

# For WebEx Participants

- Notice: Everyone will be muted upon entering the WebEx meeting
- If you have a question and are logged into the WebEx, find your name and click the hand to the right of it – this will alert the moderator that you have a question and you will be unmuted



- After your question has been addressed, please click the hand icon again to lower your hand, failure to do so will mean the moderator will be unable to tell if you have another question
- Please do not put this call on hold OR take other calls while dialed in
- If you have questions and are calling in with no computer, please text this number with your name and the number you are called in on 602.859.2304
- <https://www.wapa.gov/regions/DSW/Pages/10-year-capital-program.aspx>





Western  
Area Power  
Administration

# Parker Davis and Intertie Project 10-Year Plan Working Session

August 15, 2019

Desert Southwest Region  
WebEx Meeting



# AGENDA

1. Welcome & Introduction
2. Objectives
3. Overview of Parker-Blythe #2 Transmission Line
4. Potential Parker-Blythe #2 Rebuild Alternative
5. Open Dialogue



# Objectives

- Inform stakeholders of potential cost savings to 10-Year Plan
- Provide stakeholders with updated information regarding transmission in Parker, AZ region
- Stakeholder consideration for delaying Parker-Blythe #2 rebuild vote
- Memorialize a decision to perform a new AOA\* study to reassess alternatives to the Parker-Blythe #2 rebuild, in lieu of voting on \$55M in December 2019

