

HQ 10-Year Capital Plan

FY20-29 estimates as of September 2019

Lakewood, CO
October 9th, 2019

Introduction

- Welcome
- Approach to plan development
 - HQ/regional collaboration
 - Capital planning committee
 - Customer feedback
- Key drivers
 - Lifecycle management - IT, Aviation
 - Physical Security
 - Improved reliability & efficiency
- Today's focus



Information Technology at WAPA

- How we operate
- FY 2019 priorities/accomplishments
- Base program
 - Lifecycle management
 - Patching and upgrades
 - Compliance
- FY 2020 priorities
 - Common SCADA vendor
 - Office 365
 - Energy Imbalance Markets
- Megatrends



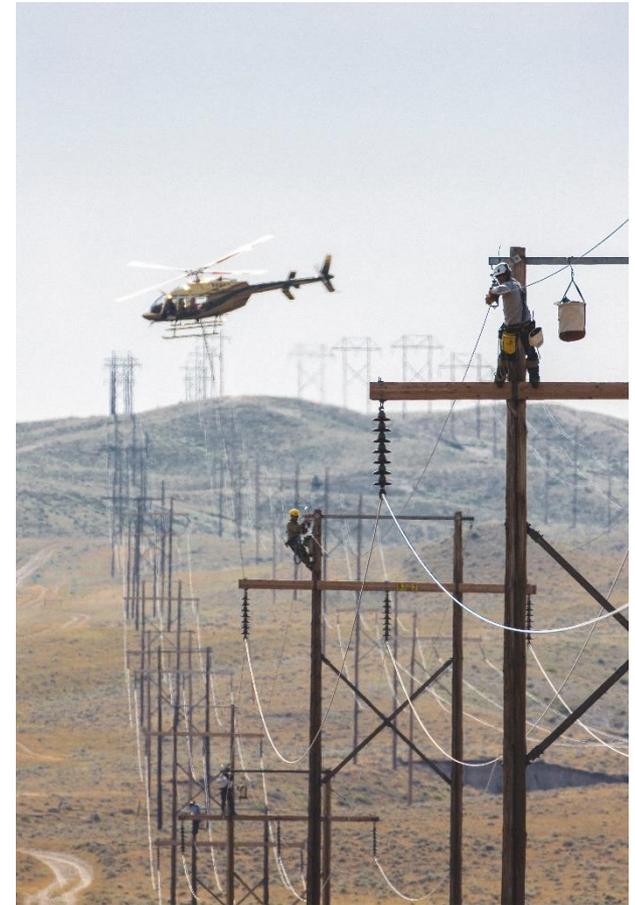
Investing in network, infrastructure

- Investing in connected energy future
- Network rides on infrastructure
- Network modernization
 - Increased connectivity
 - Network traffic growth
 - Advanced services, convergence
- Majority in RM and UGP
- Drivers – mission-critical systems
 - Maintenance
 - Power Marketing
 - Power Operations
 - Compliance



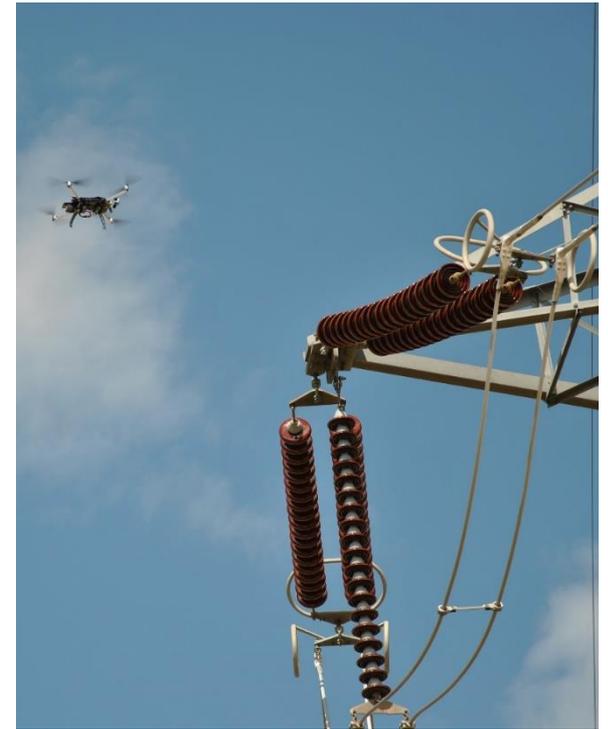
Helicopter benefits

- Replace 90 miles of dampers on Bears Ears-Bonanza 345-kV
- Options
 - Climbing: >\$1 million
 - Bucket trucks: >\$1 million
 - HEC: \$369,610
- Cost savings: ~\$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 savings: >\$9,000



