

DOCKETED	
Docket Number:	22-BSTD-04
Project Title:	2022 Energy Code Photovoltaic and Battery Storage Cost Effectiveness Determinations
TN #:	265998
Document Title:	PV Exemption Request - Turlock Mote Vista Apartments (10-109(k))
Description:	The document is the Photovoltaic Exemption Request submitted by Turlock Monte Vista LLC and Pacific West Communities for the Monte Vista Apartments project under Section 10-109(k) of the 2019 Energy Code. It documents how the Turlock Irrigation District's prohibition of Virtual Net Energy Metering, along with interconnection fees and additional technical requirements, makes the mandated low-rise multifamily PV system cost-ineffective. The request includes a detailed cost-effectiveness analysis, bid summaries, project cost breakdowns, and correspondence with the utility and local fire division. Supporting exhibits encompass solar PV bids, tariff and compensation data, CF1R calculations, and maintenance cost estimates. This revised version incorporates updated cost figures and supplemental exhibits to address prior CEC staff feedback.
Filer:	Muhammad Faisal Saeed
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	9/12/2025 12:12:51 PM
Docketed Date:	9/12/2025



September 2, 2025

Mr. Muhammad Faisal Saeed, PE., LEED AP, CEM
Senior Electrical Engineer, Building Standards Branch, Efficiency Branch
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512
Muhammad.Saeed@Energy.ca.gov

Re: Pacific West Communities, Inc.'s Request (on behalf of the Owner, Turlock Monte Vista LLC) for a Multifamily Residential Solar Photovoltaic Exemption Determination for the Monte Vista Apartments Project, a 348-unit Multifamily Residential Apartment Housing Project in Turlock, CA.

Dear Mr. Saeed,

On behalf of the Turlock Monte Vista LLC (TMV), as Energy Project Manager for the developer Pacific West Communities, Inc. (PWC), I am writing to seek a determination from the California Energy Commission (Commission) under Section 10-109(k) of the 2019 Building Energy Efficiency Standards. That section allows the Commission to determine that the solar Photovoltaic (PV) requirements¹ applicable to low rise multi-family residential buildings (Section 150.1(c)14), shall not apply if circumstances "causes the Commission's cost effectiveness conclusions, made pursuant to Public Resources Code 25402(b)(3), to not hold for particular buildings."²

By this letter, PWC formally seeks a determination that the solar PV requirements for the Monte Vista Apartments Project buildings are not cost-effective and do not apply to this project on the basis that (i) the utility Turlock Irrigation District has prohibited Virtual Net Energy Metering (VNEM), and (ii) construction costs and interconnection fees for multifamily residential buildings resulting from the VNEM prohibition and other regulations render installation of solar PV in accordance with Section 150.1(c)14 cost prohibitive.

