

Incredible Economics of Super Green Rebuilds

Green Rebuild Initiative



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Making Clean Local Energy Accessible Now

30 May 2025



<u>Mission</u>

To accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise.

Renewable Energy End-Game

100% renewable energy; 25% local, interconnected within the distribution grid and ensuring resilience without dependence on the transmission grid; and 75% remote, fully dependent on the transmission grid for serving loads.

Mission:

The Green Rebuild Initiative (GRI) aims to facilitate sustainable and resilient rebuilds through "Super Green" home designs that are all-electric, Net Zero Energy (NZE), and supported by Solar Microgrids for unparalleled resilience. The GRI also encourages homes to be designed for high energy efficiency and low embedded carbon, while being engineered to withstand extreme weather events and built with non-toxic materials.

Actions:

- 1. Educate property owners, architects, builders, policymakers, lenders, insurers, and everyone else about the superiority of Super Green homes.
- 2. Illuminate the economic benefits of Super Green designs, including the associated tax benefits and other incentives.
- 3. Provide easy access to specifications associated with Super Green designs.
- 4. Share showcase Super Green home designs.
- 5. Connect parties for Super Green outcomes, including property owners, architects, builders, and associated experts.

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GRI Webinar Overview



Super Green

- 1. 100% Electric
- 2. Net-Zero Energy (NZE)
- 3. Solar Microgrid

Sustainable Design & Construction

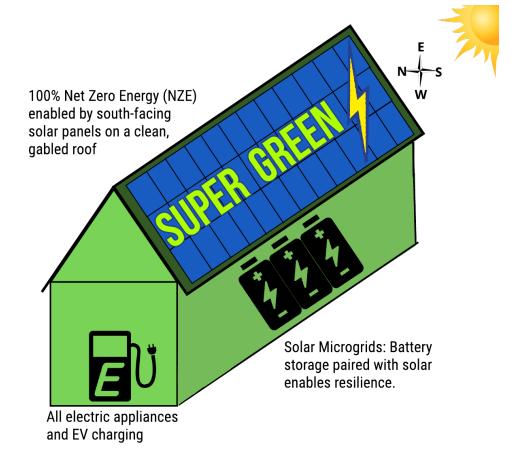
- 1. Embodied Impact
- 2. Operational Impact
- 3. Fire Resilience
- 4. Smoke Resilience

Financial Incentives

- 1. RISE: Rebuilding Incentives for Sustainable Electric Homes
- 2. Super Green Economic Outcomes



- 100% Electric: No gas service to the home and ideally an all-EV household.
- 2. Net Zero Energy (NZE): Onsite solar energy production at least equals the annual energy consumption across the premise, including to cover home EV charging.
- 3. Solar Microgrid: Combines a battery to the solar for economic optimization and achieving unparalleled energy resilience.



Super Green: 100% Electric

Specifications

Mechanical and Plumbing

- Heat Pump HVAC 0
- Heat Pump Water Heater 0
- **ERV: Energy Recovery Ventilator** Ο
- E-Fireplace: Napoleon Alluravision 60" [Optional] Ο
- Heat Pump Pool Water Heater [Optional] 0

Electrical

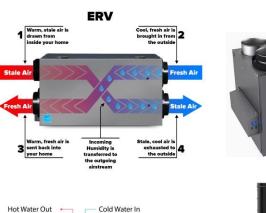
- LED Light Bulbs Ο
- **Occupancy/Vacancy Sensors** Ο
- **Dimming Switches** Ο
- Span Panel [Optional] Ο

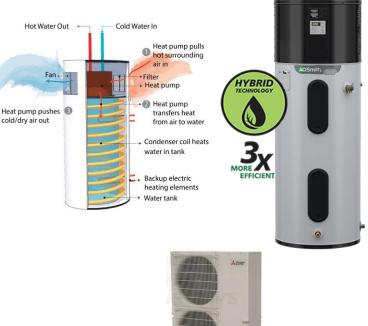
VACANCY MODE N and Auto OFF / Manual ON - Manual OFF





cold/dry air out





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Super Green: 100% Electric

Appliances

- Induction Cooktop
- EnergyStar Refrigerator
- EnergyStar Dishwasher
- EnergyStar Washing Machine
- Energy Efficient Microwave
- Heat Pump Dryer
- EV Charging Outlet and/or Charger (Level 2 capable)



100% Electric





ENERGY STA



Induction Cooktops





NZE requires the solar to produce at least as much energy as the home consumes over the course of a year. Solar needed to achieve NZE for homes with Title 24 levels of energy efficiency and two EVs (22,000 miles of home EV charging per year):

- 1,500sf home requires 9.8kW of solar (24 solar panels).
- 2,500sf home requires 14.8kW of solar (36 solar panels).

California Energy Code Title 24 (Part 6) falls far short of NZE:

- 1,500sf home only requires 2kW
 (5 solar panels)
- 2,500sf home only requires 3kW of solar (7 solar panels).