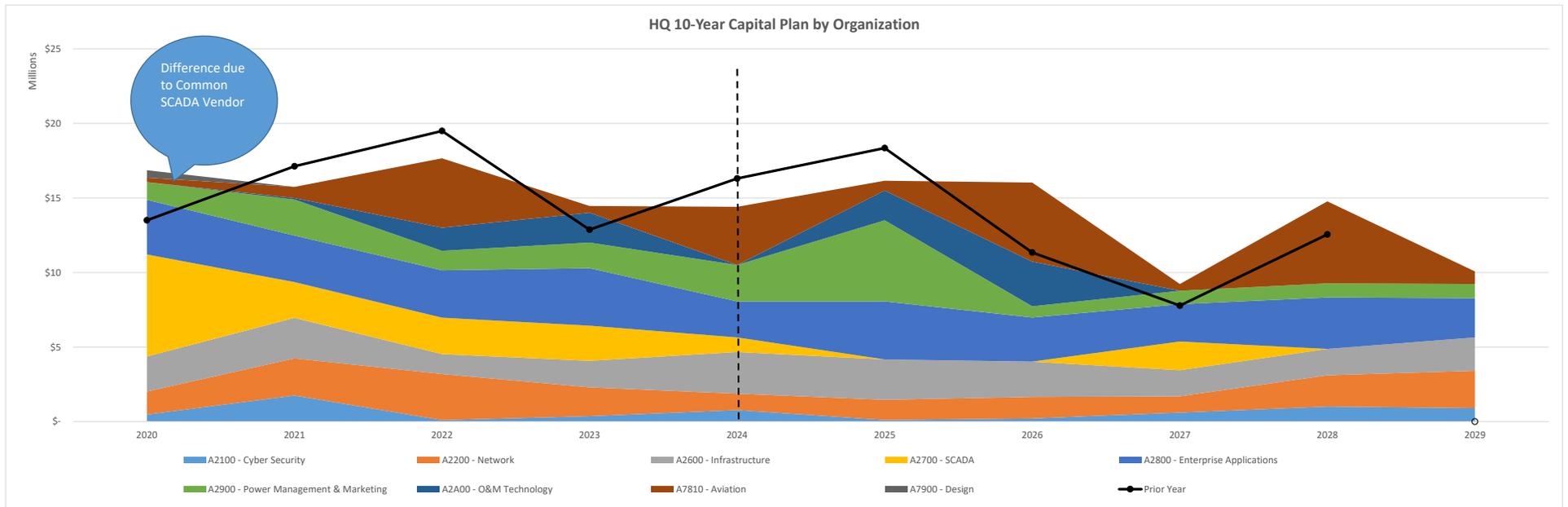
Investment Profile

- Overall plan smoothed out compared to PY
- Rolling 5 year rate window increase of 5%
 - Common SCADA vendor purchase pushed from FY19 to FY20. Would be 0% increase otherwise
- Lifecycle management - IT, Aviation, Security



