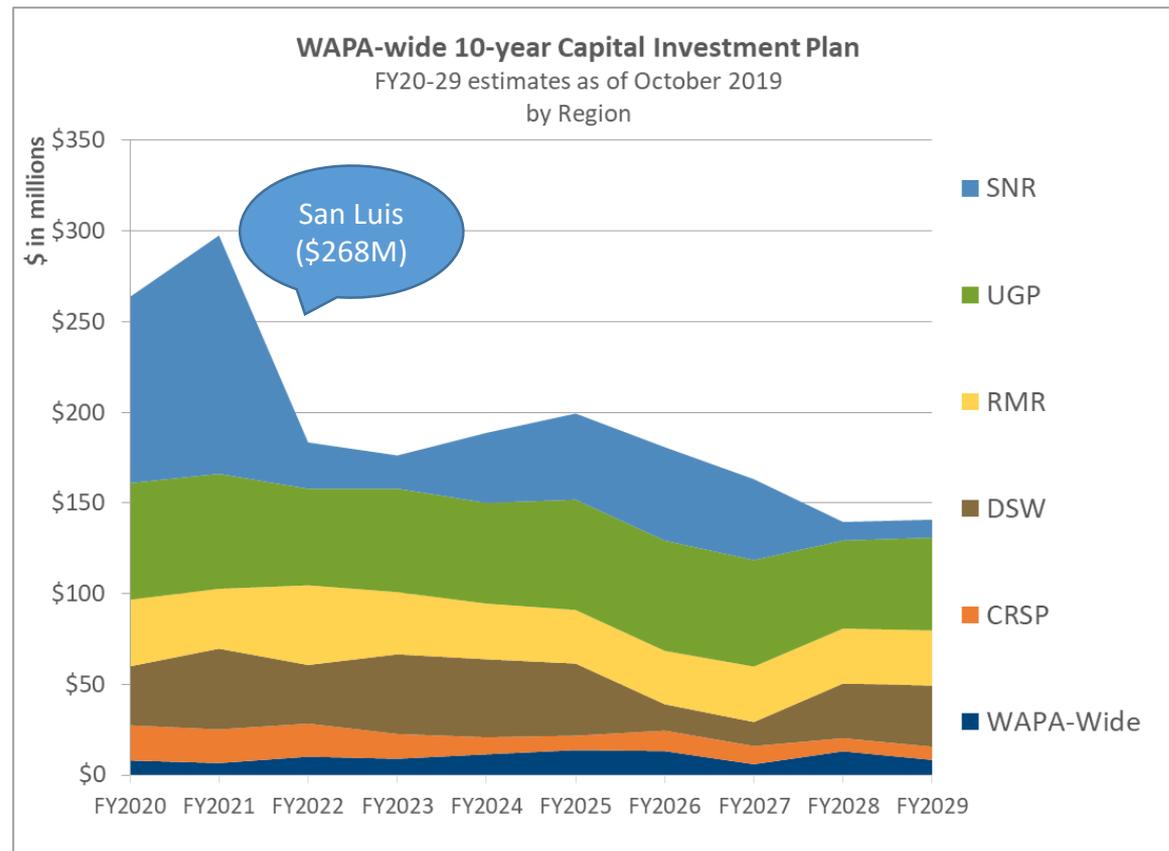


# WAPA-wide 10-Year Capital Investment Plan (By region)

## Change by Region

- CRSP 4% (+\$5.1M)
- DSW 2% (+\$7.1M)
- RM +26% (+\$68.6M)
- SN +125% (+\$266.7M)
- UGP -3% (-\$20.0M)
- WW\* +1% (+\$1.0M)