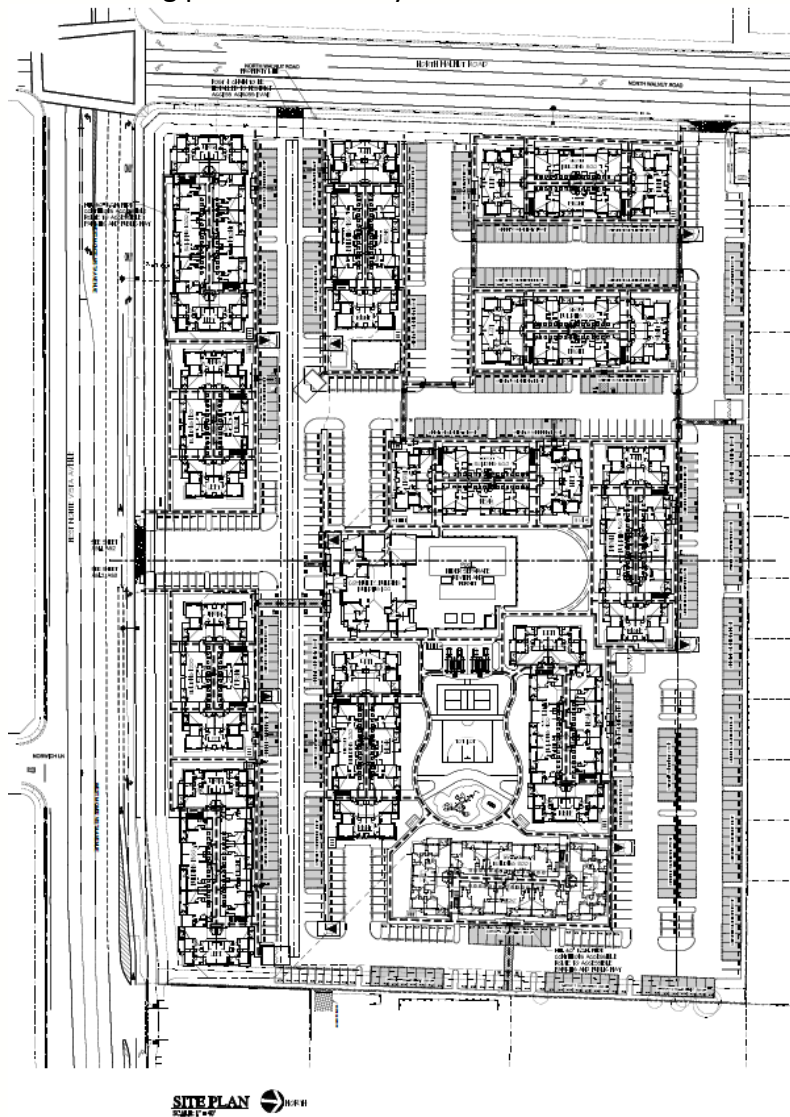
PWC supports the Commission's efforts to shift California away from fossil-fuel based energy. However, requiring a photovoltaic system on the Monte Vista Apartments Project - given its unique set of legal, regulatory, and building requirements - is not cost-effective and may place further stress on the City of Turlock and the housing needs of its community. PWC will, as required by the Energy Code, ensure that the Monte Vista Apartments Project is solar-ready in the event underlying cost drivers change or are removed.

¹ The Solar PV requirements are specifically found at Section 150.1(c)(14).

² 2019 Building Energy Efficiency Standards, 10-109(k).

Project Description and PV Requirements:

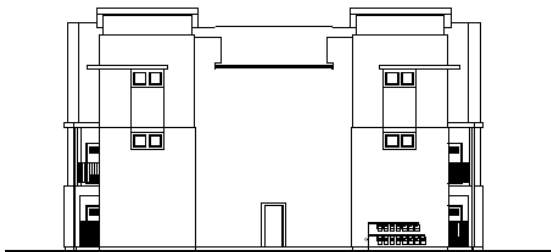
The Turlock Monte Vista is a 348 unit, three-story, thirteen building multi-family residential apartment housing community located at 1525 W Monte Vista Ave, Turlock, CA currently under development by Pacific West Communities, Inc. (located in Eagle, Idaho). The project consists of two 24-unit buildings (A), five 30-unit buildings (B), one 30-unit building (C), three 30-unit buildings (D), and one 30-unit building (E) for a total of 348 multifamily residential units in 12 tenant buildings plus a Community Building. The electric utility company in this jurisdiction is the Turlock Irrigation District ("TID"), and the permitting agency for the building permit is the City of Turlock.



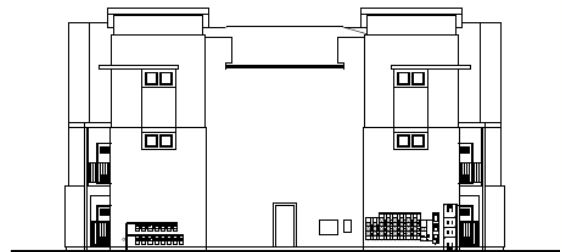
Monte Vista Apartments Project Site Plan