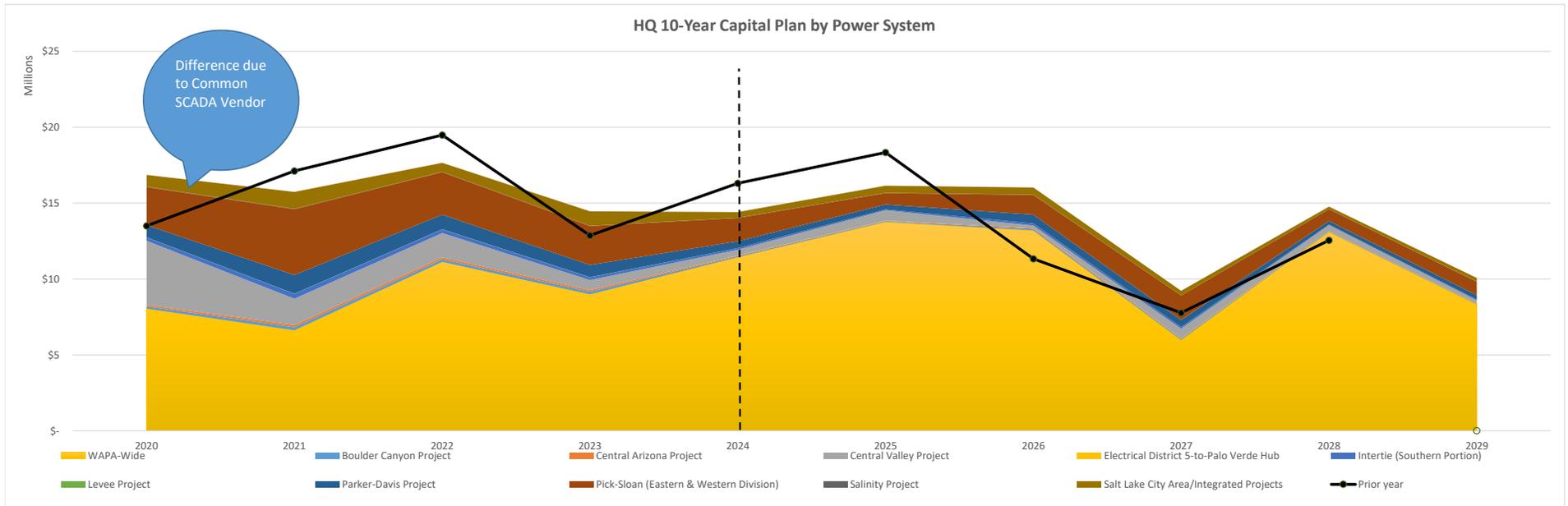
HQ 10-Year Capital Plan by Organization

Organization	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Grand Total	\$ of total
A2100 - Cyber Security	479,000	1,751,000	100,000	363,000	771,000	110,000	210,000	611,000	1,014,000	906,000	6,315,000	4%
A2200 - Network	1,533,490	2,486,600	3,092,500	1,939,750	1,106,750	1,350,000	1,447,350	1,088,425	2,091,874	2,499,875	18,636,614	13%
A2600 - Infrastructure	2,350,000	2,718,200	1,334,000	1,770,500	2,789,880	2,704,500	2,365,120	1,744,250	1,769,050	2,242,576	21,788,076	15%
A2700 - SCADA	6,845,000	2,399,500	2,442,000	2,360,000	980,000			1,931,030			16,957,530	12%
A2800 - Enterprise Applications	3,665,000	3,120,000	3,180,000	3,855,000	2,410,000	3,900,000	2,960,000	2,500,000	3,450,000	2,625,000	31,665,000	22%
A2900 - Power Management & Marketing	1,184,000	2,418,000	1,309,000	1,724,000	2,450,000	5,434,000	750,000	900,000	950,000	950,000	18,069,000	12%
A2A00 - O&M Technology		100,000	1,550,000	2,000,000		2,000,000	3,000,000				8,650,000	6%
A7810 - Aviation	300,000	750,000	4,650,000	450,000	3,900,000	650,000	5,300,000	450,000	5,500,000	850,000	22,800,000	16%
A7900 - Design	500,000										500,000	0%
Grand Total	16,856,490	15,743,300	17,657,500	14,462,250	14,407,630	16,148,500	16,032,470	9,224,705	14,774,924	10,073,451	145,381,221	100%



