OTAY RANCH VILLAGE 8 EAST

Non-Renewable Energy Conservation Plan

April 2024

Adopted on December 2, 2014
By Resolution No. 2014-235

Amended _____
By Resolution No. _____

Prepared for:

HomeFed Otay Land II, LLC
1903 Wright Place, Suite 220
Carlsbad, CA 92008

Prepared by

Prepared by

WHA, Inc.
680 Newport Center Drive, Suite 300
Newport Beach, CA 92660
(949)-250-0607
Contact: Julia Malisos

Table of Contents

I. Introduction 1
II. Non-Renewable Energy Conservation Plan 3
A. Transportation 3
B. Building Design & Use 4
C. Lighting 6
D. Recycling 7
E. Land Use 7

I. Introduction

The Otay Ranch General Development Plan (GDP) requires the preparation of a Non-Renewable Energy Conservation Plan (Plan) that identifies feasible methods to reduce the consumption of non-renewable energy resources. Categories identified in this Plan where reductions may occur include but are not limited to: Transportation, Building Design & Use, Lighting, Recycling, and Land Use.

The Chula Vista region's current reliance on fossil fuels makes up the majority of non-renewable energy consumption. Fossil fuels are directly consumed in the form of gasoline, diesel fuel and natural gas and indirectly as electricity generated from these fuels. The goals, objectives and policies of the GDP require that any new project identify a plan that assists in a long-range strategy that will increase the conservation of and decrease the consumption of non-renewable energy resources.

The Proposed Otay Ranch Village 8 East project includes a Village Core area that would accommodate a mix of uses including multi-family residential and retail/commercial uses along with an elementary school site and a centrally located 7.3-acre neighborhood park. A future multi-modal bridge, planned to accommodate Neighborhood Electric Vehicles (NEV), bicycles and pedestrians is also planned in the Village Core linking Village 8 East and future Village 9.

The proposed project would also include 20,000 square feet of commercial/retail uses and 1,348 multi-family homes distributed across eight Village Core parcels. Other residential land uses include 1,664 multi-family residential units in 10 parcels designated Medium-High Residential. The elementary school site has an underlying "High" residential land use designation that could accommodate 264 multi-family units if the site is not utilized as a school site. The project also includes an alternative elementary school site/neighborhood park site configuration which would increase the size of the elementary school site and correspondingly reduce the neighborhood park site. This alternative configuration would be implemented based on the needs of the Chula Vista Elementary School District.

Additionally, the project provides 253.6 acres of Preserve Open Space, 16.4 acres[1] of manufactured slopes/basins and the 22.6-acre active recreation site (AR-11) located east of State Route (SR) 125. Approximately 15.3 acres comprising perimeter slope areas are included in the gross acres of development parcels. The Village 8 East Final Map(s) will include open space easements over perimeter slope areas based on final engineering designs. The 43.3-acre[2] (gross) Otay Ranch Community Park South is located south of Village 8 East.

[1] A portion of the Edge Trail and associated overlook features (approximately 1.76 acres) are included within the 8.2-acre OS-7 parcel. The Edge Trail area shall be secured with a public access easement and the 1.76 acres shall satisfy a portion of the Village 8 East park obligation. The 1.76-acre Edge Trail area is not counted toward meeting the Village 8 East open space requirement.

[2] If the P-2 Community Park / OS-6 Alternative configuration depicted on the Village 8 East Tentative Map is implemented, then the park acreage would be increased to 47.4 acres (gross) and manufactured open space/basins would be reduced by 4.1 acres (gross).

Summary of proposed land use changes to the previously approved project consist of the following:

- 3,276 multi-family units (from 943 single family and 2,333 multi-family units)
- 20,000 SF of commercial/retail uses in a mixed use setting (no change)
- 7.3 acre neighborhood park (no change)[3]
- 11.3-acre elementary school site (from a 10.8 acre school site)[4]
- 253.6 acres of Preserve Open Space (OSP) (no change)
- 22.6 acres of Active Recreation (AR) (no change)

The project applicant proposes to amend the Village 8 East land use plan to reflect current market conditions and housing needs, and to ensure the community relates more closely to the adjacent Village 8 West community and future Village 9 and University Innovation District planned east of SR 125 and accommodates the SR 125 couplet interchange design between Main Street and Otay Valley Road.