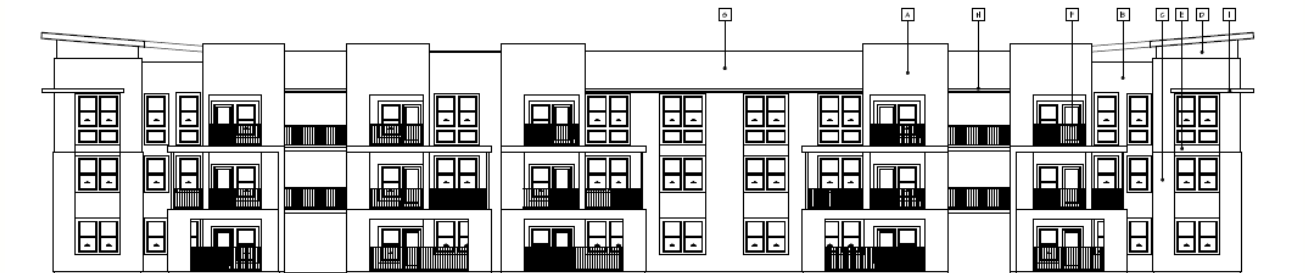
REAR ELEVATION
SCALE: 1/8" = 1'-0"



LEFT ELEVATION
SCALE: 1/8" = 1'-0"



RIGHT ELEVATION
SCALE: 1/8" = 1'-0"



FRONT ELEVATION
SCALE: 1/8" = 1'-0"

Monte Vista Apartments Elevation



The 2019 Title 24 CF1R summary document for this project is included as Exhibit J.

Summary of PV system minimum size requirements per approved 2019 Title 24 CF1R report:

<u>Building</u>	<u>#Units</u>	<u>Building Sq footage</u>	<u>Min. CF1R PV/building</u>	<u>Designed PV/building</u>
A:	24	19,152 sq ft	52 kW each	≥ 52 kW each
B:	30	25,968 sq ft	70 kW each	≥ 70 kW each
C:	30	26,820 sq ft	69 kW each	≥ 69 kW each
D:	30	95,706 sq ft	78 kW each	≥ 78 kW each
E:	30	31,902 sq ft	75 kW each	≥ 75 kW each

Total units: 348

Average kW/unit: 2.39 kW/unit

Total Monte Vista Apartments Project square footage: 322,812 sq ft

Total minimum PV kW required by CF1R: 832 kW DC “solar-only” (no batteries required)

Total PV kW as per proposed design:

- 834.33 kW DC - CalSolar
- 845.64 kW DC - Tenco Solar
- 840.84 kW DC - Citadel Roofing & solar

Background:

Through August 2025, we submitted a request for a solar exemption determination to the CEC presenting construction cost issues and a breakdown of bid costs associated with PV on the Monte Vista Apartments Project, as follows:

1. Three turnkey solar-only bids for the project from solar subcontractors for current and past projects, which include design, installation and adders, including:
 - Monitoring solution,
 - Roofing penetrations and sealing/waterproofing,
 - Rough-in conduit and wiring,
 - Blocking, and
 - Permitting & Utility fees.
2. Supporting emails from the City of Turlock. and the utility Turlock Irrigation District.
3. Title 24 CF1R Sheets.
4. ECON1 Forms.



These documents, and/or supporting documents are included and/or attached to this submittal package. A full list of Exhibits follows at the end of this letter (Exhibits A – K).

In addition, we have included emails from the City of Turlock-Building Division and Turlock Irrigation District to support our specific PV design requirements, fire safety requirements, and other associated cost drivers. These documents are attached to this submittal package as well (Exhibits E - I).

On August 21, 2025, the CEC requested that we file a formal solar exemption determination request. We believe this submittal and supporting documentation is sufficient for the CEC staff to analyze our request. We respectfully request that we be notified without delay of any additional information required to render a decision on our application.

Discussion:

The Turlock Irrigation District prohibition of Virtual Net Metering Enforcement, coupled with City of Turlock/Fire Department safety regulations, render installation of a PV system at the Monte Vista Apartments cost prohibitive.

In our review to prepare for a cost effectiveness evaluation we referred to CEC document Docket #22-BSTD-04 dated 6/8/2023. This document discusses the methodology for determining PV cost-effectiveness on another project, with similar Enphase microinverter and racking design elements. It refers to PV Cost Benchmarks for a 5.6kW & 7.9kW rooftop Enphase microinverter system on a single-family home reported by the National Renewable Energy Laboratory (NREL) in their 2016 and Q1 2022 report, respectively.

The CEC cost-effectiveness decision methodology used for this request for The Monte Vista Apartments is a \$/Watt cost figure for the 25-year lifecycle of the modules, as all of the submitted bid for this project consist of a lump sum bid, as opposed to a complete itemized breakdown of costs referenced in Docket #22-BSTD-04, dated 6/8/2023.