\* WAPA-Wide (WW)  
Investments are managed  
by HQ



# What drives the plan?

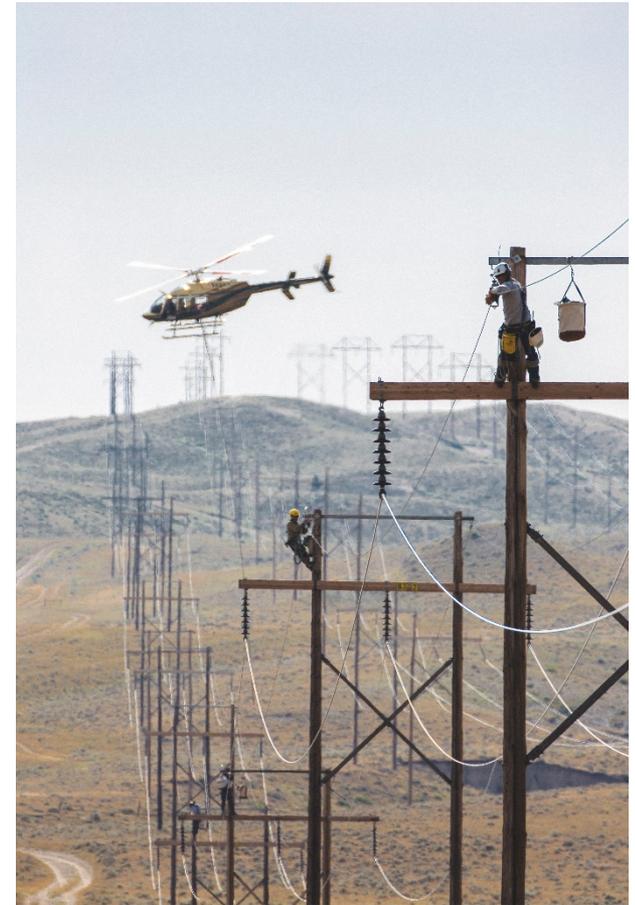
- Asset management
  - Risk register
  - 98% with contingency plan
- Rebuilding vs. maintaining
- Public safety
- Statutory and regulatory compliance
- Cost predictability and containment via LCM
  - Ex: Aviation program

