



Overview of BPA WMEG Study Results  
WEIM Regional Issues Forum  
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# Opening Remarks

- Bonneville views the results as evaluating the production cost benefit for BPA and the West
- The study is more illustrative of the impact of various market footprints than it is of specific market design elements
  - EDAM Bookend more properly characterized as benefits possible from a West-wide market footprint
  - Markets+/EDAM split describes how benefits change if there are two market footprints

# Opening Remarks

- The WMEG Study Results will be one consideration in BPA's process for determining its policy direction or subsequent decisions regarding DAM participation in a rapidly changing external environment
  - Some utilities have announced day-ahead market participation, and others will make decisions about day-ahead market participation in the next few years.
  - BPA views these initial steps towards participation as an indication that there will be fewer opportunities for bilateral trading reflected in the BAU case.
  - New governance structures for markets are being proposed and implemented throughout the West
- Today's conversations represents one element of the business case that Bonneville will use in helping arrive at a leaning in 2024
- Bonneville has not made any proposals about a leaning in 2024

# Opening Remarks

- Study Results
  - CBS narrative and quantitative materials produced are posted on the BPA website with meeting materials
- Conversations will focus on WMEG Cost Benefit Study (CBS) results
  - BPA will begin compare the California Independent System Operator (CAISO)'s EDAM and Southwest Power Pool (SPP)'s Markets+ against a non-market alternative during the November 29<sup>th</sup> workshop

# BPA Result - Single Market Scenario – 2026 EDAM Results



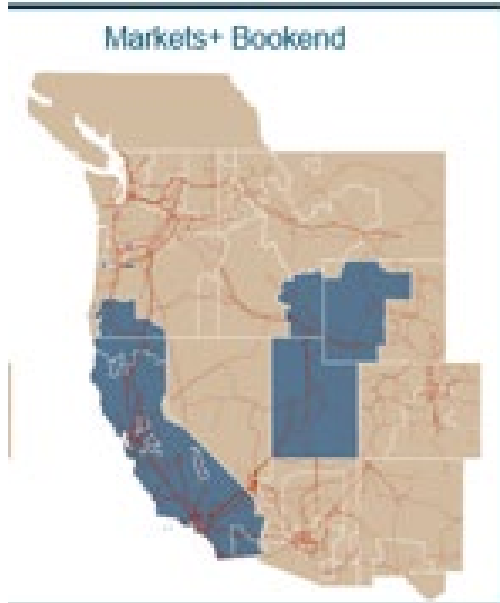
[Negative Numbers = Revenue] [Positive Numbers = Costs]

BPA EDAM Table (W/O Wheeling Revenue)				
Cost/Benefit (\$ millions)	BAU (2026)	EDAM Bookend (2026)	Δ Cost/Benefit Category	EDAM Bookend vs BAU
Load Cost	921.7	944.0	Δ Load Cost	● 22.2
Generation Cost	131.3	131.3	-	-
Reserve Cost	0.0	0.0	-	-
Generation Revenue	-1343.1	-1489.6	Δ Generation Revenue	● -146.6
Reserve Revenue	0.0	0.0	-	-
Congestion Revenue	-49.9	-60.1	Δ Congestion Revenue	● -10.2
GhG Revenue	0.0	-0.1	Δ GhG Revenue	● -0.1
<b>Net Cost</b>	<b>-339.9</b>	<b>-474.6</b>	<b>Δ Net Cost</b>	<b>● -134.7</b>

**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease  
**Net Cost Category** – Green indicates Increase & Red indicates decrease

- “Net Cost” = potential benefit to BPA ~\$134 million
  - **Δ Net Cost** - [339.9 – 474.6] = -134.7
  - Load Costs increase by ~\$22 million
  - Generation Revenue increases by ~\$146 million

# BPA Result - Multiple Market Scenarios – 2026 M+ Main Split



[Negative Numbers = Revenue] [Positive Numbers = Costs]

BPA M+ Main Split Table (W/O Wheeling Revenue)				
Cost/Benefit (\$ millions)	BAU (2026)	Main Split (2026)	Δ Cost/Benefit Category	Main Split vs BAU
Load Cost	921.7	923.6	Δ Load Cost	● 1.9
Generation Cost	131.3	131.3	-	-
Reserve Cost	0.0	0.2	-	-
Generation Revenue	-1343.1	-1370.3	Δ Generation Revenue	● -27.2
Reserve Revenue	0.0	0.0	-	-
Congestion Revenue	-49.9	-52.7	Δ Congestion Revenue	● -2.8
GhG Revenue	0.0	-0.8	Δ GhG Revenue	● -0.8
<b>Net Cost</b>	<b>-339.9</b>	<b>-368.7</b>	<b>Δ Net Cost</b>	<b>● -28.9</b>