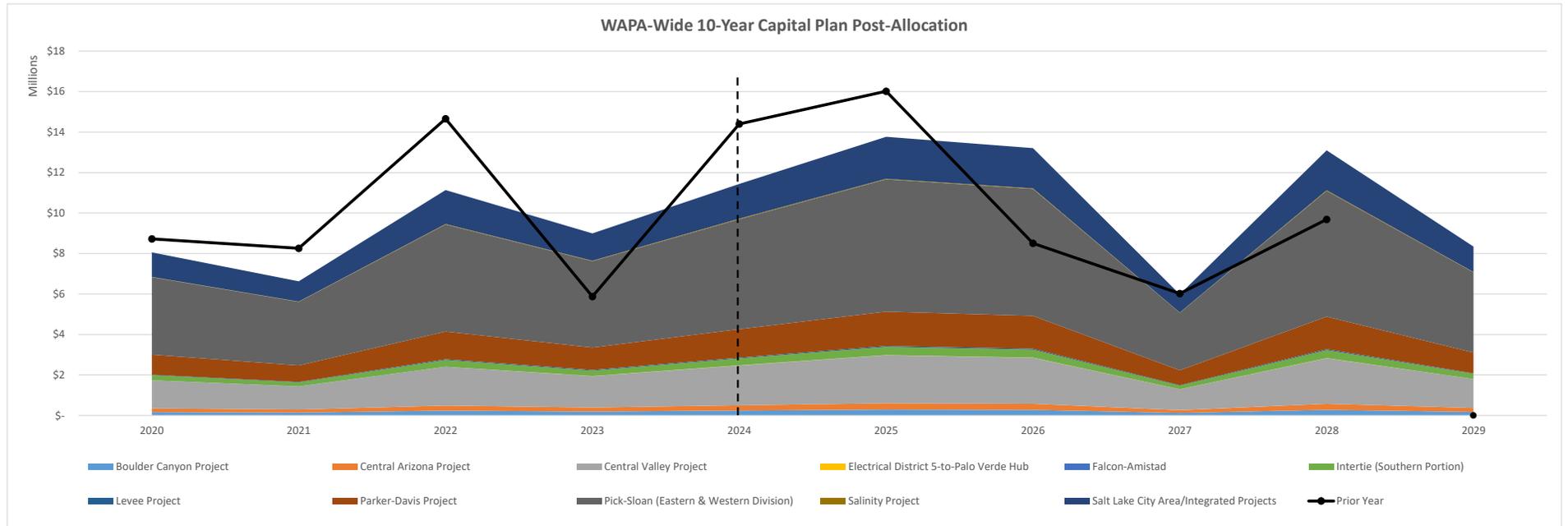
HQ 10-Year Capital Plan by Power System

Power System	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Grand Total	% of total
Boulder Canyon Project	145,641	211,243	175,287	162,090	68,396	48,984	91,960	71,240	28,319	31,453	1,034,612	1%
Central Arizona Project	97,735	141,758	118,899	111,718	45,898	33,307	61,711	47,807	19,004	21,107	698,944	0%
Central Valley Project	4,225,950	1,726,500	1,606,155	662,660	380,625	676,500	162,500	628,275	402,200	202,020	10,673,385	7%
Electrical District 5-to-Palo Verde Hub	2,218	3,217	2,324	1,667	1,042	628	1,400	1,085	431	479	14,490	0%
Intertie (Southern Portion)	218,831	317,401	236,527	181,304	102,768	64,398	138,173	107,041	42,550	47,260	1,456,251	1%
Levee Project	7,837	11,366	8,858	7,391	3,680	2,439	4,948	3,833	1,524	1,692	53,569	0%
Parker-Davis Project	793,411	1,225,792	960,125	796,231	447,602	317,929	575,970	463,094	229,273	293,095	6,102,522	4%
Pick-Sloan (Eastern & Western Division)	2,514,795	4,335,650	2,804,487	2,566,670	1,535,393	753,200	1,298,500	1,601,424	778,750	889,901	19,078,769	13%
Salinity Project	15,821	22,947	17,601	14,268	7,430	4,827	9,990	7,739	3,076	3,417	107,115	0%
Salt Lake City Area/Integrated Projects	779,001	1,122,225	594,737	961,001	374,748	478,689	481,949	307,543	172,074	244,151	5,516,118	4%
WAPA-Wide	8,055,250	6,625,200	11,132,500	8,997,250	11,440,050	13,767,600	13,205,370	5,985,625	13,097,724	8,338,875	100,645,445	69%
Grand Total	16,856,490	15,743,300	17,657,500	14,462,250	14,407,630	16,148,500	16,032,470	9,224,705	14,774,924	10,073,451	145,381,221	100%



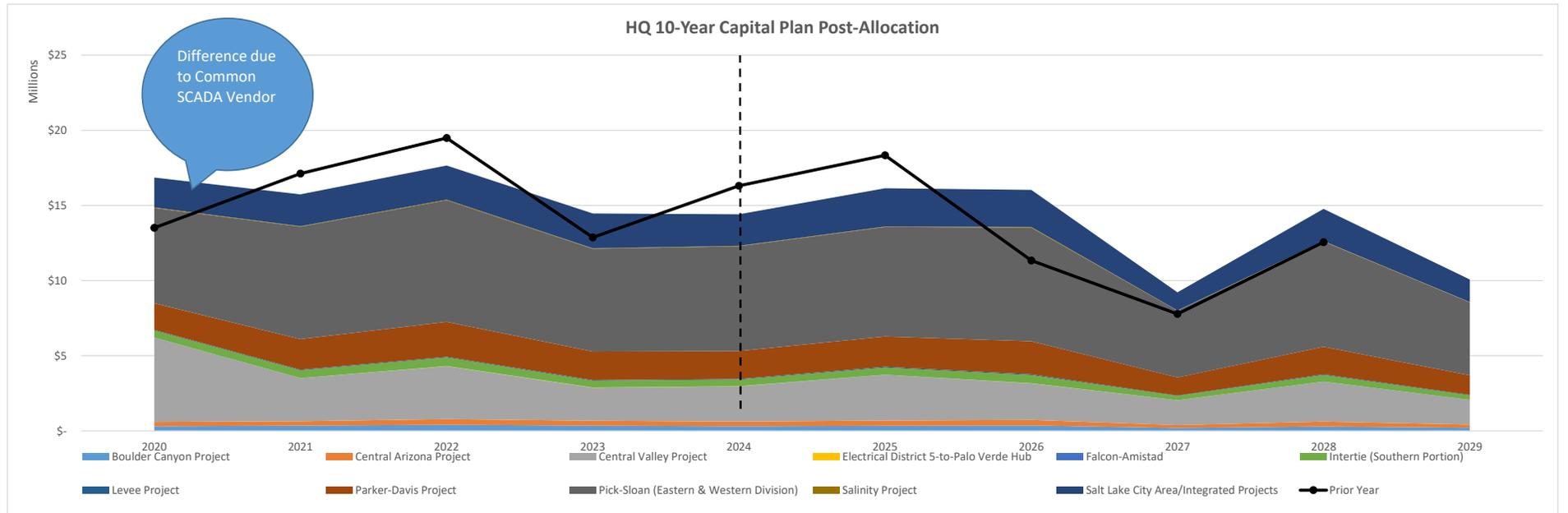
WAPA Wide 10-Year Capital Plan Post-Allocation

Power System	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Grand Total	% of total
Boulder Canyon Project	168,355	138,467	232,669	188,043	239,097	287,743	275,992	125,100	273,742	174,282	2,103,490	2%
Central Arizona Project	183,660	151,055	253,821	205,137	260,833	313,901	301,082	136,472	298,628	190,126	2,294,716	2%
Central Valley Project	1,387,114	1,140,859	1,917,017	1,549,326	1,969,977	2,370,781	2,273,965	1,030,725	2,255,428	1,435,954	17,331,146	17%
Electrical District 5-to-Palo Verde Hub	3,222	2,650	4,453	3,599	4,576	5,507	5,282	2,394	5,239	3,336	40,258	0%
Falcon-Amistad	806	663	1,113	900	1,144	1,377	1,321	599	1,310	834	10,065	0%
Intertie (Southern Portion)	241,658	198,756	333,975	269,918	343,202	413,028	396,161	179,569	392,932	250,166	3,019,363	3%
Levee Project	28,999	23,851	40,077	32,390	41,184	49,563	47,539	21,548	47,152	30,020	362,324	0%
Parker-Davis Project	987,574	812,250	1,364,845	1,103,063	1,402,550	1,687,908	1,618,978	733,838	1,605,781	1,022,346	12,339,131	12%
Pick-Sloan (Eastern & Western Division)	3,824,633	3,145,645	5,285,711	4,271,894	5,431,736	6,536,856	6,269,910	2,841,975	6,218,799	3,959,298	47,786,457	47%
Salinity Project	17,722	14,575	24,492	19,794	25,168	30,289	29,052	13,168	28,815	18,346	221,420	0%
Salt Lake City Area/Integrated Projects	1,211,510	996,430	1,674,328	1,353,186	1,720,584	2,070,647	1,986,088	900,238	1,969,898	1,254,167	15,137,075	15%
Grand Total	8,055,250	6,625,200	11,132,500	8,997,250	11,440,050	13,767,600	13,205,370	5,985,625	13,097,724	8,338,875	100,645,445	100%