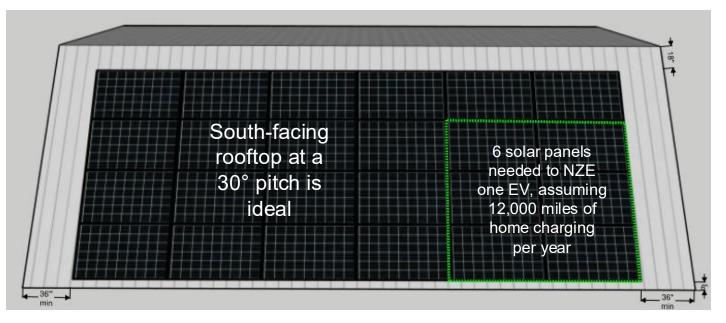




Super Green: Solar to achieve 1,500sf NZE home



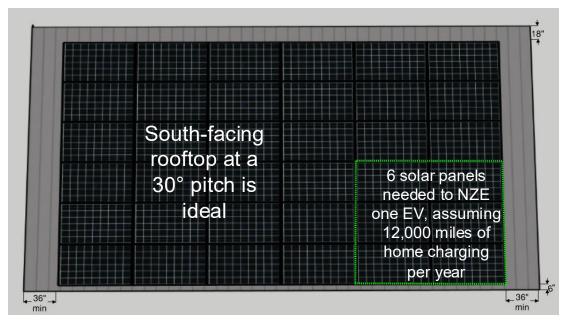
Total single roof area required to achieve NZE for a 1,500 sf house is 700 sf, to accommodate 507 sf of solar (9.8 kW) plus setbacks



- [•] 14,600 kWh per year is the estimated energy consumption for a typical 4-person household in a 1,500sf home.
- A 9.8kW solar array (assuming 1,512kWh/kW-yr) is required to achieve Net Zero Energy (NZE), which includes charging two EVs
- Note: an EV driving 12,000 miles per year will require 3,600kWh of energy per year to charge, which can be offset by 6 solar panels. This model also assumes there is a second EV using 10,000kWh per year.
- Assumes QCELL 410W solar panels, each with dimensions of 6.2 ft x 3.4 ft (21.1 sf per panel).
- ² 24 solar panels required to achieve NZE, requiring 507 sf for the solar layout, and producing 14,808 kWh per year.
- Total roof area required is 700 sf, including setbacks of 3 feet on side edges, 1.5 feet from the ridge, and 0.5 feet from the bottom edge (the bottom setback is needed to ensure proper rain drainage into a gutter).



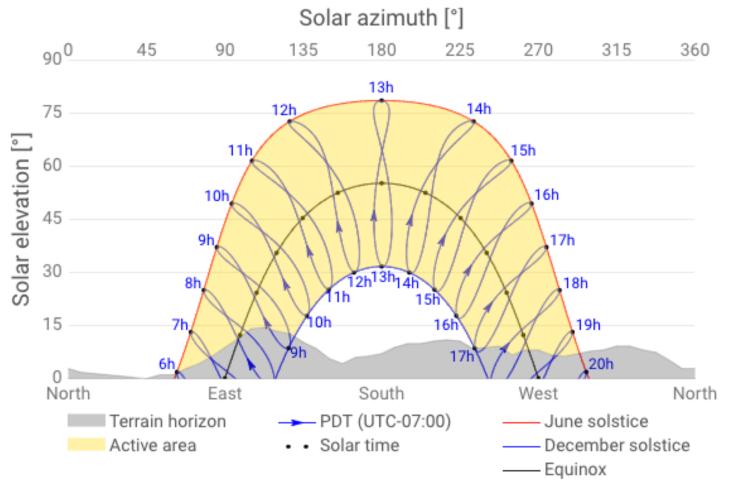
Total single roof area required to achieve NZE for a 2,500 sf house is 1,000 sf, to accommodate 760 sf of solar (14.8 kW) plus setbacks



- 21,221 kWh per year is the estimated energy consumption for a typical 2,500sf 4-person household
- A 14.8kW solar array (assuming 1,512kWh/kW-yr) is required to achieve Net Zero Energy (NZE), which includes charging two EVs
- Note: an EV driving 12,000 miles per year will require 3,600kWh of energy per year to charge, which can be offset by 6 solar panels. This model also assumes there is a second EV using 10,000kWh per year.
- Assumes QCELL 410W solar panels, each with dimensions of 6.2 ft x 3.4 ft = 21.1 square feet
- [•] 36 solar panel required to achieve NZE, requiring 760 sf for the solar layout, and producing 22,223 kWh per year.
- Total roof area required is 1,000 sf, including setbacks of 3 feet on side edges, 1.5 feet from the ridge, and 0.5 feet from the bottom edge (the bottom setback is needed to ensure proper rain drainage into a gutter).