The proposed mix of uses in a higher density environment enables more pedestrian activity rather than car trips. The 2022 CalGreen Code requires energy conservation methods that will reinforce Chula Vista's desire for sustainable development and living.

[3] if the alternative configuration is implemented, the S-1 site would be 12.0 acres (net) and the P-1 park site would be 4.6 acres (net).
[4] If the alternative configuration is implemented, the S-1 site would be 12.0 acres (net) and the P-1 park site would be 4.6 acres (net).

II. Non-Renewable Energy Conservation Plan

Opportunities for energy conservation in Village 8 East are characterized by the following:

A. Transportation

Transportation design features that encourage energy conservation in Village 8 East include:

- ***Reduced Vehicle-trip Miles:***
  On the regional level, Village 8 East is designed to accommodate transit service. New transit stops are proposed at the intersection of Main Street and La Palmita Drive.

  The internal circulation plan encourages pedestrian activity and bike access by way of "complete" streets as defined within the Section Planning Area (SPA) which includes the Village Pathway, an off-street 10 to 12-foot wide paved path for bicycles and pedestrians. All streets include some form of sidewalk or Promenade Trail to create a fully connected pedestrian network. Main Street includes an off-street 5.5-foot-wide cycle track adjacent to the Chula Vista Regional Trail, and La Media Parkway includes off-street cycle tracks as part of the network. This bike network connects to the Village Pathway in Village 8 West and will cross State Route (SR) 125, linking to Village 9.

  Additional measures to promote alternative transportation or reduce traffic congestion include uses such as open space and an elementary school within walking distance to the majority of homes, design features that encourage walking and minimize conflicts between cars and pedestrians, and appropriately scaled architecture and landscape aesthetics that are visually engaging from the sidewalk.

  As part of the 2014 FEIR, the Otay Ranch Village Eight East project was approved by the City of Chula Vista City Council in December 2014 and incorporated into the Chula Vista General Plan and the Otay Ranch General Development Plan. The current project would include one minor modification (0.22 acres) to the development area analyzed in the University Villages Comprehensive SPA Plan Amendment FEIR (EIR-13-01; SCH No. 2013071077; City of Chula Vista 2014). The minor change is related to the realignment of Otay Valley Road (La Media Parkway). Proposed Village 8 East land use changes (refer to Section 1 of this document for description) would result in a decrease in trip generation and traffic impacts as compared to the 2014 approved project and would not substantially change trip distribution patterns (Chen Ryan 2023). Due to the elimination of single family units and increase in multi-family units in the Proposed Project, the overall trips calculated for the 2023 proposed project are 4,000 less than the 2014 Traffic Analysis (Chen Ryan TIA 2023).

- ***Alternative Travel Modes***
  The GDP describes the automobile oriented improvements as only one component of an integrated mobility system, which includes bicycles, low speed electric vehicles, pedestrian trails and public transit systems. For this reason, all circulation streets in and around Village 8 East have been designed to minimize steep gradients wherever possible. The village has

trails and sidewalks throughout, providing connectivity and access within the village and outside of the village using means other than an automobile.

Furthermore, any residential unit with a private garage will include Electric Vehicle (EV) - Capable infrastructure enabling electric vehicle charging. Common area parking will also include charging stations as required by Code. Attached residential projects (e.g., multi-family) of more than 20 units built after January 1, 2023 will comply with the 2022 California Green Building Code Title 24, Part 11 (CalGreen) code, at a minimum, which includes various requirements from "EV Ready" to installed EV charging stations.

Neighborhood electric vehicles (NEVs) provide a clean alternative vehicular mode of transportation, ideal for shorter trips. The NEV network consists of internal low-speed streets within Village 8 East. NEVs are permitted on all public streets with a posted speed limit of 35 miles per hour or less. The circulation system has been intentionally designed to provide an internally connected system of low-speed streets that allow NEVs to travel between various destinations within Village 8 East. Calle Escuela also provides a connection for NEVs to Village 8 West and the future Multi-Modal Bridge provides a future connection to Village 9 across SR-125. NEVs are not permitted on sidewalks, trails or other pedestrian-only paths.

- ***Increase Use of Transit***
  Village 8 East proposes higher density homes that are close to transit and pedestrian/bicycle trails. Enabling safe walking and biking environments as well as convenient access to a planned transit stop encourages transit use. Village 8 East enables non-vehicular travel through land use planning and circulation design.

