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BPA's Day-Ahead Market Choice

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About the Public Power Council



Our mission

To preserve and enhance the benefits of the Federal Columbia River Power System for consumer-owned utilities — all of which hold a legal and historic first right to federal power at cost.

1966

Founded, from the Rates & Economics Section of NWPPA

~80

Member utilities: municipals, PUDs, and rural electric cooperatives

7

Western states: WA, OR, ID, MT, NV, UT, WY

What we do



Represent public power with one regional voice

Members range from 10 to over 375,000 customers and together purchase ~90% of the power BPA markets to preference customers, paying most of the agency's costs.



Safeguard preference

Protect consumer-owned utilities' priority right to federally generated power at cost — before BPA, FERC, and in Washington, D.C.



Provide technical expertise

Active in BPA rate cases, contract negotiations, transmission, resource planning, fish and wildlife, federal policy, and wholesale market design.



Build consensus positions

PPC has participated in the development of both Markets+ and EDAM from their inception, advocating for designs BPA could support.

A decision that preference customers will live with for decades



Who bears the consequences

PPC members are the consumer-owned utilities that fund the federal power system - under newly signed contracts spanning decades.



Where BPA's process landed

A two-year decision process with extensive customer debate and analysis culminated in a policy decision to pursue Markets+, supported by PPC¹ and most of Northwest public power.



What has happened since

BPA has been preparing for participation: making necessary investments and modernizing the systems and processes required to operate in the market.



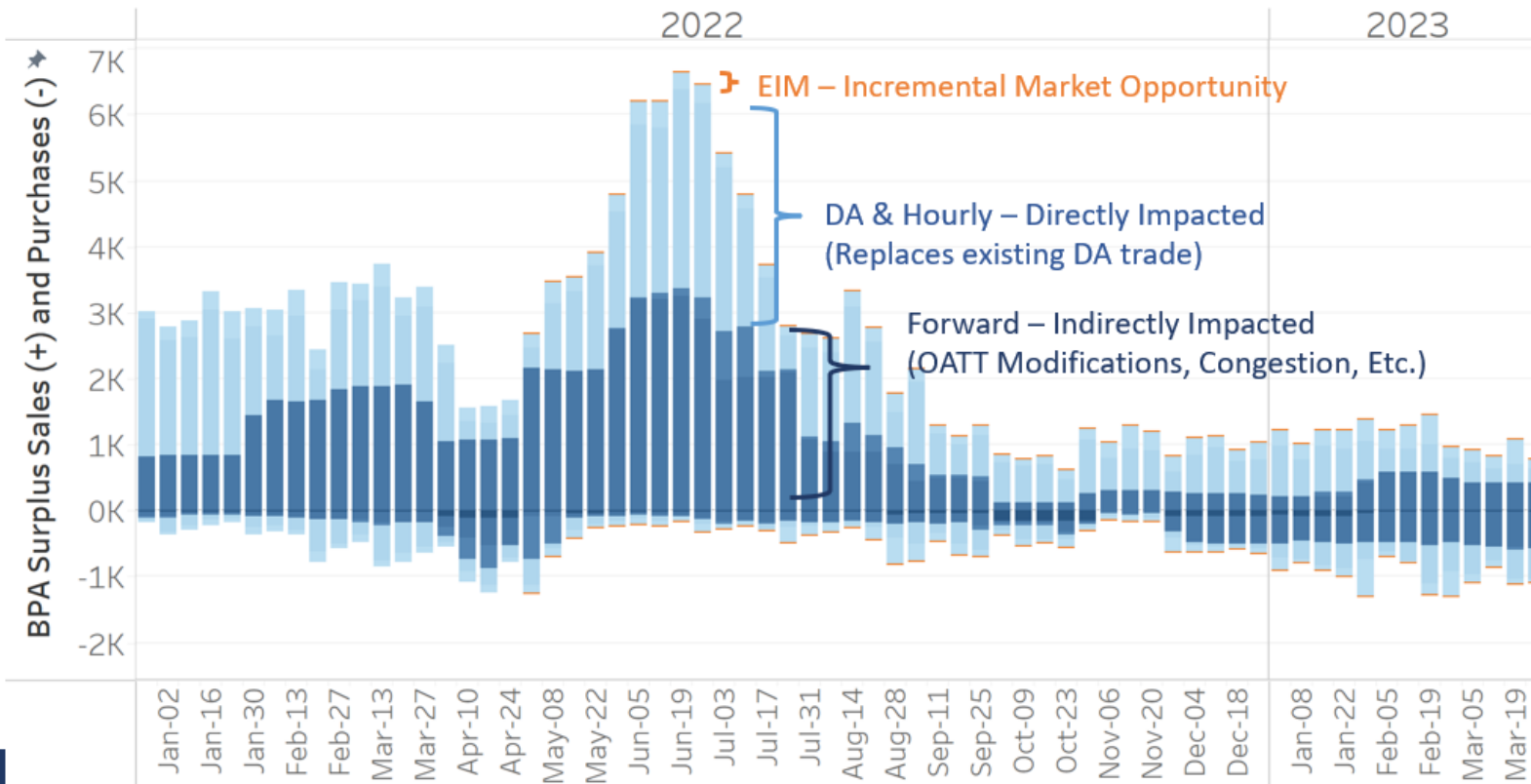
Why the economics pass straight through

As a federal Power Marketing Administration, every dollar of surplus revenue BPA earns - or loses - flows directly into preference customers' rates and their end-use customers' bills.

¹ This presentation and associated paper do not reflect the views of PPC member Seattle City Light

How BPA markets its surplus today and why it matters

BPA Surplus



~\$300M / yr

BPA's estimated surplus power revenue (BP-26). It directly offsets preference rates.

Day-ahead markets replace existing trade

The vast majority of surplus is sold day-ahead and forward against the Mid-C index. EDAM would either directly settle these at market prices in EDAM or indices that will be influenced by EDAM prices.

BPA surplus sales and purchases by product, 2022–2023. Source: PPC Markets Paper. Forward and day-ahead sales dominate; the incremental market opportunity (real-time) is small.

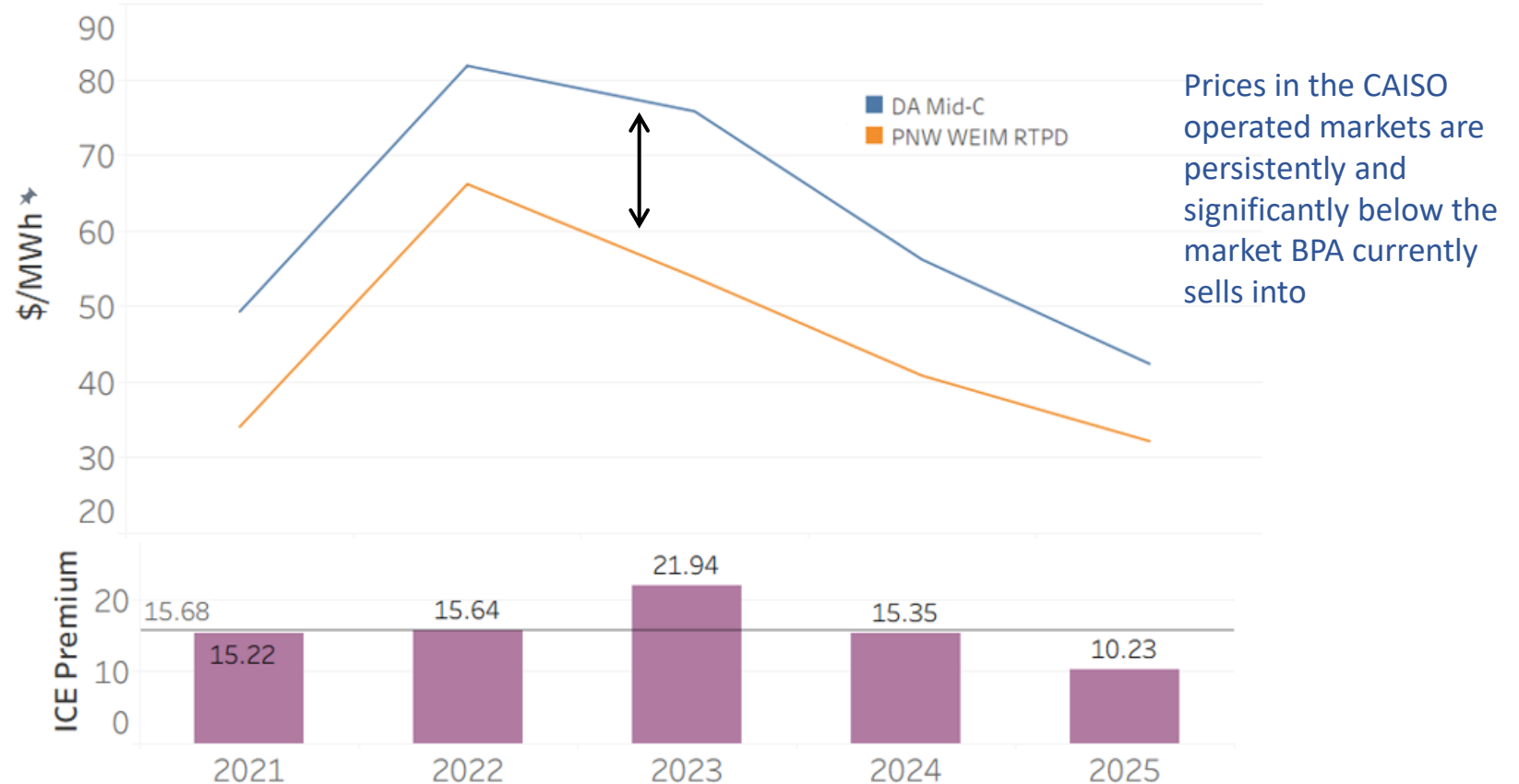
What is at stake: BPA's surplus revenue

\$108–282M
5–14% rate increase

Settling BPA surplus through EDAM will significantly lower secondary revenues.

