

# Drought Impacts on Hydropower in Arizona

Drought Interagency Coordinating Group

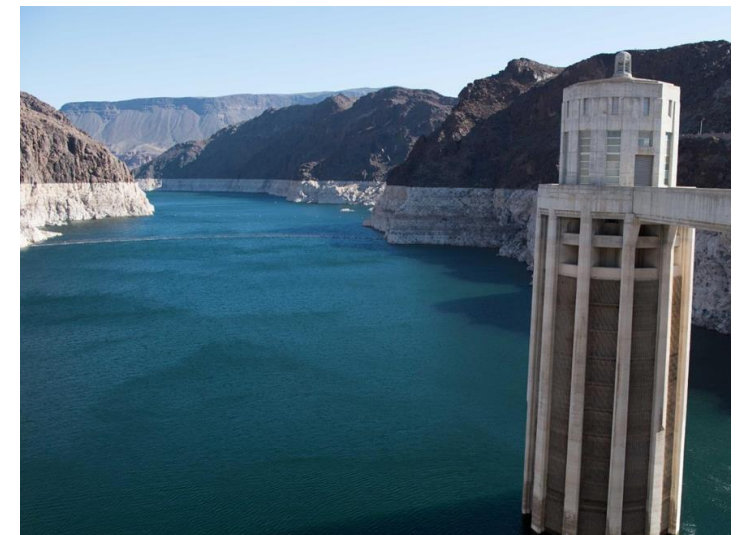
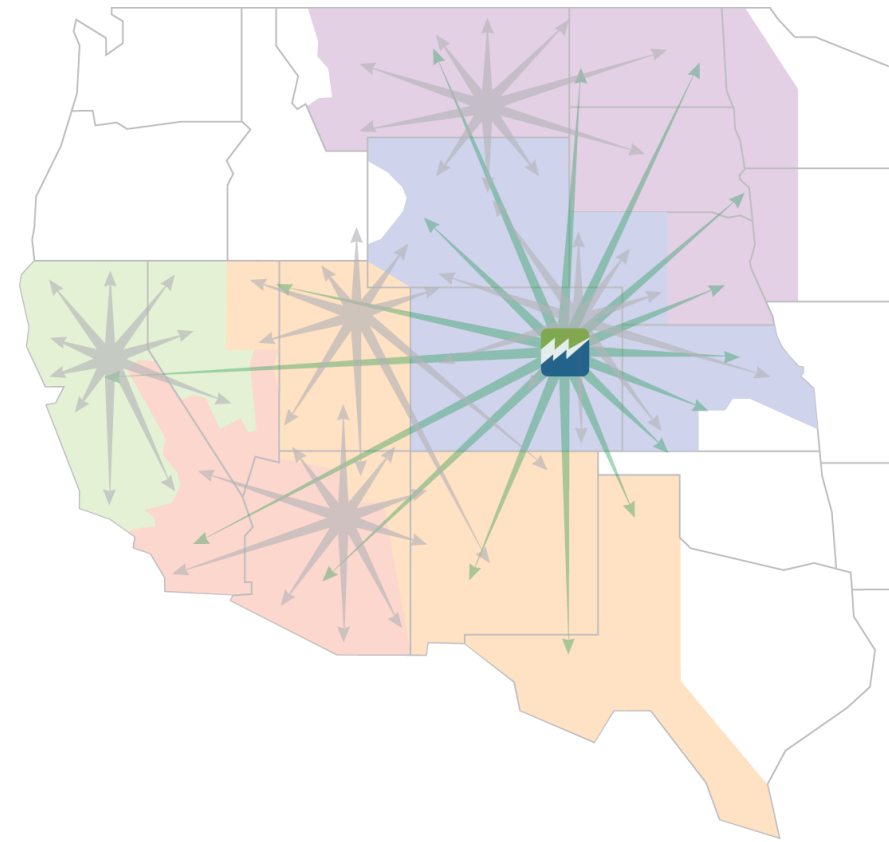
Jack Murray