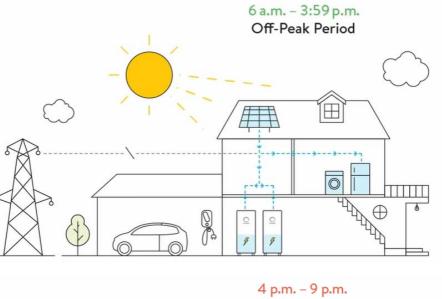




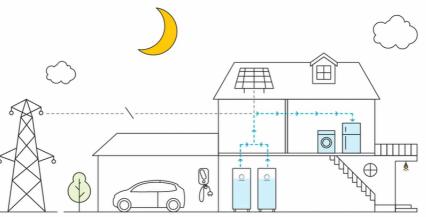
Salisbury 10 kW

© 2022 Solargis





Peak Period



© Sonnen

Off-Peak Period

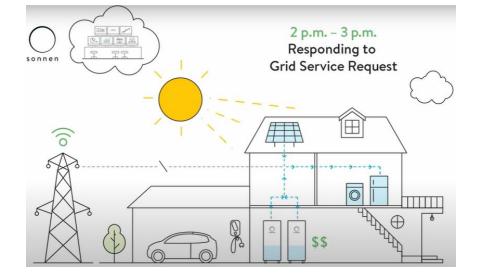
Power from Sun During the day the home draws power from its solar array and charges the home battery.

Peak Period

Power from Battery Power is drawn from the home's battery, and Peak Utility-based costs are avoided

Super Green: Solar Microgrid





Power Outage

Grid Service Request

Earn Credits

Homeowner can earn credits from the utility company by providing excess power during a Grid Service Request. These credits can be used to offset future utility charges

Power Outage

Off-Grid Mode

During a planned and/or unexpected power outage, homeowners can shift consumption to *Critical Loads* and consume energy entirely from their solar + battery system. Critical Loads include only essential appliances and circuits, (Refrigerator, Microwave, WiFi, firelife-safety devices and select outlets). *Whole-home Back Up Optional*



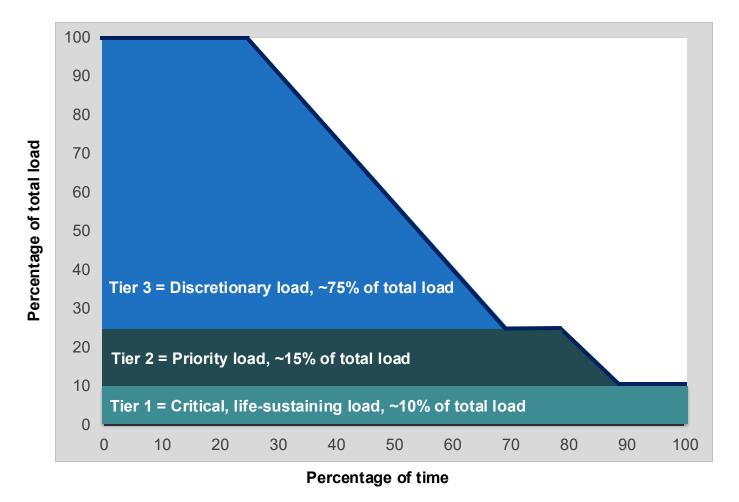
VOR123

VOR123 is the value-of-resilience (VOR) from Solar Microgrids methodology that the Clean Coalition has developed to normalize VOR across all types of facilities & geographies.
The VOR normalization is founded in tiering loads into three categories: Tier 1 (critical), Tier 2 (priority), and Tier 3 (discretionary). Since each Tier has its own resilience requirement and VOR, this methodology is called VOR123.

VOR123 webinar

https://clean-coalition.org/news/webinarvaluing-resilience-solar-microgrids-thursday-<u>5-nov-2020/</u>

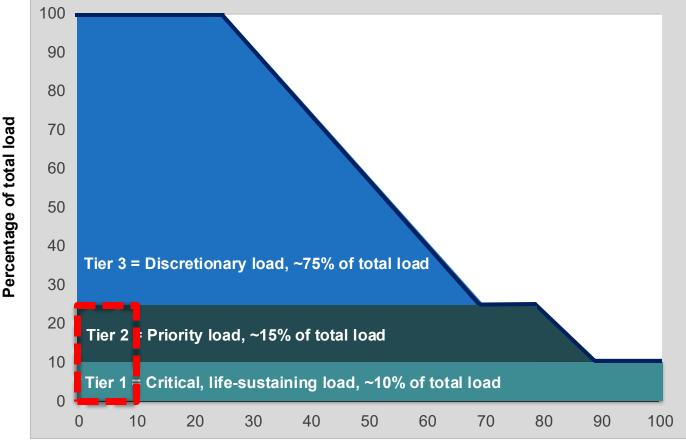
Typical load tier resilience from Solar Microgrids



Percentage of time online for Tier 1, 2, and 3 loads for a Solar Microgrid designed for the University of California Santa Barbara (UCSB) with enough solar to achieve net zero and 200 kWh of energy storage per 100 kW solar.