| Asset ID      | Description   | Risk Level | Risk Score | Risk Category | Risk Description | Risk Mitigation | Risk Status   | Risk Owner    |
|---------------|---------------|------------|------------|---------------|------------------|-----------------|---------------|---------------|
| 100-1000-0001 | 100-1000-0001 | High       | 100        | High          | 100-1000-0001    | 100-1000-0001   | 100-1000-0001 | 100-1000-0001 |
| 100-1000-0002 | 100-1000-0002 | High       | 100        | High          | 100-1000-0002    | 100-1000-0002   | 100-1000-0002 | 100-1000-0002 |
| 100-1000-0003 | 100-1000-0003 | High       | 100        | High          | 100-1000-0003    | 100-1000-0003   | 100-1000-0003 | 100-1000-0003 |
| 100-1000-0004 | 100-1000-0004 | High       | 100        | High          | 100-1000-0004    | 100-1000-0004   | 100-1000-0004 | 100-1000-0004 |
| 100-1000-0005 | 100-1000-0005 | High       | 100        | High          | 100-1000-0005    | 100-1000-0005   | 100-1000-0005 | 100-1000-0005 |
| 100-1000-0006 | 100-1000-0006 | High       | 100        | High          | 100-1000-0006    | 100-1000-0006   | 100-1000-0006 | 100-1000-0006 |
| 100-1000-0007 | 100-1000-0007 | High       | 100        | High          | 100-1000-0007    | 100-1000-0007   | 100-1000-0007 | 100-1000-0007 |
| 100-1000-0008 | 100-1000-0008 | High       | 100        | High          | 100-1000-0008    | 100-1000-0008   | 100-1000-0008 | 100-1000-0008 |
| 100-1000-0009 | 100-1000-0009 | High       | 100        | High          | 100-1000-0009    | 100-1000-0009   | 100-1000-0009 | 100-1000-0009 |
| 100-1000-0010 | 100-1000-0010 | High       | 100        | High          | 100-1000-0010    | 100-1000-0010   | 100-1000-0010 | 100-1000-0010 |
| 100-1000-0011 | 100-1000-0011 | High       | 100        | High          | 100-1000-0011    | 100-1000-0011   | 100-1000-0011 | 100-1000-0011 |
| 100-1000-0012 | 100-1000-0012 | High       | 100        | High          | 100-1000-0012    | 100-1000-0012   | 100-1000-0012 | 100-1000-0012 |
| 100-1000-0013 | 100-1000-0013 | High       | 100        | High          | 100-1000-0013    | 100-1000-0013   | 100-1000-0013 | 100-1000-0013 |
| 100-1000-0014 | 100-1000-0014 | High       | 100        | High          | 100-1000-0014    | 100-1000-0014   | 100-1000-0014 | 100-1000-0014 |
| 100-1000-0015 | 100-1000-0015 | High       | 100        | High          | 100-1000-0015    | 100-1000-0015   | 100-1000-0015 | 100-1000-0015 |
| 100-1000-0016 | 100-1000-0016 | High       | 100        | High          | 100-1000-0016    | 100-1000-0016   | 100-1000-0016 | 100-1000-0016 |
| 100-1000-0017 | 100-1000-0017 | High       | 100        | High          | 100-1000-0017    | 100-1000-0017   | 100-1000-0017 | 100-1000-0017 |
| 100-1000-0018 | 100-1000-0018 | High       | 100        | High          | 100-1000-0018    | 100-1000-0018   | 100-1000-0018 | 100-1000-0018 |
| 100-1000-0019 | 100-1000-0019 | High       | 100        | High          | 100-1000-0019    | 100-1000-0019   | 100-1000-0019 | 100-1000-0019 |
| 100-1000-0020 | 100-1000-0020 | High       | 100        | High          | 100-1000-0020    | 100-1000-0020   | 100-1000-0020 | 100-1000-0020 |



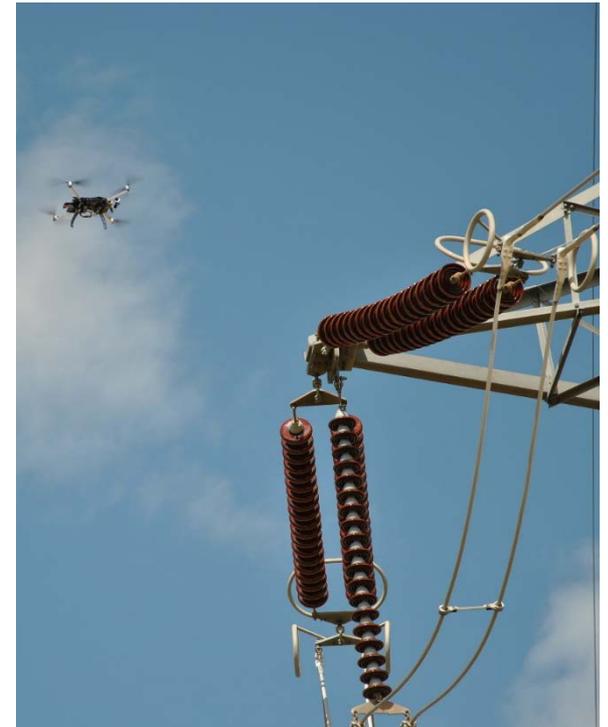
# Helicopter benefits

- Replace 90 miles of dampers on Bears Ears-Bonanza 345-kV
- Options
  - Climbing: >\$1 million
  - Bucket trucks: >\$1 million
  - HEC: \$369,610
- Cost avoidance: ~\$640,000



# Unmanned Aerial Vehicles

- Inspect 25 structures for Ault-Craig spacer replacement
- Options
  - Climbing (3 hours/structure): \$11,250
  - UAS (30 mins/structure): \$2,187.50
- Cost avoidance: >\$9,000



