California ISO | WESTERN ENERGY MARKETS

The CAISO's Strategic Plan for Demand and Distributed Energy Participation and Visibility and 2026 Progress

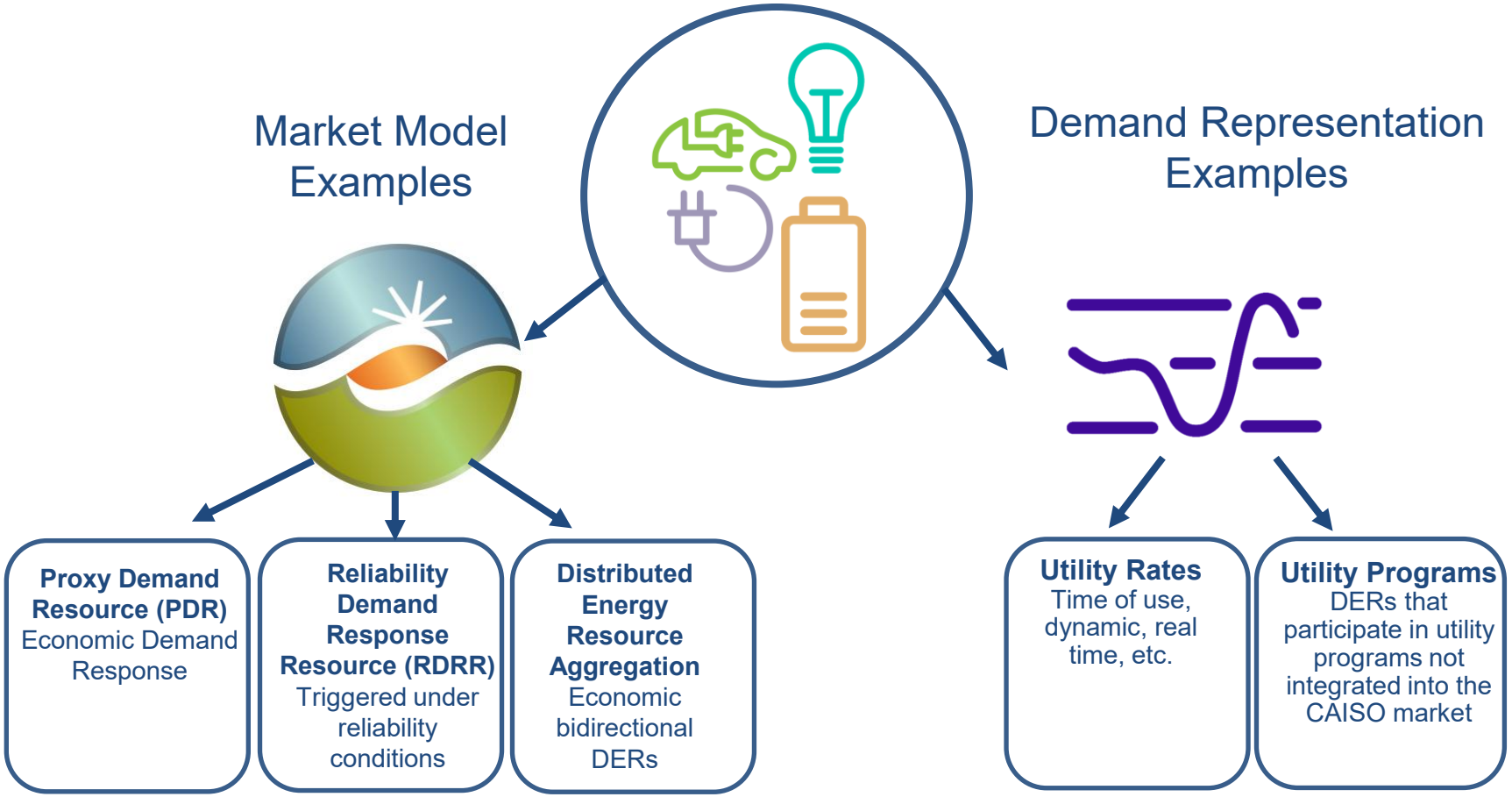
BOSR Briefing

Anja Gilbert, Policy Development Manager, Demand Flexibility

November 13, 2026

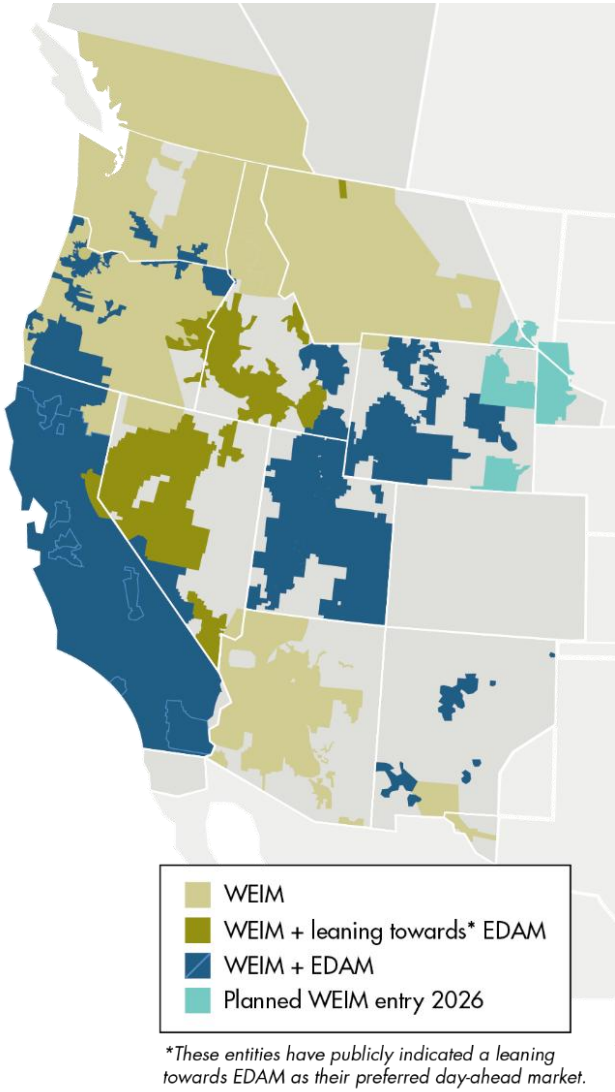
What is demand flexibility?

Demand flexibility is the ability for customers to shift when and how they use electricity in response to grid needs.



Strategy Context

- Growing electricity demand, extreme weather events and expanding deployment of a diverse set of distributed energy resources (DERs) are creating challenges and opportunities for system operators in California and across the West.
  - *WECC projects a 20.4% increase in annual electricity demand by 2034, driven largely by electrification and large loads.*
- Demand flexibility and dispatchable DERs are powerful tools for enabling reliable and cost-effective system operations across the WEIM and EDAM footprint.
- The ISO's strategy positions demand flexibility as a core asset and outlines the role we can play in enabling and scaling demand flexibility over the next five years.



*These entities have publicly indicated a leaning towards EDAM as their preferred day-ahead market.

From Challenges to Future Opportunities

ACTIONS

Enhance DER Visibility

- Improve forecasting to reduce uncertainty in market operations
- Strengthen situational awareness
- Integrate DER data into system planning

Leverage DER Dispatch Data

- Use dispatch information to improve emergency response and coordination
- Optimize market performance by aligning DER operations with system needs

Capture Untapped Demand Flexibility

- Enable new resources (large loads) and new sources of value
- Enhance reliability while reducing costs through flexible load participation
- Defer or avoid costly infrastructure investments by substituting DER flexibility for new build-outs

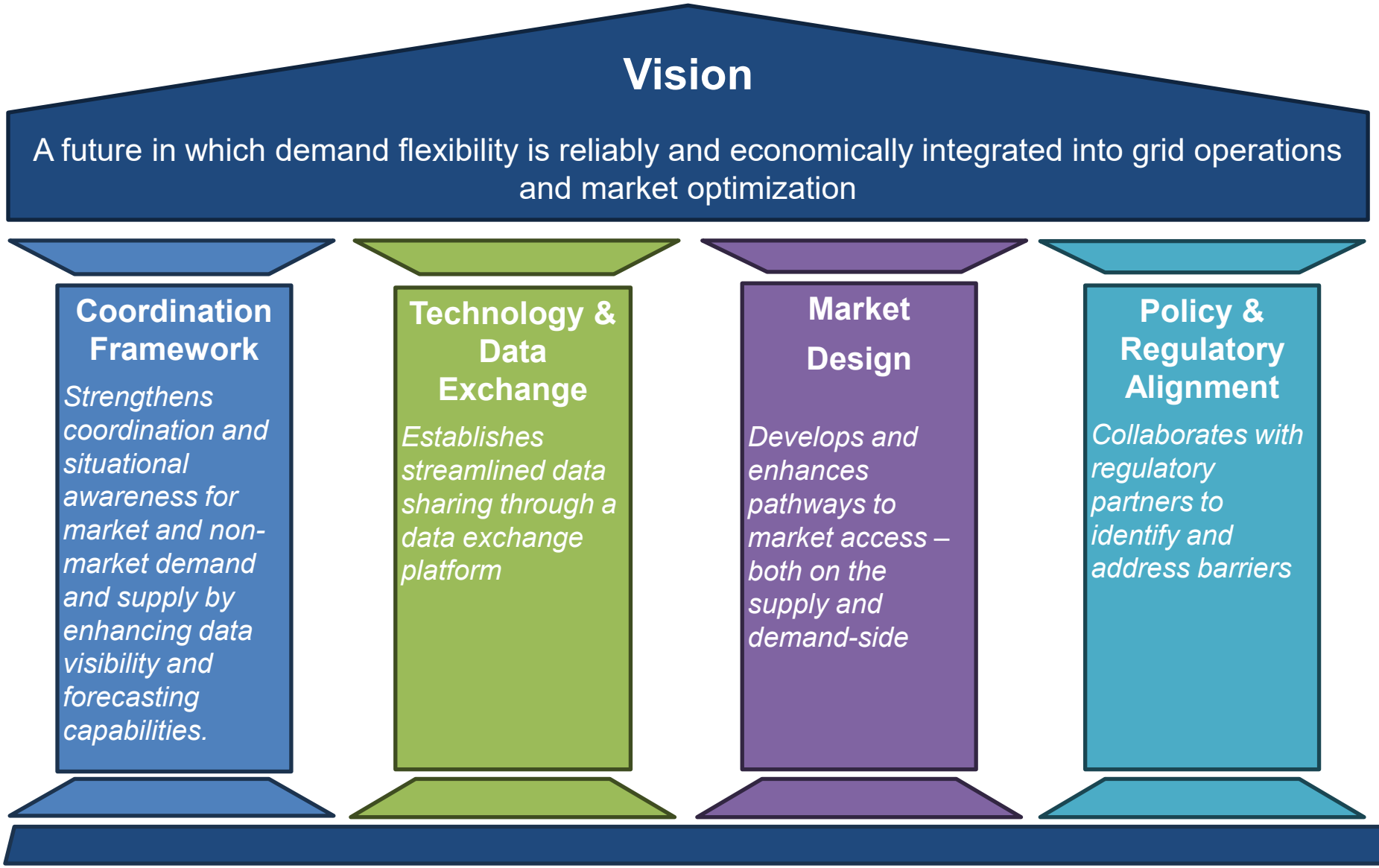
RESULTS

Reduce Uncertainty and Strengthen Reliability

Optimize Coordination and Market Outcomes

Enable Market Value and Defer Infrastructure

Vision and Pillars



The ISO's Near-Term Focus (2026- 2028)



Coordination Framework

- Develop a coordination framework prototype and share learnings to incorporate in the coordination framework requirements.
- Begin using currently available DER data to improve forecasting and operations.
- Plan and scope larger enhancements that will be enabled by future data exchange capabilities.



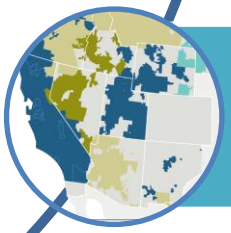
Technology & Data Exchange Infrastructure

- Use the coordination framework prototype and distribution utility feedback to define data needs, sources, and frequency of data exchange.
- Develop operational and forecasting technical requirements to meet market operator, transmission operator, and distribution operator needs.
- Advance near-term projects while identifying synergies/conflicts with the future data exchange.



Market Design Enhancements

- Advance market design innovation, including, enabling behind-the-meter exports, exploring demand-side bidding, and simplifying and streamlining participation requirements.
- Evaluate how demand reductions influence wholesale price formation and refine price signals—especially during emergencies—to better reflect system needs and flexibility value.

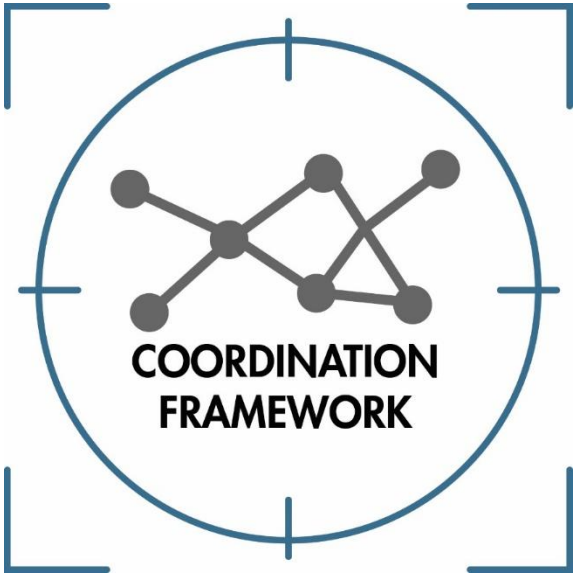


Policy and Regulatory Alignment

- Identify data sharing opportunities with state agencies.
- Identify regulatory barriers and the venues where they can be addressed.
- Work with regional regulators to understand how flexibility programs will evolve.