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Diesel generators are designed for limited resilience



Percentage of time

A typical diesel generator is configured to maintain 25% of the normal load for two days. If diesel fuel cannot be resupplied within two days, goodbye. This is hardly a solution for increasingly necessary long-term resilience. In California, Solar Microgrids provide a vastly superior trifecta of economic, environmental, and resilience benefits.

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Load Management is key to Solar Microgrids



SPAN

SPAN Panels are king of residential Load Management

• Control circuits from anywhere

Real-time on/off control over every circuit in the home from the SPAN Home App + scheduling with Amazon Alexa.

• Learn from deep energy insights

360-degree view of your home's energy from a smartphone or tablet helps you save more.

Save on energy bills

Quantify the impact of appliances on your energy bill, and make smarter decisions to save.

Set a powerful foundation

Future-proof your home for upgrades such as EV, solar, battery storage, heat pumps, induction cooktops, and more.

https://www.span.io/

Design and Construction Timeline

1. Conceptual Design: Architect

- Finalize home size:
 - o Square Footage
 - \circ Orientation
 - # of Bedrooms
 - o # of Bathrooms
- Develop Conceptual Rendering (4-6 weeks)
- Energy Optimization (2-4 weeks):
 - Design Solar Array + Battery System
 - Size System for Microgrid Resilience
 - o Economic Analysis

2. Design Development: Architect

- o SD: Schematic (2-4 Mo.)
 - o Site Survey (1-2 Weeks)
 - Submit for Permit Review (4-6 Weeks)
- CD: Construction Documents (1-2 Mo.)
 - Prefab/Modular Shop Drawings
- 3. Construction Schedule: Contractor
 - Foundation (1-2 Month)
 - Utility Tie-Ins (4-6 Weeks)
 - Framing (1-2 Months)
 - MEP (3-4 Months)
 - o Interior Finishes (3-4 Months)
 - Exterior Finishes (1 Month)
 - Certificate of Occupancy (2-4 Weeks)

Opportunity for PreFab or Modular Construction

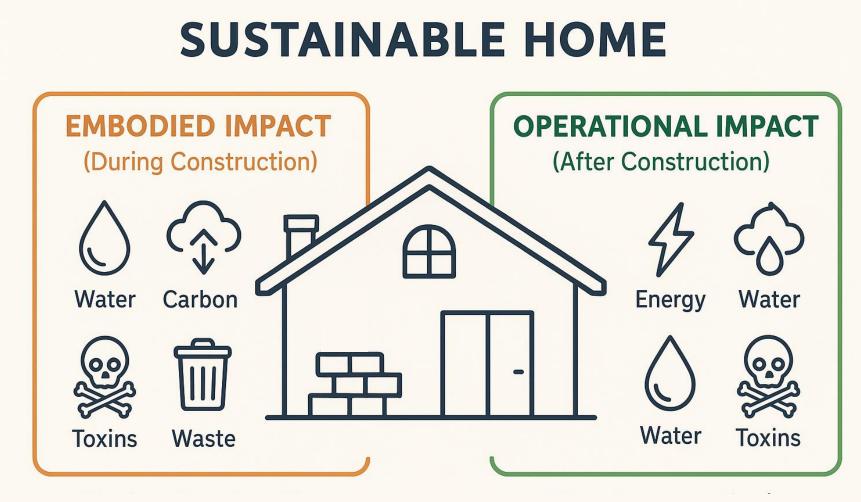






Most Common Terms in Sustainable Design and Construction High-Performance Building Low-Carbon Construction Passive Design Resilient Design Sustainable Design Climate-Resilient Construction Biophilic Design Green Building Eco-friendly Building Regenerative Design Net-Zero Building





Sustainability: meeting present needs without compromising the ability of future generations to meet their own needs.

Sustainable Home: designed and built to minimize its environmental impact and promote a healthy living environment.

Embodied Impact





Carbon Footprint of a Single Building global average (business as usual)

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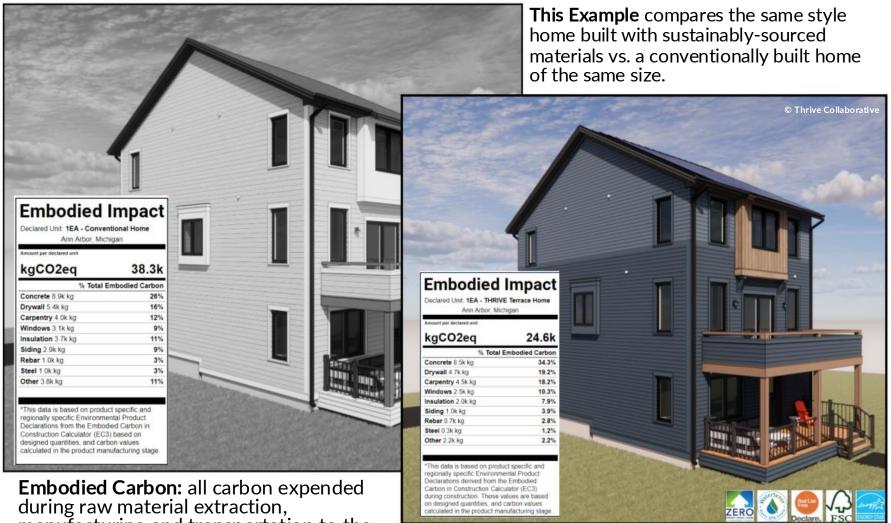
Embodied Carbon Manufacture, transport and installation of construction materials Operational Carbon Building energy consumption



Making Clean Local Energy Accessible Now

Embodied Impact

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during raw material extraction, manufacturing and transportation to the construction site (Cradle-to-Gate).