# Work for Others

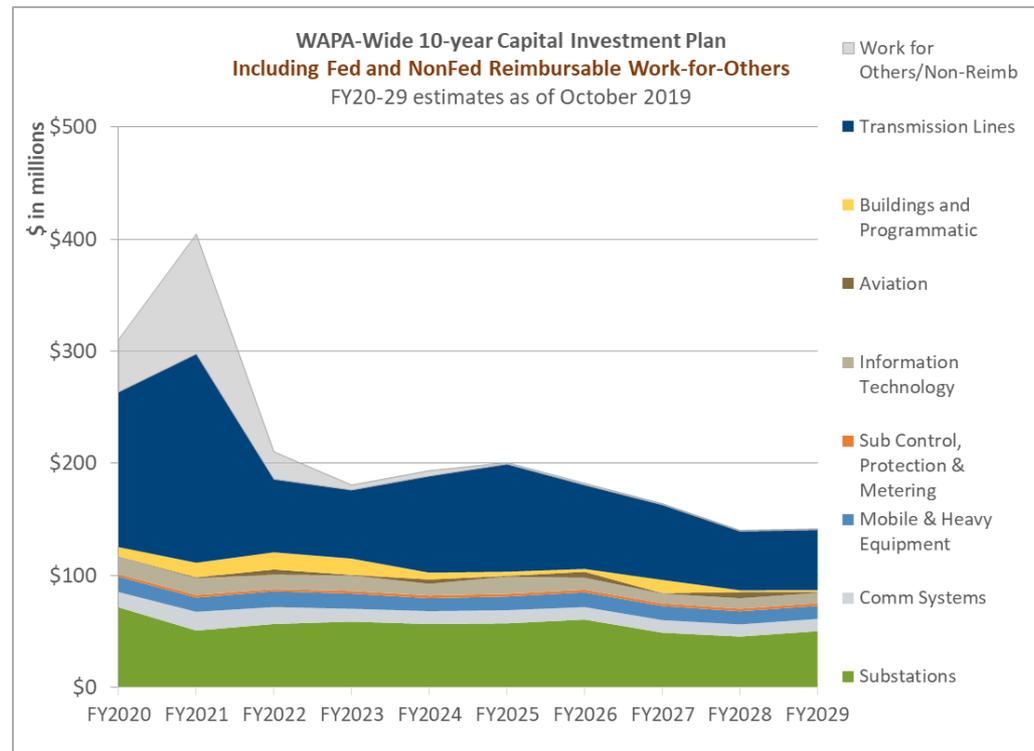
## 10-Year Capital Investment Plan

### (By category)

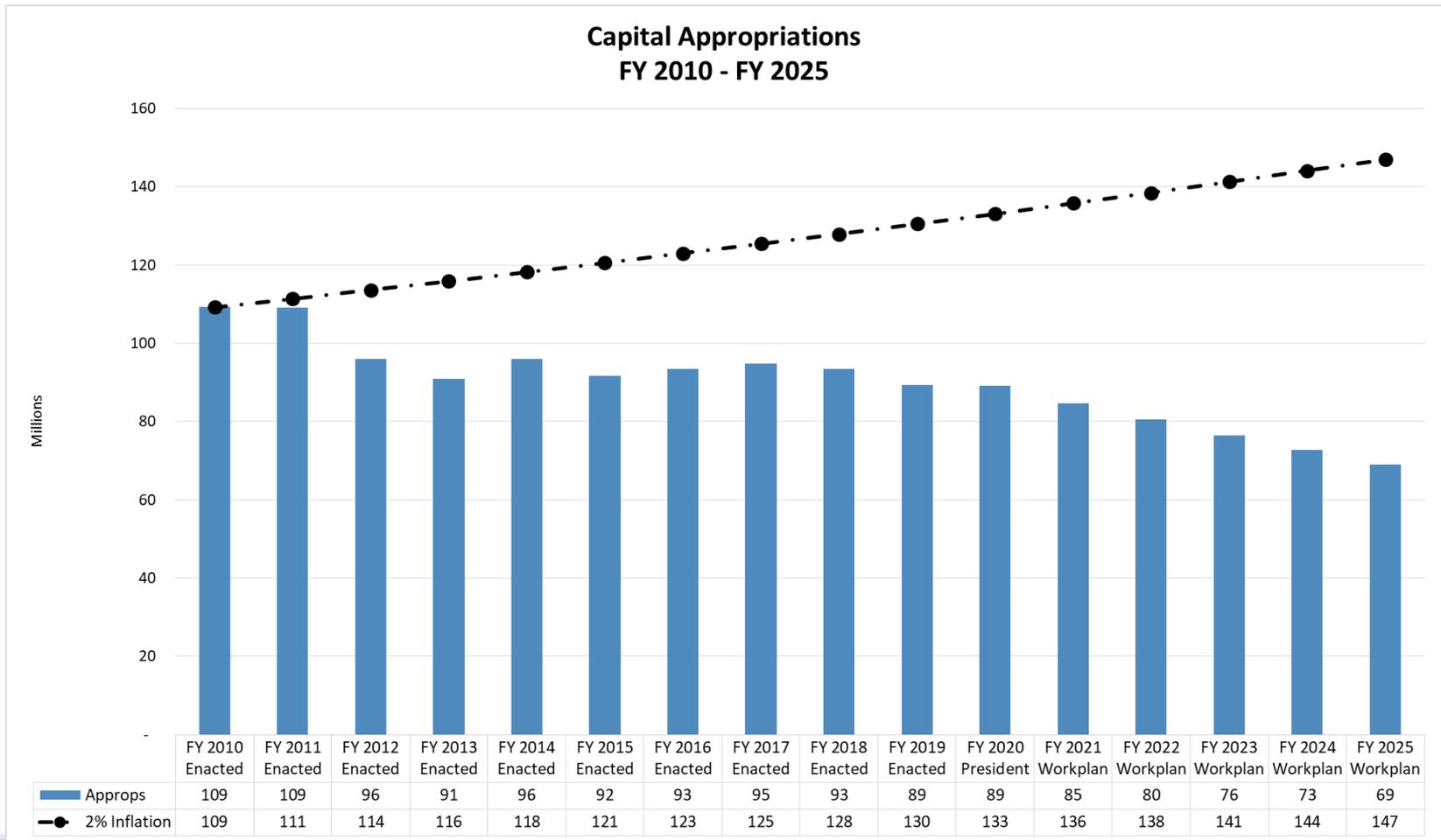
In addition to WAPA investment of \$1.9B, another \$193M in reimbursable Work for Others (WFO) is planned

#### Key Projects

- Glendo-Podolak (RM)
  - \$16.2M total (FY20 \$550K, FY21 \$14.7M, FY22 \$940K)
- Beale AFB Interconnect (SN)
  - \$54.8M total (FY20 \$2.2M, FY21 \$52.1M, FY22 \$502K)
- COTP Sub Replacements (SN)
  - \$21.0M total (FY20 \$7M, FY21 \$6M, FY22 \$4.3M, FY23-24 \$3.7M)
- Creston-Maryville (UGP)
  - \$14.9M total (FY20 \$503K, FY21 \$13.8M, FY22 \$617K)

