Combined Transmission Service Rate

Colorado River Storage Project Management Center
and
Desert Southwest Region

September 24, 2020

Western Area Power Administration

Webex Housekeeping

- All participants are muted on entry to ensure a smooth remote meeting.
- For questions, please choose one of the following options:
  - Send questions to the host in the Webex chat
  - Use the “Raise Hand” icon next to your name in participant list. The host will unmute and call on you. Click same icon to lower your hand.
  - Unmute yourself on Webex or press *6 if you are only participating by phone
- Will have time for additional questions at the end of the meeting
- Make sure you are not “double-muted” when attempting to talk (i.e. muted on your device in addition to the Webex client)

Agenda

- Welcome and Introductions
- Website Information/Resources
- Rate Convergence Chart with FY 2021 Rates
- Transmission System Overview
- Transmission Pancakes
- Rate Design/Revenue Allocation
- Future Meetings (frequency, logistics)
- Action Items and Meeting Close

Website Information/Resources

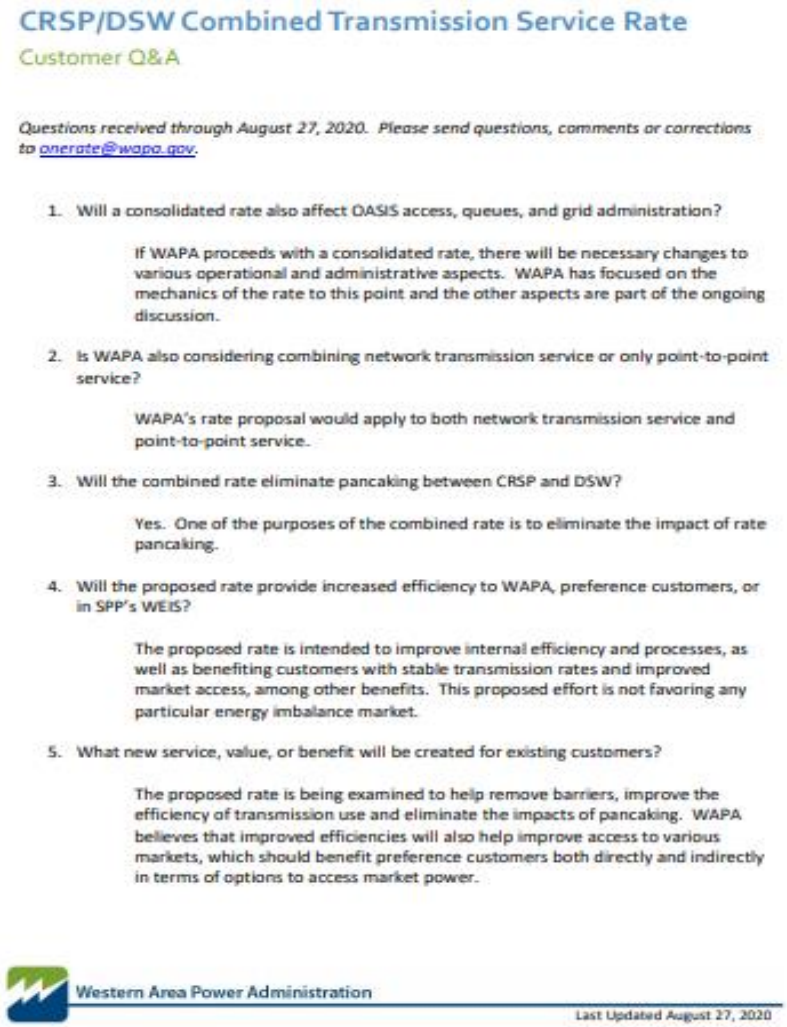
- Briefings, FAQ, notes, presentations, and other information is available at:

  https://www.wapa.gov/regions/DSW/Rates/Pages/CombinedTransRate.aspx

- FAQ will be updated throughout the process and we will keep you appraised of progress through periodic emails/contact

- Continue preparations for work group meetings later this year

Questions are encouraged



CRSP/DSW Combined Transmission Service Rate

Customer Q&A

Questions received through August 27, 2020. Please send questions, comments or corrections to onerate@wapa.gov.