The \$200 million dollar question to BPA customers. Does WEIM/EDAM converge to ICE?

BPA Status Quo Market (DA Bilateral Mid C) and EDAM Proxy (WEIM) Prices

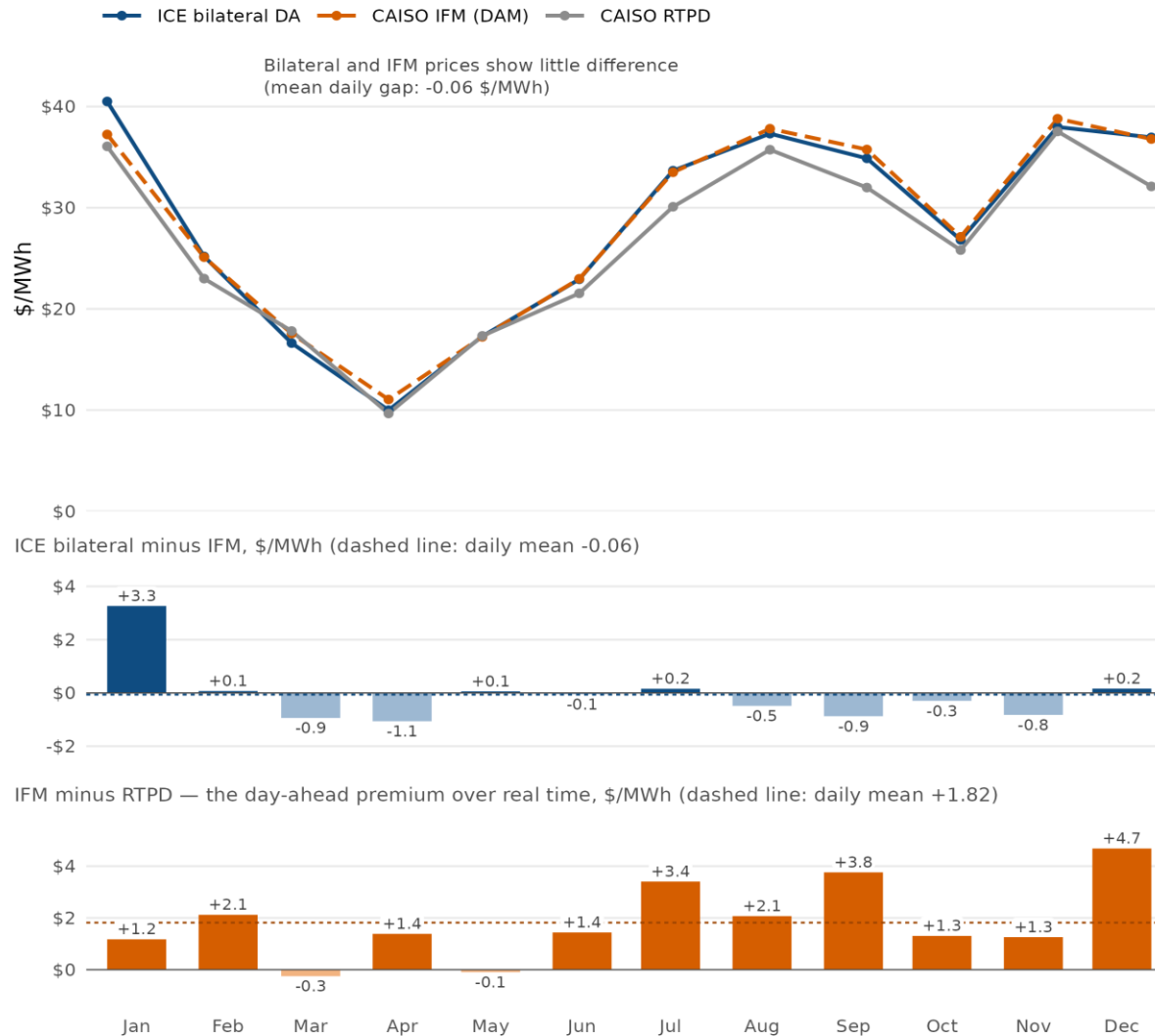


Takeaway. Comparing the prices BPA sells at today, to indicative prices under EDAM show a substantial reduction in the value of BPA surplus. Directionally opposite of PCM results and much greater dollar impact.

CAISO prices show small differences across market runs

SP 15 HLH Bilateral, IFM(DAM), and RTPD Prices

SP15 heavy-load-hour monthly averages, 2025 — delivery days with ICE trades (n = 280)



Sources: EIA ICE daily price index (SP15 EZ Gen DA LMP Peak); CAISO OASIS (TH_SP15_GEN IFM and RTPD, hourly).

ICE and DA Prices Converge

The bilateral ICE product for SP15 has traded typically with \$1/MWh of the average price resulting from the day-ahead market run.

Small day-ahead premium persist

SP15 day-ahead prices had a \$1.82/MWh premium to the real-time fifteen-minute market. No where near what is observed between Mid-C and WEIM.

EARLY EDAM prices converging to WEIM

PACW EDAM (DAM), PACW RTPD, and PNW RTPD Prices

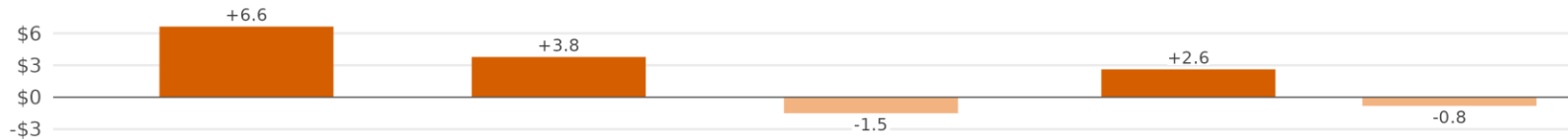
Daily all-hours (24x7) prices, May 1, 2026 – Sep 20, 2026 (n = 143 days)

— PACW EDAM DA (IFM) — PACW RTPD — PNW RTPD

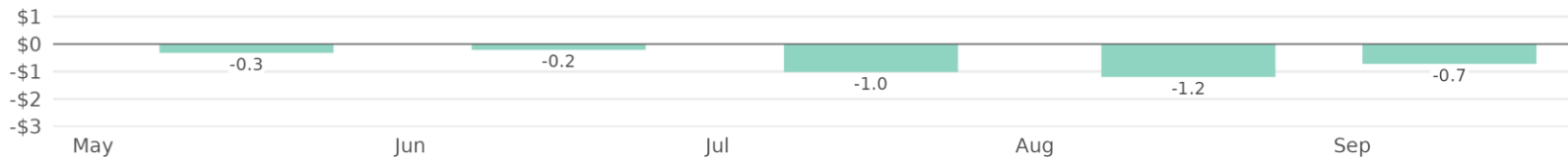
Jul-Sep averages: DAM – PACW RT +0.2 · PACW RT – PNW RT -1.0 \$/MWh



PACW EDAM DA minus PACW RTPD — the day-ahead premium, \$/MWh



PACW RTPD minus PNW RTPD — the real-time basis, \$/MWh



Source: PPC analysis of Mid-C day-ahead index and CAISO OASIS RTPD prices for PNW WEIM BAAs.

Published prices show WEIM EDAM convergence

EDAM prices in the PacifiCorp West BAA appear to be converging with WEIM prices. The monthly difference between WEIM and EDAM in Jul – Sep was roughly \$1 - \$2.50/MWh