HQ 10-Year Capital Plan Post-Allocation

Power System	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Grand Total	% of total
Boulder Canyon Project	313,996	349,710	407,956	350,132	307,493	336,727	367,952	196,339	302,061	205,736	3,138,102	2%
Central Arizona Project	281,395	292,813	372,720	316,855	306,731	347,208	362,793	184,279	317,632	211,234	2,993,660	2%
Central Valley Project	5,613,064	2,867,359	3,523,172	2,211,986	2,350,602	3,047,281	2,436,465	1,659,000	2,657,628	1,637,974	28,004,531	19%
Electrical District 5-to-Palo Verde Hub	5,440	5,867	6,777	5,266	5,618	6,135	6,683	3,479	5,670	3,815	54,749	0%
Falcon-Amistad	806	663	1,113	900	1,144	1,377	1,321	599	1,310	834	10,065	0%
Intertie (Southern Portion)	460,489	516,157	570,502	451,222	445,969	477,426	534,334	286,609	435,482	297,426	4,475,615	3%
Levee Project	36,835	35,217	48,935	39,781	44,864	52,002	52,487	25,381	48,676	31,712	415,892	0%
Parker-Davis Project	1,780,985	2,038,042	2,324,970	1,899,294	1,850,152	2,005,837	2,194,948	1,196,932	1,835,053	1,315,441	18,441,654	13%
Pick-Sloan (Eastern & Western Division)	6,339,428	7,481,295	8,090,198	6,838,564	6,967,128	7,290,056	7,568,410	4,443,398	6,997,549	4,849,199	66,865,226	46%
Salinity Project	33,542	37,523	42,092	34,062	32,598	35,116	39,041	20,907	31,891	21,762	328,535	0%
Salt Lake City Area/Integrated Projects	1,990,511	2,118,655	2,269,065	2,314,188	2,095,331	2,549,336	2,468,037	1,207,781	2,141,972	1,498,318	20,653,193	14%
Grand Total	16,856,490	15,743,300	17,657,500	14,462,250	14,407,630	16,148,500	16,032,470	9,224,705	14,774,924	10,073,451	145,381,221	100%