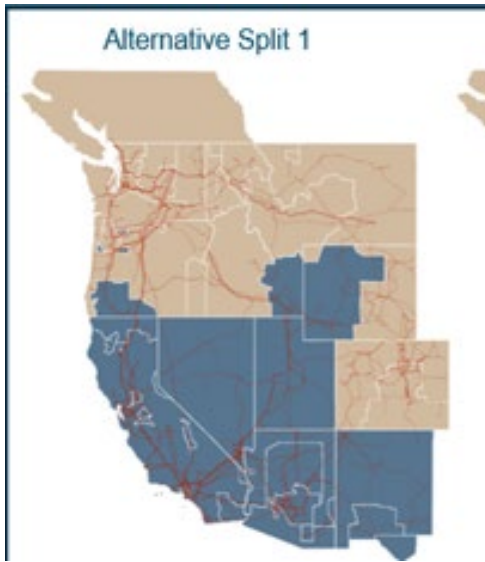
**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease  
**Net Cost Category** – Green indicates Increase & Red indicates decrease

- “Net Cost” = potential benefit to BPA of ~\$29 million
  - **Δ Net Cost** - [339.9 – 368.7] = -28.9
  - Load Costs increase by ~\$2 million
  - Generation Revenue increases by ~\$27 million

# BPA Result - Multiple Market Scenario – 2026 M+ Alt Split 1

## DSW = EDAM & PNW = M+

[Negative Numbers = Revenue] [Positive Numbers = Costs]



Footprint vs BAU				
Cost/Benefit (\$ millions)	BAU (2026)	Alt Split 1 (2026) DSW EDAM PNW M+	Δ Cost/Benefit Category	Two Markets Alt Split 1 (2026) DSW EDAM PNW M+
Load Cost	921.7	919.2	Δ Load Cost	● 2.5
Generation Cost	131.3	131.3		-
Reserve Cost	0.0	0.1		-
Generation Revenue	-1343.1	-1359.5	Δ Generation Revenue	● -16.5
Reserve Revenue	0.0	0.0		-
Congestion Revenue	-49.9	-48.3	Δ Congestion Revenue	● -1.6
GhG Revenue	0.0	-0.7	Δ GhG Revenue	● -0.7
<b>Net Cost</b>	<b>-339.9</b>	<b>-358.0</b>	<b>Δ Net Cost</b>	<b>● -18.1</b>

**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease  
**Net Cost Category** – Green indicates Increase & Red indicates decrease

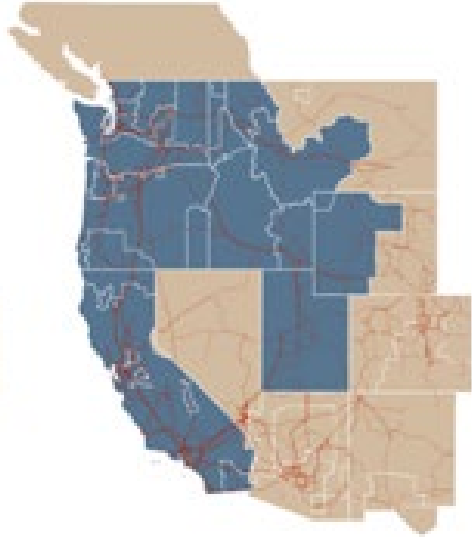
- “Net Costs” = potential benefit to Bonneville of ~\$18 million
  - **Δ Net Cost** - [339.9 – 358.0] = -18.1
  - Load Costs decrease by ~\$2.5 million
  - Generation Revenue increases by ~\$16.5 million

# BPA Result - Multiple Market Scenario – 2026 M+ Alt Split 2

## PNW = EDAM DSW = M+

[Negative Numbers = Revenue] [Positive Numbers = Costs]

Alternative Split 2



Footprint vs BAU				
Cost/Benefit (\$ millions)	BAU (2026)	Alt Split 2 (2026) PNW EDAM DSW M+	Δ Cost/Benefit Category	Two Markets Alt Split 2 (2026) PNW EDAM DSW M+
Load Cost	921.7	982.0	Δ Load Cost	60.3
Generation Cost	131.3	131.3		-
Reserve Cost	0.0	0.0		-
Generation Revenue	-1343.1	-1514.7	Δ Generation Revenue	-171.7
Reserve Revenue	0.0	0.0		-
Congestion Revenue	-49.9	-49.1	Δ Congestion Revenue	-0.8
GhG Revenue	0.0	-0.1	Δ GhG Revenue	-0.1
<b>Net Cost</b>	<b>-339.9</b>	<b>-450.7</b>	<b>Δ Net Cost</b>	<b>-110.8</b>

**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease  
**Net Cost Category** – Green indicates Increase & Red indicates decrease

- “Net Costs” = potential benefit to Bonneville of ~\$110 million
  - **Δ Net Cost** - [339.9 – 450.7] = -110.8
  - Load Costs increase by ~\$60 million
  - Generation Revenue increases by ~\$171 million



# BPA Result - Multiple Market Scenario – M+ Alt Split 3

*DSW & IPCO = EDAM & PNW = M+*

[Negative Numbers = Revenue] [Positive Numbers = Costs]