1. Will a consolidated rate also affect OASIS access, queues, and grid administration?

   If WAPA proceeds with a consolidated rate, there will be necessary changes to various operational and administrative aspects. WAPA has focused on the mechanics of the rate to this point and the other aspects are part of the ongoing discussion.

2. Is WAPA also considering combining network transmission service or only point-to-point service?

   WAPA's rate proposal would apply to both network transmission service and point-to-point service.

3. Will the combined rate eliminate pancaking between CRSP and DSW?

   Yes. One of the purposes of the combined rate is to eliminate the impact of rate pancaking.

4. Will the proposed rate provide increased efficiency to WAPA, preference customers, or in SPP's WEIS?

   The proposed rate is intended to improve internal efficiency and processes, as well as benefiting customers with stable transmission rates and improved market access, among other benefits. This proposed effort is not favoring any particular energy imbalance market.

5. What new service, value, or benefit will be created for existing customers?

   The proposed rate is being examined to help remove barriers, improve the efficiency of transmission use and eliminate the impacts of pancaking. WAPA believes that improved efficiencies will also help improve access to various markets, which should benefit preference customers both directly and indirectly in terms of options to access market power.

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Last Updated August 27, 2020

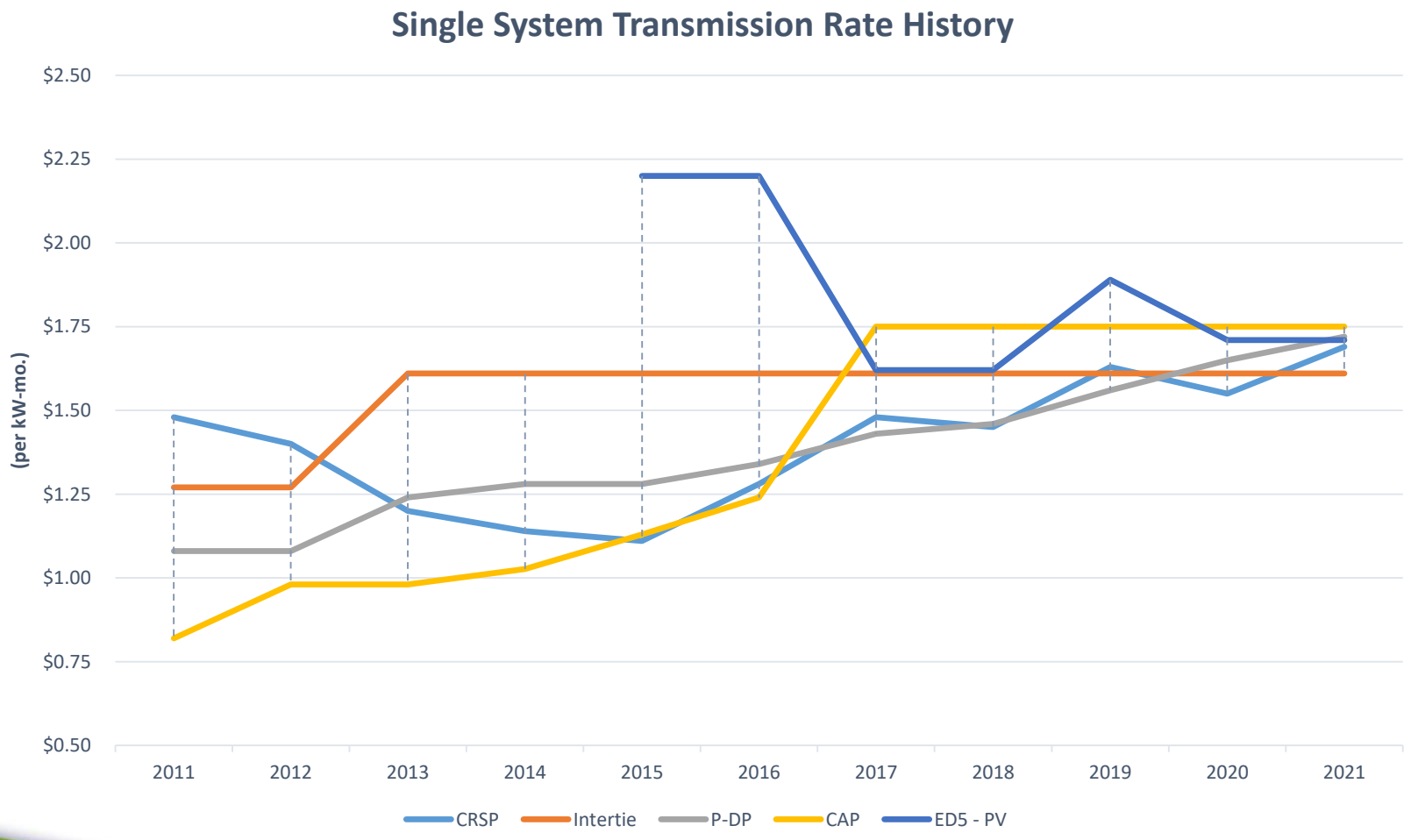
We have posted Frequently Asked Questions to website