Cost Analysis per Docket #22-BSTD-04 dated 6/8/2023

Reference - microinverter rooftop system

CEC/NREL \$/Watt: \$3.82 (we are using the higher value \$3.82/w instead of \$3.74 listed in Docket to be conservative)

After discussing the potential PV exemption for this project with the City of Turlock, TID and the CEC staff, on June 16, 2025, the CEC requested that we go ahead and request the appropriate quotes. Thus, the cost breakdown from three of The Monte Vista Apartment's quotes/bids is documented using the \$/Watt cost figure for the 25-year lifecycle of the modules (\$/Watt reference figure in a spreadsheet - see Exhibit D) consistent with these established CEC and NREL solar cost figures referenced in said documents. These cost details make it clear the conservative values from the three bids are significantly larger than the NREL cost estimates, resulting in a potential unreasonable/unjust

financial burden imposed on the developer and owner making the project cost prohibitive.

All three bids support the excessive solar project cost concerns that we have for the Monte Vista Apartments Project. The basis for our exemption request is that solar cost for the Monte Vista Apartments Project, per the CEC/NREL cost model structure, is not cost effective based on the solar bids received and the resultant Life Cycle Cost Calculations with project totals between \$4.1- \$6.1M or \$4.93 - \$7.27 per watt. These numbers reflect the bids received and the total life cycle cost as defined by the CEC and NREL references. These figures are exclusive of Federal Tax Credits, as it is unclear if the projects will be eligible in light of the Big Beautiful Bill passing July 4, 2025. See Exhibit C for bids and Exhibit D for detailed total project cost analysis.

The following items summarize the issues that contribute to unusually high PV costs for the Monte Vista Apartments Project, with supporting details, analyses and spreadsheet provided in the Exhibits.

1. The project is in the jurisdiction of the utility Turlock Irrigation District, which prohibits Virtual Net Metering. See Exhibit E.
2. The project is in the jurisdiction of the City of Turlock Fire Inspector/Department and requires a readily accessible solar PV disconnect at ground level for first responders, as part of the California Electrical Code article 690 for each system. See Exhibit F.
3. As a result of the two issues noted above, The Monte Vista Apartments Project requires a PV system design for three story multi-family residential buildings wherein each unit has a small, separate PV system on the rooftop with extensive AC wiring through the building to the main service metering switchgear at ground level with a PV disconnect and NEM PV meter for each apartment, and then back feeding into each unit's subpanel with a cellular monitoring system and cellular plan to meet regulatory and code requirements. When we discuss this required design approach with other developers, contractors, and analysts they express universal agreement that this is an unusual and extraordinarily expensive approach for a PV implementation in this project.
4. The extensive nature of the required AC wiring has significant cost implications as a result of the higher material costs that are not factored into the CEC or NREL baseline solar single-family home cost analyses (per Docket #22-BSTD-04). Furthermore, the impact of California labor rates or labor cost increases relative to NREL's national averages used in the reference documents/figures is not accurately accounted for in the CEC 2016 referenced NREL solar cost estimates. Aside from legal and regulatory requirements in our jurisdiction, we see the labor line item as one of the most significant driver of costs in addition to our complex building design (i.e. 3-story, flat roof, multi-residential vs single family home construction). Comparing CEC/NREL costs to The Monte Vista Apartments Project or return-on investment analysis (from referenced DOCKET analysis) is a problem because the NREL approach is focused on single family homes. The more complex, low-

rise, multi-family residential Monte Vista Apartments Project has a number of cost factors which are not included in a single-family home analysis.

5. The Monte Vista Apartments Project's roofs are a TPO type roof which requires custom sealing/waterproofing of all mounting feet; added blocking; conduit and mounting penetrations; and walk pads to protect the roof. This penetration sealing/waterproofing and walk pad work must be part of the solar PV system scope working with the roofing subcontractor to maintain the roof warranty.
6. Due to the flat, TPO type roof on The Monte Vista Apartments Project and its height, higher cost mounting and racking products are required, relative to a single-family home analysis.
7. The scale of cost efficiency with the smaller ~2.39 kW PV systems required in The Monte Vista Apartments Project is extremely poor compared to the CEC/NREL cost models for a 5.6kW system (2016) or a 7.9kW system (2022). As the size of each unit's PV system decreases, the cost per watt increases dramatically in a low-rise, multi-family residential project like the Monte Vista Apartments Project with its scope and specialized infrastructure.