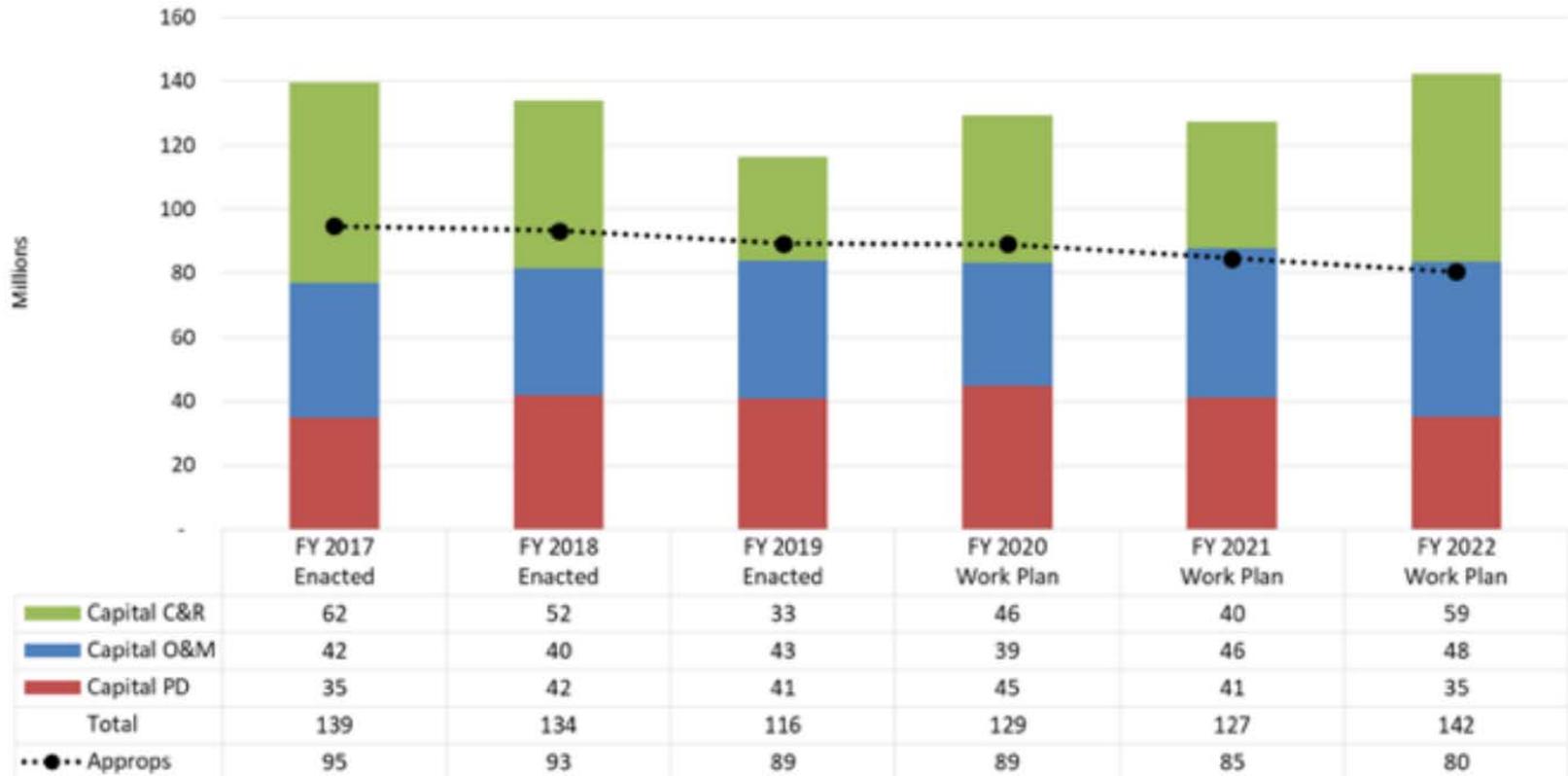


# Appropriations trend



# Capital Appropriations FY 2017 – FY 2022

(5% decrement in FY 2021-2022)



FY21 = \$0 C&R, \$3M deficit for Capital O&M  
 FY22 = \$0 C&R, \$3.1M deficit for Capital O&M