Third-Party Material Certifications





Living Future Red List

Chemical	Where It's Found	Environmental Impacts	Human Health Impacts		
Flame Retardants (e.g., PBDEs)	Insulation, upholstery, electronics casings	Persistent organic pollutants; accumulate in wildlife	Thyroid disruption, neurodevelopmental harm, carcinogen		
Formaldehyde	Composite wood, insulation, adhesives	Air pollutant, contributes to smog	Respiratory irritant		
Isocyanates (e.g., MDI, TDI)	Spray foam insulation, paints, sealants	Contribute to smog, hazardous waste	Respiratory irritant, skin and eye irritation		
PFAS	Paints, Stain-resistant carpets, sealants, coatings, membranes	Extremely persistent ('forever chemicals'), water pollution	Hormone disruption, carcinogen		
PVC (Polyvinyl Chloride)	Vinyl flooring, pipes, windows, others	Toxic byproducts during manufacturing	Endocrine disruptor		
Phthalates (e.g., DEHP)	Vinyl products, sealants, adhesives	Bioaccumulative through food chain	Hormone disruption, reproductive toxicity		
VOCs	Paints, sealants, adhesives, flooring, cabinetry	Contributes to smog indoor air pollution	Eye/nose/throat irritation, liver/kidney damage, carcinogenic		



The complete **Red List** includes <u>12,500</u> chemicals total Including Asbestos, Lead, Mercury, and others

https://living-future.org/red-list/

Fire Resilience

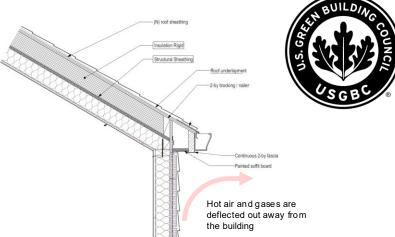


USGBC Wildfire Defense Toolkit

- 1. Defensive Perimeter
- 2. Class A Materials
- 3. Hot Roof (Non-Vented)
- 4. Tempered Triple-pane Windows
- 5. Heat Resistant Siding



Build back better once





Timber HP: Class A (2-Hr Rated)

Reference:

https://usgbc-ca.org/wp-content/uploads/2025/04/USGBC-CA-Wildfire-Defense-Toolkit_2025-compressed.pdf Rise



Economics: CALGreen Intro

CALGreen Building Code Title 24 Intro

Energy & Envelope Core Requirements

All-Electric Ready

- O New homes must be wired and plumbed for future electric appliances.
- High-Efficiency HVAC
 - O Ducts must be sealed and tested; heat pump space heating and cooling encouraged or required in some zones.
- High-Efficiency Water Heating
 - O Mandatory heat pump water heater (HPWH) ready infrastructure; HPWH required in some cases.
- Solar PV Requirement
 - O New single-family homes must include solar photovoltaic systems, (PV 1,500sf to 2,500sf Home = 2kW to 3kW min.)

High Performance Walls & Roofs

O Mandatory insulation values: R-13 to R-21 for walls, R-30 to R-38+ for ceilings (climate zone dependent).

Mandatory Air Sealing

O < 5.0 ACH50 blower door test or sealed envelope with visual verification.</p>

High-Performance Fenestration

○ Windows must meet U-factor ≤ 0.30 and SHGC ≤ 0.23 (varies by climate zone).

Cool Roofs (in applicable zones)

Roofing must meet minimum solar reflectance and thermal emittance values.

Lighting & Controls

O All lighting must be high-efficacy (LED), with vacancy sensors and dimmers as required.

Verification & Documentation

O HERS verification for insulation quality, duct leakage, blower door test, refrigerant charge, etc.





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Capital Costs Gas vs. CALGreen Building Code Title 24 vs. Super Green