Recommended Limitations of Scope of Determination required by Section 10-109(k)

Regarding limitations to the scope of the determination that we are requesting, the primary driver of the prohibitive PV costs for the Monte Vista Apartments are the applicable rules and regulations enacted by the City of Turlock/Fire Inspector and Turlock Irrigation District associated with on-site renewable generation to prevent cost shifts to customers without on-site renewable generation. If Virtual Net Energy Metering is not allowed in a jurisdiction due to the cost shift to non-solar customers, then this is an indication that the Commission's cost effectiveness conclusions for PV installations may be invalid on multi-story, multi-family residential projects. In such a service territory our solar bids and analyses indicate that three-story residential buildings with flat/unique roofs would surely be candidates for PV exemptions based on poor cost-effectiveness.

Closing

In summary, while our project may be compared to the single-family residential CEC/NREL cost model, we move forward with subcontractors, materials, and requirements associated with more complex low-rise, multi-family residential projects and their accompanying costs. We cannot take advantage of a significantly lower cost central string inverter design often seen in such projects in larger public utility districts because of the regulations enacted by the City of Turlock/Fire Inspector/Department and Turlock Irrigation District. Thus, we have a unique and expensive solar project – a very small-scale distributed design per unit, driven by legal and regulatory necessity - with the scope, materials, and California wage labor (relative to NREL's national average) driving higher than expected or reasonable solar project costs. We appreciate the discussions/emails you have had with the City of Turlock and email strings with Turlock Irrigation District regarding the CEC's review of the PV exemption for this project and tariff rates, respectively. We have not addressed these in detail but understand should you



require additional information to complete and confirm your analysis to date that you will contact the City of Turlock and/or Turlock Irrigation District directly.

On behalf of the Owner, Turlock Monte Vista LLC, I respectfully request that the Commission make the determination under Section 10-108 of the 2019 Energy Code that the solar PV requirements of Section 150.1(c)14 do not apply to the Monte Vista Apartments Project. Thank you for the opportunity of presenting the above information.

Best Regards,

Jeff Trirogoff
Energy Project Manager
Pacific West Communities, Inc.
430 E. State St., Suite 100
Eagle, ID 83616
208-963-2240

Exhibits:

- A. Discussion and Details of Project Cost Analysis and Cost Drivers
- B. Bid summary sheet with CEC/NREL lifetime incremental maintenance costs – *reserved if requested*
- C. Solar PV bids, including electrical, roof sealing, blocking, monitoring and fire safety
- D. Project spreadsheet with cost category breakdown for the Monte Vista Apartments
- E. Email - PV exemption – from TID – VNEM not permitted
- F. Email - PV exemption - City of Turlock/Fire Division Requiring Separate PV Disconnect at Ground Level
- G. Email - PV exemption - TID Supporting Information
- H. Reserved
- I. Turlock Irrigation District – DG Tariff Rate and Net Generation Compensation at SRMC
- J. The Monte Vista Apartments Project Title 24 CF1R - T24 PV Requirements Per Building Type
- K. The Monte Vista Apartments ECON1 Forms

Cc (email only):

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Exhibit A

The Monte Vista Apartments Solar Project Cost Analysis and Cost Drivers

Introduction

As requested by the CEC, we requested the labor and material breakout description in each solar-only bid from each of the three solar contractors (see Exhibit C for complete turnkey bids). CalSolar's bid is chosen for this analysis because it has the lowest turnkey cost of \$4,114,883 or \$4.93/watt (including modules, racking, microinverters, solar BoS, solar material & labor, permit fees, utility fees, rough in, waterproofing of roof attachments, blocking and monitoring, but exclusive of O&M beyond 10 years, though the microinverters have a 25 year warranty). See Exhibit D "Cost Spreadsheet for Monte Vista Apartments - Total Site" for details of category breakdowns. Notably, CalSolar is the same solar subcontractor used in the CEC/NREL cost model analysis per CEC Docket # 22-BSTD-04, using the same Enphase microinverter based system.