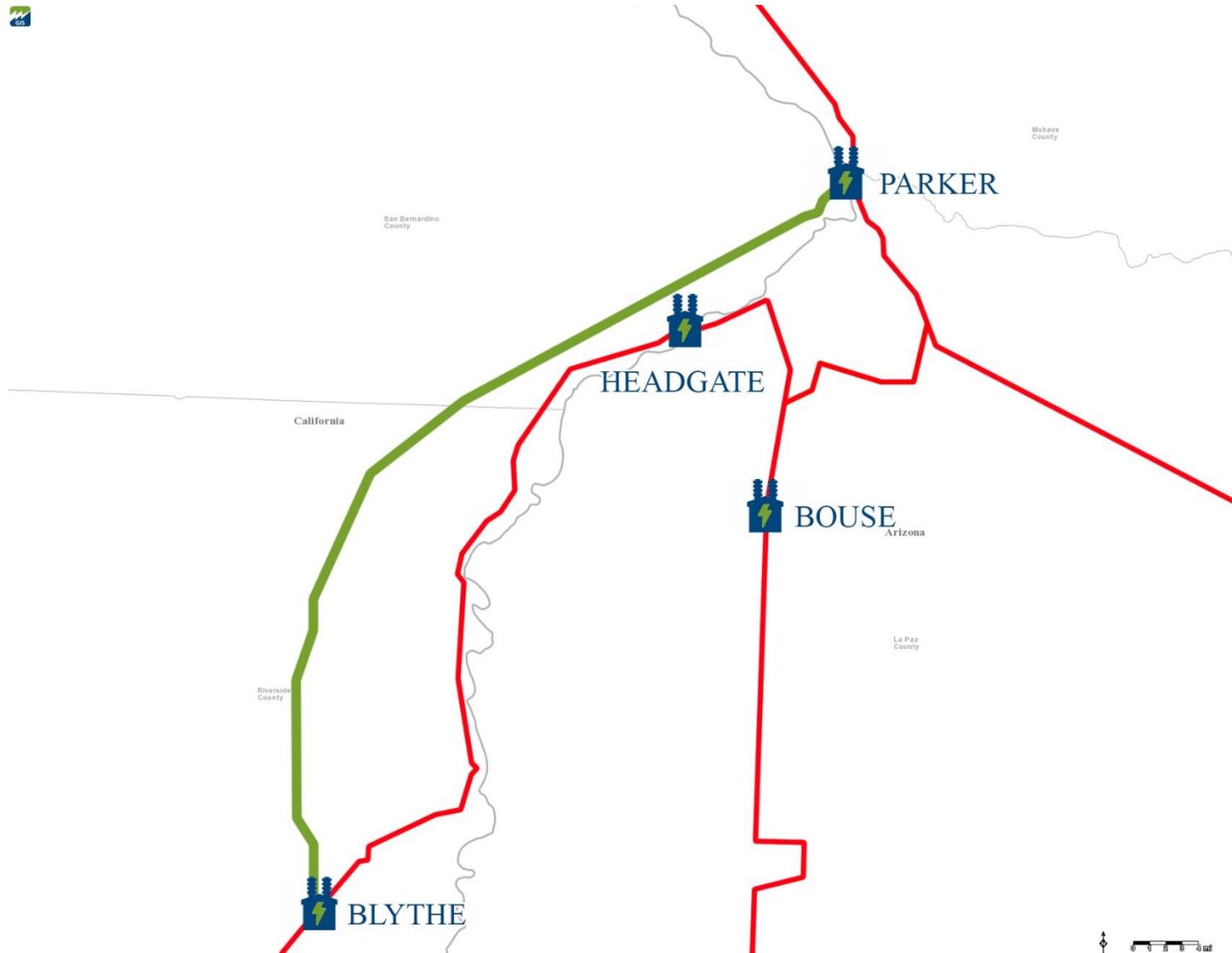
*\*AOA – Analysis of Alternatives*



# Parker-Blythe #2 Transmission Line Overview



# Parker-Blythe #2



# Parker-Blythe Mission Need



Geographic Information System

## July 29, 2019 PAD-BLY-2 161kV G5200 Maintenance Report

### Maintenance Performed in 2019

	Arm/Bridge	Brace	Crossarm	Foundation	Guy	Insulator	Phase/Conductor	Pole	Pole Hardware	Signs	Static Wire	TOTALS
Adjusted/Modified												0
Repaired								1				1
Replaced												0
<b>TOTALS</b>	0	0	0	0	0	0	0	1	0	0	0	1

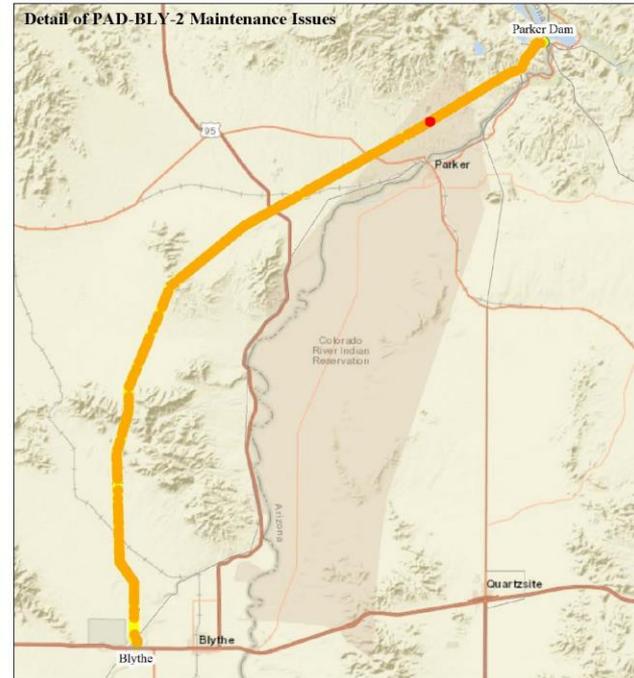
Note: Totals include RADDs projects and maintenance items.

### Current Status

Row Labels	A	B	C	D	E	Grand Total
Anchor			18			18
Brace		11	182	6		199
Crossarm		223	80	14		317
Foundation		1				1
Guy		5	31			36
Insulator		12	38	1		51
OPGW			1			1
Phase/Conductor			1			1
Pole	1	41	476	401	1	920
Pole Hardware			11	2		13
Signs			13			13
Static Wire			4	2		6
Structure	7					7
Vibration Damper			4			4
<b>Grand Total</b>	8	293	859	426	1	1587

#### Maintenance Priority Codes

A	Good or like new. No action required.
B	Minor defect. Monitor degradation.
C	Moderate defect. Rehabilitation or replacement recommended as scheduled maintenance.
D	Serious defect. Repair, reinforce, or replace as soon as possible.
E	Risk to public safety or system reliability.