- Customer comments received have been answered
- Some customers comments have not been answered yet, and we're working on those

Please see the website to read some of these questions

https://www.wapa.gov/regions/DSW/Rates/Pages/CombinedTransRate.aspx

FY 2011 – FY 2021 Rate Convergence



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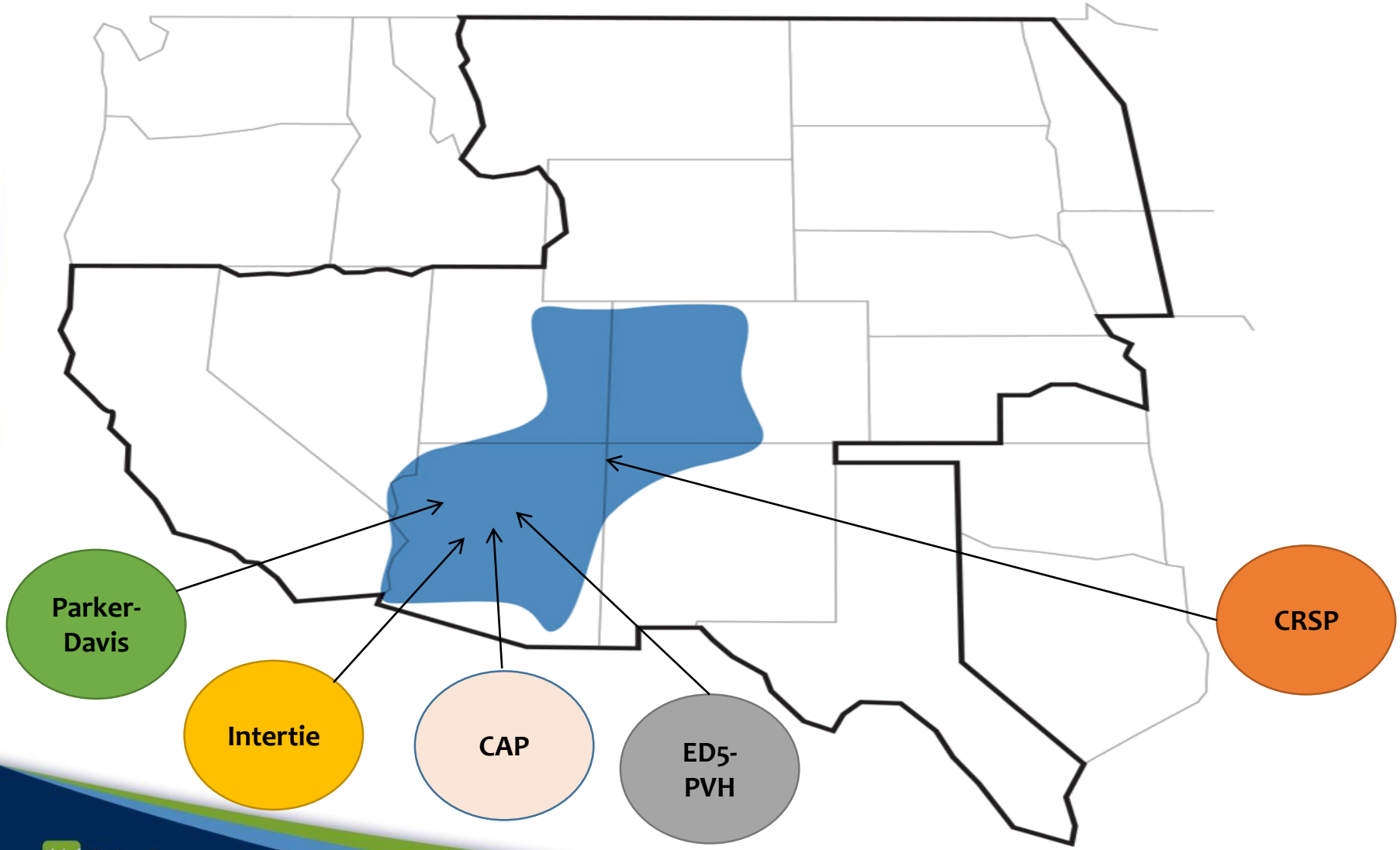
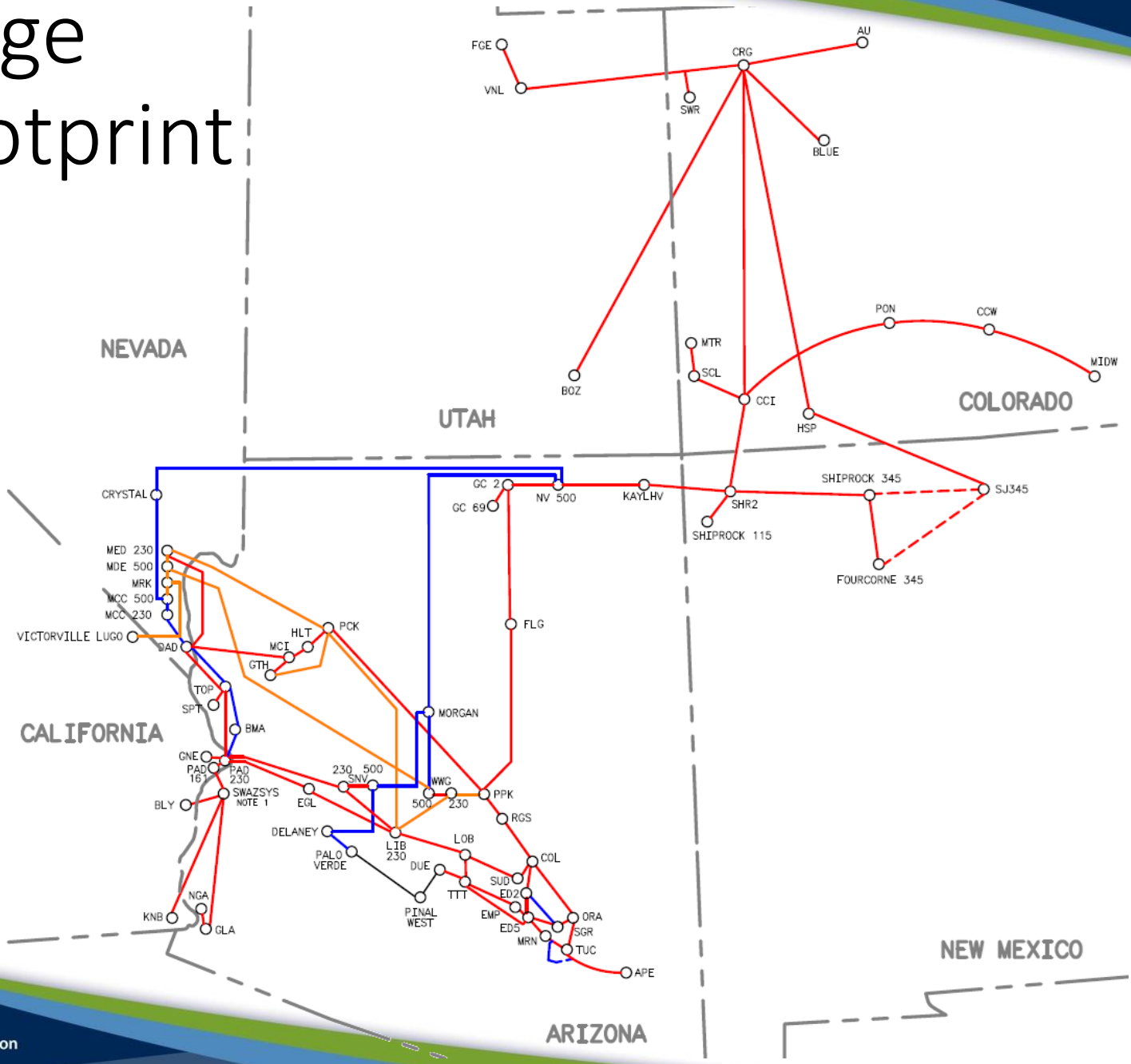
Transmission System Overview



Large Footprint



Colorado River Storage Project

- Constructed as part of the Colorado River Storage Project Act of 1956 to deliver federal hydropower to project use and preference customers in several states
- System consists of mostly 138-kV, 230-kV and 345-kV high-voltage transmission lines and attendant facilities, including 36 substations, extending across Arizona, New Mexico, Colorado and into portions of Utah and Wyoming. There are over 2,300 transmission line miles with 56% of those line miles in Colorado and 29% in Arizona.
- The fiscal year FY 2021 firm transmission rate for CRSP is $20.27/kW-year based on a revenue requirement of $87.8 million and sales of 4,333 MW

ED5-Palo Verde Hub Project

- 230-kV transmission line, completed under WAPA's Transmission Infrastructure Program as a public-private partnership, began commercial operation in 2015
- The transmission line is integrated with the Parker-Davis Project and provides service from the Palo Verde Hub to ED5 Substation south of Phoenix, Arizona
- The FY 2020 firm transmission rate for ED5-PVH is $20.52/kW-year based on a revenue requirement of $3.2 million and sales of 156 MW

Pacific Northwest – Pacific Southwest Intertie Project

- Authorized by the Pacific Northwest Power Marketing Act of 1964
- Originally envisioned to connect the Pacific Northwest to the Pacific Southwest with AC and DC transmission line segments
- The Desert Southwest Region's portion consists of 230-kV, 345-kV and 500-kV high-voltage transmission lines, including 7 substations, extending across Arizona and California
- The fiscal year FY 2021 firm transmission rate for Intertie is $19.32/kW-year based on a revenue requirement of $30.6 million and sales of 1,584 MW

Central Arizona Project

- Central Arizona Project is one of three related water development projects that make up the Colorado River Basin Project
  - Authorized in 1968 to improve water resources in the Colorado River Basin
  - Transmission facilities include a 230-kV from McCullough Substation in Nevada and interconnects to the Davis and Parker substations in Arizona
  - CAP has capacity rights in the transmission line from Parker to Liberty substations in Arizona. CAP also includes 230-kV lines east of Phoenix, Arizona, and several 115-kV lines that feed pumping stations near Salome and Tucson, Arizona
  - Although not included in the rate set by WAPA, CAP also includes the federal share of capacity in the 500-kV lines of the Navajo Southern Transmission System and the Navajo Western Transmission System
- The calendar year 2020 firm transmission rate for CAP is $21.00/kW-year based on a revenue requirement of $13.2 million and sales of 630 MW
  - Project pumping load represents 540 MW of the 630 MW

Parker-Davis Project

- Formed by consolidating two projects, Parker Dam and Davis Dam, under terms of the Consolidate Parker Dam Power Project and Davis Dam Project Act of May 28, 1954
- Transmission facilities of P-DP include 230-kV lines from Mead Substation in Nevada to Davis, Parker, Liberty and Pinnacle Peak substations in Arizona
- P-DP also includes 161-kV lines from Parker Substation to Yuma, Arizona; 115-kV lines from Phoenix to Southeastern Arizona; and a number of shorter line segments from Mead Substation to other nearby substations in southern Nevada
- The FY 2021 firm transmission rate for P-DP is $20.64/kW-year based on a revenue requirement of $53.2 million and sales of 2,578 MW. Firm electric service and priority use power represent 271 MW of the 2,578 MW.