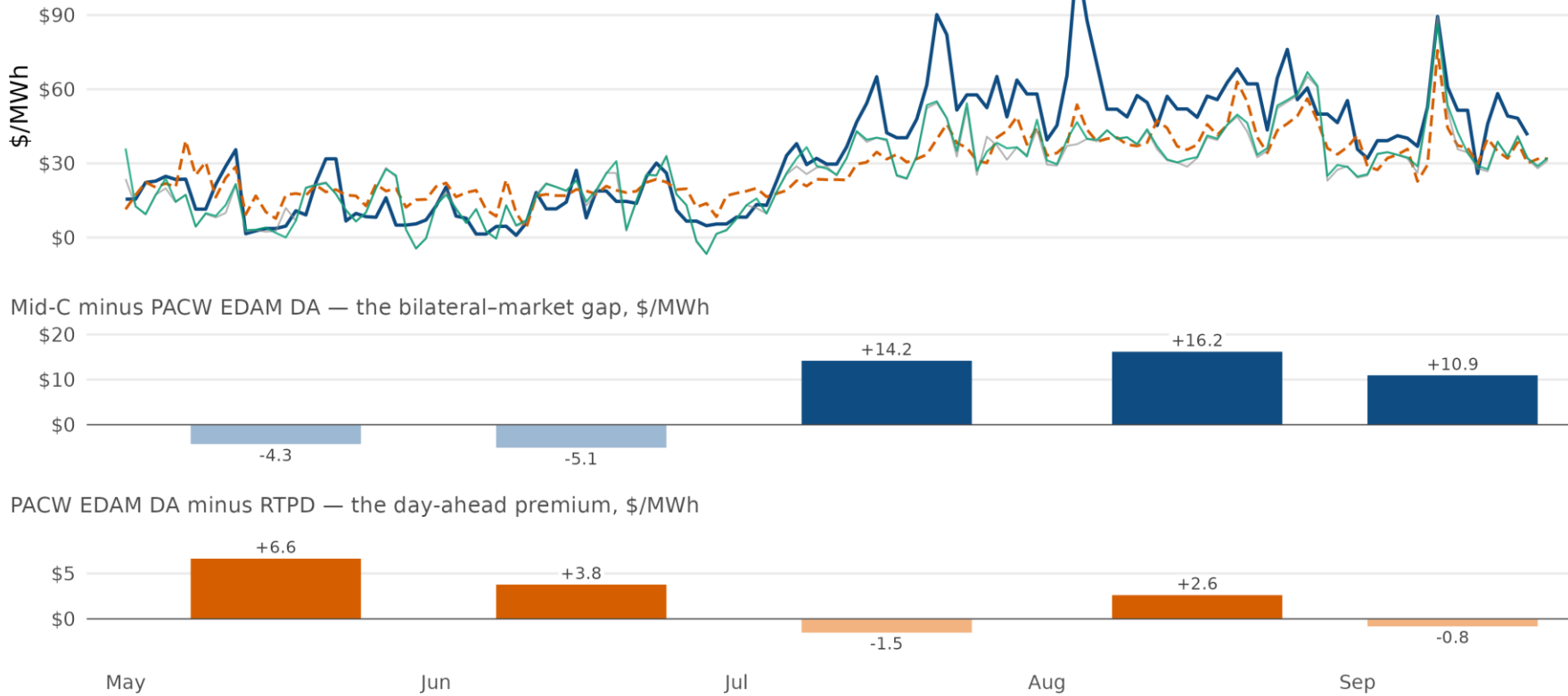
Bilateral price premium continues

Mid-C Day-Ahead, PacifiCorp West WEIM/EDAM, and PNW WEIM Prices

Daily all-hours (24×7) prices, May 1, 2026 – Sep 20, 2026 (n = 143 days)

— Mid-C bilateral DA — PACW EDAM DA (IFM) — PACW RTPD — PNW RTPD

Jul-Sep average gap: +14.1 \$/MWh



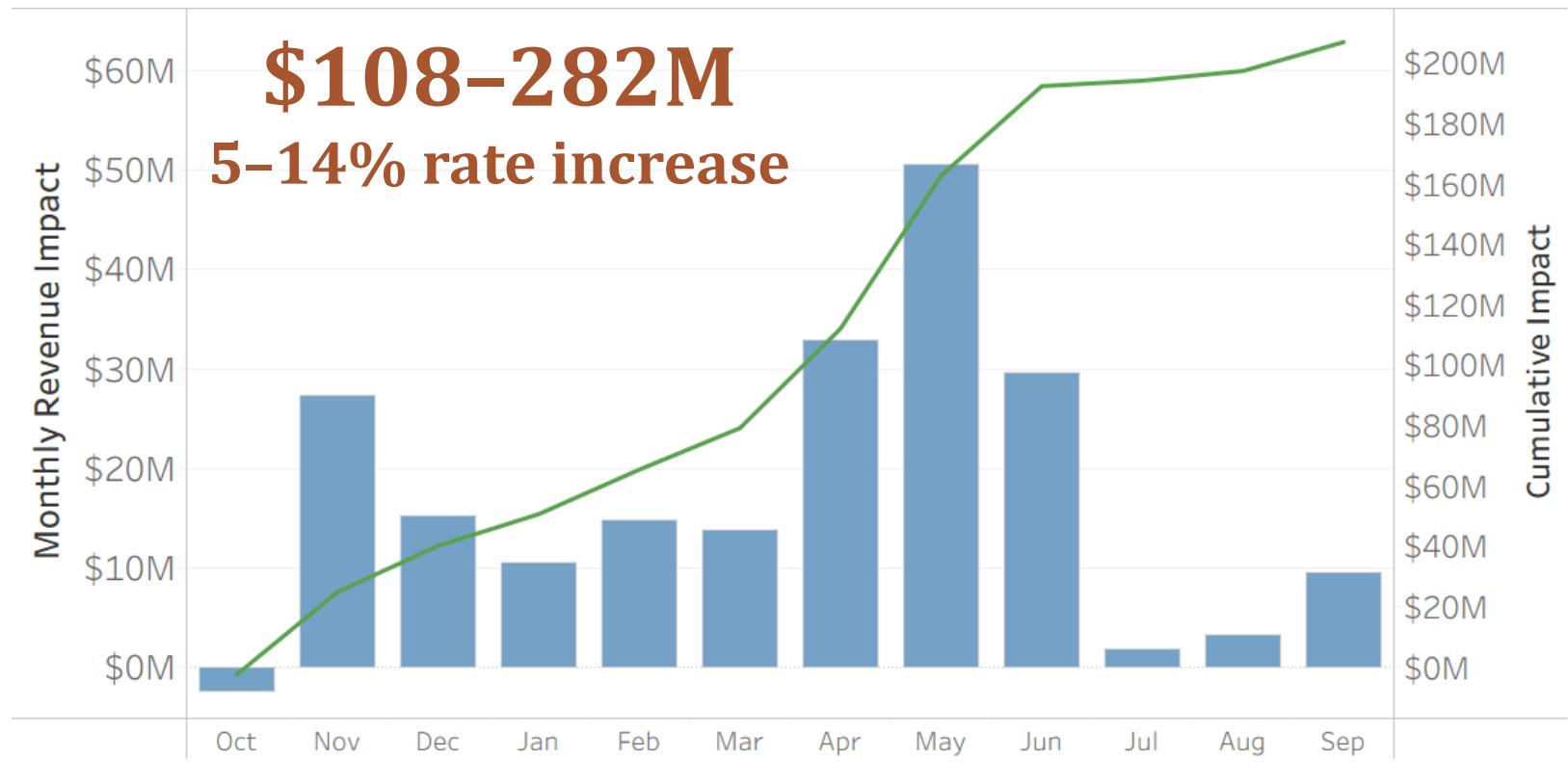
Source: PPC analysis of Mid-C day-ahead index and CAISO OASIS RTPD prices for PNW WEIM BAAs.

Bilateral Gap Persists

The Mid-C bilateral price outside of runoff continues to carry a substantial premium. Over July 1 – Sep 20, Mid-C averaged \$14.1/MWh over EDAM.

Preference customers pay more under EDAM

Exposure analysis: annual surplus value at risk from selling BPA surplus at EDAM prices



BPA's modeled average surplus inventory across hydro, load, and resource conditions.

BPA surplus value

Actual market prices over the last few months indicate that in EDAM BPA surplus would be sold a considerably lower price.

A day-ahead market option may include new revenue streams – but they will not outweigh a significant reduction in value of every MWh BPA sells.

PCM Market Benefit Estimation

How do benefits accrue?

- More efficient unit commitment
- Real time re-optimization
- Get more out of the existing transmission system

Benefits associated with reduced gas costs

What does this mean for NW Hydro?

- Doesn't really have unit commitment
- Fuel cost unchanged (\$131 Millions across Scenarios)
- Market choice doesn't impact water supply or load
 - Gen MWh and Load MWh consistent across scenarios

Benefits depend on price of purchases (~98%) and sales (~2%)

What does this mean for BPA's PCM results?

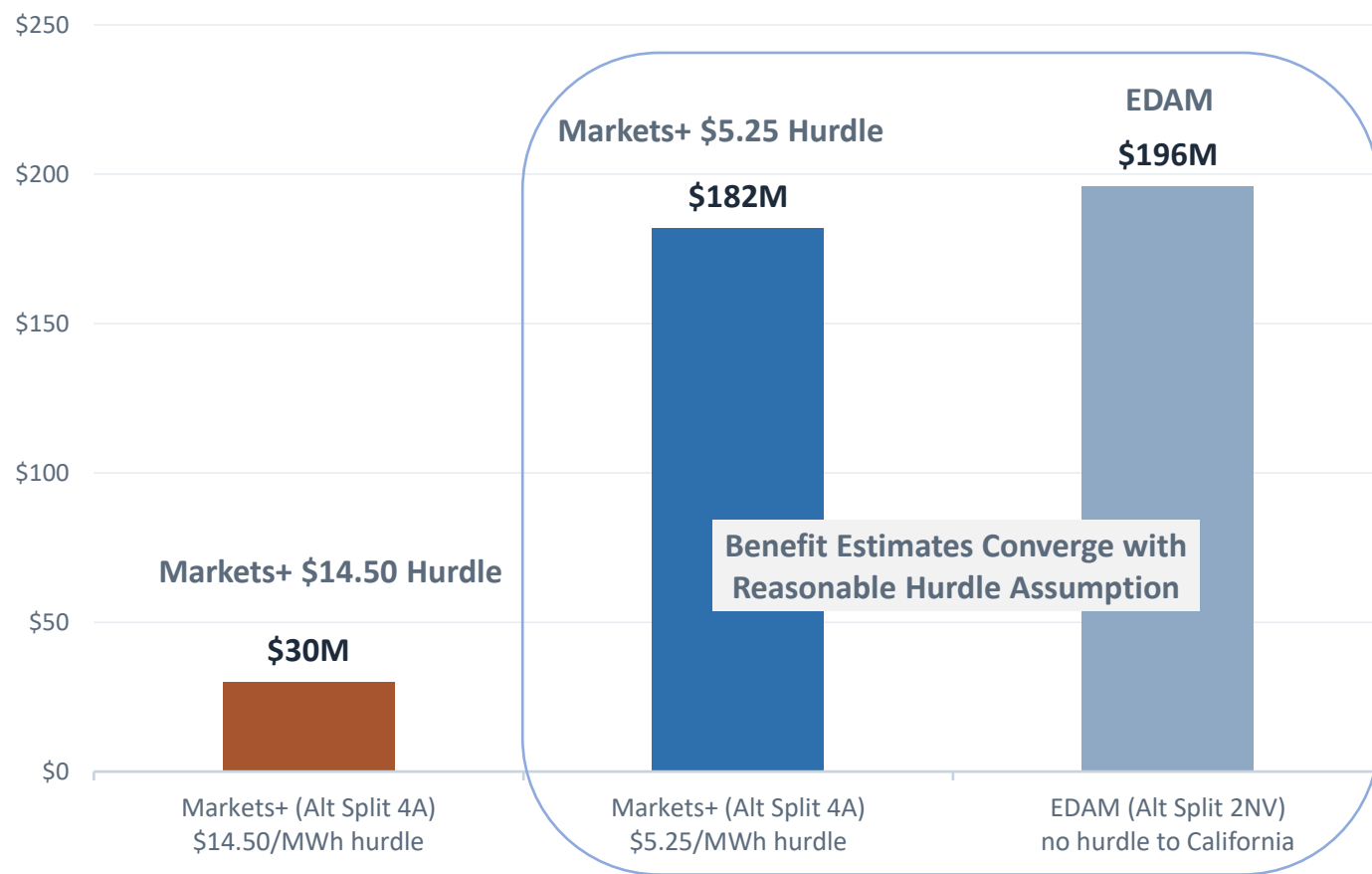
- PCM is trickier to apply hydro dominated utilities like BPA.
- BPA Benefits will come down to prices, and the accuracy of the modeling can be evaluated in terms of how well it estimated the relative prices across markets and the status quo.
- The PCMs reviewed to date appear to miss the relative price of market options.

Example: PCM analysis shows lower prices day-ahead under the status quo relative real-time or EDAM (~\$2/MWh). PPC's review of real-world data show the opposite to a significant magnitude (~\$10-20/MWh).

Creates a serious mismatch in theoretical modeled benefits and what real world data suggests.

PCM “Hurdle Rate” assumptions shape results

BPA annual cost savings vs. no day-ahead market, by E3 scenario (\$ million)



Source: BPA / E3 WMEG Follow-Up Analysis (Nov. 2024), "2026 Result" and market-to-market coordination scenarios.

What a hurdle rate is

A \$/MWh charge the model applies to every MWh crossing a market boundary. Represents incremental transmission cost and market friction.

High hurdle scenario produced counterintuitive results

Southern Intertie transfers fall by over 50%. Estimates WEIM prices will exceed bilateral. Surplus is trapped in the Northwest; regional prices drop over \$4/MWh; The hurdle moves BPA's benefits by more than \$150M/yr.

Difficult to represent reality in a model

EDAM and Markets+ operate on top of the OATT. On BPA system, nearly all schedules are on “sunk-cost” transmission. Hurdle rates are directional and can manifest differently between buyers and seller prices.

Not all flows and transactions follow “spot market price”. We see transfers moving against DA price spreads. How were RA must offer rules modeled before they were developed? Did they model all external CA RA bidding \$0? Nuance on transmission, carbon, assets with ownership that cross market seams.

Low Prices: A market outcome versus a design outcome

A MARKET OUTCOME

PPC's concern is not that market prices are not high. A price that is low because supply is abundant is rational and equitable. This outcome reflects market conditions, sends appropriate price signals. If accurate and competitive price formation produces low prices, BPA appropriately bears that outcome.

A DESIGN OUTCOME

A price that is low because the design excludes real costs — start-up, scarcity, the competitive value of constrained flexible supply — and suppresses offers below an efficient and accurate clearing price. That is what the WEIM prices reflect, and each mechanism carries forward into EDAM.

Why this is a transfer, not a saving. BPA surplus revenues directly offset their rates. Systematically depressed prices are a transfer of value away from the customers who paid for the system. A west wide market will produce the greatest aggregate “economic efficiency” but with unbalanced design it harms BPA ratepayers.

Three design mechanisms behind the gap



Fast-start pricing

EDAM / CAISO

Excluded from CAISO prices; peakers made whole via uplift payments outside of the market. Five of six FERC-jurisdictional markets include it. Evening-peak SP15 prices ran ~\$23/MWh below efficient levels; NW/SW sellers receive \$188–420M/yr less¹. CAISO saves \$1.3 billion per year. Reform put on hiatus.

MARKETS+

Included in the FERC-approved Markets+ tariff today.



Scarcity pricing

EDAM / CAISO

Limited: Design does not consistently cause real-time energy and reserve prices to reflect the value of reserves as system conditions tighten. Reserve products administratively capped. Comprehensive reform (reserve demand curves) deferred; current initiative proposes marginal changes.

MARKETS+

Graduated demand curves in day-ahead and real-time for flex products, rising with shortage up to \$1,000/MWh.



Market power mitigation

EDAM / CAISO

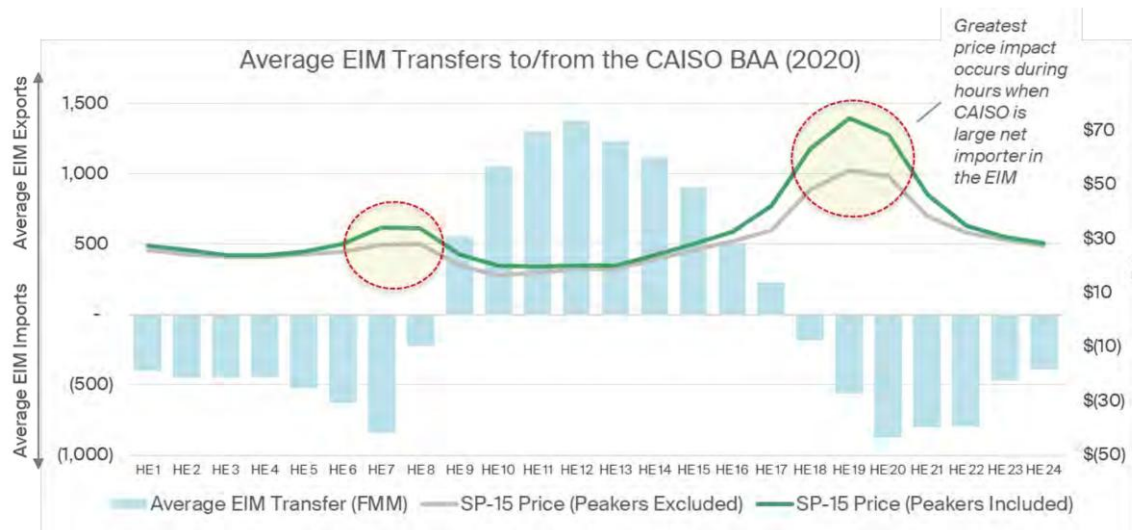
BAA-level test with no conduct or price-impact screen. BPA's BAA was subject to mitigation in nearly 40% of intervals in summer 2025 – undermining BPA bids on a fuel-limited hydro system.

MARKETS+

Three-part test: structure, conduct, and impact. SPP data: mitigation in <1% of day-ahead and <0.2% of real-time intervals.

Mechanism 1 — Fast-start pricing

What it is. Including the cost of starting and running gas peaking units in the market clearing price when they are needed to meet demand. FERC has recognized this as a marginal cost that belongs in prices; five of six FERC-jurisdictional markets include it. CAISO is the exception — peakers are made whole through side payments instead, an approach CAISO and its market monitor have actively defended.



Average WEIM transfers to/from the CAISO BAA (2020) with SP-15 prices shown with and without peaker costs. The largest price effect occurs in evening hours when CAISO is a large net importer.

What the Powerex / PPC analysis of 2017–2020 unit data found

\$5-9/MWh

average SP15 price suppression

\$1.3B / yr

estimated benefit to California loads from suppressed prices

\$188–420M / yr

less received by Northwest and Southwest sellers

9% / 34%

revenue suppression for N. California wind / 4-hour storage (2020)

- Discriminatory compensation: resources providing the same service in the same hour are paid differently
- Weak signal for clean, energy-limited hydro to shape output into peak hours; excludes peakers' GHG cost from prices
- CAISO's fast-start effort was put on hiatus to prioritize other work. Markets+ includes it in its tariff today.

Energy GPS on behalf of PPC and Powerex, [The Importance of Fast-Start Pricing in Market Design](#) (June 2022).

Mechanism 2 – Scarcity Pricing

Bilateral premium over PNW WEIM prices, by Mid-C day-ahead price bin, 2020–2025 (\$/MWh)



Source: PPC analysis of WEIM and ICE Day-Ahead Mid-C index.