# Risks / issues

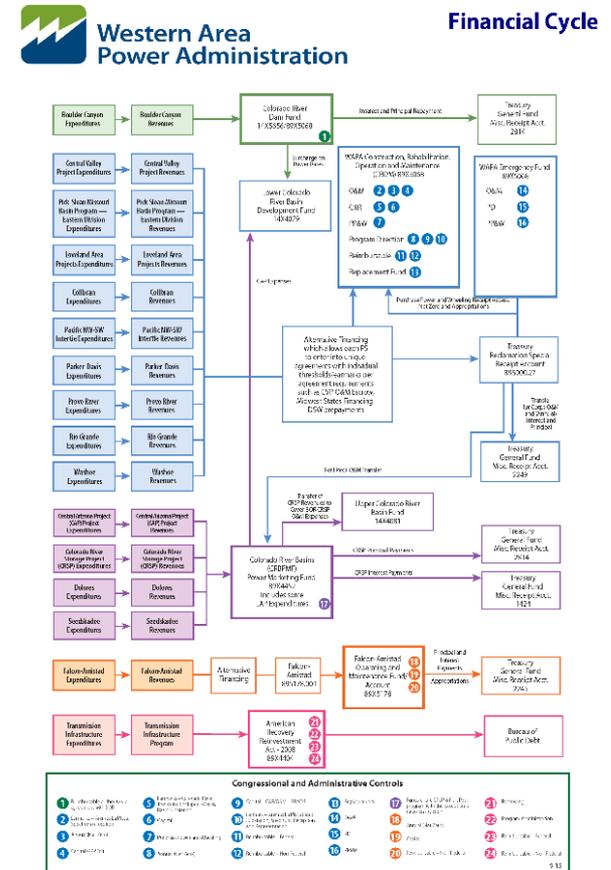
- **WAPA customers**
  - Continued pressure on appropriation levels
  - Cash flow constraints
  - Competing priorities with growth in generating agency investment plans
- **Energy infrastructure**
  - Compromise protection, reliability, and resilience
  - Asset life cycle management program impacts
  - Diminished cyber and physical security posture



# Customer meetings debrief – Financial model complexity

# Symptoms of a broader problem

- “Cobbled together” legislative authorities
  - Not well understood
  - Reinterpretation risk
- 100% reliant on cash
  - All receipts not accessible
  - Alternative financing approach
- No borrowing mechanism
- Sub-optimal decisions
- Complexity implications



# Summary of feedback

- Shared objectives
  - Capital plan alignment
  - Stable funding mechanisms (PPW, Capital)
  - Cost efficiency
  - Rate stability, predictability, affordability
  - Checks and balances
  - Preserve the value of the hydro resource



# Summary of feedback

- Unique perspectives
  - Public power “ownership” model
  - Performance vs. power contract
  - Customers handle PPW needs
- Broad support for increasing capital appropriations
- Mixed opinions on addressing financial model



# Contact/follow me

**Dennis Sullivan**

720.962.7500

dsullivan@wapa.gov



wapa.gov



@westernareapowr  
@D\_Sullivan03



Dennis Sullivan



WesternAreaPower1



# **Roundtable Discussion Kick-off**

**Stacey Decker**  
**Acting Chief Strategy Officer**

# Roundtable discussions

- Two rounds of open discussion
  - 30 minutes of discussion
  - 10 minutes report out
- Each round will offer the same topics; select the topic of your choice for each round
- Two WAPA leaders at each table to kick off discussions

# Roundtable topics

- Ways to increase the value of hydropower
- Emerging trends in the utility industry
- Participation in WEIS and associated matters
- Cyber and physical security practices in a utility

# Guest Speaker

## Judy Chang, The Brattle Group



Judy Chang, Principal

[Judy.Chang@brattle.com](mailto:Judy.Chang@brattle.com)

617-864-7900

# Closing Remarks

**Mark A. Gabriel**  
**Administrator and CEO**