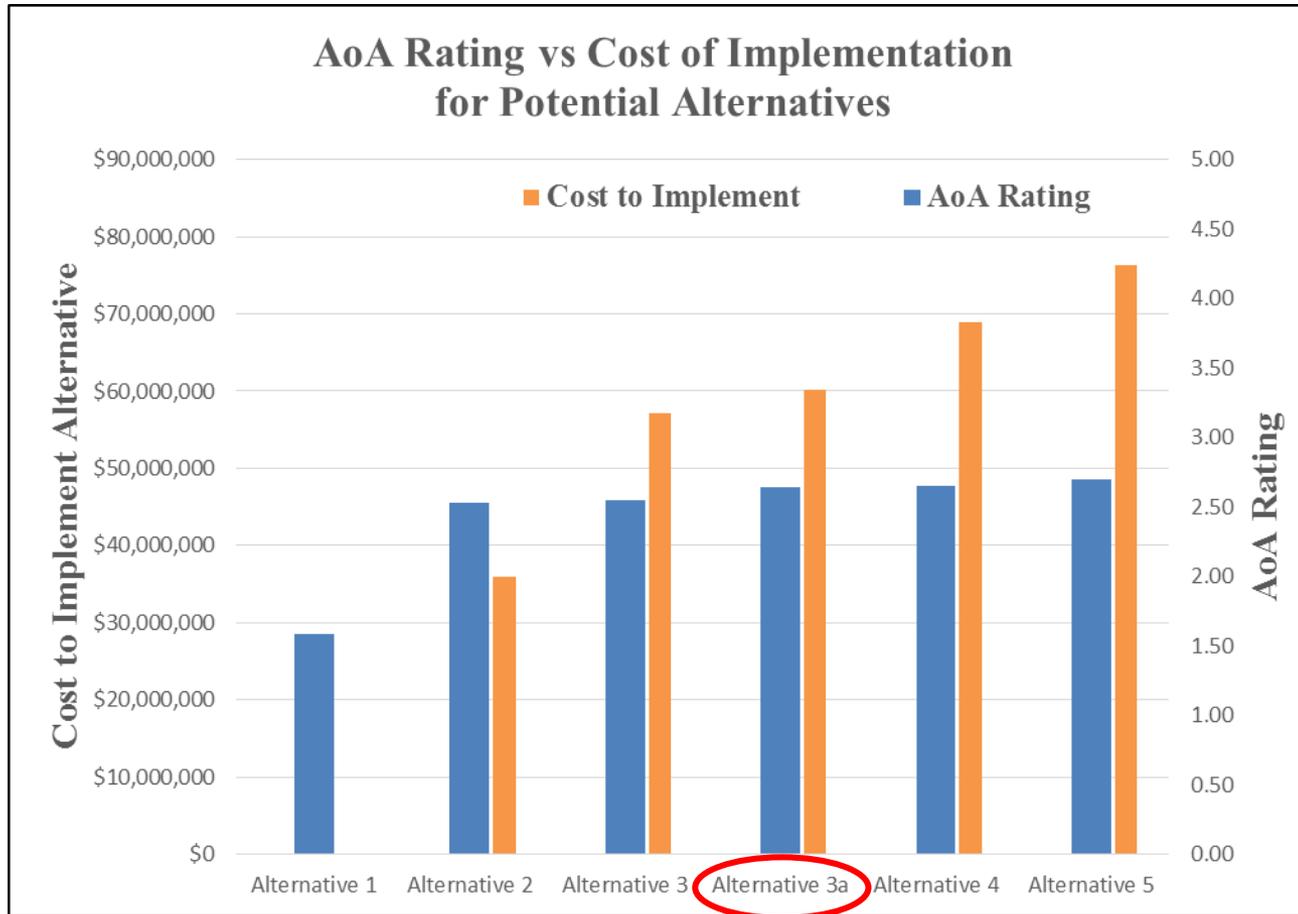


# Original Parker-Blythe Alternatives

- **Alternative 1-** Status Quo (Maintenance only)
- **Alternative 2-** Replace wood poles in-kind and add steel structure dead-ends every <10 miles
- **Alternative 3-** Rebuild with light duty steel H-Frame structures using 161-kV specifications and standards
- **Alternative 3a-** Rebuild with light duty steel H-Frame structures using 230-kV specifications and standards
- **Alternative 4-** Rebuild with steel monopoles using 161-kV specifications and standards
- **Alternative 5-** Rebuild with steel monopoles using 230-kV specifications and standards (operated at 161kV)



