Programs Portfolio

- Reach Codes
- Technical Asst.
- Med Vulnerable
- Resi Storage
- Commercial Storage
- Resilience Centers
- Muni PV+Storage
- Appliance Incentives
- Low Income Homes
- Marketing & Training
- E-Bikes
- Ride-hailing
- Muni Fleets
- EV Incentives
- Load Shaping
- EV Ready Incentives & Tech. Asst.
- Marketing & Training
In May 2020, the Board approved a four-year $6.1 million Existing Building Electrification plan. Initial programs outlined were:

1. **Heat Pump Water Heater (HPWH) Program**
   - HPWH incentives. Combine with BayREN incentives.

2. **Low Income Healthy Home & Electrification Program**
   - Turnkey no-cost home upgrades, energy efficiency, and electrification for low-income residents.

3. **Harvest Thermal Technology Pilot**
   - Pilot combined space and water heating system with load shifting thermal storage and potentially lower cost than separate retrofits.
Harvest Thermal Contract: Request

Program: Harvest Thermal Technology Pilot

Request: Recommend Board approval of contract with Harvest Thermal to execute technology pilot

Amount: Up to $250,000
Technology and Company Overview

Technology
• Technology provides water and space heating through one heat pump and storage
• Lowers cost to install than separate installations and allows load shift of water and space heating
• Pilot new Harvest Thermal technology in homes to prove viability

Company Profile
• Bay Area-based startup, has deployed functioning prototypes in several homes in the area
• Experienced senior leadership team
• Secured early-stage funding
• Recently won both National Science Foundation and California Energy Commission grants
THE HARVEST SYSTEM

✓ Combined space conditioning and hot water
✓ Single high-efficiency heat pump
✓ Inexpensive energy storage using hot water tank
✓ Uses standard HVAC delivery systems
✓ Patented methods to know energy state of tank using sensors in Harvest pod
✓ Plan to include air conditioning

Example shown for forced air system – can also be implemented for radiant floors and radiators
Pilot Implementation Detail

Approach

• Support further development of the technology
• Install technology in up to 5 single family homes at no cost to homeowner
• Independent third-party assessment of technology (install costs, energy, bill savings, customer satisfaction)
• Preferred pricing for PCE if technology is scaled for larger market penetration

Implementation Detail

• Harvest Contract: up to $250,000 over 2.5 years
  • Develop pilot site recruitment criteria and outreach to prospective homes
  • Manage installation process, provide homeowner support
  • Monitor system performance and provide data to independent measurement & verification party
• Independent measurement & verification: up to $50,000 (separate contract by PCE)
Harvest Thermal Contract: Request

Program: Harvest Thermal Technology Pilot

Request: Recommend Board approval of contract with Harvest Thermal to execute technology pilot

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