Peninsula Advanced Energy Community (PAEC)

Components of an Advanced Energy Community (AEC)

- Energy efficiency
- Renewable energy
- Energy storage
- Zero net energy (ZNE)
- Electric vehicle (EV) charging infrastructure

Benefits of an AEC

- Reduces need for new energy transmission and distribution infrastructure
- Bridges the electricity overgeneration gap via energy storage and demand response
- Promotes grid reliability and resilience
- Saves customers money on their energy bills
- Provides clean local energy
- Creates clean energy jobs
- Obviates the expenses of new power plant construction
- Helps mitigate climate change

PAEC report highlights

**Challenges**
- Inconsistent municipal and utility permitting processes
- Insufficient financial instruments available to fund AEC investments
- Split incentives between building owners and tenants
- Tension between capital and operating expenses
- Initial costs favored over life cycle costs
- EV range anxiety and lack of fast chargers

**Recommendations**
- Implement bundles of energy efficiency measures
- Facilitate energy efficiency retrofits for residential and commercial properties
- ZNE for all buildings
- Expand EV charging infrastructure with battery storage
- Develop EV-ready codes for multi-unit dwellings
- Continue subsidizing energy storage as the market brings prices down

**Tools and Solutions**
- Streamlined permitting
- Model interconnection process checklist
- Model ordinances
- Green lease language
- Solar Siting Surveys

Projects with AEC components in the PAEC region

- Facebook: Energy efficiency, solar PV, EV charging, energy storage, onsite black water treatment
- City of Palo Alto: Solar PV, solar covered parking garages, EV charging, energy storage
- Stanford University: Energy efficiency, district-scale heat exchange system, solar PV, EV charging
- Kaiser Permanente: Energy efficiency retrofits, solar PV power purchase agreement, EV charging
- Redwood City: Solar Emergency Microgrid, solar PV, EV charging, energy storage
- Oakman Family Jewish Community Center: Energy efficiency, air-source heat pump, solar PV, EV charging