

Public Service Company of New Mexico and El Paso Electric Company Day-Ahead Market Benefits Studies

AUGUST 29, 2024



PNM 3RD WORKSHOP UPDATES

- Core customer benefits continue to guide PNM's regional engagement
- Regional participation prioritization continues to evolve
- Analysis helps with day-ahead market choice
- Next steps

What has stayed the same?

- PNM continues to advocate for expanded regional collaboration
 - Day-Ahead markets are the next step towards expanded regional collaboration and increased customer benefits
 - Necessary as NM continues towards the energy transition to carbon free generation
 - Increased reliability
- More RTO functionality will continue to be pursued
 - Regional transmission planning – WestTEC
 - Regional visibility of Resource Adequacy – WRAP
 - Continued governance reform to enable largest market footprints possible – Pathways Initiative
- Transmission is important
 - PNM customers can and should benefit from renewable potential in NM

REGIONAL PRIORITIZATIONS EVOLVE

What ideas have evolved?

- Seams are going to be important
 - PNM will participate in initiatives to quickly evolve seam improvements
 - NM will benefit from mature seams that enable seam congestion management
 - Seam management ensuring optimized transfers between markets during price differences should be adopted early
- GHG market design is important for PNM
 - PNM is the only utility currently subject to non-priced carbon reduction rules
 - Current market designs do not support PNM's unique rule
 - Emissions reporting for market transactions is needed
 - PNM would support dispatch solutions for limiting emissions

ANALYSIS INFORMS DAY-AHEAD MARKET CHOICE

Brattle study addressed remaining uncertainties

- Modeling of all possible transmission market connectivity
- Including long-term transmission customer contracts
- Understanding effects of wind transfers through PNM's system

PNM day-ahead market choice is not heavily dependent on neighboring utilities' selections

- Study demonstrated that PNM customers would benefit from participation in either day-ahead market regardless of "boxed in" location
 - Adequate transmission connectivity to M+ and EDAM is currently available
 - Other market characteristics, operational challenges, and future topology opportunities can guide PNM choice

NEXT STEPS

PNM would like to make day-ahead market choice this fall

- Internal and external discussions about Brattle study results
- Consider NMPRC and stakeholder guiding principles when considering day-ahead market choice

PNM will continue to participate in regional efforts

- WestTEC, WRAP, Pathways and others
- Current and future market policy
- Focus on market seams and GHG processes

THE BRATTLE GROUP STUDY

PNM & EPE participated in The Brattle Group Study (Brattle Study).

Similar to the WMEG Study conducted by E3, this study focused on a cost benefit analysis on behalf of PNM and EPE.

John Tsoukalis from The Brattle Group will discuss the details of the Brattle Study.

Summary of EPE Participation Impacts \$ Million/Year

Benefit Metric	Metric	CT	EDAM	Markets+
Adjusted Production Cost	<i>Cost</i>	\$73.6	\$70.5	\$62.2
Short-term Wheeling Revenue	<i>Revenue</i>	\$0.5	\$0.4	\$0.0
EDAM Congestion Revenue	<i>Revenue</i>	-	\$12.4	-
WEIM Congestion Revenue	<i>Revenue</i>	\$7.8	\$3.6	-
Markets+ DA Congestion Revenue	<i>Revenue</i>	-	-	\$8.1
Markets+ RT Congestion Revenue	<i>Revenue</i>	-	-	\$4.4
Bilateral Trading Revenue [1]	<i>Revenue</i>	\$6.6	\$14.4	\$0.0
APC Net of Revenues [2]		\$58.8	\$39.7	\$49.7
Net Benefits			\$19.1	\$9.1

Notes:

[1] Bilateral trading values of exports and imports from the BAs of EDAM members, includes impacts on trades by third party marketers.

[2] Total system cost is adjusted production cost minus all the revenues

EPE INTERPRETATION OF BRATTLE STUDY RESULTS

- EPE will employ the Brattle Study findings as part of their deliberation when selecting a Day-Ahead Market (DAM).
- The study serves as a valuable tool for EPE to assess potential cost benefits in electricity production for the benefit of their customers.
- The Brattle Study points to EDAM as more beneficial vs. the WMEG study that points to Markets+.
- Both studies prove that joining a DAM will be more beneficial than not joining a market.
- The Brattle study shows \$10M in net benefits (annual) to joining EDAM over joining Markets+.
 - However, it is important to note that the \$14M difference in bilateral transaction revenue is not a guaranteed benefit.
 - The bi-lateral trading, benefit of EDAM vs. Markets+ is dependent how much of that trading is captured by EPE vs. third-party trading .
 - EDAM is more beneficial because the seam with TEP becomes more valuable (as discussed by The Brattle Group).

