

# EPIC Funded Grid-integrated Research

Power Association of Northern California  
Annual Spring Seminar



David Erne, California Energy Commission  
May 8, 2019



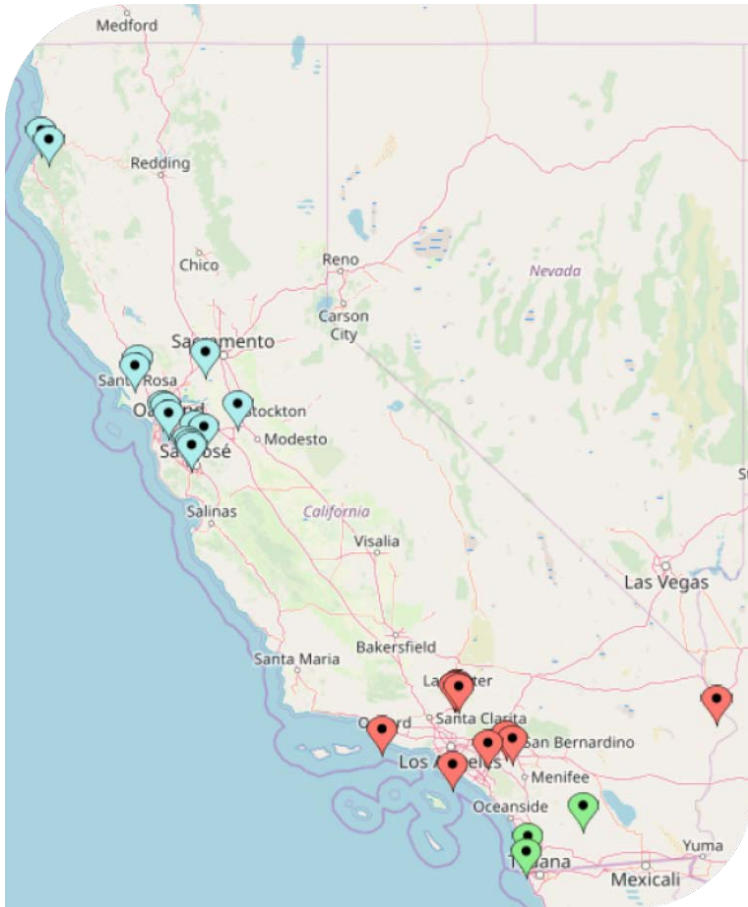
# Major Research Programs

- **Electric Program Investment Charge (EPIC)**
  - Ratepayer-funded program to benefit ratepayers
  - Administered by the Energy Commission and three Investor-Owned Utilities (PG&E, SCE, and SDG&E)
  - Energy Commission Program ~ \$130 M/year
- **Natural Gas RD&D**
  - Approximately \$24 M/year
- **Special Funds** (e.g., climate vulnerability, transportation research)





# Energy Commission Microgrid Landscape



- 20 microgrid projects with total of 30 sites
  - Critical infrastructure (fire station, hospital, evaluation shelter, wastewater treatment plant)
  - Campus
  - Community
  - Military base
  - Port
  - Distribution Center
- \$84.5 million Energy Commission funds and \$73.4 million match fund