May 4, 2022

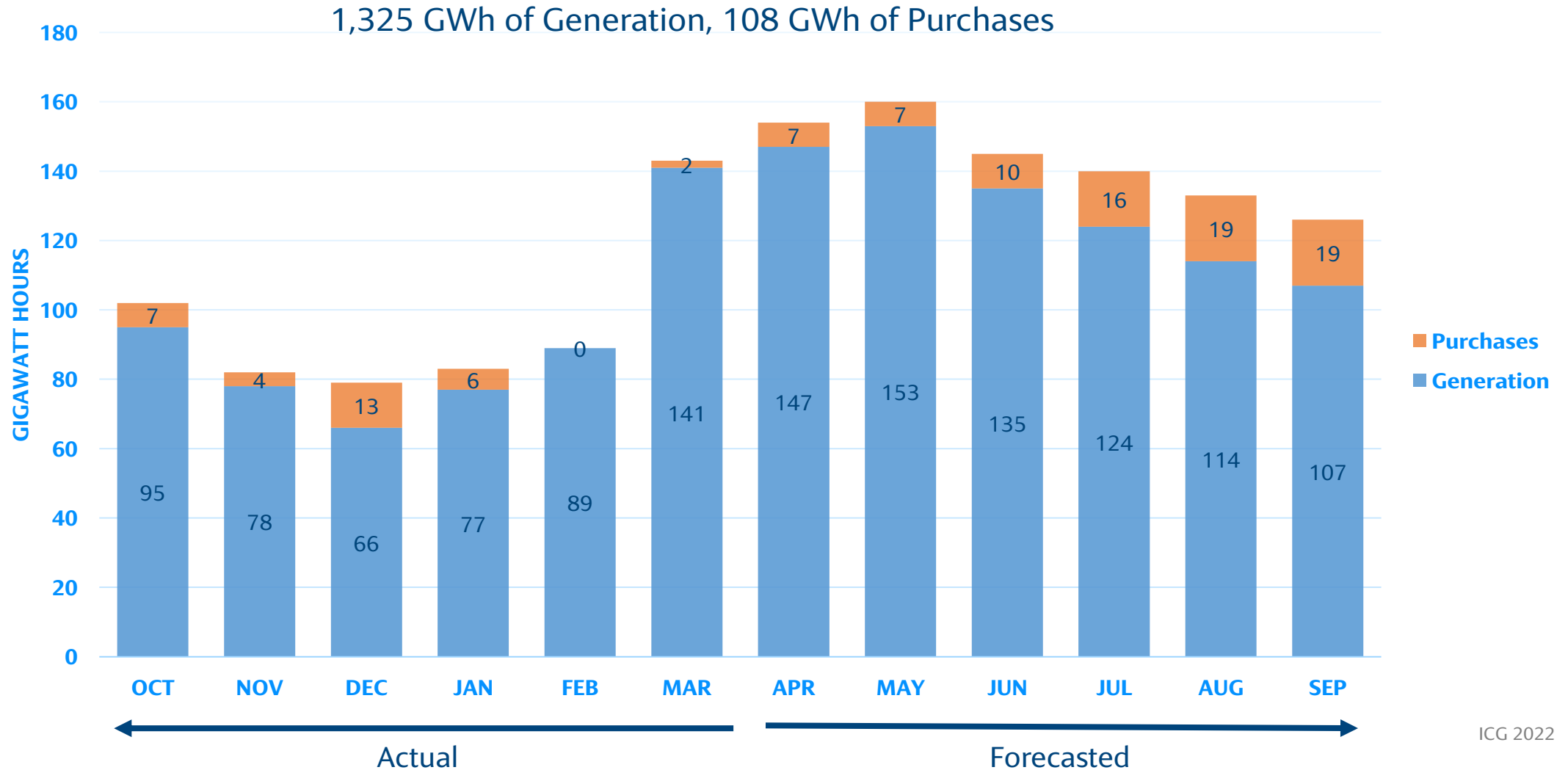


# What is WAPA?

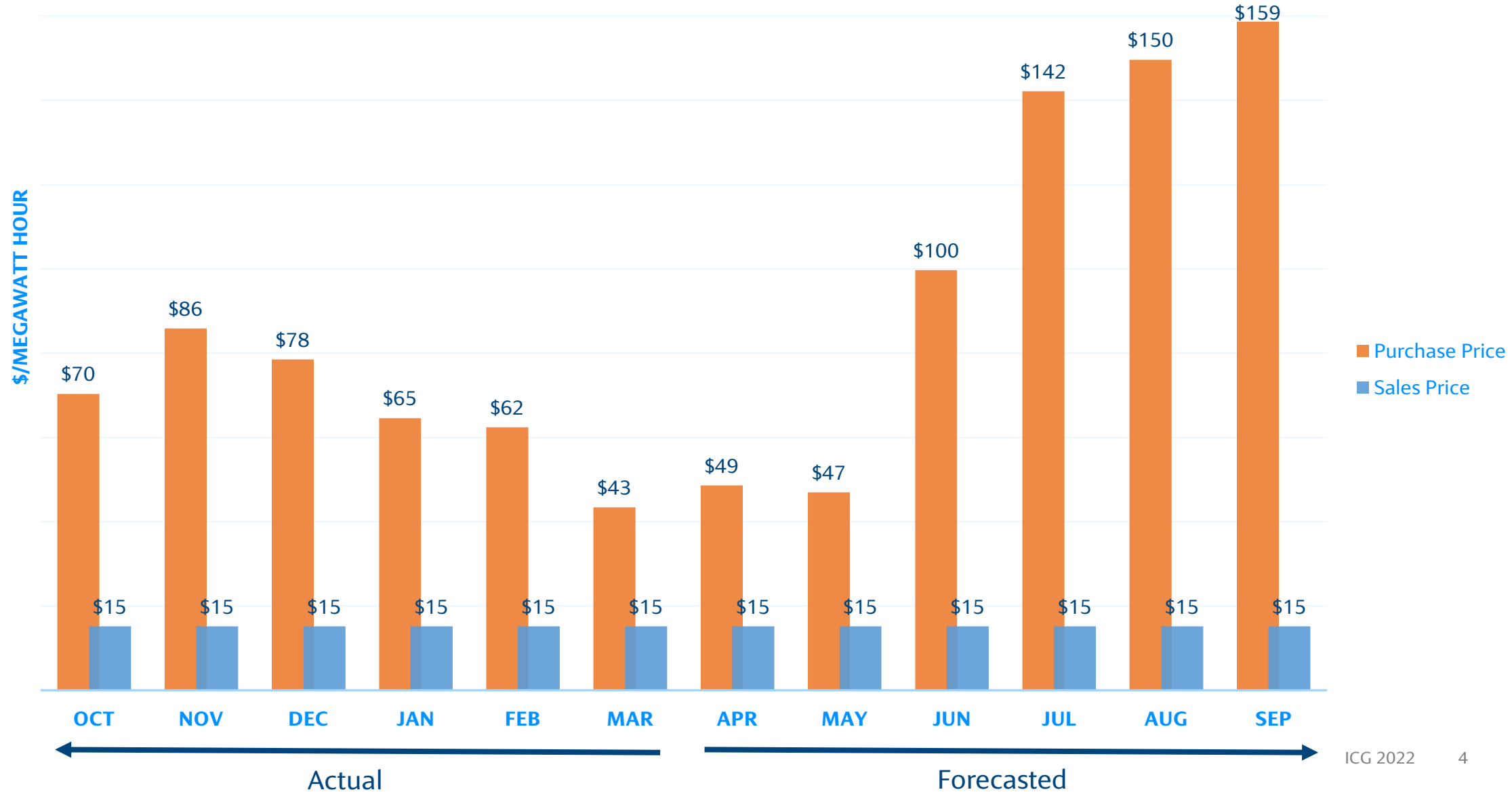
- Power Marketing Administration under Department of Energy
- Wholesale electricity supplier
- 15-state footprint
- 17,000 miles of transmission lines
- 700 customers who, in turn, serve 40 million Americans
- Power from Glen Canyon Dam, Hoover Dam, Davis Dam, and Parker Dam



# Parker-Davis Project – FY 2022



# Price of Purchases



# Cost of Purchases

Decreasing Price Certainty



Year	GWh	Purchase Cost (millions)	% of Typical Operating Cost
2022	108	\$13.3	72%
2023	114	\$12.5	68%
2024	121	\$8.7	47%
2025	139	\$9.9	54%
2026	145	\$8.9	48%
2027	166	\$9.9	54%
2028	177	\$10.3	56%
2029	178	\$10.2	55%
2030	174	\$9.9	54%



# Drought Cost Estimate (2022 – 2030)

Boulder Canyon Project (Hoover)	Millions
Direct Rate Impact	\$196
Replacement Power	548
Renewable Energy Certificates (NV)	5
Green House Gas (CA)	31
Ancillary Services	145
Resource Adequacy (CA)	15
<b>Total</b>	<b>\$939</b>

Parker-Davis Project	Millions
Replacement Power	\$41
Renewable Energy Certificates (NV)	1
<b>Total</b>	<b>\$42</b>



# Directly Affected Arizona Customers

Arizona Electric Power Cooperative

Arizona Power Authority

City of Mesa

City of Williams

Colorado River Agency

Electrical District No. 3

Fort Mohave Indian Tribe

Hohokam Irrigation and Drainage District

Luke Air Force Base

Marine Corps Air Station Yuma

Salt River Project

San Carlos Irrigation and Drainage District

Tohono O'odham Utility Authority

Town of Fredonia

Town of Gilbert

Town of Marana

Town of Thatcher

Town of Wickenburg

Wellton-Mohawk Irrigation and Drainage District

Yuma County Water Users Association

Yuma Irrigation District

Yuma Proving Grounds





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