Rate Setting Comparison

	Central Arizona Project (CAP)	Colorado River Storage Project (CRSP)	(ED5-PVH)	Pacific Northwest-Pacific Southwest Intertie Project (Intertie)	Parker-Davis Project (PDP)
Rate Setting Methodology	Static	Fixed Charge	Static	Pinch-Point	CIA-Modified
Formula/Stated Rate	Formula - Calculated Annually	Formula - Calculated Annually	Formula - Calculated Annually	Stated Rate	Formula - Calculated Annually
Rate Setting Period	Future Five Years	First Future Year	First Future Year	Future 50 Years	Future Five Years
Rate (kW-Month)	$1.75	$1.69	$1.71	$1.61	$1.72
Effective Date	1/1/2020	10/1/2020	10/1/2020	10/1/2020	10/1/2020
Costs	$15,161,686	$86,894,976	$4,528,102	$40,207,826	$59,718,671
Offsetting Revenue	$(3,199,311)	$(1,929,490)	$(786,870)	$(9,600,000)	$(6,513,374)
True-up	$1,267,000	$2,867,206	$(544,437)	n/a	$0
Revenue Requirement	$13,229,375	$87,832,693	$3,196,795	$30,607,826	$53,205,297
Reservations (kW)	630,000	4,333,197	156,000	1,584,256	2,577,776
True-up	Yes	Yes	Yes	Yes	Yes
Substations	10	36	5	7	48
Line Miles	270	2,324	109	588	1,662

Transmission Pancakes

- Limited Pancaking now, most Pre-OATT contracts
- Post FERC Order 888 – limited pancaking due to barriers of multiple charges
- Existing DSW/CRSP Pancaking
  - CRSP Customers on PDP system
  - Public Service Company of New Mexico Palo Verde Wheeling Arrangements

Opportunities without Pancakes

- Possible capacity to be sold out of our ties from Palo Verde and Westwing (close to Palo Verde).
- Customers may explore cheaper energy resources at the Palo Verde hub to serve their load.
- Additional capacity exporting to California on the Intertie system.
  - More transactions from PDP/CRSP customers with excess generation will be submitted for sales to California.

Conceptual Rate Design and Revenue Allocation

- This rate design/revenue allocation is an illustrative model intended to be a starting point for discussions
- The amounts included in the workbook are approximations used for illustrative purposes
- Systems will continue to use their individual rate methodologies to determine costs
- Firm electric service will pay their proportionate share of combined costs
- Offsetting revenues will be combined/pooled and allocated along with firm revenues
- Revenue will be allocated based on individual system costs
- Under/Over-Collections will be handled according to each system's individual rate methodology

Rate Design

Step 1 - Determine Combined System Revenue Requirements

(the dollar amount to be collected from firm sales - numerator)

Calculations Based on FY 2021

	Cost		PY True-Up/Carryover		Offsetting Revenue		Adjustment Unbilled Reservations		Revenue Requirements
CAP	$ 15,161,686	-	$ 432,311	-	$ 1,500,000	-	$ -	=	$ 13,229,375
CRSP	86,865,188	-	(2,867,206)	-	7,131,821	-	3,430,390	=	79,170,183
ED5-PVH	4,528,102	-	1,331,307	-	-	-	-	=	3,196,795
Intertie	40,207,826	-	-	-	9,600,000	-	-	=	30,607,826
PDP	63,732,425	-	4,013,754	-	6,494,663	-	-	=	53,224,008
	$ 210,495,227	-	$ 2,910,166	-	$ 24,726,484	-	$ 3,430,390	=	$ 179,428,187

Rate Design

Step 2 - Determine Combined System Reservations

(the estimated quantity of firm sales - denominator)

	FY 2021 Reservations		Adjustment Unbilled Reservations		Adjustment Pancakes		Total Reservations
CAP	630,000	-	-	-	-	=	630,000
CRSP	4,333,197	-	174,000	-	1,723	=	4,157,474
ED5-PVH	156,000	-	-	-	-	=	156,000
Intertie	1,584,256	-	-	-	134,000	=	1,450,256
PDP	2,577,776	-	-	-	63,813	=	2,513,963
	9,281,229 kW	-	174,000 kW	-	199,536 kW	=	8,907,693 kW

