

## AVILA RANCH ENERGY GUIDELINES

The Avila Ranch Energy Guidelines are designed to promote sustainability, affordability, and a healthy home environment for our clients. The Development plan, as approved, has some inconsistencies with current codes updates; for instance, the 2019 code update did not adopt a ZERO NET ENERGY threshold. The CEC (California Energy Council) did not deem ZERO NET ENERGY to be a cost effective solution for homebuyers. The Majority of updates to section 13 is focused on solar and the language around "ZERO NET". We feel these homes will be designed with the RIGHT SIZE solar design, which is an avg of 19-30% above the current t-24 requirements. Current t-24 min requirements have about 50-53% usage offset, with our increase in size we will be offsetting around 70-80% of electrical usage. Other minor changes included tweaks to the language around the REACH CODE and minor changes to Advanced framing methods. Some of the methods provided in the original DP were neither cost effective or structurally sound.

### 1. BUILDING DESIGNS

#### • SOLAR

- Maximized the solar size for each plan type while being able to stay compliant with T-24 and competing with all requirements and lot constraints.
- See below for breakdown of each plan – we are able to increase the size of the photovoltaic design by 19% to 30% above the current 2019 title 24 code requirements. We believe this is the **RIGHT SIZE SYSTEM** for these homes.

#### Avila Ranch - ALL Electric

Plan	Stories	Sq. Ft	<b>PROPOSED</b> Right Sized Solar System Size	2019 Code Title 24 Code Minimum Size	% above code minimum size compliance
Plan 1 - cluster	2	1848	2.80 kW	2.28	21%
Plan 2 - cluster	2	1898	2.80 kW	2.28	21%
Plan 3- cluster	2	2069	3.15 kW	2.61	20%
Plan 4 - cluster	2	2273	3.15 kW	2.64	19%

Plan 1 - cottage	2	1167	2.45 kW	1.86	30%
Plan 2 - cottage	2	1611	2.80 kW	2.23	24%
Plan 3 - cottage	2	1723	2.80 kW	2.25	24%
Plan 4 - cottage	2	1554	2.80 kW	2.22	24%

- **ALL ELECTRIC** – meeting city requirements for clean energy choice program by going all electric.
- **LEED – ND** - Compliance with the U.S. Green Building Councils Leadership in Energy and Environmental Design for Neighborhood Development ( LEED- ND) focuses on the following areas
  - Smart Location and Linkage
  - Neighborhood Pattern and Design
  - Green Infrastructure and Buildings
  - Innovation and Design Process
  - Regional Priority Credits
- **GREEN POINT RATED** - GreenPoint Rated is a credible and accessible pathway to ensure you have the elements of a sustainable, efficient, and healthier home while focusing on these 5 key areas
  - Energy Efficiency
  - Indoor Air Quality
  - Water Conservation
  - Resource Conservation
  - Community
- **ADVANCED FRAMING SYSTEMS**
- **QII – Quality Insulation Inspections**
  - QII ensures that insulation is installed properly in floors, walls, and roofs/ceilings to maximize the thermal benefit of insulation.
- **ENERGY STAR RATED APPLIANCES**
- **HVAC**
  - Dual Zones
  - Heat Pump Efficiency Rating 10.5
  - SEER 26% better than min T-24 reqs
  - EER 12% better than min T-24 reqs
  - Bypass Ducts
  - Standard A/C
- **WATER HEATER**
  - Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater
  - 3.85 UEF
  - Up to 400% more efficient than a standard electric water heater
  - Energy Saving Scheduling
    - Programable water heater to match demand throughout the day.

- Link - <https://s3.amazonaws.com/WebPartners/ProductDocuments/71FFBB6F-7E6F-48F3-9B6D-9CB9FEBE6FA3.pdf>

- **EPA WATER-SENSE FIXTURES**
- **BICYCLE STORAGE AREA IN GARAGES**
  - Plus each single family home to receive a voucher for \$750 toward an e-bike
  - Multi-family to include a bicycle rideshare component.
- **DEDICATED CIRCUIT FOR EV CHARGER PRE-WIRE**
- **NEGOTIATING WITH ZIPCAR FOR RIDESHARE SERVICES**