CalSolar's bid for this project, the Monte Vista Apartments (348 PV systems, average 2.39 kW per unit) cost of \$4,114,883 or \$4.93/watt (exclusive of federal solar tax credit) contrasts to the 2022 NREL standard benchmark of \$3.82/watt for a single-family home with a 7.9kW PV system (*NREL 2022 p22*, see references below for link). We identify the categories per the bid (see Exhibit D), as follows:

- Workmanship Warranty
- Base Bid Material
- Base Bid Labor + Design
- Permit Fees
- Utility Fees
- Rough-in Labor
- Rough-in Material
- Waterproofing Labor
- Waterproofing Material
- Monitoring Labor
- Monitoring Material
- Blocking Labor
- Blocking Material

The cost analysis referenced in the CEC/NREL documents show a much more detailed description of the items within the bid's categories. However, the final cost/watt (\$/w) is equally applicable and relevant to this project, as the bid includes everything needed (turnkey) to install 348 different Enphase microinverter based PV systems on these 12 tenant buildings.



Base Bid – System Hardware - PV Modules

The Tier1 Phono 435 W modules are a standard, competitive mono-crystalline module. CalSolar sources Phono modules for most, if not all, of CalSolar's other contracted projects.

Workmanship Warranty

All three bids have a 10-year workmanship warranty, which is the industry standard for the IOU territories requiring a 10-year Workmanship to protect against defects and undue degradation of electrical generation output caused by faulty manufacture or installation, and to cover any expenses generated from repair and replacement of the system that are not otherwise covered by the manufacturer. We recognize the potential added O&M expenses for the systems from years 11-25 to cover the life cycle of the 25-year warranty of the PM modules, and are not reflected in the Project spreadsheet with cost category breakdown for the Monte Vista Apartments (see Exhibit D), though referenced in the Docket and CEC/NREL cost analysis. This added cost would drive the \$/w even further higher than the \$/w per Exhibit D.

Base Bid - System Hardware - Microinverters and Monitoring

Adder - Cell Card for Monitoring

The IQ8 Enphase microinverters are the industry standard, competitive microinverter. CalSolar sources Enphase microinverters for most, if not all, of CalSolar's other contracted rooftop projects. The monitoring system needed for each PV system include a cellular card and cellular plan for 10 years, as it is unreasonable to assume each tenant will have an internet/modem connection. It would also be unreasonable for the solar contractor to hard wire in an internet connection for each unit. This type of monitoring (cellular card and cellular plan) is standard for all of our apartment projects, both NEM and VNEM interconnections.

Base Bid - System Hardware - Structural BoS (Racking/Mounting)

Adder - Blocking

Due to the flat roofs ($\leq 5\%$ slope) on the Monte Vista Apartments project and the roof profile, designers/bidders have specified Ironridge flat roof attachments with a tilt mount system, which is typical for low rise apartments. In addition, because the project is a flat roof with a TPO type roofing material, every penetration must be custom sealed/waterproof (included in base bid) and service walk pads must be installed (in order to maintain the roof warranty working with the roofer), and blocking (listed as adder) must also be installed between structural roofing members to support the racking system. This item is the first instance where The Monte Vista Apartments Project significantly departs from the NREL single family home benchmarks for Structural BoS (racking materials, etc). The Monte Vista Apartments has a low-rise, residential style flat, three-story roof requiring an extensive racking system, blocking, service walk pads and custom sealing/waterproofing for all roof protrusions, all of which are not commonly required for single-family homes. Thus, the cost for the low-rise, multi-residential Monte Vista Apartments structural racking and roof materials is considerably more than the NREL average national estimate for a single-family home.

Base Bid - System Hardware - Electrical BoS**Adder - Rough-In**

CalSolar included most of the electrical equipment in the base bid, with the electrical rough-in as an adder, though necessary to this project. The equipment specs are consistent with the electrical gear list approved by the City of Turlock and TID. Costs driven by the City of Turlock/Fire Division interconnection requirements include a PV disconnect at ground level (see exhibit F). Costs driven by the utility TID interconnection requirements include exceptionally long runs from the three story roof to the PV disconnect at ground level and to each unit's main distribution panel, which are not typical for single family homes, which are typically one story. This Electrical BoS and rough-in cost is substantially higher than for the single-family home 7.9KW DC system referenced in NREL study. Cost per watt will escalate rapidly for very small systems such as the average 2.39 kW individual unit systems for the Monte Vista Apartments project.