- ***Roadway Pavement Widths and Street Trees***
  Otay Ranch street sections are narrower than typical standards. Narrow streets and a reduction in asphalt pavement reduce the "urban heat-island effect" by limiting the amount of reflective surfaces and reducing the demand for air conditioning. Street trees provide shade which further reduces heat-gain. Street and parking lot tree planting shall comply with the City of Chula Vista Shade Tree Policy Number 576-19 (May 22, 2012). The objective is to maximize shade cover to the greatest extent possible. Shade trees are provided for all new parking lots that will achieve 50% canopy cover over the parking stall areas five to 15 years after planting. Shade street trees are also designed into the village landscape plan reducing pavement temperatures in the hotter months.

  The design of all public streets includes sidewalks and landscaping to promote pedestrian circulation throughout the SPA Plan Area. Private street configurations are to be determined during design review and refined during final engineering.

B. Building Design & Use

Building design and use features that encourage energy conservation in Village 8 East include:

- ***Housing Efficiency***
  Village 8 East proposes higher densities that typically require attached housing typologies. Such attached homes use less energy for heating and cooling than larger, single-family

detached homes. The SPA Amendment purpose is to incorporate higher densities into Village 8 East including Medium-High Residential, High Residential and Village Core. Allowed densities would range from 11-45 dwelling units per acre.

- ***Solar Orientation***
  Passive solar design including the orientation of buildings can take advantage of the sun's warmth in winter to assist with heating as well as minimize heat gain in summer months to assist with cooling. Village 8 East buildings will accommodate 2022 Title 24 standards (at a minimum) which encourage effective solar orientation for useful photovoltaic systems; see also Use of Solar Energy Systems, below.

- ***Building Efficiency***
  Buildings in Village 8 East will be required to comply with Title 24, Part 6 of the California Building Standards Code, which regulates energy uses including building envelope, space heating and cooling, hot water heating, and ventilation. The energy code allows builders to use either a performance standard or a prescriptive method; either way, energy efficiency requirements shall be met.

  The City of Chula Vista has adopted Green Building Standards (Chula Vista Municipal Code (CVMC) Chapter 15.12) and an Energy Efficiency Ordinance (CVMC Section 15.26) that require compliance with the applicable Title 24 Part 11 and Part 6, respectively.

- ***Water Conservation***
  A Water Conservation Plan was prepared as a component of the approved SPA Plan (2014) in conformance with the requirements of the Otay Ranch GDP and the Chula Vista Growth Management Ordinance.

  As described in the Water Conservation Plan prepared by Dexter Wilson Engineering, certain landscaped areas are required to utilize recycled water where available based on current Otay Water District (OWD) policies regarding new subdivision development. Consistent with the Otay Ranch GDP, it is anticipated that recycled water will irrigate landscape areas identified in the Water Conservation Plan.

  The potential sources and availability for recycled water use are described in more detail in the Water Conservation Plan. Potential demand within the SPA Plan area will be estimated in a subsequent Subarea Water Master Plan to be approved by the OWD prior to project implementation. Recycled water requirements for the project will be coordinated by OWD and the City. Phased construction of recycled water facilities, based on an OWD-approved master plan, will be incorporated into the project Public Facilities Financing Plan (PFFP) and/or subdivision map conditions of approval to assure timely provision of required facilities.

  Indoor Water Conservation
  - Plumbing fixtures and fixture fittings shall comply with the current California Energy Code.

Outdoor Water Use

- Outdoor water use shall comply with the requirements of the applicable California Green Building Standards Code (2022 or future).

- Controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

    - Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.

    - Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

- ***Use Improved Construction Standards***
  Residential and commercial construction within Village 8 East is required to adhere to the Energy Efficiency Standards of the City of Chula Vista Municipal Code Sections 15.26, 20.04 and the Building and Energy Efficiency Standards in Title 24 Part 6 of the California Code of Building Regulations.

- ***Use of Solar Energy Systems***
  Village 8 East will comply with the City of Chula Vista's "Solar Ready" Ordinance which requires solar hot water pre-plumbing (CVMC Section 20.04.030) and photovoltaic pre-wiring requirements (CVMC 20.04.040) as well as the applicable state code requirements.

  Chula Vista Municipal Code Section 20.04.040 requires all new residential units to include plumbing specifically designed to the later installation of a system that utilizes solar photovoltaic or other renewable energy resource as a means of generating electricity.