Building Component (Labor + Materials)Building Component (Labor + Materials)(Labor + Materials)Building Component (Labor + Materials)Appliances: Gas\$ 4,603.00100% Electric: Appliances\$ 8,213.00100% Electric: Appliances\$ 0.00No Solar Required\$ -Solar: 2kW\$ 6,000.00Net-Zero Solar: 9.8kW\$ 2No Battery Required\$ 13,800.00No Battery Required\$ 17,000.00HVAC: Heat Pump + ERV\$ 17,000.00Water Heating: Gas\$ 5,779.00Water Heating: Heat Pump\$ 6,800.00Water Heating: Heat Pump\$ 100%	Pre-Title 24 (Gas	s Ho	ome)	California Home (Title 2	ompliant)	Super Greer	Super Green		
No Solar Required\$-No Battery Required\$-No Battery Required\$\$HVAC: Gas\$13,800.00Water Heating: Gas\$5,779.00Building Envelope:\$21,900.00- Roof: R-19Building Envelope:\$- Walls: R-11 Foundation: R-0 Windows: Double Pane U-0.6 Doors: U-0.4-	Building Component			Building Component	-		Building Component	-	ost Estimate or + Materials)
No Battery Required\$-Solar Microgrid: SPAN Panel +\$1HVAC: Gas\$13,800.00HVAC: Heat Pump + ERV\$17,000.00HVAC: Heat Pump + ERV\$17,000.00Water Heating: Gas\$5,779.00Water Heating: Heat Pump\$6,800.00HVAC: Heat Pump + ERV\$1Building Envelope:\$21,900.00Building Envelope:\$27,300.00Building Envelope:\$22- Roof: R-19-No Battery Required\$27,300.00Building Envelope:\$2233- Walls: R-11No Battery Required\$2-Roof: R-30-823- Windows: Double Pane U-0.6<	Appliances: Gas	\$	4,603.00	100% Electric: Appliances	\$	8,213.00	100% Electric: Appliances	\$	8,213.00
HVAC: Gas\$ 13,800.00HVAC: Heat Pump + ERV\$ 17,000.00Battery, 15kWhWater Heating: Gas\$ 5,779.00Water Heating: Heat Pump\$ 6,800.00HVAC: Heat Pump + ERV\$ 1Building Envelope:\$ 21,900.00Building Envelope:\$ 27,300.00Water Heating: Heat Pump\$ 0,800.00- Roof: R-19- Roof: R-30- Roof: R-30- Roof: R-30- Roof: R-30- Roof: R-30- Roof: R-30- Walls: R-11- Foundation: R-10- Walls: R-19- Foundation: R-10- Walls: R-19- Foundation: R-10- Walls: R-19- Windows: Double Pane U-0.6- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25	No Solar Required	\$	-	Solar: 2kW	\$	6,000.00	Net-Zero Solar: 9.8kW	\$	24,600.00
Water Heating: Gas\$ 5,779.00Water Heating: Heat Pump\$ 6,800.00Water Heating: Heat Pump\$ 2Building Envelope:\$ 21,900.00Building Envelope:\$ 27,300.00Building Envelope:\$ 2- Roof: R-19- Roof: R-30- Roof: R-30- Roof: R-30- Roof: R-30- Walls: R-19- Soundation: R-10- Walls: R-19- Soundation: R-10- Walls: R-19- Foundation: R-10- Windows: Double Pane U-0.30- Doors: U-0.25- Doors: U-0.25- Windows: Double Pane U-0.30- Doors: U-0.25- Windows: Double Pane U-0.30	No Battery Required	\$	-	No Battery Required	\$	-	-	\$	19,000.00
Building Envelope:\$21,900.00Building Envelope:\$27,300.00- Roof: R-19- Roof: R-30- Roof: R-30- Roof: R-30- Walls: R-19- Walls: R-19- Foundation: R-0- Foundation: R-10- Foundation: R-10- Foundation: R-10- Windows: Double Pane U-0.30- Windows: Double Pane U-0.30- Windows: Double Pane U-0.30- Doors: U-0.4- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25- Doors: U-0.25	HVAC: Gas	\$	13,800.00	HVAC: Heat Pump + ERV	\$	17,000.00	HVAC: Heat Pump + ERV	\$	17,000.00
- Roof: R-19- Roof: R-30- Roof: R-30- Walls: R-11- Walls: R-19- Walls: R-19- Foundation: R-0- Foundation: R-10- Foundation: R-10- Windows: Double Pane U-0.6- Windows: Double Pane U-0.30- Windows: Double Pane U-0.30- Doors: U-0.4- Doors: U-0.25- Doors: U-0.25	Water Heating: Gas	\$	5,779.00	Water Heating: Heat Pump	\$	6,800.00	Water Heating: Heat Pump	\$	6,800.00
	- Roof: R-19 - Walls: R-11 - Foundation: R-0 - Windows: Double Pane U-0.6 - Doors: U-0.4	\$	21,900.00	- Roof: R-30 - Walls: R-19 - Foundation: R-10 - Windows: Double Pane U-0.30 - Doors: U-0.25	\$	27,300.00	- Roof: R-30 - Walls: R-19 - Foundation: R-10 - Windows: Double Pane U-0.30 - Doors: U-0.25	\$	27,300.00
	Capital Cost Totals	\$	46,082.00	Capital Cost Totals	; \$	65,313.00			102,913.00 37,600.00

Super Green Premium 5 37.000.00



Super Green Incentives

				Super G	Gree	en					
Building Component		Cost Estimate Incentives Incentives		Incentives	Incentives	Incentives			Incentives		
Building Component	(La	bor + Materials)		CalEHP		CESHP⁺	RISE*		RISE Equity*		ITC, 30%
100% Electric: Appliances	\$	8,213.00	\$	(3,000.00)	\$	(6,000.00)	\$ (10,000.00)	\$	(5,000.00)	\$	-
Net-Zero Solar: 9.8kW	\$	24,600.00	\$	-	\$	-	\$ -	\$	-	\$	(7,380.00)
Solar Microgrid: SPAN Panel +	\$	19,000.00	\$	(6,250.00)	\$	(3,500.00)	\$ (5,000.00)	\$	(2,500.00)	\$	(5,700.00)
Battery, 15kWh											
HVAC: Heat Pump + ERV	\$	17,000.00	\$	(300.00)	\$	(3,000.00)	\$ (3,000.00)	\$	(1,500.00)	\$	-
Water Heating: Heat Pump	\$	6,800.00	\$	(600.00)	\$	-	\$ -	\$	-	\$	-
Building Envelope:	\$	27,300.00	\$	-	\$	-	\$ -	\$	-	\$	-
- Roof: R-30											
- Walls: R-19											
- Foundation: R-10											
- Windows: Double Pane U-0.30											
- Doors: U-0.25											
- Air Tightness: ACH50 3-4											
Capital Cost Totals	\$	102,913.00	\$	(10,150.00)	\$	(12,500.00)	\$ (18,000.00)	\$	(9,000.00)	\$	(13,080.00)
Super Green Premium	\$	37,600.00									

CalEHP: California Electric Homes Program - currently active for all California Homeowners

ITC: Federal Investment Tax Credit, possibly will be eliminated at the end of 2025

RISE: CPUC Incentive, *pending final approval

RISE Equity: CPUC Incentive for low-income households, *pending final approval

CESHP: California Energy Smart Homes Program, available for SEC, PG&E and SDE&G customers only



Energy Costs Gas vs. CALGreen Building Code Title 24 vs. Super Green

Pre-Title 24 (Gas Home)							
Annual Energy and Fuel Cost	Y	ear 1 Cost*					
Electricity = 5,130 kWh/yr	\$	2,000.70					
Gas = 835 therms per yr	\$	1,528.05					
Gas Car, 12k Mi/yr, 25Mpg	\$	2,400.00					
Gas Car, 10k Mi/yr, 25Mpg	\$	2,000.00					
Total Energy and Fuel Bill	\$	7,928.75					
*Adjusted to 2025 prices							

California Home (Title 24 Compliant)								
Annual Energy Cost	Year 1 Cost							
Electricity = 8,000 kWh/yr	\$	3,120.00						
Gas = N/A	\$	-						
EV Car, 12k Mi/yr = 3,600 kWh/yr	\$	1,404.00						
EV Car, 10k Mi/yr = 3,000 kWh/yr	\$	1,170.00						
Total	\$	5,694.00						
Solar Production		Cost						
Solar 2kW = 3,086 kWh	\$	(1,203.54)						
Total Energy Bill	\$	4,490.46						

Super Green							
Annual Energy Cost	Year 1 Cost						
Electricity = 8,000 kWh/yr	\$	3,120.00					
Gas = N/A	\$	-					
EV Car, 12k Mi/yr = 3,600 kWh/yr	\$	1,404.00					
EV Car, 10k Mi/yr = 3,000 kWh/yr	\$	1,170.00					
Total	\$	5,694.00					
Solar Production		Cost					
Solar 9.8kW = 14,815 kWh	\$	(5,777.85)					
Total Remaining Bill	\$	432.00					

~\$4,000 Estimated Savings on Annual Energy Costs!

Car Fuel (EV Charging) Costs are also Covered



Super Green Payback

Super Green												
Building Component		Cost Estimate		Incentives		Incentives		Incentives		Incentives		Incentives
Building Component	(Lab	or + Materials)		CalEHP		CESHP⁺		RISE*		ITC, 30%		RISE Equity*
Net-Zero Solar: 2kW> 9.8kW	\$	18,600.00	\$	-	\$	-	\$	-	\$	(5,580.00)	\$	-
Solar Microgrid: SPAN Panel +	\$	19,000.00	\$	(6,250.00)	\$	(3,500.00)	\$	(5,000.00)	\$	(5,700.00)	\$	(2,500.00)
Battery, 15kWh												
Capital Cost Totals	\$	37,600.00	\$	(6,250.00)	\$	(3,500.00)	\$	(5,000.00)	\$	(11,280.00)	\$	(2,500.00)

Premium Cost Less Incentives	Total	Payback Period
Super Green Premium	\$ 37,600.00	Year 8
Premium Less (CalEHP)	\$ 31,350.00	Year 7
Premium Less (CalEHP + RISE)	\$ 26,350.00	Year 6
Premium Less (CalEHP + RISE + ITC)	\$ 15,070.00	Year 4
Premium Less (CalEHP + RISE + ITC + RISE Equity)	\$ 12,570.00	Year 3