# Non-lithium Ion Demonstrations



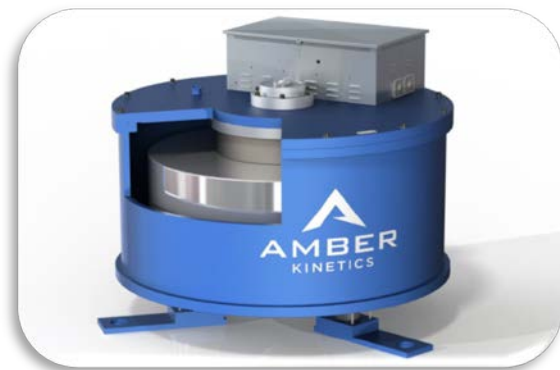
Primus Power



Eos Energy Storage



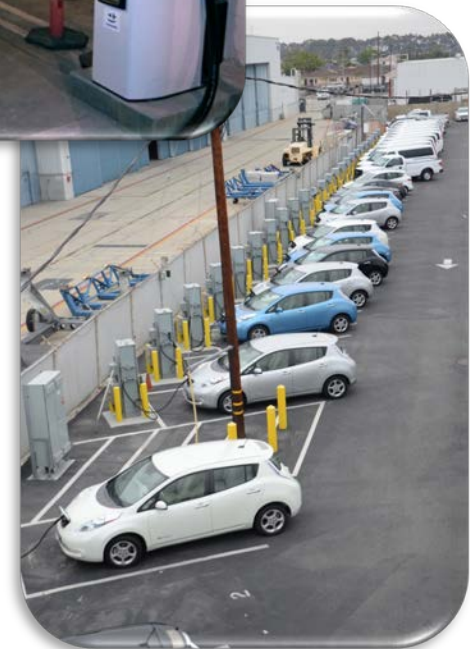
UET



Amber Kinetics



# Supporting Vehicle Grid Integration

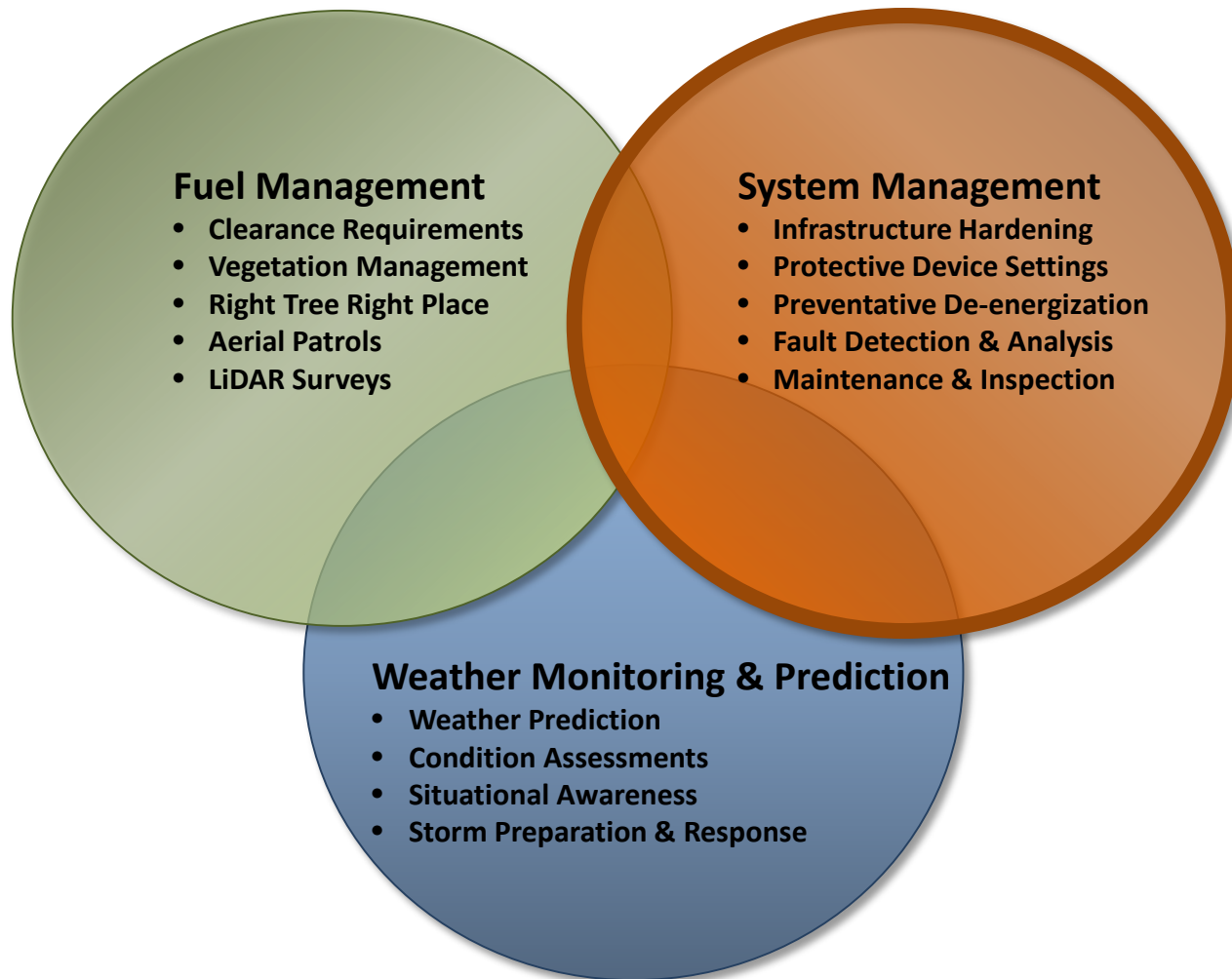


- **Managed Charging**
- **Bi-direction Power Flow**
- **Energy Storage**
- **Ancillary Grid Services**



# Initiating Research on Technologies for Ignition Prevention

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# Questions

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