Coordination Framework

Focus areas of coordination framework



- Enhanced Operational Coordination
- Information and Visibility
- Operational Forecasting

Coordination Framework is moving from trial findings to operational implementation

Customer-side resources are growing quickly, the trials demonstrated that reliable coordination depends on translating DER and large load behavior into information for forecasting, load distribution factor (LDF) optimization, market processes, and ISO/utility operations.

2026
Trial and Define

- Document current processes and known gaps
- Complete prioritized PG&E/CAISO trials
- Identify operationally valuable information and use cases
- Identify conforming and non-conforming demand frameworks

2027
Operationalize and Evaluate

- Finalize documentation, roles, workflows, and standardized data exchanges
- Use available demand and DER information in existing forecasting and operational processes
- Evaluate treatment of out-of-market resources in aggregate forecasting and LDF optimization
- Define requirements for conforming and non-conforming load

2027+
Implement and Scale

- Phased implementation of operational improvements that reduce costs and increase reliability
- Continue to advance future platform design to automate and scale bidirectional ISO/utility data exchange

What changed through the prototype?

The need is not universal device-level visibility. The need is actionable information about material behavior, provided at the timing, geography, and level of detail required for each operational use case.

Technology and Data Exchange Infrastructure

Objective

Define and develop the technology and data exchange infrastructure necessary to support the coordination framework with automated exchange.

How will we get there?

Deliver a secure, scalable, and fully operational data exchange platform by 2030, laying the technological foundation for enhanced coordination and innovation. This platform will be the technology infrastructure for the coordination framework.

What will success look like?

An automated, standardized data platform enabling operational and forecast information sharing across the market footprint, transmission operators, distribution operators, and aggregators.

Market Design Enhancements

Objective

Enhance market opportunities for demand flexibility while maintaining open access and market efficiency.

How will we get there?

Evaluate and advance market design opportunities for demand flexibility, including existing supply-side pathways, demand-side flexibility, large loads, and simplified participation requirements, where appropriate.

What will success look like?

Market pathways that are responsive to stakeholder needs, scalable across the regional market footprint, and capable of capturing flexibility where it provides system value.

Policy and Regulatory Alignment

Objective

Collaborate with federal, state, and industry partners to identify and address barriers to enabling demand flexibility through both wholesale and retail pathways.

How will we get there?

Participate in regulatory processes and communicate frequently with regulators to seek policy alignment and advance outcomes consistent with the strategy.

What will success look like?

Federal, state, and regional alignment across wholesale and retail frameworks, enabling flexible demand at scale.

2026 Progress



Coordination Framework

- Tested priority coordination needs with utility partners and identified where additional information can improve forecasting and operational awareness.
- Demonstrated the value of greater visibility into resource operating behavior, operating limits, and expected large-load behavior.
- Identified priority areas for continued coordination, including DER availability, forecasting, and large-load information exchange.



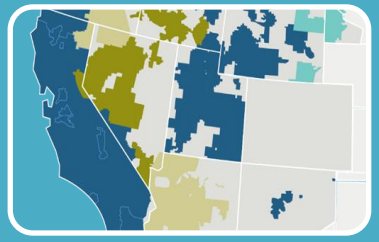
Technology & Data Exchange Infrastructure

- Used prototype work to identify the highest-value data exchanges, including schedules, telemetry, operating characteristics, and availability.
- Advanced a phased approach for exchanging large-load information and incorporating it into forecasting and operational processes.
- Evaluated interoperability standards and future architecture needs to support more scalable data exchange.



Market Design Enhancements

- Evaluated existing demand-side and supply-side participation pathways and identified where additional flexibility or simplification may be warranted.
- Defined the next phase of market design work through DDEMI's non-conforming load enhancements initiative, connecting large-load visibility and forecasting needs with how flexible loads may ultimately be represented and participate across the WEIM, EDAM and CAISO BAA footprints.



Policy and Regulatory Alignment

- Strengthened coordination with state and regional partners on demand flexibility, DERs, and emerging large-load needs.
- Advanced conversations around data sharing, operational coordination, and pathways for flexible resources.
- Expanded regional engagement on how policy and regulatory frameworks can support reliable integration of evolving demand-side resources.

Questions?