California’s Commercial ZNE Action Plan UPDATE
Identifying the Best Plan for the Future

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Energy Policy, Sustainability Planning, Stakeholder engagement, Communications & Facilitation

• New ZNE Residential Action Plan
• ZNE Commercial Action Plan update
• Existing Buildings Energy Efficiency Action Plan
• ARRA Statewide Energy Upgrade California Outreach, Marketing & Communications
• Energy Upgrade California Working Group
• Local Government – Regional Energy Networks Business Planning
• Strategic Plan Statewide IOU Workforce Education & Training
Develop a Plan to Align Market with Policy
Evolution and Need to Refocus

Building Scale ZNE with Rooftop Solar

Distributed Energy Resources
- Community Scale Renewables
- Storage
- Deep Energy Efficiency
- Controls
Update the Goal & Objective

- **Goal:** Beginning in 2030, all new commercial buildings and major renovations of existing buildings achieve zero net energy performance (onsite/offsite renewables) and grid optimization.

- **Objective:** ZNE Buildings and Districts are integrated as key distributed energy resources that reduce carbon emissions, enhance customer experience and create more resilient communities.
Focus on Drivers of ZNE

1. Programs Enable ZNE/ZNE Ready Buildings & Districts
2. Informed Customer Decisions
3. Integrated ZNE Districts
4. Market Capacity & Readiness
5. Targeted Technology R&D
6. Codes & Standards
Develop A Decision Making Tool

• Informed by CPUC, CEC policy goals
  – Grid Friendly/Load Balancing
  – Locational Value
  – Cost Effective
  – Equity for Ratepayers
  – Reduce Transmission
  – Distributed Energy Resources
  – Reliability

• Powered by Customer needs and objectives
Decision Maker Focused

• Who Makes the Decision?
  – Developers
  – Local Governments
  – Property Owners

• Who Helps to Make the Decision?
  – Architects
  – Builders
  – Energy Consultants
Discussion Tool Concept

1. Identify Paths to ZNE
2. Define “Customer” Objectives for Going to ZNE
3. CPUC values Paths
4. Customer Prioritizes Objectives
5. Get 2-3 Options to further Explore
   • Goal – Better decision making with Customer Choice
Initial Paths to ZNE

- Building Scale (Onsite Solar Only)
- Building Scale (Solar + Storage Onsite)
- Community Scale Renewables (Solar, wind, biogas et al.)
- Community Solar Plus Storage
- District ZNE/Grid Connected Microgrid
- Islanded Microgrid
- Utility Scale Renewables
Objectives

- Sustainability
- Resiliency
- Carbon Zero/Neutral Development
- Infrastructure Modernization
- Local Energy Supply
- Monetization Of Energy
- Economic Development
- Asset Control/Management
- Ease of Access
- Architecture Flexibility
- Load Management
- Leverage non-building Financing
- Costs
Additional Considerations

- Risk Management
- Land Availability
- Electrification
- Interconnection
- Line Connection
- Stakeholder Buy In
- Renewable System Ownership
- Integration of Electric Vehicles
- Tax Credits Availability
- Incentives/Local Programs
- Environmental Justice
- Certification
# Example 1. Sustainability Focused Customer

<table>
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<tr>
<th>ZNE Option</th>
<th>Building Scale (Solar + Storage Onsite)</th>
<th>Community Solar Plus Storage</th>
<th>District ZNE/Grid Connected Microgrid</th>
<th>Utility Scale Renewables</th>
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**Score:**
- Building Scale: 104
- Community Solar: 114
- District ZNE/Grid Connected Microgrid: 145
- Utility Scale Renewables: 74
Example 2. Economic Focused Customer

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Next Steps

• Test and Discuss Values and Definitions
• Develop and Test Phase 1. Decision Making Tool
• Complete the Commercial Buildings Action Plan
• Coordination with other Agencies
  – Energy Efficiency Collaborative
  – Ongoing Coordination with CEC
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