\$172/MWh

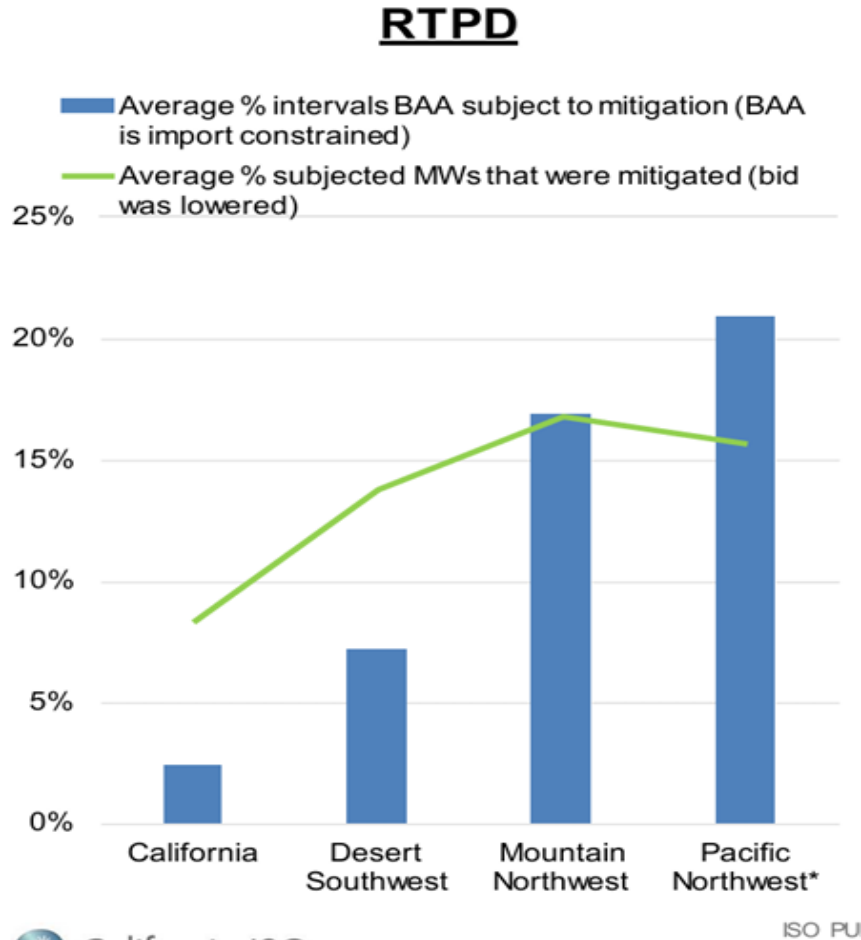
Average WEIM discount to Mid-C in hours when Mid-C exceeds \$250/MWh

Case study June 2021 heat dome: with Portland at 116°F, Mid-C cleared above \$300/MWh while WEIM prices for Northwest BAAs sat far below bilateral levels.

Why it matters: these are the hours that justify investment in firm resources and transmission. A design that cannot let scarcity reach the clearing price undervalues the federal system when it matters most.

Mechanism 3 — Market power mitigation

Share of intervals with mitigation applied(January - October 2023)



EDAM. Extends CAISO's local mitigation: a three-pivotal-supplier test on each binding constraint, with every effective resource's bid capped at the competitive LMP or its Default Energy Bid. No conduct screen, no price-impact screen — mitigation applies regardless of how a resource bid or whether the bid moved the price.

The BAA-level test. When a BAA is import-constrained and fails the competitiveness test, supply across the whole BAA is mitigated. BAAs in the Pacific Northwest were mitigated in over 15% of intervals. The BPA BAA was flagged for mitigation in nearly 40% of intervals in summer 2025. CAISO's current initiative explores grouping BAAs, not a conduct-and-impact framework.

Markets+. FERC-approved three-part test from SPP's Integrated Marketplace: structural conditions indicating market power, an offer above its reference level by the conduct threshold, and a demonstrated material price impact. Only when all three fail is the offer replaced. Not all concentration is an exercise of market power; the test checks rather than assumes. SPP Market monitor shows mitigation in the SPP Eastern RTO was less than 1% of intervals.



Source :CAISO Department of Market Monitoring, BAA-Level Mitigation in the WEIM, presentation to the Price Formation Enhancements stakeholder initiative (November 16, 2023), 6

What is at stake: an exposure analysis of BPA's surplus

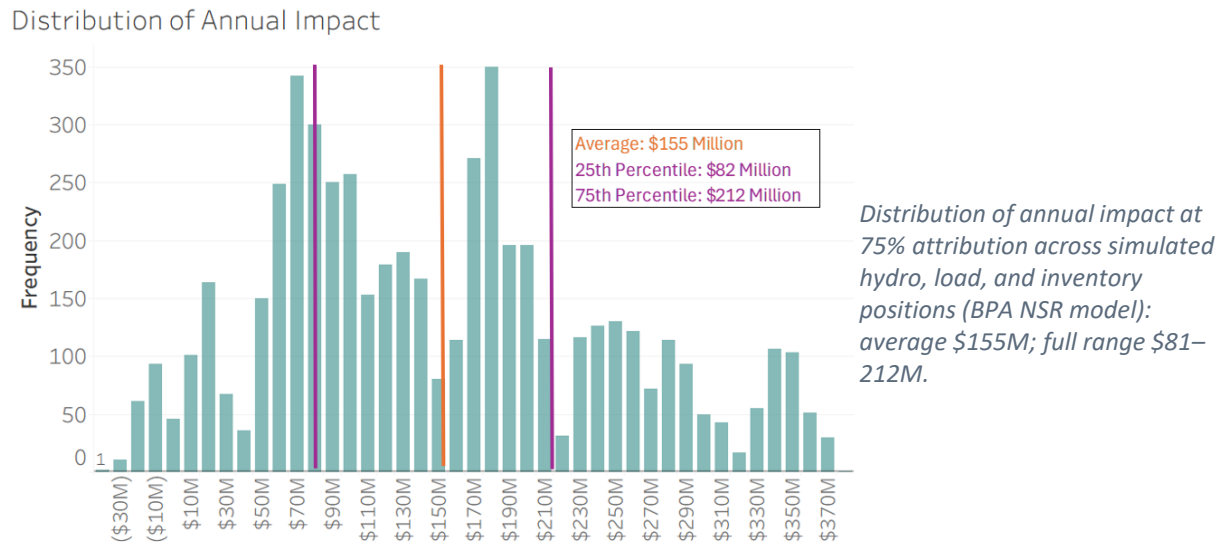
Annual surplus value at risk, by share of the observed WEIM–bilateral spread attributed to design

Share attributable to design	Surplus value at risk (annual)	Reading
25%	\$27 – 71M	Most skeptical case — still exceeds the modeled footprint gap
50%	\$54 – 141M	
75%	\$81 – 212M	PPC's assessment, given the documented mechanisms
100%	\$108 – 282M	

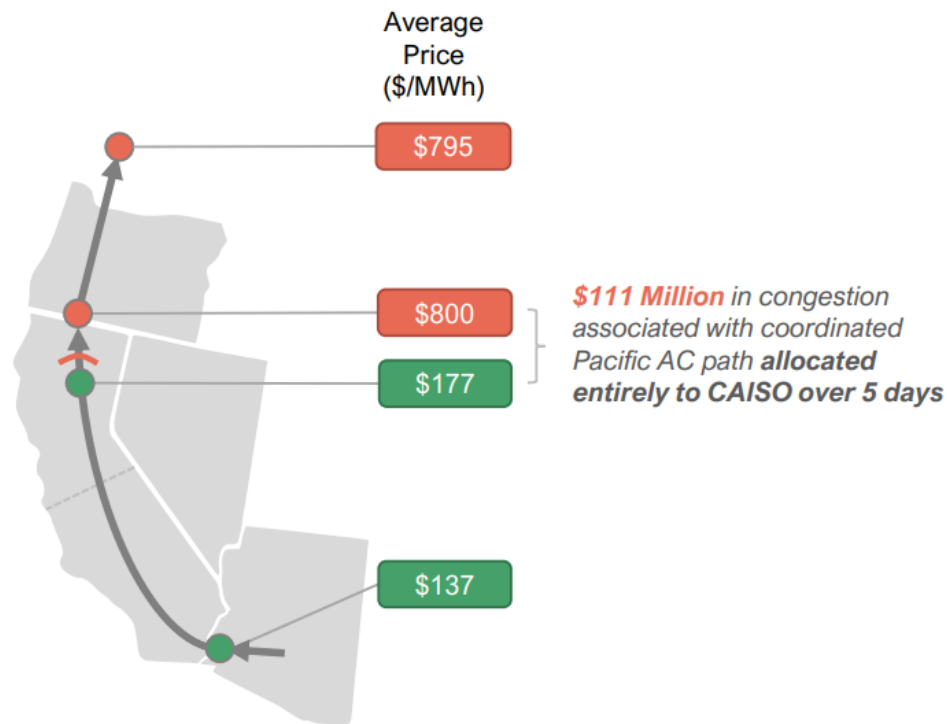
Not a forecast. These figures apply portions of the observed 2021–2025 spread to BPA's surplus inventory across hydro conditions. They show what different answers to "how much of the gap is design?" imply.

Why ~75%. Mid-C is a deep, mature benchmark. While there may be structural differences, Mid-C reflects fast start commitment costs, prices that reflect scarcity, and doesn't rely on over application of administrative pricing.

The question is not whether Markets+ guarantees accurate prices - no market does. It is which market gives BPA stronger structural protection against documented undervaluation as the bilateral benchmark disappears, and which sends effective price signals for a reliable, affordable, and abundant resource fleet.



Southern Intertie: who captures the value of regional trade?



January 2024 cold event: CAISO-side rights holders captured \$125M of \$149M in weekly regional trade value over the full 7 days.



1964: a bargain, not one region's asset

Congress funded the intertie on the condition of regional preference; the Preference Act allowed only surplus power to flow south. By the 1980s BPA estimated California captured ~81% of the path's value and acted unilaterally to rebalance it. In the 2010s BPA changed the intertie rate to address CAISO scheduling rules.



\$200 million/yr at stake

The value of regional trade between the PNW and CAISO over the Southern Intertie averages over \$200 million annually. While the overall value of regional trade has been roughly even past few years - CAISO value exceeds OATT by \$7 million annually – there is significant year to year volatility in outcomes.

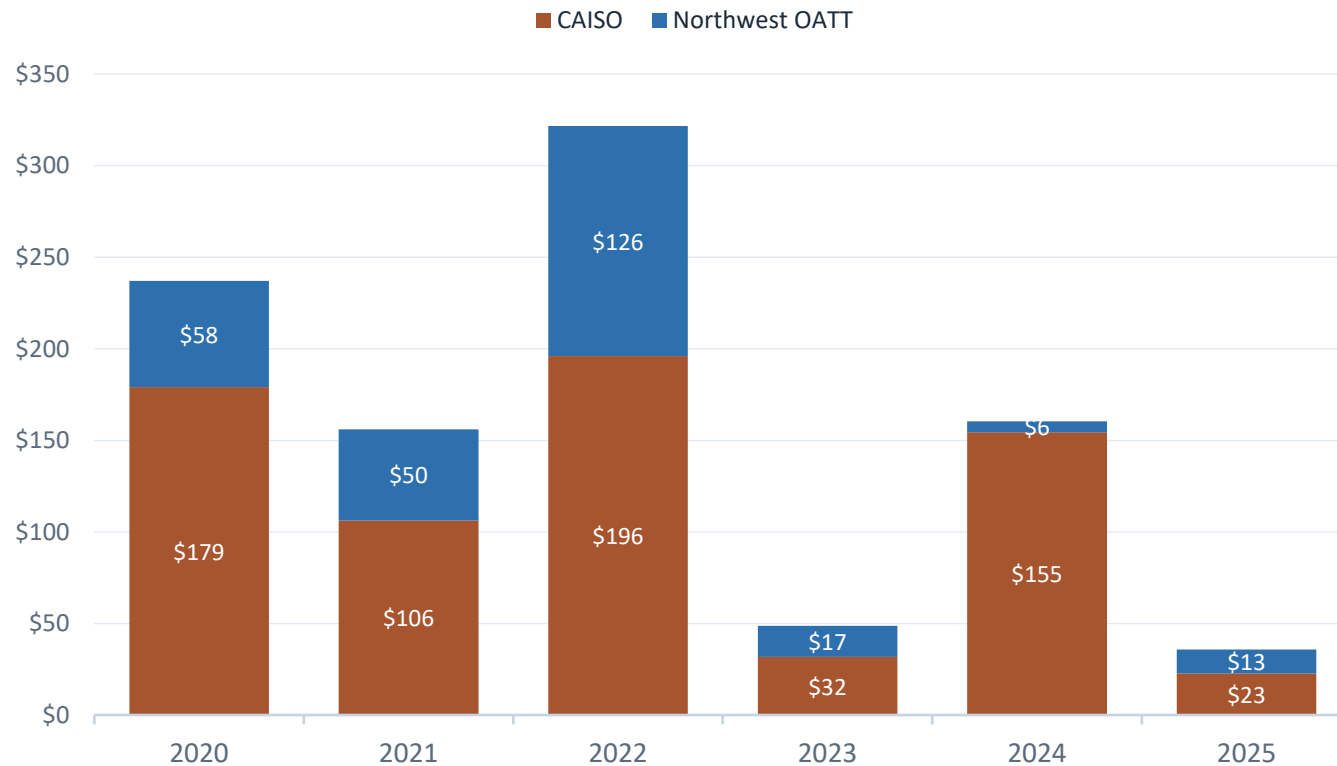


Today: value shifts to CAISO when it matters most

The CAISO congestion design shifts the value of regional trade towards the CAISO CRRs when the path is most valuable.

When the interties bind, value shifts to CAISO

Day-ahead trade value in binding hours, CAISO share vs. Northwest OATT share (\$ million)



Average total trade value in binding hours $\approx$ \$160M/yr. 2023–2025 were historically low water years with low intertie utilization.

Value concentrated and biased

Value of regional trade is concentrated in “binding” hours. 70% of total regional trade value collected by CAISO in these hours. On average \$75M/yr more than the Northwest, over \$150M in some years. An even split would move \$37–75M/yr to northern OATT holders.

More binding ahead

Low water years have suppressed utilization. As the Northwest tightens and BPA enters a day-ahead market, market optimization or market-to-market intertie frameworks will fill the paths far more often.

A Forum Question

Not an automatic Markets+ benefit - the Northwest value placed at stake in a forum question. Inside EDAM, congestion becomes an allocation decided in CAISO/ROWE processes and BPA's historical tools dissolve. Under Markets+ it stays a peer-to-peer seam between two FERC-jurisdictional operators.

If further market design erodes the value of Southern Intertie, it risks rolling the \$130 million segment into the Network.

Two more design differences



Congestion rent allocation design

MARKETS+

- Constraint-by-constraint allocation, pro rata to long-term transmission rights holders, consistent across every participating BAA. Honors the OATT, lets rights holders hedge, and rewards making transmission available to the market.

EDAM

- Approach has changed repeatedly: measured-demand → baa congestion only → interim self-schedule hedge. Left to each BAA, undermines efficiency, and offers no reciprocal hedge for parallel flows from constraints inside the CAISO BAA.
- Durable alternatives under study could impose new congestion charges on OATT rights - costs not in any modeling to date.



Greenhouse gas attribution

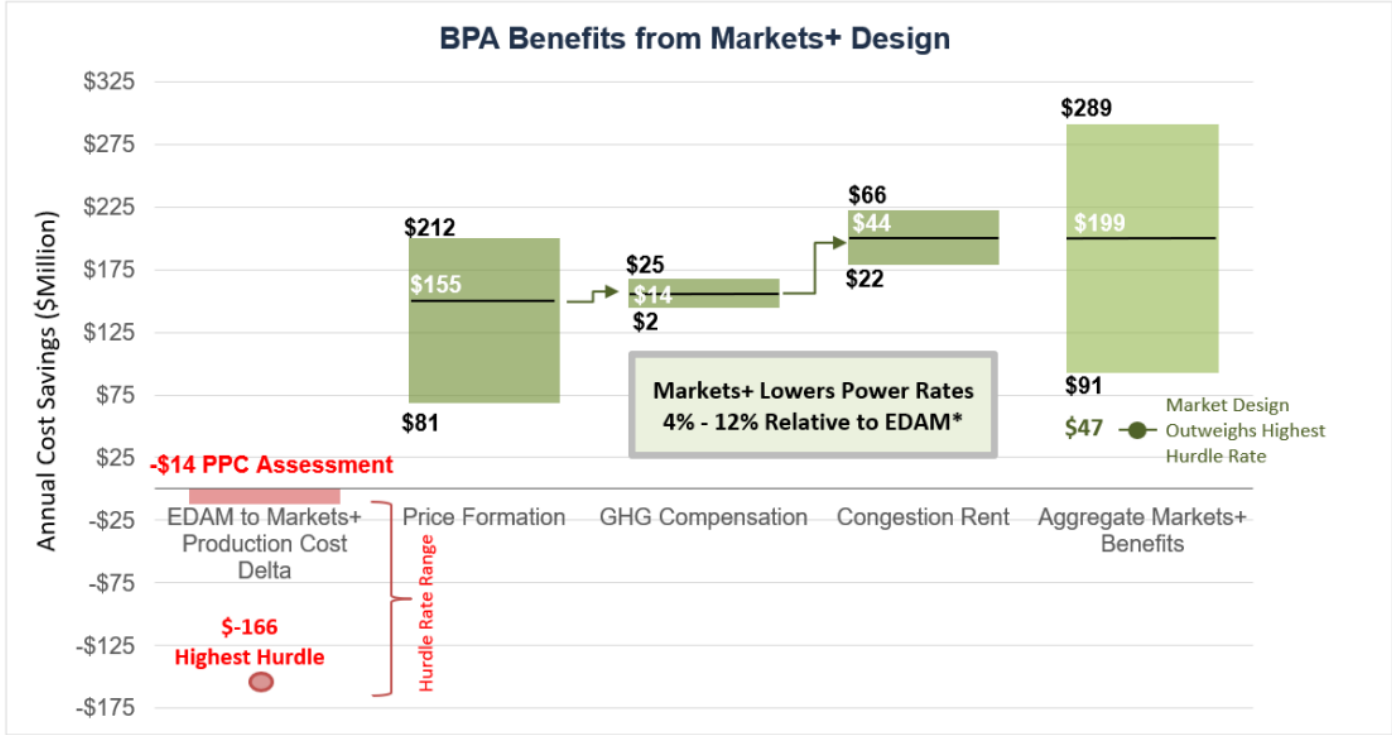
MARKETS+

- Zonal design with verified specified-source imports: nominated resource, emissions rate, validated delivery path, dispatched in tandem. GHG price floats up to the unspecified-import penalty.