HQ 10-Year Capital Plan
Projects>\$1M

Org Name	Project #	Name Of Project	Project Classification	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Grand Total
A2800 - Enterprise Applications	#1	Enterprise Applications - Hardware Lifecycle Replacement - 2022	Lifecycle management			500,000								500,000
	#2	Enterprise Applications - Hardware Lifecycle Replacement - 2023	Lifecycle management				2,200,000							2,200,000
	#3	Enterprise Applications - Hardware Lifecycle Replacement - 2027	Lifecycle management								1,600,000			1,600,000
	#4	Enterprise Applications - Hardware Lifecycle Replacement - 2028	Lifecycle management									1,100,000		1,100,000
	#5	FIMS 12.2 Upgrade - 2020	Upgrade	1,430,000										1,430,000
	#6	FIMS 12.2 Upgrade and Enhancements - 2021	Upgrade/enhancement		1,480,000									1,480,000
	#7	Enterprise Applications Upgrades - 2025	Upgrade						2,750,000					2,750,000
	#8	Enterprise Applications Upgrades - 2026	Upgrade							2,000,000				2,000,000
	#9	Enterprise Applications Upgrades and Enhancements - 2024	Upgrade/enhancement					2,160,000						2,160,000
	#10	Enterprise Application Upgrades and Enhancements - 2028	Upgrade/enhancement									2,350,000		2,350,000
	#11	Enterprise Application Upgrades and Enhancements - 2029	Upgrade/enhancement										2,350,000	2,350,000
	#12	Records Management - NARA - 2020	Compliance	650,000										650,000
	#13	Records Management - NARA - 2021	Compliance		790,000									790,000
	#14	Records Management - NARA - 2022	Compliance			440,000								440,000
A2800 - Enterprise Applications Total				2,080,000	2,270,000	940,000	2,200,000	2,160,000	2,750,000	2,000,000	1,600,000	3,450,000	2,350,000	21,800,000
A2900 - Power Management & Marketing	#15	Metering Strategy - MV90 Infrastructure Enhancement - phase I 2025	Emerging requirement						750,000					750,000
	#16	Metering Strategy - MV90 Infrastructure Enhancement - phase II 2026	Emerging requirement							750,000				750,000
	#17	Power Billing Software System - Phase I 2024	Lifecycle management					2,450,000						2,450,000
	#18	Power Billing Software System - Phase II 2025	Lifecycle management						3,000,000					3,000,000
	#19	Standardize EMMO and Settlements tools across WAPA Phase I 2021	Upgrade		2,418,000									2,418,000
	#20	Standardize EMMO and Settlements tools across WAPA Phase II 2022	Upgrade			1,309,000								1,309,000
	#21	Upgrade/Replace In-house developed tools - update frameworks 2020	Upgrade	1,184,000										1,184,000
	#22	Upgrade/Replace In-house developed tools - update frameworks 2025	Upgrade						1,184,000					1,184,000
	#23	Upgrade/Replace In-house developed tools - update frameworks 2027	Upgrade								900,000			900,000
	#24	Upgrade/Replace In-house developed tools - update frameworks 2028	Upgrade									950,000		950,000
#25	Upgrade/Replace In-house developed tools - update frameworks 2029	Upgrade										950,000	950,000	
A2900 - Power Management & Marketing Total				1,184,000	2,418,000	1,309,000	-	2,450,000	4,934,000	750,000	900,000	950,000	950,000	15,845,000
A2700 - SCADA	#26	Common SCADA/EMS Vendor	Lifecycle management	4,005,000										4,005,000
	#27	Implementation of the Common SCADA vendor - SNR 2020	Lifecycle management	2,840,000										2,840,000
	#28	Implementation of the Common SCADA vendor - UGP 2021	Lifecycle management		2,399,500									2,399,500
	#29	Implementation of the Common SCADA vendor - UGP 2022	Lifecycle management			770,500								770,500
	#30	Implementation of the Common SCADA vendor - RMR/DSW 2023	Lifecycle management				1,860,000							1,860,000
	#31	Implementation of the Common SCADA vendor - RMR/DSW 2024	Lifecycle management					980,000						980,000
	#32	Historian software license renewal 2022	Lifecycle management			1,671,500								1,671,500
	#33	Historian software enterprise license renewal 2027	Lifecycle management									1,931,030		1,931,030
A2700 - SCADA Total				6,845,000	2,399,500	2,442,000	1,860,000	980,000	-	-	1,931,030	-	-	16,457,530
A2100 - Cyber Security	#34	SESC SIEM Lifecycle Replace 2021	Lifecycle management		1,525,000									1,525,000
	A2100 - Cyber Security Total				-	1,525,000	-	-	-	-	-	-	-	1,525,000
A2A00 - O&M Technology	#35	Access Management System 2022	Upgrade			1,000,000								1,000,000
	#36	Access Management System 2023	Upgrade				2,000,000							2,000,000
	#37	Integrated Functional Control Center 2025	Emerging requirement						2,000,000					2,000,000
	#38	Integrated Functional Control Center 2026	Emerging requirement							3,000,000				3,000,000
A2A00 - O&M Technology Total				-	-	1,000,000	2,000,000	-	2,000,000	3,000,000	-	-	-	8,000,000
A7810 - Aviation	#39	Aviation Helicopter replacement 2022	Lifecycle management			4,000,000								4,000,000
	#40	Aviation Helicopter replacement 2024	Lifecycle management					3,500,000						3,500,000
	#41	Aviation Helicopter replacement 2026	Lifecycle management							4,500,000				4,500,000
	#42	Aviation Helicopter replacement 2028	Lifecycle management									5,000,000		5,000,000
A7810 - Aviation Total				-	-	4,000,000	-	3,500,000	-	4,500,000	-	5,000,000	-	17,000,000
Grand Total				10,109,000	8,612,500	9,691,000	6,060,000	9,090,000	9,684,000	10,250,000	4,431,030	9,400,000	3,300,000	80,627,530

Projects highlighted in yellow are new to this year's plan



Enterprise Applications Hardware Lifecycle Replacements (#1 - #4)

What

- Base program – Lifecycle management
- Replace hardware hosting ~200 databases and applications used by WAPA Operations, Marketing, Maintenance and Finance business partners
- FY22/FY23 - \$2.7M
- FY27/FY28 - \$2.7M

Why

- Maintain business continuity, availability and reliability
- Aligns with lifecycle management strategy

Value

- Stay within warranty period and vendor support
- Maintain performance of hosted systems
- Maintain availability of hosted systems

Alternatives

- Alternative 1 - Status quo
- Alternative 2 - Replace
- Alternative 3 - Migrate to Cloud
- **Planned alternative for FY22/FY23 – Replace**

FIMS Upgrades(#5, #6) Enterprise Applications (#7, #8)

What

- Base program – Upgrade
- Financial Information Management System (FIMS) Upgrades
- FY20/21 - \$2.9M
- FY25/26 - \$4.8M

Why

- Current version de-supported 12/2021
- 2025/2026 planning for future upgrades
- Maintain vendor support for updates, maintenance and patches
- Aligns with lifecycle management strategy

Value

- Leverage new features to comply with legislative, regulatory and compliance requirements
- Vendor provides application and system security patches

Alternatives

- Alternative 1 – Status quo
- Alternative 2 – Upgrade
- Alternative 3 – Migrate to Cloud
- **Planned alternative for FY20/21 – Upgrade**

Enterprise Applications Upgrades and Enhancements (#9 - #11)

What

- Base program – Upgrade/enhancements
- Upgrades and enhancements for mission supporting finance, budget, maintenance, asset management, facility, procurement, reporting and collaboration systems.
- FY24 - \$2.2M, FY28 - \$2.4M, FY29 - \$2.4M

