

PEACE GARDENS ELECTRIFICATION RETROFIT PROJECT



Diana Sacks

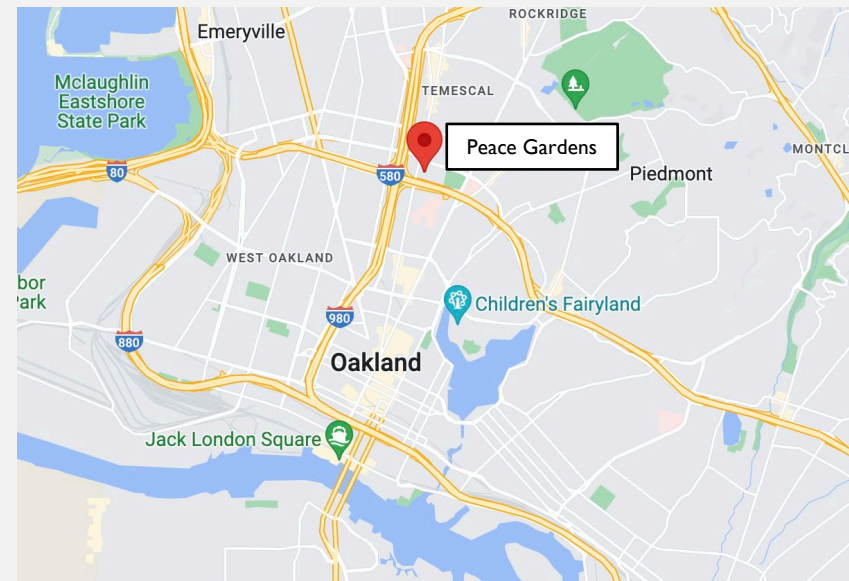
Sustainability Director and Asset Manager

Northern California Land Trust

diana.sacks@nclt.org

BACKGROUND:

- Deed restricted north Oakland home
 - hasn't had a substantial rehab since the late 90's
- Late 1800s house subdivided into five (5) multifamily units and detached ADU
 - 6 units total
- Resident managed limited equity cooperative housing
- Received \$299k Health and Safety Loan from the City of Oakland, and electrification scope was added to the project after the repair scope was developed. We took out an additional \$194k loan to cover the remaining scope items



COMMUNITY INVOLVEMENT

- Residents were already very sustainability minded and were on board with the energy efficiency upgrades since day one
- Strong community involvement was essential to project success
 - Coordinated grant opportunities
 - Had established relationships with vendors and contractors
 - Willing to try out new technologies and adapt to all electric lifestyle
- Occupied Rehab
 - Pro – residents were onsite while work happened and could communicate any inconsistencies with the development team
 - Con – required extra level of coordination and resulted in several delays when we could not immediately gain access to a unit

SCOPE AND BUDGET

Item	Cost
Induction stoves *(NCLT provided stipends for new cooking equipment)	\$ 6,974.53
Mini-split heat pump heating/ AC	\$ 17,441.93
Heat pump water heaters	\$ 8,194.00
Energy Star refrigerators	\$ 9,115.92
Electrical service upgrade	\$ 36,057.00
Solar panels	\$ 25,000.00
New windows	\$ 37,345.00
Roof, wall, crawlspace insulation	\$ 16,535.00
New roof	\$ 33,712.66
Lighting upgrades	\$ 1,599.00
Total Cost	\$ 191,975.04
Per unit cost	\$ 31,995.84

INCENTIVES

Program	Incentive Amount
Low Income Weatherization Program (LIWP) Rebates	\$ 15,615.00
Bay Area Multifamily Building Enhancements (BAMBE) Rebate	\$ 21,100.00
Multifamily Solar on Affordable Housing (MASH) rebate	\$ 5,000.00
Hammond Foundation Solar Moonshot Grant	\$ 25,000
B Quest Grant	\$ 4,875.00
SPARCC Microgrant	\$ 7,500.00
Total Incentives	\$ 79,090.00
Gap (covered by city funding and Green and Healthy Homes loan)	\$ 112,885.04

BENEFITS

- Solar panels offset 50% of energy consumed on the property
- Residents benefit from efficient air conditioning and heating
- Installing insulation and new windows increases comfort and reduces draftiness and noise
- Electrical infrastructure is modernized with more outlets and larger electrical capacity



LESSONS LEARNED

- PG&E has not updated our billing statement after solar interconnection, and is over charging us as a result
 - Even with the error, we are saving 4% on bills since switching everything to electric (this number is from before new windows and insulation were installed)
- Electrification scope should be in the rehab plan from the very beginning
 - This was added after selecting a contractor and finalizing the scope of work with the City loan, which created a last minute scramble to secure more funding
 - Solar panels were not sized correctly for the additional electricity loads
- Regional programs are not sufficient for covering financing gaps
 - The local incentives (excluding grants) generally cover 15-20% of the funds needed for an electrification project
- Resiliency questions
 - Battery storage is extremely expensive, we are still figuring out how to include this in our rehab plan as a phase 2 project

RESOURCES

- **NCLT website:**
 - nclt.org
- **Solar Moonshot Grant Application:**
 - <https://www.hammondclimatesolutions.com/solar-moonshot>
- **Revalue.io**
 - <https://www.revalue.io/>
- **SPARCC:**
 - <https://www.sparcchub.org/>
- **BayREN MF rebates**
 - <https://www.bayren.org/rebates-financing/multifamily-property-owners>