Base Bid - Total System Hardware costs**Adders - Cell Card, Blocking, Rough-In**

Significant contributors to these elevated costs include:

- Regulatory requirements leading to a per-unit system design
- Racking system for flat roof
- Blocking needed for roof attachments
- Walk pads around PV system on flat TPO roof
- Sealing/Waterproofing roof penetrations on TPO roof
- City of Turlock requirements for ground level PV disconnect for first responders
- Long electrical and conduit runs for three story building relative to a single-family home
- Enphase communication gateway and cell card per unit
- Small size of each unit's system drives higher cost per watt numbers

Labor Costs**Adders – Blocking, Rough-In**

The labor costs did not include prevailing wages. California labor costs are much higher than NREL's national averages. Furthermore, a large low-rise, multi-family residential complex project does not typically contract with smaller, low overhead, lower wage paying subcontractors.

Permit, Inspection, and Interconnection (PII) Costs

PII per unit costs include \$445 per residential interconnection application to the utility TID and \$400 per unit to the City of Turlock building department for permit costs for a total of \$294,060 or \$0.35/watt or \$845/unit. This compares to NREL's \$0.21/watt for the single-family home project with a 7.9kW PV system. This \$845 cost per Unit is lower than NREL's national average of \$1,628 but the smaller Monte Vista Apartments apartment PV system at 2.39 kW drives the per watt cost much higher. Another example of the financial disadvantage inherent in a small, distributed PV system on low-rise residential projects.

Discussion/Review of Cost Drivers

Several factors contribute to the significant “per watt” cost of installing a distributed type of solar system on the Monte Vista Apartments project apartments:

The utility Turlock Irrigation District (TID) does not allow a solar design wherein a central inverter feeds back into a house meter that does not have equivalent electric consumption. In other words, the utility does not allow a solar generating system to feed more production through a single meter than is being consumed by that meter. In addition, TID does not allow virtual net metering, resulting in a cost shift to customers without on-site renewable generation. This forces the solar designer into installing a six or seven PV module system designed for each Monte Vista Apartments apartment with significant cost adders. Very small systems such as this will have significant overhead cost adders compared to larger systems such as the 7.9kW residential system modeled by NREL. For example, per the reference system in CEC/NREL Docket, a \$452 Enphase communications interface costs \$0.257/watt for a 1.76kW versus \$0.057/watt for the NREL modeled system. The same example holds true for the Monte Vista Apartments project with a 2.39 kW system. There are numerous scales of inefficiency to be found in a small distributed solar system such as the one the Monte Vista Apartments project would need to build to meet the regulatory interconnection requirements. The City of Turlock also requires a PV disconnect at ground level which drives material and labor costs higher associated with the long wiring runs in these larger apartment buildings.

The Monte Vista Apartments project is a large, three story multi-family residential project with flat roofs on 12 tenant buildings. The small company contractors envisioned by NREL for a single-family home are not generally equipped or qualified to handle projects of this scope. Larger contractors with 100+ field employees that have the personnel and experience in a project like this typically employ better trained, higher paid (often prevailing wage) employees with more experience. This raises labor costs significantly higher than NREL assumptions. Electrical contractors in projects of this scope typically submit formal equipment lists to the AHJ for approval. This equipment is more often than not, higher quality and more expensive than similar equipment found in single-family residences. Finally, the size of the buildings necessitates long wire runs incurring significant labor costs for electrical.

The flat roofs on the Monte Vista Apartments project significantly increase the cost of solar racking. Rather than installing rails directly onto simple, low cost mounting feet as would be found on a single-family residential installation, more expensive, blocking, mounting feet and hardware are required along with a tilt mount racking system to maintain an efficient solar angle for the PV modules. Then, due to the nature of the TPO flat roof, the subcontractor (working with the roofer) needs to custom seal/waterproof all roof penetrations, install blocking for the racking attachments, and install service walking pads to protect the TPO roof and maintain the roof warranty.