# Parker-Blythe Alternative Comparison



# Parker-Blythe Rebuild Alternative

“Alternative 3a” was identified via the AOA\* process as the preferred rebuild alternative, it consists of:

- New conductor, insulators, and hardware
- Upgrade all wood poles structures to light duty steel H-frame structures
- Install steel dead-end structures as required by design
- Add optical overhead ground wire (OPGW)
- Repair/reclaim right-of-way access
- Design using 230-kV standards/specifications operated at 161-kV to help standardize maintenance and improve availability of replacement/equipment

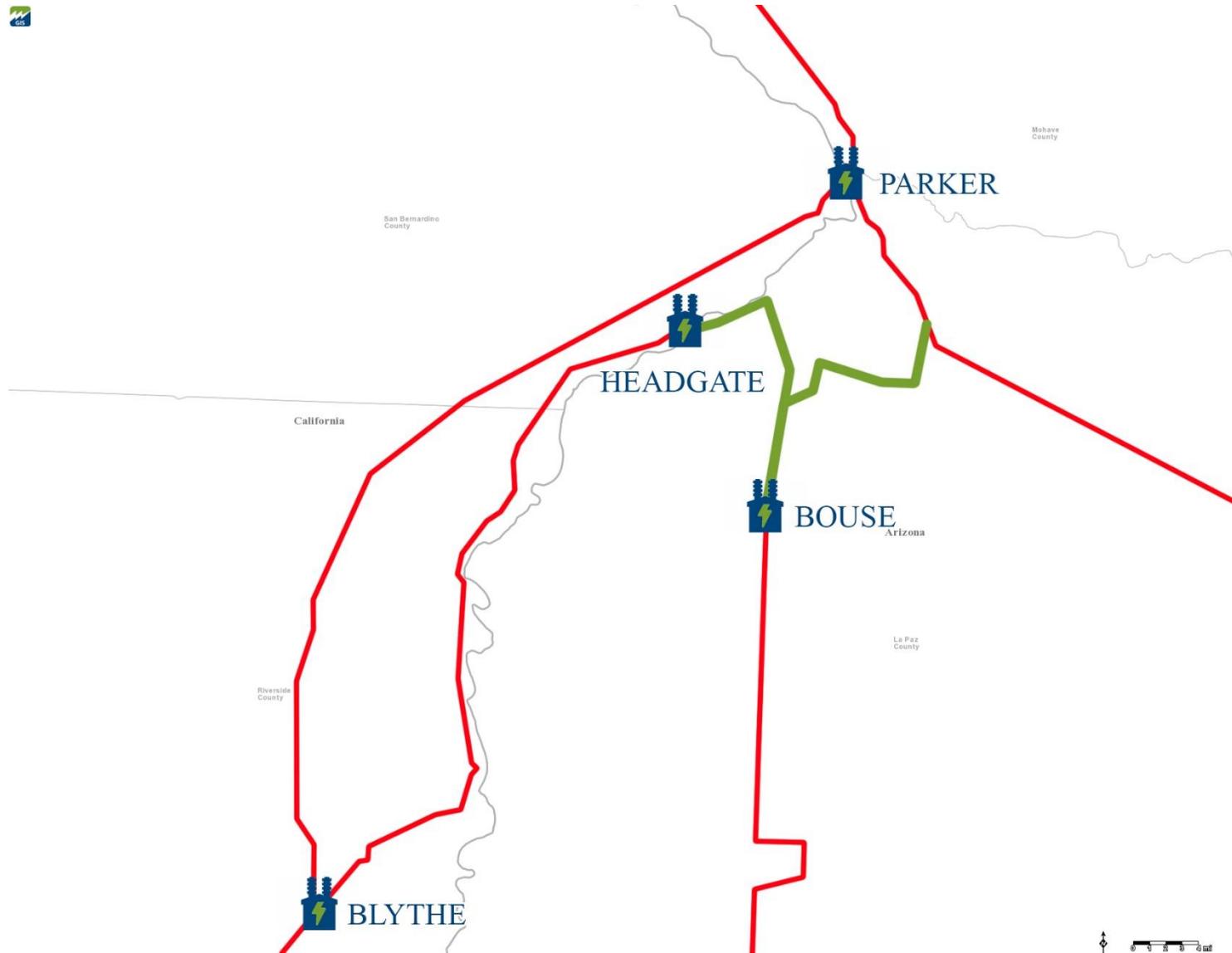
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# PARKER-BLYTHE #2 PRELIMINARY ASSESSMENT