Why

- Aligns with lifecycle management strategy
- Upgrades to other Enterprise Applications
- Comply with legislative, regulatory and compliance requirements
- Support WAPA strategic initiatives

Value

- Leverage agile approach to deliver value sooner
- Leverage a staff augmentation approach to reduce cost of delivery

Alternatives

- Alternative 1 – Status quo
- Alternative 2 – Leverage existing solutions
- Alternative 3 – Buy new applications/tools
- **Planned alternative** – Leverage existing tools

Enterprise Applications – Records Management (#12 - #14)

What

- Base program - Compliance
- Install Enterprise Records Management System by CY19
- Phased implementation plan to meet Presidential Directive and NARA requirements by CY22
- Capital - FY20-\$650k, FY21 - \$790k, FY22 - \$440k

Why

- Meet OMB/NARA M-19-21 Directive requirement that born-electronic permanent records are managed electronically by 12/31/19
- Meet new requirement of being fully electronic by 12/31/22
- Efficiently manage the amount of records WAPA creates

Value

- Identify authoritative business information
- Allow for continuity of access to WAPA information
- Create efficiencies by managing records in a central environment

Alternatives

- Purchased COTS Solution in September 18
- Alternative 1 – Rely on manual processes
 - Alternative 2 – Utilize manual and automated solutions
 - Alternative 3 – Automate to the fullest extent possible
 - **Planned Alternative 2**

Metering Strategy—MV90 Infrastructure Enhancement Phase I & II (#15, #16)

What

- Emerging requirement
- Critical revenue metering system(s)
 - Split into 2 phases
 - Moved to FY25 and FY26
- FY25 - \$750k
- FY26 - \$750k

Why

- Each WAPA region currently has standalone implementations
- Status quo is resource intensive
- Single metering strategy is sustainable and supportable into the future

Value

- Improved efficiency in metering, energy accounting & billing
- Revenue reporting and data integration is maintainable and simplified
- Enhanced revenue tracking

Alternatives

- Alternative 1 – Status quo
- Alternative 2 – Write in-house metering system
- Alternative 3 – Assemble a team to develop the strategy
- **Planned Alternative – assemble team**

Power Billing Software System Phase I&II (#17, #18)

What

- Base program – Lifecycle management
- Upgrade/replace In-house developed power billing system
- FY24 - \$2.5M
- FY25 - \$3M

Why

- In-house power billing system will be 15 years old
- Frameworks will need to be upgraded which aligns with effective life-cycle-management
- Adheres to WAPA cyber security policies

Value

- Facilitates common practices across WAPA
- Provides opportunity for efficient resource deployment
- Creates common, sustainable, access to data

Alternatives

- Alternative 1 – Status quo
- Alternative 2 – Re-write in-house system
- Alternative 3 - Look for existing COTS system (updated cost estimate)

- **Planned Alternative – COTS**

Settlements/EMMO Tools Phase I/II (SNR/DSW) (#19, #20)

What <ul style="list-style-type: none">• Base program – Upgrade• Standardize multiple systems used by WAPA power marketing and scheduling staff (SNR/DSW) only• FY21 - \$2.4M• FY22 - \$1.3M	Why <ul style="list-style-type: none">• Aligns with the Organizational Approach to Markets• Approximately 45 separate tools currently used within WAPA• Changing industry environment – existing tools likely won't meet needs into the future
Value <ul style="list-style-type: none">• Positions WAPA to better take advantage of any market participation benefits• Provides opportunity for efficient resource deployment	Alternatives <ul style="list-style-type: none">• Alternative 1 – Status quo• Alternative 2 – Build new systems in-house• Alternative 3 – Standardize existing COTS systems across WAPA • Planned Alternative – standardize COTS

Upgrade/Replace In-house Developed Tools (#21 - #25)

What

- Base program – Upgrade
- In-house developed tools for WAPA specific processes
- Software lifecycle replacement of in-house power marketing related applications
- FY20 - \$1.2M
- FY25 - \$1.2M
- FY27-29 - \$2.8M lifecycle maintenance
- PD costs

Why

- Address WAPA specific business process needs
- No vendor options at the time in-house systems were built
- Unsupported by vendor

Value

- Facilitates exchange of information with business partners and customers
- Fill the WAPA process gaps
- Streamline solution to common issues

Alternatives

- Alternative 1 – Status quo
- Alternative 2 – Upgrade/replace
- Alternative 3 – Look for existing COTS system

- **Planned Alternative – Upgrade/replace**

Common SCADA/EMS Vendor (#26-#31)

What

- Base program – Lifecycle management
- Procure and install a common SCADA/EMS system across WAPA's six control centers.
- FY19 – Evaluate/Analyze
- FY20 – Decide/Purchase (\$4.01M)
- FY20 – Implement in SNR (\$2.84M)
- FY21/FY22 – Implement in UGP (\$2.40M/\$0.77M)
- FY23/FY24 – Implement in DSW/RMR (\$1.86M/\$0.98M)

Why

- System upgrades and lifecycle replacements are coming. This is an opportunity to take a fresh look at a WAPA-wide approach.
- The common vendor approach, has the potential to reduce costs associated with procurement, annual licensing, vendor support, internal support, and training.