Footprint vs BAU				
Cost/Benefit (\$ millions)	BAU (2026)	Alt Split 3 (2026) DSW & IPCO - EDAM PNW M+	Δ Cost/Benefit Category	Two Markets Alt Split 3 (2026) DSW & IPCO - EDAM PNW M+
Load Cost	921.7	840.4	Δ Load Cost	● 81.3
Generation Cost	131.3	131.3		-
Reserve Cost	0.0	0.0		-
Generation Revenue	-1343.1	-1151.6	Δ Generation Revenue	● -191.5
Reserve Revenue	0.0	0.0		-
Congestion Revenue	-49.9	-51.5	Δ Congestion Revenue	● -1.6
GhG Revenue	0.0	-0.6	Δ GhG Revenue	● -0.6
<b>Net Cost</b>	<b>-339.9</b>	<b>-231.9</b>	<b>Δ Net Cost</b>	● <b>-107.9</b>

**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease  
**Net Cost Category** – Green indicates Increase & Red indicates decrease

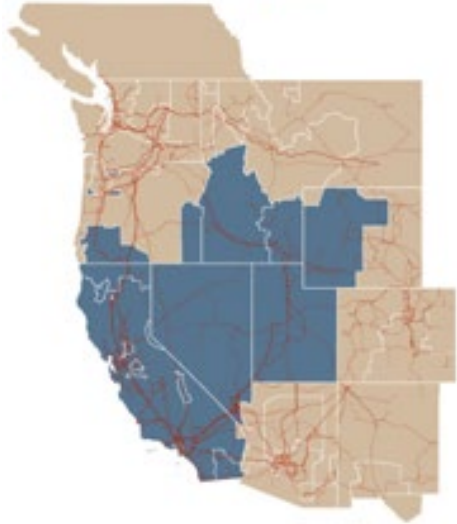
- “Net Cost” = potential decreased benefit to Bonneville of ~\$108 million
  - **Δ Net Cost** - [339.9 – 231.9] = 107.9
  - Load Costs decrease by ~\$81 million
  - Generation Revenue decreases by ~\$191 million

# BPA Result - Multiple Market Scenario – M+ Alt Split 4

*IPCO & NV = EDAM & PNW & DSW = M+*

[Negative Numbers = Revenue] [Positive Numbers = Costs]

Alternative Split 4



Footprint vs BAU				
Cost/Benefit (\$ millions)	BAU (2026)	Alt Split 4 (2026) IPCO & NV EDAM PNW M+	Δ Cost/Benefit Category	Two Markets Alt Split 4 (2026) IPCO & NV EDAM PNW M+
Load Cost	921.7	860.9	Δ Load Cost	● 60.8
Generation Cost	131.3	131.3		-
Reserve Cost	0.0	0.0		-
Generation Revenue	-1343.1	-1220.0	Δ Generation Revenue	● -123.0
Reserve Revenue	0.0	0.0		-
Congestion Revenue	-49.9	-48.3	Δ Congestion Revenue	● -1.6
GhG Revenue	0.0	-0.5	Δ GhG Revenue	● -0.5
<b>Net Cost</b>	<b>-339.9</b>	<b>-276.6</b>	<b>Δ Net Cost</b>	<b>● -63.3</b>

**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease  
**Net Cost Category** – Green indicates Increase & Red indicates decrease

- “Net Cost” = potential decreased benefit to BPA of ~\$63 million
  - **Δ Net Cost** - [339.9 – 276.6] = 63.3
  - Load Costs decrease ~\$60 million
  - Generation Revenue decreases by ~\$123 million

# BPA Results – Comparison Table 2035 (Coordinated Balancing & Tx)

Δ Comparisons							
Cost/Benefit (\$ millions)	RTO vs 2026 BAU	RTO vs 2026 Main Split	RTO vs 2026 EDAM	RTO vs Main Split (2035) No Coordination	RTO vs Main Split CBA 2035		
Load Cost	● 210.9	● 209.0	● 188.6	● 44.4	● 26.2		
Generation Revenue	● -361.6	● -334.3	● -215.0	● -241.1	● -211.7		
Congestion Revenue	● -25.0	● -22.2	● -14.8	● 23.8	● 28.5		
GhG Revenue	● 0.0	● 0.8	● 0.1	● 0.0	● 0.0		
Δ Net Cost	● -175.7	● -146.7	● -41.0	● -172.9	● -157.1		

**Load Cost Category** - Green indicates decrease & Red indicates Increase **Category of Gen Revenue, Congestion Revenue & GhG Revenue** - Green indicates increase & Red indicates decrease

- RTO participation is not part of the current process, however results showed benefits from an RTO that exceeded any DAM scenario. Therefore, it may be short sighted to not consider the viability of each market operator’s path for potential future market opportunities
- Joining a DAM is not a short-term decision and participants in a DAM would not be able to simply change market operators in the without financial impact if their current market operator does not present a reasonable path to an RTO