Publicly-Funded Research & Development

Spurring California's clean energy progress

- Accelerate new scientific and technology solutions that enable a cleaner, more affordable, more resilient, more equitable, and safer energy system for California.
- Enable achievement of our climate and clean energy goals.
- Overcome "Valleys of Death" for key early-stage technologies.
- Provide innovation laboratory for the world, as federal government retreats on clean energy.



Image: CEC Commissioner Noemi Gallardo attends a battery diagnostics demonstration at ReJoule in Signal Hill, CA.

Photo Credit: California Energy Commission.

CEC Clean Energy RD&D Programs

- Electric Program Investment Charge (EPIC) (~$150M/year)
- Gas R&D ($24M/year)
- Food Production Incentive Program ($150M)
- Long-Duration Energy Storage ($273M)
- Industrial Grid Support and Decarbonization ($40M)
- Community Energy Reliability and Resilience Investment (~$180M)

EPIC by the Numbers*

*since program establishment in 2011 through December 31, 2025

$1.5 BILLION

EPIC FUNDS

INVESTED

602

PROJECTS

$19.8 BILLION

PRIVATE INVESTMENT AFTER RECEIVING EPIC SUPPORT

67%

DEMONSTRATION AND DEPLOYMENT FUNDING IN **DISADVANTAGED AND LOW-INCOME COMMUNITIES**

$30.4 MILLION

DEMONSTRATION AND DEPLOYMENT FUNDING FOR PROJECTS ON **CALIFORNIA NATIVE AMERICAN TRIBAL LANDS**

EPIC Investment Areas



Entrepreneurial Ecosystem



Grid Decarbonization & Decentralization



Resiliency & Safety



Industrial & Agricultural Innovation

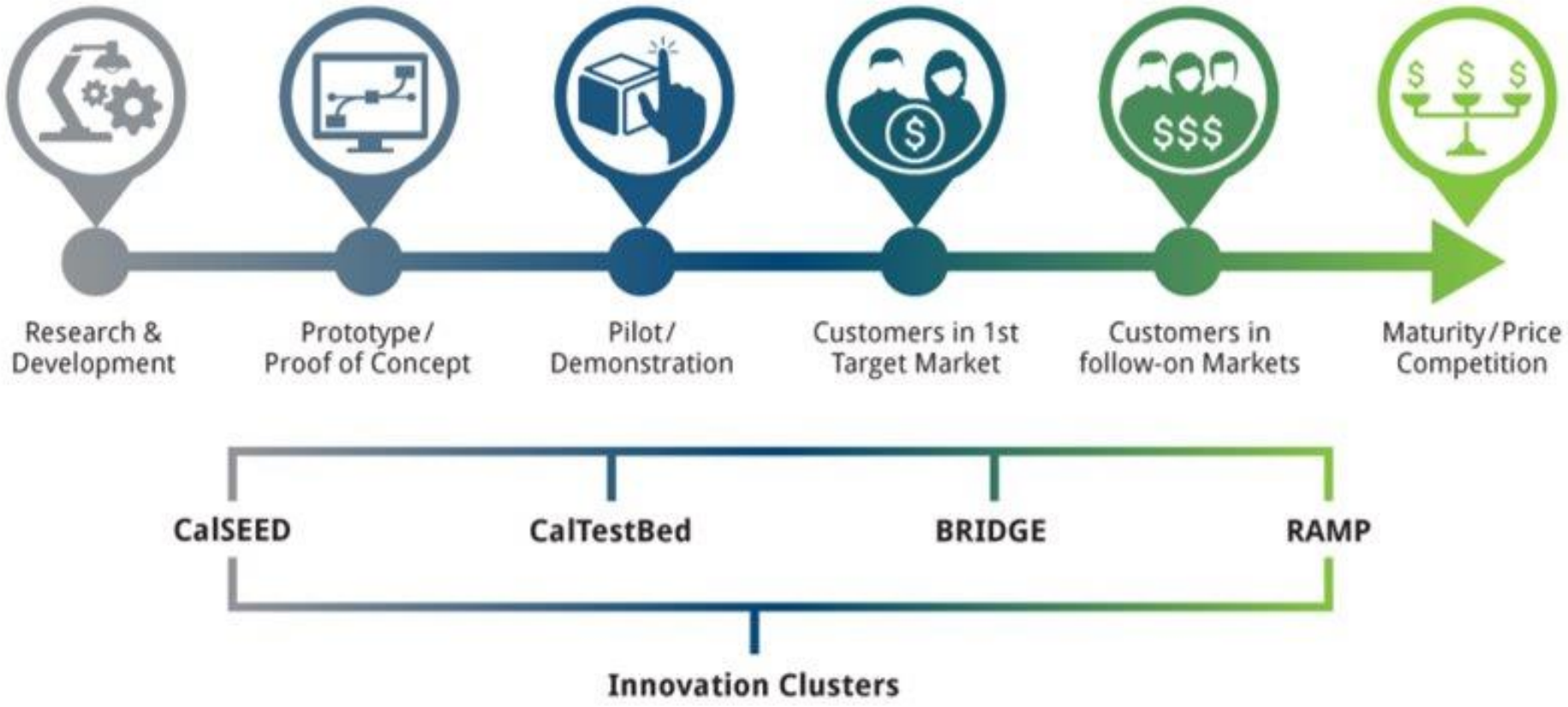


Building Decarbonization



Low-Carbon Transportation

Entrepreneurial Ecosystem



Targeted funding initiatives enable the path to commercialization for innovative technologies.

Gradient

- **Topic:** Building Decarbonization
- **Innovation:** Portable, low-cost, high-efficiency, low-Global Warming Potential (GWP) refrigerant heat pump that residential customers can install easily.
- **Impact:** Affordable access to heat pump technology and benefits, including for renters.
- **CEC Funding:** ~$6M across multiple EPIC awards
- **Notable Mentions:**
  - Named one of 2022 Best Inventions by Time Magazine.
  - Named by Forbes Magazine as “One of the 5 Innovative Technologies of 2025.”
  - Winner, NYSERDA/NYCHA/NYPA Clean Heat for All Challenge
  - 2023 DOE Defense Production Act grant for $17.5M.
  - With input from Gradient, U.S. EPA adopted ENERGY STAR heating test procedures and metrics in 2024 for window-based heating and cooling systems for 1st time.



Antora

- **Topic:** Thermal battery storage
- **Innovation**: Development of and process improvements to the innovative thermophotovoltaic cells can significantly reduce costs.
- **Impact:** Decarbonize industries (e.g., food and beverage, chemical production, pulp and paper, concrete) via zero-emission heat and power.
- **Funding:** ~$9M across multiple EPIC awards
- **Notable Mentions:**
  - $150M in Series B funding raised in 2024 to ramp up factory production.
  - $550M in Series C funding raised in 2026 for scaling and deployment in the industrial sector.
  - Commissioned 5 GWh Project Big Stone in South Dakota in 2026, one of the largest energy storage projects in the world. Multi-day thermal battery delivering round-the-clock energy. 5.8 GWh project in Kansas to come online in 2027.



EPIC – Success Stories

Watt EV
EPIC Success Story: WattEV

Harvest
EPIC Success Story: Harvest

Blue Lake Rancheria
EPIC Success Story: Blue Lake Rancheria Microgrid

Watch all videos: