

# Feasibility of Energy Savings from Community Scale Solar Water Heating in Los Angeles County

by

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## CSSWH Feasibility

- Large Scale Public & Private Housing Communities.
- Case Studies focus on financial constraints, building codes, & practical considerations.
- Conducted stakeholder interviews w/ contractors, county housing officials, and private property developers

### William Mead Homes – Los Angeles, CA.



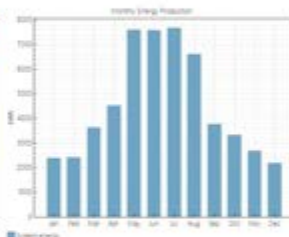
### Pheasant Ridge Apartments – Rowland Heights, CA.



## CSSWH System Simulations

- Simulations of system performances conducted using NREL SAM
- Financial analyses include benefits to site residents, system owners, and the general public (reduction in carbon emissions)

Metric	Value
Annual energy saved (year 1)	54,449 kWh
Solar fraction (year 1)	0.34
Aux with solar (year 1)	104,762.1 kWh
Aux without solar (year 1)	160,876.4 kWh
Capacity factor (year 1)	12.60%
Net capital cost	\$56,385



## Initial Findings

1. In the context of LA County, “community scale” systems are limited to parcel-level.
2. Renewable energy retrofits for public housing are much more expensive than for public properties due to existing federal and state policies governing project management.
3. Retrofitting properties with CSSWH in LA County is most economical on a structure-by-structure basis (little benefit to centralizing solar heat storage).
4. Considerable gap exists in understanding the advantages/disadvantages of system scale.