Year	Energ	y Cost Savings		otal Annual nergy Cost
				nergy cost
Year 1	\$	4,058.46	\$	4,058.46
Year 2	\$	4,261.38	\$	8,319.84
Year 3	\$	4,474.45	\$	12,794.30
Year 4	\$	4,698.17	\$	17,492.47
Year 5	\$	4,933.08	\$	22,425.55
Year 6	\$	5,179.74	\$	27,605.29
Year 7	\$	5,438.72	\$	33,044.02
Year 8	\$	5,710.66	\$	38,754.68
Year 9	\$	5,996.19	\$	44,750.87
Year 10	\$	6,296.00	\$	51,046.87
Year 11	\$	6,610.80	\$	57,657.68
Year 12	\$	6,941.34	\$	64,599.02
Year 13	\$	7,288.41	\$	71,887.43
Year 14	\$	7,652.83	\$	79,540.26
Year 15	\$	8,035.47	\$	87,575.74
Year 16	\$	8,437.25	\$	96,012.98
Year 17	\$	8,859.11	\$	104,872.09
Year 18	\$	9,302.06	\$	114,174.16
Year 19	\$	9,767.17	\$:	123,941.33
Year 20	\$	10,255.53	\$	134,196.85



Super Green Payback

Super Green												
Duilding Common ont		Cost Estimate		Incentives		Incentives		Incentives		Incentives	Incentives	
Building Component	(La	abor + Materials)		CalEHP		CESHP⁺		RISE*		ITC, 30%		RISE Equity*
Net-Zero Solar: 3kW> 15kW	\$	36,000.00	\$	-	\$	-	\$	-	\$	(10,800.00)	\$	-
Solar Microgrid: SPAN Panel +	\$	34,000.00	\$	(10,000.00)	\$	(3,500.00)	\$	(5,000.00)	\$	(10,200.00)	\$	(2,500.00)
Battery, 30kWh												
Capital Cost Totals	\$	70,000.00	\$	(10,000.00)	\$	(3,500.00)	\$	(5,000.00)	\$	(21,000.00)	\$	(2,500.00)

Premium Cost Less Incentives	Total	Payback Period		
Super Green Premium	\$ 70,000.00	Year 10		
Premium Less (CalEHP)	\$ 60,000.00	Year 9		
Premium Less (CalEHP + RISE)	\$ 55,000.00	Year 8		
Premium Less (CalEHP + RISE + ITC)	\$ 34,000.00	Year 6		
Premium Less (CalEHP + RISE + ITC + RISE Equity)	\$ 31,500.00	Year 5		

Year	Energy Cost	Total Annual
rear	Savings	Energy Cost
Year 1	\$ 6,043.14	\$ 6,043.14
Year 2	\$ 6,345.30	\$ 12,388.45
Year 3	\$ 6,662.57	\$ 19,051.01
Year 4	\$ 6,995.69	\$ 26,046.71
Year 5	\$ 7,345.48	\$ 33,392.18
Year 6	\$ 7,712.75	\$ 41,104.94
Year 7	\$ 8,098.39	\$ 49,203.33
Year 8	\$ 8,503.31	\$ 57,706.64
Year 9	\$ 8,928.48	\$ 66,635.12
Year 10	\$ 9,374.90	\$ 76,010.02
Year 11	\$ 9 <i>,</i> 843.64	\$ 85,853.66
Year 12	\$ 10,335.83	\$ 96,189.49
Year 13	\$ 10,852.62	\$ 107,042.10
Year 14	\$ 11,395.25	\$ 118,437.35
Year 15	\$ 11,965.01	\$ 130,402.37
Year 16	\$ 12,563.26	\$ 142,965.63
Year 17	\$ 13,191.43	\$ 156,157.05
Year 18	\$ 13,851.00	\$ 170,008.05
Year 19	\$ 14,543.55	\$ 184,551.60
Year 20	\$ 15,270.72	\$ 199,822.32

Current Collaborators

Architects

- Altadena Collective
 - Tim Vordtreide
 - Chris Corbett Design
- o Bildsten Arch: Ellen Bildsten
- o Union Studios: Ben Willis
- o Garcia Architecture: Elisa Garcia

Landscape Architects

• Kiesel Design: Jack Kiesel

General Contractors

- o Allen Construction: Dennis Allen
- o Best Tech Contracting: Jason Scheurer
- o Desert Estate Development: John Pedalino

Prefab/Modular Manufacturers

- Plant Prefab: Steve Glenn
- Joubert Homes: Darin Dusan & Steffen Andrews

Clean Coalition

- ReMo Homes: Ryan Blowers/ Vamsi Kotla
- BPublicPrefab

Other Collaborators

- Mayor of LA: Karen Bass
- USGBC LA: Ben Stapleton
- Bello Global Consulting: John Bello, P.E.
- Taft Office: Margie Taft
- Box Power: Fallon Vaughan
- Steadfast LA: Rick Caruso
- Permacity Foundation: Jonathan Port
- California Home+Design: Lauren Michele
- Direct Relief
- Habitat for Humanity

Conclusion and Q&A



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https://clean-coalition.org/programs/green-rebuild-initiative/