Rate Design

Step 3 - Calculate Combined Rate

(to be charged for sales)

$$\text{Revenue Requirements} = \frac{\$179{,}428{,}187}{\text{Reservations} = 8{,}907{,}693\ \text{kW}} = \$20.14/\text{kW-Year} \text{ or } \$1.68/\text{kW-Month}$$

Step 4 - Determine Amount to Be Collected via CRSP SLIP Rate

(CRSP SLIP is not charged a transmission rate, so this step ensures it receives a proportionate share of the costs)

$$\frac{\text{FES/Merchant Reservations}}{3{,}512{,}886\ \text{kW}} \times \frac{\text{Combined Rate}}{\$20.14/\text{kW-Year}} = \$\ 70{,}760{,}270$$

Revenue Allocation

Step 1 - Determine Revenue Allocation Percentages Based on Rate Calculation

(how revenue from the combined rate will be distributed)

	Calculations Based on FY 2021								
	Cost		PY True-Up/Carryover		Adjustment Pancakes		Net Costs		Allocation Percentages
CAP	$ 15,161,686	-	$ 432,311	-	$ -	=	$ 14,729,375		7.2%
CRSP	86,865,188	-	(2,867,206)	-	3,430,390	=	86,302,004		42.3%
ED5-PVH	4,528,102	-	1,331,307	-	-	=	3,196,795		1.6%
Intertie	40,207,826	-	-	-	-	=	40,207,826		19.7%
PDP	63,732,425	-	4,013,754	-	-	=	59,718,671		29.3%
	$ 210,495,227	-	$ 2,910,166	-	$ 3,430,390	=	$ 204,154,671		100.0%

Revenue Allocation

Step 2 - Determine Actual Combined System Revenue

(revenue to be distributed - will come from financial reports)

	Combined Revenue	
Firm Transmission	$	108,667,917
CRSP SLIP Rate		70,760,270
Offsetting Revenue		24,726,484
	$	204,154,671

Revenue Allocation

Step 3 - Allocate Actual Revenue

(allocated revenue due each system)

	Allocation Percentages		Combined Revenue		Share of Revenue		CRSP Credit Collected via SLIP		Amount Due From Allocated Revenue
CAP	7.2%	x	$204,154,671	=	$ 14,729,375	-	$ -	=	$ 14,729,375
CRSP	42.3%	x	204,154,671	=	86,302,004	-	70,760,270	=	15,541,734
ED5-PVH	1.6%	x	204,154,671	=	3,196,795	-	-	=	3,196,795
Intertie	19.7%	x	204,154,671	=	40,207,826	-	-	=	40,207,826
PDP	29.3%	x	$204,154,671	=	59,718,671	-	-	=	59,718,671
	100.0%				$ 204,154,671	-	$ 70,760,270	=	$ 133,394,401