# Parker Region



# Preliminary Assessment

**Table 1 - 2023 Heavy Summer Voltage Results**

Bus Name	Bus Voltage	Contingency Description	With PAD-BLY2	Delta (without - with)	Without PAD-BLY2
PARKER	161	LineTOPOCK230.0toBLKMESA230.0Circuit1 + LinePARKER230.0toBOUSE230.0Circuit1	<b>0.930</b>	-0.031	<b>0.899</b>
PARKER	161	Breaker Failure PAD182 230kV	0.965	-0.024	<b>0.941</b>
PARKER	161	Bus Fault PARKER Sub 230kV South Bus (M&T)	0.965	-0.024	<b>0.941</b>

**Table 2 - 2027 Heavy Summer Voltage Results**

Bus Name	Bus Voltage	Contingency Description	With PAD-BLY2	Delta (without - with)	Without PAD-BLY2
PARKER	161	LineN.HAVASU230.0toTOPOCK230.0Circuit1 +LineTOPOCK230.0toBLKMESA230.0Circuit1	<b>0.899</b>	-0.026	<b>0.874</b>
BLYTHE	161	LineBLYTHE161.0toKNOB161.0Circuit1 + LineJHINDMWD230.0toJ.HINDS230.0Circuitr1	0.962	-0.021	<b>0.942</b>
KNOB	161	Breaker Failure KNOB 172 161.0	0.957	-0.008	<b>0.949</b>



# Real-Time Flow Comparison

Real-Time Snap Case 05-15-2019:19:00:33; WALC Load 1521MVA		
	Basecase Flow	Parker - Blythe #2 Out
Parker - Blythe #1 161kV (HDR-BLY)	18.6	29.5
Parker - Blythe #2 161kV	20.5	0
Parker - Headgate Rock 161kV	17.5	28.5
Parker - Bouse 161kV	33.6	36
Bouse - Headgate Rock 161kV (BOUS-BLKPK-HDR69kV): Meas. @ HDR 69	10.1	10.1
Bouse - Kofa 161kV	6.1	8.7
Kofa - Dome Tap 161kV	1.3	3.9
Dome Tap - Wellton Mohawk 161kV	12.2	13
Dome Tap - Gila 161kV	10.8	9.1
Wellton Mohawk - Gila 161kV	7.5	6.6
Gila - Knob 161kV	13.8	10.5
Blythe - Knob 161kV	6	11.4
Headgate Rock - Blythe 161kV	18.6	29.5



# Alternative Investigation

- The preliminary assessment demonstrated that the PAD-BLY #2 line is not critical to the power flow in the region
- Due to this assessment, the \$55M rebuild currently on the 10-Year Plan is no longer considered the preferred alternative
- The goal of this discussion is to determine whether DSW should move forward with the vote or study potential cost saving alternatives



# Summary

- DSW is soliciting stakeholder consideration and engagement on the following paths forward:
  - Vote in December for the preferred alternative identified in the 2017 AOA for Parker Blythe #2 at \$55M
  - Investigate new alternatives to the 230-kV/161-kV rebuild, such as but not limited to:
    - Contracting external forces to repair/replace only the high need structures
    - Utilizing WAPA internal labor forces to repair/replace the line through O&M
- These alternatives could present a substantial cost savings vs. the \$55M currently slated to go to vote this December



# Summary

- Contracting external forces to repair/replace only the high need structures
  - Cost\* - \$25M - \$35M
  - Time - 3 years
- Utilizing WAPA internal labor forces to repair/replace the line through O&M
  - Cost\* - \$20M - \$25M
  - Time - ~5 years

***\*Costs are Preliminary and Conceptual***



# OPEN DIALOGUE



# THANK YOU

