DOCKETED	
Docket Number:	24-FDAS-02
Project Title:	Load Flexibility Policy & Planning
TN #:	273659
Document Title:	Presentation 3 EPIC 5 Proposed Research on DER Interoperability
Description:	Third presentation at the 11/4/26 Commissioner Workshop on Interoperability.
Filer:	Scott McCarthy
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	11/16/2026 1:47:01 PM
Docketed Date:	11/16/2026



EPIC 5 Proposed Research on DER Interoperability

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EPIC Program Overview



$185 million annual budget.



Supports new, emerging, and pre-commercialized clean energy innovations in California.



Advances access to safe, equitable, affordable, reliable, environmentally sustainable energy for electricity ratepayers.

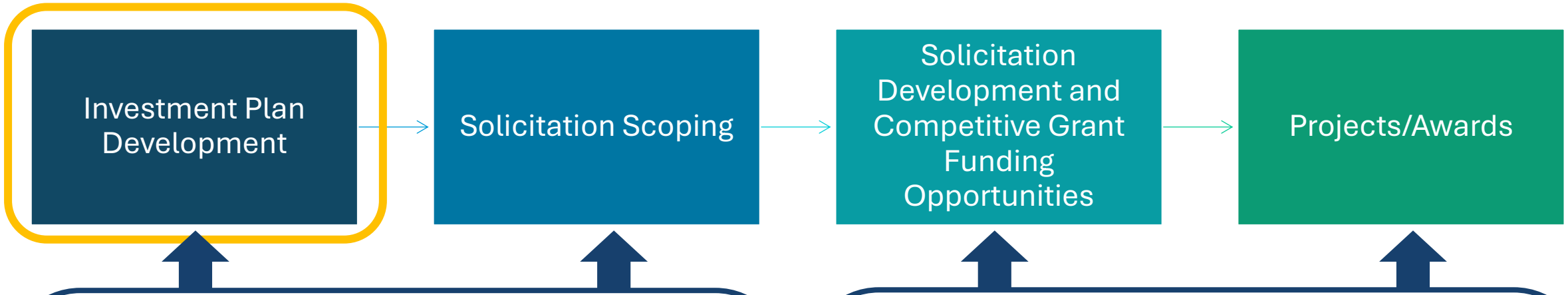


Funds projects in three areas: Applied Research and Development, Technology Demonstration and Deployment, and Market Facilitation.



Administered by the CEC (80% funding) and Investor-Owned Utilities (20% funding).

CEC EPIC 5 Investment Plan Development



Research Planning and Design

- Engage and consult with stakeholders
- Q4 2026: Investment Plan Approval anticipated
- Q1 2027: Initial Solicitation Scoping

Implementation

- Q3/4 2027: Initial Solicitations Released

EPIC 5 Investment Plan - Proposed Initiatives

EPIC 5 Strategic Goal	Initiative
Transportation Electrification	Harnessing the Value of Transportation Electrification for Ratepayers
Distributed Energy Resources (DER) Integration	Leveraging DERs and Load Flexibility for Affordability and Grid Reliability
	Accelerating Grid Connection of Clean Resources and Beneficial Loads
	Community Led Clean Energy Capacity Building and Research Incubation for California Native American Tribes and Community Based Organizations
Building Decarbonization	Innovative Approaches to Building and Community Scale Decarbonization
Getting to 100% Net-Zero Carbon and the Coordinated Role of Gas	Advancing the Clean Energy Transition While Protecting Communities and Ecosystems
	Enhancing Clean Energy Technology Safety, Supply Chains, and Life Cycle Benefits
	Cost-Effective Industrial Decarbonization
Climate Adaptation	Leading Innovation in Electricity Sector Resilience and Adaptation

Research Topic: Advancing Customer-sited DER Integration and Interoperability

Challenge: Incompatible communication standards and the absence of common testing frameworks limit DERs' ability to integrate seamlessly with each other and with utility systems, increasing costs, constraining secure real-time data exchange, and reducing the speed and reliability of coordinated DER response to grid signals.

Proposed Activities / Research

- Research and evaluate existing protocols and standards to identify protocol consolidation opportunities.
- Develop & test unified communication protocols, standardized data formats, and cybersecurity measures that align with common DER use-cases.
- Conduct field projects across diverse building types to validate these protocols, data formats, and cybersecurity measures under real-world conditions.

Solicitation Scoping: Begins Q1 2027

Further Information

- For more information, download the EPIC 5 Proposed Investment Plan and sign up for the EPIC listserv at the EPIC 5 website: https://www.energy.ca.gov/proceeding/electric-program-investment-charge-2026-2030-investment-plan-epic-5

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