Value

- Achieve best prices for purchase and maintenance of SCADA/EMS systems.
- Improved ability to share expertise across all regions resulting in increased reliability.
- Set the stage for consistency in market implementation and future operational reliability standard changes.

Alternatives

- Alternative 1 – Maintain the status quo
 - Alternative 2 – Keep RMR/DSW system
 - Alternative 3 – Keep SNR system*
 - Alternative 4 – Keep UGP system
 - Alternative 5 – Replace all six systems*
- * Current options under consideration
- **Planned Alternative – TBD in FY20**

Historian Software License Renewal (#32-#33)

What

- Base program – Lifecycle management
- Historian software provides a repository for the collection of bulk electric system data.
- The historian is bundled with analytical tools and display tools.
- The license renewal takes place every five years.
- FY22 - \$1.67M, FY27 - \$1.93M

Why

- This enterprise agreement provides WAPA with unlimited use of the historian for data collected from DSW, RMR, and SNR substations. It is used by:
 - Operations
 - Maintenance
 - Power Marketing

Value

- Data produced by intelligent electronic devices (IED) is growing by leaps and bounds. It takes a product like a data historian to collect, analyze and display the data.
- It is used by Operations to monitor the electric system, by Maintenance for asset management, by Transmission Planning to design the grid, and by Power Marketing to observe power plants.

Alternatives

- Alternative 1 – Historian
- Alternative 2 – No Historian
- **Planned Alternative – Historian**

SEIM Lifecycle Replacements (#34)

What

- Base program – Lifecycle management
- Replace 19 Servers currently collecting and analyzing cyber information
- Item represents consolidation of projects in cyber for FY 2021
- \$1.5M

Why

- Meet compliance requirements under NERC CIP
- Address cyber control requirements under FISMA, DOE, DHS, and OMB directives
- Manage large amount of data for analysis

Value

- Automate collection, correlation and analysis of cyber data
- Provide rapid alerting and intelligence on system cyber events
- Assist in system and network maintenance

Alternatives

- Alternative 1 – Do Nothing
- Alternative 2 – Move to Cloud
- Alternative 3 – Replace/Lifecycle equipment

Planned Alternative – Purchase replacements

Access Management System (#35, #36)

What

- Base program - Upgrade
- Update access control of substation and access management program
- Requirements driven solution
- Extends our physical access control systems where feasible
- FY22 - \$1M and FY-23-\$2M based

Why

- DOE IG identified shortfall in WAPA's access management program
- Current access management system:
 - Issue, tracking and control and program assurance can be improved

Value

- Improved security and less time to manage (accountability, issue and use)
- Ensures compliance...less moving parts
- Potential for consolidated regional control with HQs redundancy

Alternatives

- Alternative 1 - Extend our Physical Access Control Systems
- Alternative 2 – Develop a requirements based solution employing both manual (keys and locks) and technological solutions

Planned alternative – Alternative 2

Integrated Functional Control Center (#37, #38)

What

- Emerging requirement
- Consolidate cross functional operations (EOC, security, EM, cyber operations) in one area
- Combine information across functional areas
- Provide stakeholders/SLT with a better common operational picture; uses GIS
- FY25 - \$5M/Requirements based

Why

- Information comes in through one lens at a time...need to provide an integrated picture
- Consolidated operations are more efficient
- Provides enterprise view of incidents; conveys more useful information, better situational awareness and decision support

Value

- Better synergy/situational awareness across functional areas
- Enhanced capability of control centers:
 - Improved C3I across WAPA (more informed decisions, better speed, integration, and response)

Alternatives

- Alternative 1 - Rely on current regional security monitoring and response capability
- Alternative 2 - Combine CCs to collect information/respond to threats (natural, physical)
- Alternative 3 - Explore integration options with other federal agencies such as DHS

Planned alternative – Alternative 2

Aviation – Helicopter Lifecycle Replacements (#39 - #42)

What

- Base program – Lifecycle management
- Helicopter lifecycle replacements:
 - FY22 – \$4M (N619DE – DSW)
 - FY24 – \$3.5M (N617DE – RMR)
 - FY26 – \$4.5M (N618DE – UGP)
 - FY28 - \$5M (N620DE – SNR)
- \$3.5M - \$5M for new, similarly-equipped to current helicopters

Why

- Lifecycle replacements due to either age and/or number of hours on airframe.
- Increased operational costs of maintaining older aircraft
- Existing helicopters made in '00/'07/'08/'08
- Lifecycle is in accordance with FAA and DOE-OAM recommendations

Value

- Using helicopters and doing human external cargo(HEC)work provides cost/time savings
- Many WAPA locations are only reachable by helicopter, especially during winter season
- Helicopters are valuable for providing fire protection and quick emergency response
- New helicopters have a 2-year warranty which leads to reduced operational costs

Alternatives

- Alternative 1 – Replace w/new helicopters
 - Alternative 2 – Replace w/quality used helicopters (dependent upon availability)
 - Alternative 3 – Utilize contract helicopters
 - Alternative 4 – Perform all line work and patrols utilizing ground-based methods
- Planned Alternative** – Alternative 1 or 2 depending availability of quality used units

Questions & Next Steps

Provide Feedback to Colin Marquez at

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By October 30, 2019