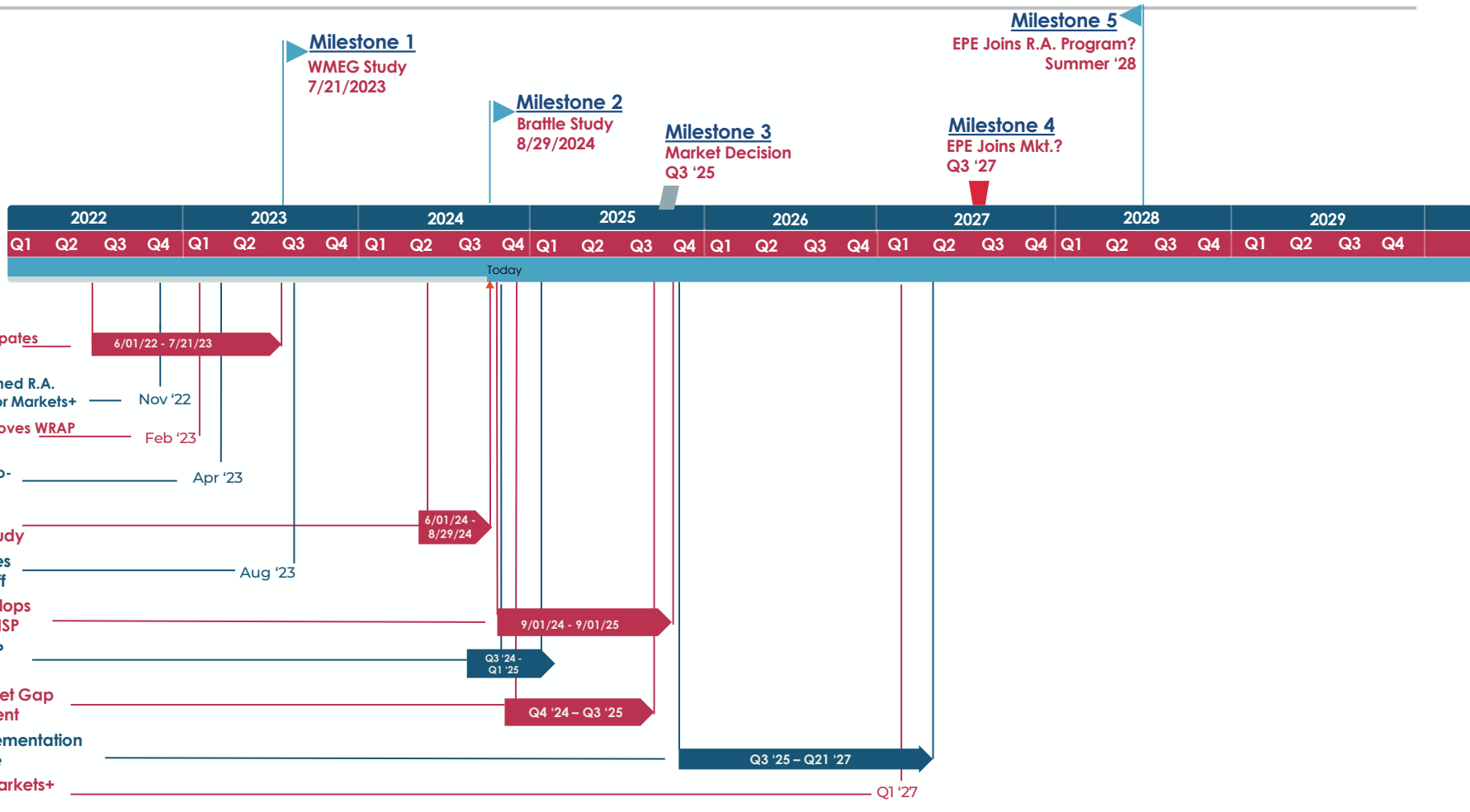
EPE INTERPRETATION OF BRATTLE STUDY RESULTS

- The decision on which DAM to choose must include other non-economic factors such as governance, regional collaboration, weighing the investment cost of transmission, generation, DC tie, etc. vs. the gain customers get from upgrading.
- Administrative costs, initial start-up costs, integration costs were also not considered in the Brattle Study.
- Other economic factors may be considered to study change economic outlook (*e.g.* DC tie optimization to the east).
- The Brattle Study reinforces:
 - The importance of regional collaboration, market footprint, market seams.
 - Joining a market, either market, is more beneficial than not joining any.

ADDITIONAL CONSIDERATIONS FOR EPE DAM SELECTION

- Additional sensitivities are needed
- Further analysis on market footprints and regional collaboration
- EPE is actively monitoring the Markets+ and EDAM tariffs currently before FERC
- EPE is continuing its research and studies in RA, DAM evaluation before a market decision can be reached

Market Development Timeline



COMMISSION PARTICIPATION/FUTURE WORKSHOPS

Commission Participation

- Continue to motivate and engage in stakeholder initiatives
- Continue to monitor and participate on market development issues locally, in market forums, state and FERC collaboration
- Supporting the adoption of market tariffs at FERC
- Coordination with neighboring states on market development initiatives and key issues (regulatory bodies and commissions)

Future Workshops and Forums

- Market development informational workshops at NMPRC
 - Market offerings informational workshop (EIM, EDAM, Markets+, WRAP)
 - Transmission availability, planning and resource adequacy

CONCLUDING STATEMENTS

- The Brattle Study results represent one tool to analyze the effect of market participation.
- EPE continues to monitor and participate in DAM discussions while designing the next steps for analysis.
- EPE's participation plans to engage in different market sensitivities.
- Still true today, DAMs are fluid and constantly evolving, all potential market participants and stakeholders need to be prepared to pivot quickly and adapt to change.