EDAM

- Attribution stack with no delivery verification. When willing clean capacity is deep, the GHG shadow price clears near zero regardless of what physically served the load.
- EDAM included new reference pass and GHG net export limit could help.
- Result: EDAM undercompensates BPA's clean energy by an estimated \$2–25M per year.

Putting it together: market design is key



Source: PPC Markets Paper. Ranges reflect surplus inventory across hydro, load, and resource conditions; rate estimate is Tier 1 average cost impact (RAM2026 inputs).

The question is not whether Markets+ guarantees equitable value for BPA’s assets, that isn’t certain. In a scenario where the status quo disappears **which market gives BPA stronger structural protection to receive equitable compensation for the federal system.**

Footprint (production cost)	-\$14M
Price formation	\$81-212M
GHG compensation	\$2-25M
Congestion rent	\$22-66M

\$91-289M / yr
4-12 % Rate Benefit
Net annual value of Markets+ design for BPA
— roughly 4-12% on BPA power rates
assuming pro-rata share of congestion rent

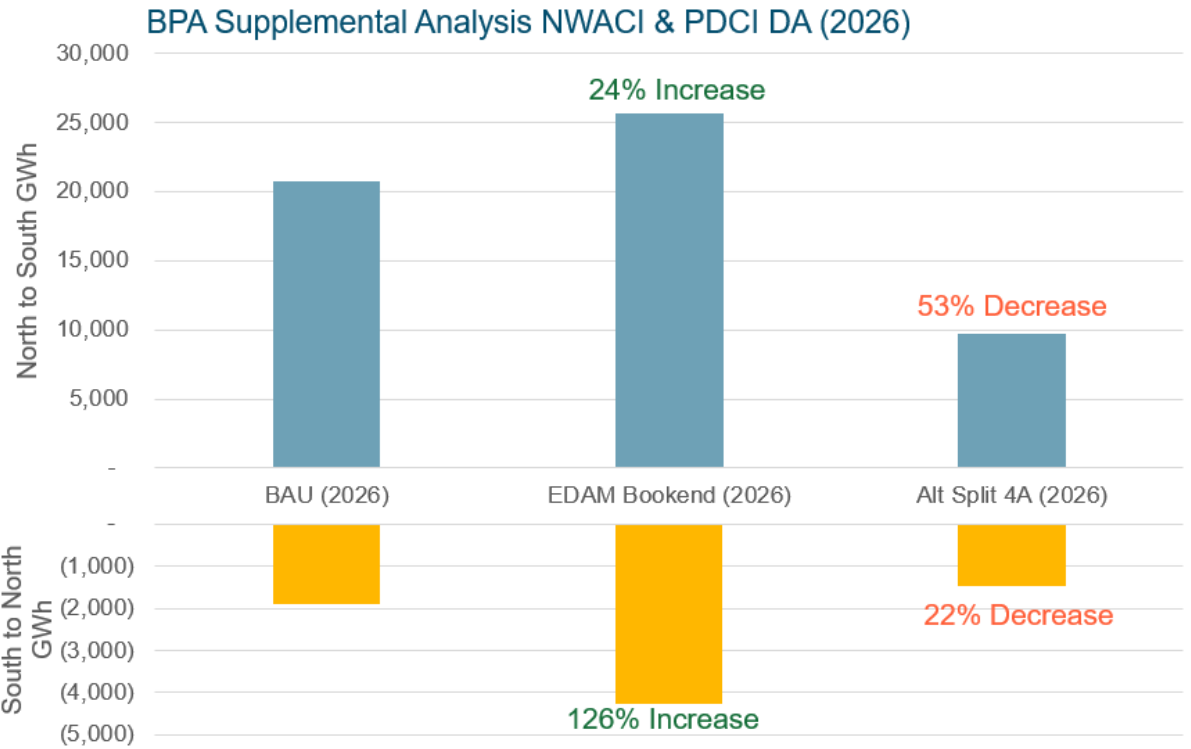
Even at the highest hurdle assumption, market design outweighs modeled production cost difference by \$47M

Appendix

Key production model outputs



Key production model outputs



Counter Intuitive Modeling Outcomes

Transfers to California Drop by 50 percent.

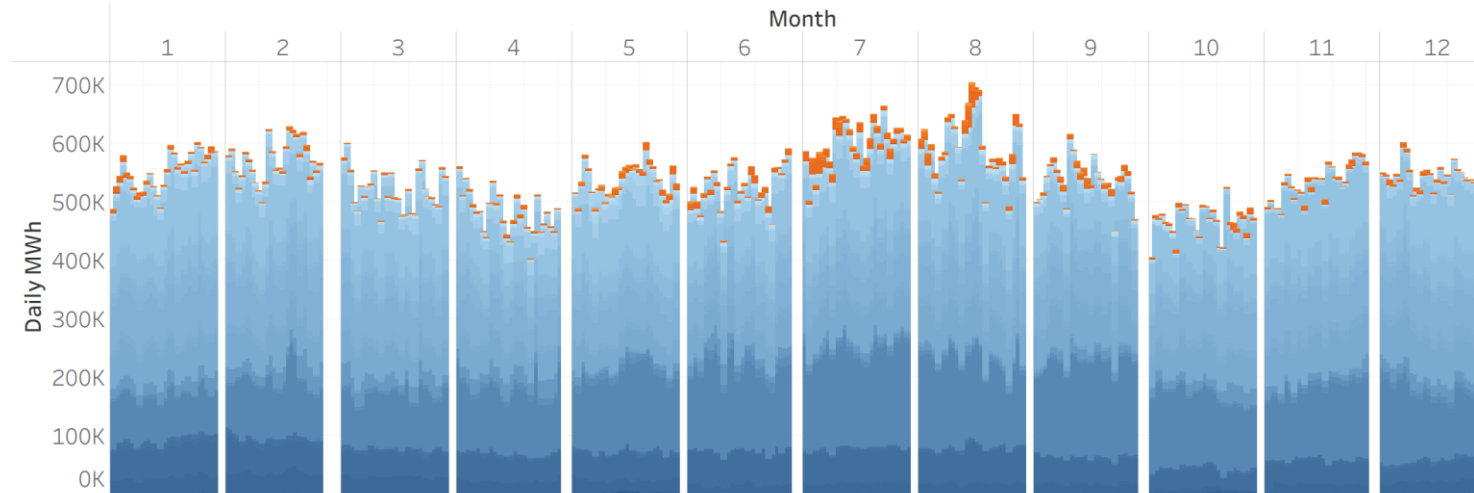
Model shows prices higher in real-time and lower prices in Markets+

Average Price in Scenarios (\$/MWh)



The hurdle assumption contradicts how the West trades

2023 BPA Transmission Schedules by Product



2023 BPA transmission schedules by product. *Blue = long-term rights; orange = short-term products.*
Source: BPA Hourly Firm Monitoring and Evaluation.

Both markets sit on the OATT

Neither replaces the transmission construct. Long-term rights on the Southern Intertie — arguably the most valuable transmission in WECC — remain fully subscribed.

Trade moves on sunk-cost rights

Virtually all schedules on BPA's system use long-term transmission with low incremental hurdles. Markets+ introduces no new charge to cross these paths relative to today.

A 50% cut in intertie flows is not supportable

BPA joining EDAM may marginally raise utilization of the Southern Intertie; halving it under Markets+ has no basis in how these paths are used.

Most realistic scenario: Alt Split 4A with a \$5.25 hurdle — the likely footprint, with the friction assumption that best matches observed incremental costs of crossing a seam. On that basis the gap between BPA in Markets+ and BPA in EDAM is roughly \$14M per year, within the noise of any production cost model.

Neither market eliminates seams — each relocates them

Seams exist in the West today, in every function

- Two Reliability Coordinators (CAISO and SPP) since Peak Reliability wound down
- Nearly 40 balancing authority areas — neither market is an RTO, CAISO needs further legislation for full Western RTO
- Separate transmission providers and OATTs
- Divergent state GHG policies
- SPP RTO West on the eastern edge creates a seam with either market
- EDAM requires no resource adequacy program; Markets+ requires WRAP

MARKETS+

Residual seam at a negotiated boundary

- Resolves commercial seams inside the Northwest with a single security-constrained commitment and dispatch
- Common resource adequacy through required WRAP participation
- SPP is already RC for most of the footprint
- Boundary with EDAM is a seam between two FERC-jurisdictional operators — managed by JOAs and market-to-market coordination, contestable and rebalanceable

EDAM

Internalizes the West's hardest seam

- The CAISO BAA / OATT boundary does not disappear - it moves inside the market
- Different rules already apply to the CAISO BAA and other EDAM BAAs can lead to tension; congestion rent allocation is the live example
- Governed not by peer negotiation but by CAISO/ROWE processes with statutory obligations to a subset of participants
- "Seamless" is not what the design delivers

The West is not the East: Neither market will be an RTO and bilateral trading opportunities will continue regardless of whether there is one market or two, further softening the boundaries of a day-ahead market seam. SPP is also exploring additional tools, such as intermarket optimization, to gain additional efficiencies with market-to-market management.