  However, all projects approved under the Village 8 East SPA Amendment will be required to meet the California Energy Code current at the time of permit review. Therefore, photovoltaics may be required to be installed rather than pre-wired.

C. Lighting

Energy efficient lighting will be used to light streets, parks and other public spaces. All residential and commercial use lighting would be in compliance with current California Energy Code requirements at the time of permit review.

- ***Energy Efficient Public Lighting***
  Standards for Village 8 East will comply with Title 24, Part 6 requiring the use of energy efficient lighting in commercial public areas including plazas and parks. The proposed project will also comply with Title 24, Part 11 regarding light pollution reduction.

The City of Chula Vista Public Works Department has installed LED lights in the City that use 1/3 the electricity without reducing lighting levels and impacting public safety. The lighting system will continue to be used in Village 8 East.

D. Recycling

Residential and Commercial Recycling programs in Village 8 East include:

- Chula Vista Municipal Code Sections 8.23-25 require all commercial and industrial establishments that recycle with a third-party recycler to submit recycling tonnage documentation on an annual basis to the City's conservation coordinator, due on or before January 31st, for the previous year. Those establishments recycling with a franchised hauler do not need to report because the hauler does the reporting to the City. This requirement promotes recycling of materials.

  The City of Chula Vista's Recycling and Solid Waste Planning Manual, adopted by the Chula Vista City Council, provides information for adequate space allocated to recycling and solid waste within individual projects, based upon the type of project and collection service needed.

  Additionally, the City of Chula Vista encourages the use of compost materials to be incorporated into the soil of all new construction projects to improve soil health, water retention, less water runoff and filtration of water run-off prior to entering storm drains and creeks draining to San Diego Bay. The yard trimmings collected in Chula Vista are composted at the Otay Landfill and may be available for purchase.

- ***New Construction Waste Reduction***
  CalGreen requires that a minimum of 65% all new construction waste generated at a site be diverted to recycle or salvage. Additionally, the State has set per capita disposal rates of 5.3 pounds per person per day for the City of Chula Vista. To maintain these targets the following programs must be implemented per Chula Vista Municipal Code Sections 8.23, Solid Waste and Recycling Contract or Franchise; 8.24, Solid Waste and Litter; 8.25, Recycling; and 19.58.340, Trash Enclosures.

  All new construction and demolition projects in the City are required to divert from landfill disposal 100% of inert waste to include asphalt, concrete, bricks, tile, trees, stumps, rocks and associated vegetation and soils resulting from land clearing; and 50% of all remaining waste generated. Contractors will be required to put up a performance deposit and prepare a Waste Management Report form to ensure that all materials are responsibly handled. Upon verification that the diversion goals have been met the performance deposit will be refunded. CVMC 8.25.095.

E. Land Use

Land use patterns and project features that conserve non-renewable energy resources and reduce reliance on the automobile within Village 8 East include:

- ***Reduce the Reliance on the Automobile***
  The vision for Village 8 East is to develop a community with interconnected uses and varying residential densities. The mix of proposed residential, commercial and community

uses are intended to provide a complementary, mixed-use environment with a focus on promoting a walkable and bikeable community that reduces automobile trips.

The Village proposes sidewalks and trails throughout as well as transit stops along Main Street. The various opportunities encourage walking or biking rather than driving. The trails also connect to the larger regional system as does the transit, thus enabling transit use beyond Village 8 East.

Per the Otay Ranch Village 8 East Project – Air Quality and Greenhouse Gas Update (Dudek, 2023), the proposed Village 8 East SPA Amendment would reduce daily vehicle trips generated by approximately 5% as compared to the 2014 approved project.

- ***Regional Mass Transit Facilities***
  Otay Ranch and Village 8 East are designed and ready to accommodate public transportation and alternative travel modes to reduce energy consumption. Village 8 East is designed with transit stops to accommodate connection to the larger regional transit system. In conformance with applicable General Plan goals and policies, public transportation is an integral part of Otay Ranch. The Village 8 East plan has responded by providing such public transit facilities.

In conclusion, this Non-Renewable Energy Conservation Plan supports the goals, objectives, and policies of the GDP by providing methods to reduce energy consumption and increase use of renewable energy in the future Otay Ranch Village 8 East.