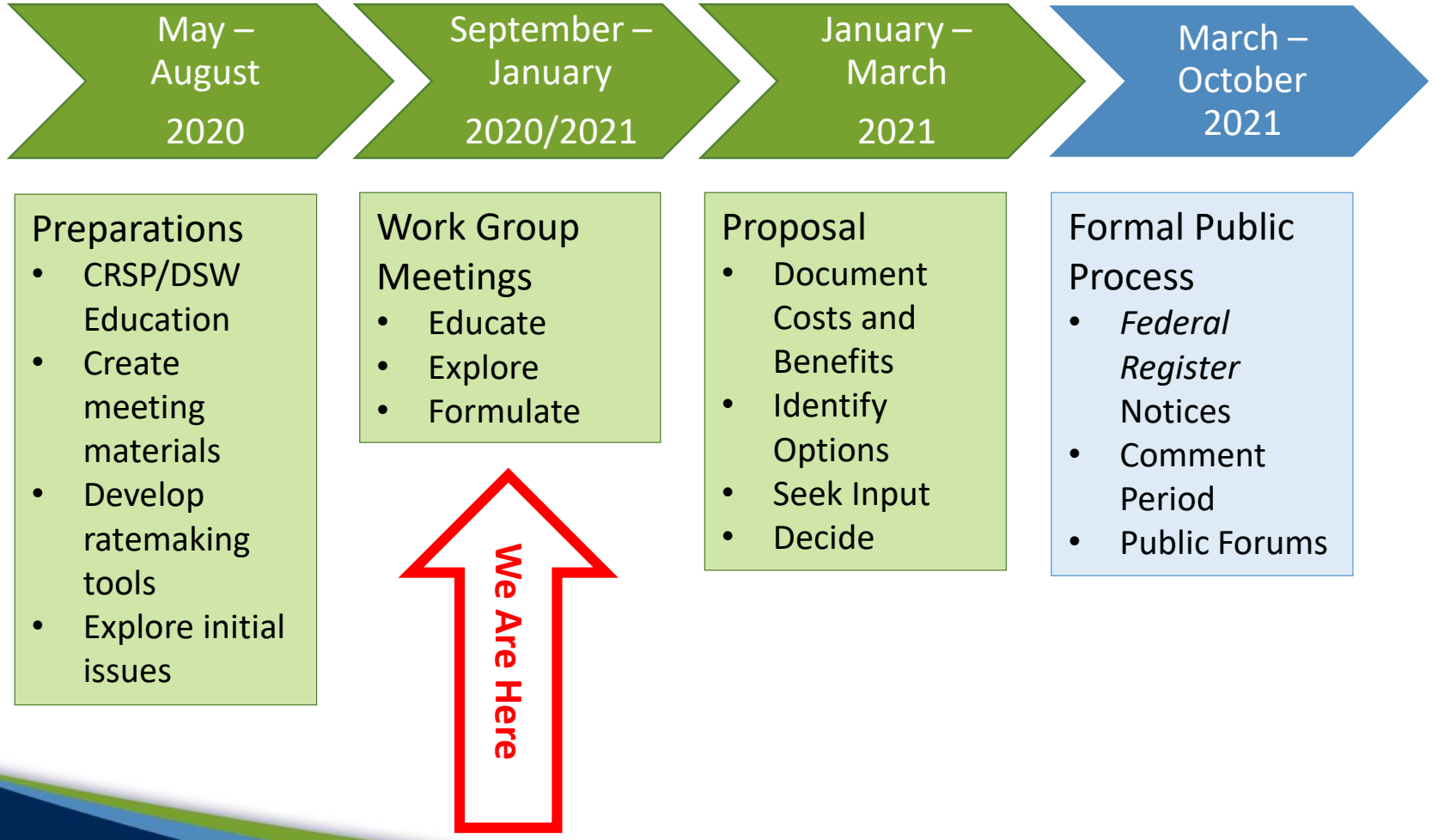
Revenue Allocation

Step 4 - Check for Cost Recovery

(illustrates any over/under-collection due to differences in estimated revenue vs actual revenue)

	Allocated Revenue		CRSP Credit Collected via SLIP		Net Costs		Over/(Under) Collection
CAP	$ 14,729,375	+	$ -	-	$ 14,729,375	=	$ -
CRSP	15,541,734	+	70,760,270	-	86,302,004	=	-
ED5-PVH	3,196,795	+	-	-	3,196,795	=	-
Intertie	40,207,826	+	-	-	40,207,826	=	-
PDP	59,718,671	+	-	-	59,718,671	=	-
	$ 133,394,401	+	$ 70,760,270	-	$ 204,154,671	=	$ -

Tentative Timeline



Future Meetings

- Frequency of meetings?
  - Monthly?
- Sub-teams or additional meetings?
  - Specific topics
  - Opportunity for a deeper dive
- How to keep you informed?
  - Website
  - Meeting notes
  - What else?

Open Discussion

Action Items and Close

- Action items
- Meeting notes and materials will be posted to our website
- Next meeting
- Thank you for attending!

https://www.wapa.gov/regions/DSW/Rates/Pages/CombinedTransRate.aspx

Contact Information

onerate@wapa.gov

602-605-2442
801-524-5495

wapa.gov

@westernareapowr

WesternAreaPower1