Governance is why the design gaps should be expected to persist

Governance layer	EDAM / ROWE	Markets+
Policy development	Proposals are staff driven, which incentivizes appealing to staff over compromise between stakeholders. ROWE will likely rely on contracted CAISO staff to run stakeholder process in the near term, if not permanently – increasing PPC’s concern with this approach.	Stakeholder-driven working groups; MPEC (all participants and stakeholders) advances proposals at 67% weighted vote. Major design elements approved at or near unanimity.
FERC filing authority	ROWE shares one tariff with CAISO; "jump ball" filings and "exigent circumstances" override remain. ROWE relies on CAISO for staff, finances, and start-up loan guarantee.	Markets+ Independent Panel decides filings; SPP Board role limited to narrowly defined, tariff-specified circumstances. No statutory mandate to any single state.
Market operation	CAISO operates the market while operating its own BAA inside it, under a statutory obligation to California consumers (PUC §345.5) — an obligation the ROWE legislation deliberately preserved.	SPP operates under a separate Markets+ tariff as a contractual service; the SPP BAA is not directly affected by most MIP decisions.
Roles & responsibilities	No adopted process for deciding which tariff sections are "market" (ROWE) vs. "BAA" (CAISO). The 2021 wheel-through priority episode shows how costly that ambiguity can be.	Separate tariff, clearly defined decision path, and every participant continues to operate its own BAA under its own tariff.

PPC credits the Pathways Initiative and the ROWE as real progress. **But after every reform is credited at full value, four structural gaps remain - and no iteration of governance reform to date has removed them.**

CAISO's statutory duty to California survives every reform



A statutory obligation to California

California Public Utilities Code §345.5 requires CAISO to operate consistent with the interests of the people of the state, including reducing costs to California consumers.



The ROWE didn't remove the statute

Section 345.5 was intentionally kept in place by the legislation creating the ROWE — removing it was politically untenable, much like removing preference would be in the Northwest.



EDAM inherits California's rules

EDAM's day-ahead rules are built with CAISO BAA rules as a foundation. Built over decades with intent of benefitting California ratepayers.



ROWE isn't fully independent of CAISO

To expedite formation and avoid duplicative costs, the ROWE still relies on CAISO for key financial, market expertise, and regulatory functions rather than standing fully apart. ROWE is currently budgeted for 9 employees. Markets+ ~200 employees.



California institutions maintain influence

California institutions will continue to have a significant influence on the market mechanics through their oversight of CA programs such as resource adequacy.

Reform hasn't reached the root cause. A Governance Review Committee ran three phases from 2019–2023, and the Pathways initiative added two more — neither changed CAISO's mission or its Board's ultimate authority. PPC's core governance concern remains unresolved by every iteration to date.

California's influence reaches channels no board reform touches



The lesson: CAISO put forward a market based solution— and it did not matter. When California's regulator and the market operator disagreed over the terms of external participation, the regulator prevailed through its authority over jurisdictional load-serving entities, a channel that no board-independence reform reaches. EDAM institutionalizes that exposure; Markets+ preserves a seam in which to arbitrate it.

Administrator Kavulla's letter to the ROWE



PPC supports the identified reforms

The September 3 letter takes governance seriously. Independent filing authority, separation of market operations, congestion revenue alignment, stakeholder-driven governance, market design that equitably values hydro: PPC has long advocated these reforms.



Real reform would benefit the whole West

If the ROWE delivers them in substance, the West gains something durable that benefits the broader West. PPC will work constructively with BPA and the ROWE toward that outcome.



Substance, not assurances

Markets+ protections are in a FERC-approved tariff today. It would be unfortunate to set them aside for assurances rather than implemented, enforceable reforms.



Preserve the viability of WRAP

Markets+ requires WRAP of every participant; EDAM requires no resource adequacy program. A pivot that sends mixed signals fragments participation would undermine the West's only binding RA program just as it approaches its first binding season.



A transparent process

BPA's 2025 decision followed a two-year public process. Any change of direction deserves the same rigor and transparency, with meaningful input from the customers who fund the system.

PPC supports the areas for reform the Administrator has identified and will engage constructively to help secure them. Our ask is that they be delivered in binding commitments and that any change in BPA's market direction be made through a legitimate, transparent process.

The status quo is not an option — indecision is a decision



 **The region has already run this experiment**

As WEIM membership grew, real-time bilateral liquidity migrated into the organized market. The entities that stayed out - including BPA - ultimately joined because trading in a shrinking pool was no longer tenable, entering a market whose design was settled years earlier. The same dynamic will govern the day-ahead timeframe.

Further EDAM evolution is unlikely without Markets+

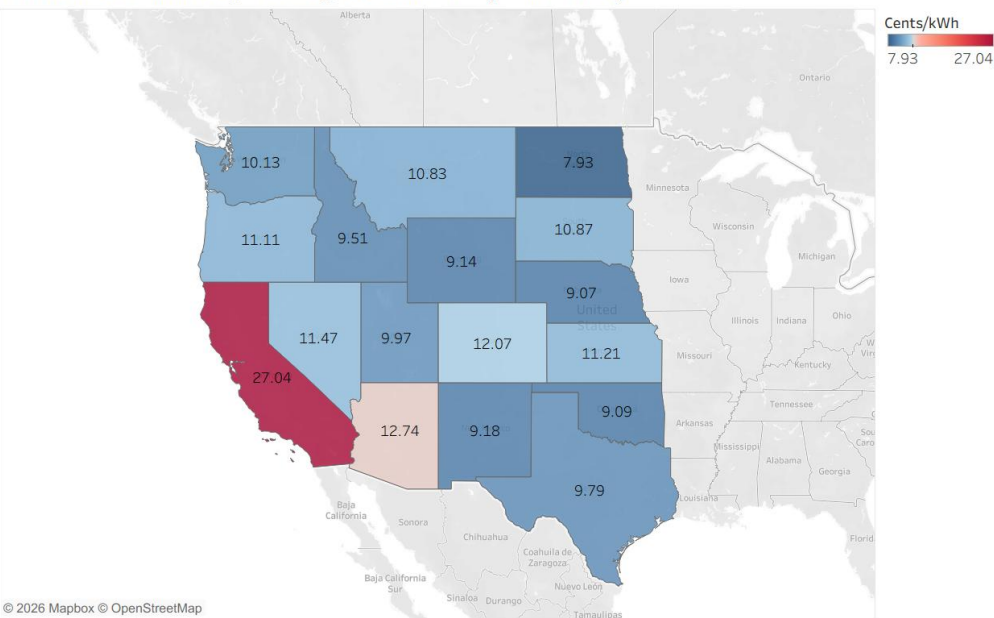
Market and design reforms achieved to date have been because of the Markets+ threat. Without Markets+, there is no incentive for further modification.

 **The choice before BPA**

Anchor and shape a market that reflects the value of the federal system on design and governance terms the region helped build — or defer until EDAM is the only option left. Without action now, Markets+ is unlikely to remain viable as other entities make their decisions. BPA has the opportunity, and PPC believes the responsibility, to choose deliberately.

Markets+ advances the region's and the nation's energy goals

Total Electric Industry- Average Retail Price (cents/kWh)



California's retail rates are the highest in the continental U.S. That creates continuous pressure on state institutions to cut California costs - pressure the record shows operates at other regions' expense when interests conflict. (EIA 2024 average retail price, ¢/kWh)

The nation's most affordable federal power system should not be governed by the institutions of its most expensive state.



Affordability

Preserves \$91–289M/yr of Northwest value (4–12% on rates) through tariff mechanisms and institutional standing to protect the federal surplus.



Reliability

Requires WRAP participation of every participant and prices scarcity and flexibility so resources that perform when needed are compensated. EDAM requires no RA program.



Abundant firm energy

Data centers, manufacturing, and electrification will be served only where prices and RA support firm resources worth building. Markets+ sends those signals; EDAM undercompensates firm, flexible supply.



Grid modernization

Builds customer trust to use market signals in transmission planning and keeps the option to evolve toward an RTO — which for EDAM would require a change in California law that has failed repeatedly.



BPA's historic mission

BPA's legal analysis found it can meet its preference obligations in Markets+. No equivalent finding exists for EDAM, and its carbon-attribute tracking makes one doubtful.

The two markets at a glance

	Markets+ (SPP)	EDAM (CAISO / ROWE)
Market operator	SPP, as a contractual service under a separate Markets+ tariff	CAISO, on behalf of the ROWE, while also operating its own BAA inside the market
Tariff & decisions	Separate FERC-approved tariff; Markets+ Independent Panel decides filings; MPEC advances policy at 67% weighted vote	Shared CAISO–ROWE tariff; ROWE files on "market" items, CAISO Board retains statutory authority and BAA/transmission items
Resource adequacy	WRAP participation required of every participant	No RA program required; day-ahead resource sufficiency test only
Fast-start pricing	Included in tariff	Excluded; peakers made whole through uplift; reform on hiatus
Scarcity pricing	Graduated demand curves for flex products, up to \$1,000/MWh	Flexible ramp up capped at \$247/MWh; imbalance reserves at \$55/MWh
Market power mitigation	Three-part structure / conduct / impact test	BAA-level pivotal-supplier test; no conduct or price-impact screen
Congestion rent	Constraint-by-constraint, pro rata to long-term rights holders, consistent across BAAs	Determined by each BAA; interim self-schedule hedge; durable design unresolved
GHG design	Zonal; verified specified-source imports; price floats to unspecified penalty	Attribution stack; no delivery verification; shadow price often near zero
Reliability coordinator	SPP is already RC for most of the prospective footprint	CAISO RC for California; SPP RC for most other EDAM BAAs