Some of the increased costs of the Monte Vista Apartments project over NREL benchmarked costs driven by the racking costs but much of it derives from the fact that this is a small 2.39 kW system and

certain fixed and variable costs are much higher per watt. Despite these issues, given the understandably higher cost for California vs NREL's national average, the solar-only roof top costs of this project are clearly not the major driver of excessive cost in this project. The two most significant drivers of excessive cost are 1. the Building AC wiring costs driven by regulatory issues essentially limiting the scope of the solar design, and 2. the flat roof design, blocking, penetration sealing/waterproofing and walk pad requirements.

Summary

We have reviewed the contributing factors that drive higher solar costs on the Monte Vista Apartments project in detail. The analysis calculates \$4.1M, \$4.2M and \$6.1M or \$4.93/watt, \$5.06/watt and \$7.27/watt respectively for this project's three bids. The separate spreadsheet (Exhibit D) provides additional insight. Regulatory requirements, building design, larger contracting companies (given the project scope), and the small, per unit PV system design all play a key role in escalating our overall costs vs a single-family home in the CEC/NREL standards. We have compared our per watt costs to NREL benchmarks and noted the specific cost drivers that create the differences. Of course, NREL's analysis is a national average and they note, importantly, that their data is intended to be used for long term policy decisions not short-term, localized analyses.

It appears that the impact of labor cost increases - especially in California - are not well accounted for in the NREL work (e.g. impact of prevailing wage rates) although they do comment that "multiple participants noted significant increased labor costs" linked to labor shortages. Yet, they have not addressed these issues in the cost tables for the 2022 study. We see the labor line items as the most significant driver of costs along with the unique building design (i.e. three story, flat roof, multi-residential vs single-family home).

It should also be noted that these line-item breakdown costs are taken from one of the lower bids we received, from CalSolar. As stated earlier, CalSolar is the same solar subcontractor used in the CEC/NREL cost model analysis per CEC Docket # 22-BSTD-04, also using the Enphase microinverter system. Thus, the reference company's bid and analysis (of the same Enphase microinverter based system) is equally applicable for the Monte Vista Apartments project. One other bid was a bit higher, and the other, significantly higher.

In summary, while our project the Monte Vista Apartments may be compared to the single-family residential CEC/NREL cost model, we move forward with subcontractors, materials, and requirements associated with more complex low-rise, multi-family residential projects and their accompanying costs. We cannot take advantage of a significantly lower cost central string inverter design often seen in such projects in larger public utility districts because of the regulations enacted by the utility TID by not allowing virtual net metering. Thus, we have a unique and expensive solar project – a very small-scale distributed design per unit, driven by legal and regulatory necessity - with the scope, materials, and relatively higher California non-prevailing wage labor (relative to the national average) driving higher than expected or reasonable solar project costs.



References

NREL Q1 2022 Tech report TP-7A40-83586 <https://www.nrel.gov/docs/fy22osti/83586.pdf>

Also see 2016 NREL report: <https://www.nrel.gov/docs/fy16osti/67142.pdf>

CA CEC 2019 "Measure Proposal Rooftop Solar PV Systems" TN# 222201

Attached CEC Docket # 22-BSTD-04



Exhibit B

Bid summary sheet with CEC/NREL lifetime incremental maintenance costs

We reserve this Exhibit if needed or requested by the CEC or others. We have excluded the incremental maintenance costs referenced throughout this document from years 11-25. We realize including these incremental costs would further increase the \$/w in the cost analysis, should it be needed.



Exhibit C

Solar PV Bids

(including electrical, roof sealing, blocking, monitoring and fire safety)

PROJECT INFO:

Turlock Monte Vista
N. Walnut Rd. & W. Monte Vista Ave.
Turlock, CA 95382

CLIENT:

Dustin Messenger
The Pacific Companies Housing

PROPOSAL REVISION: R15

California Solar Integrators, Inc.(CSI) will provide all labor, equipment and materials for the above-referenced project as a design-build subcontractor. Our firm will coordinate the completed design with the architect and engineers and the installation with the General Contractor and other subcontractors. CSI will manage the installation of the complete turn-key solar photovoltaic system described below:

SYSTEM EQUIPMENT:

Category	Qty	Description
Modules	1918	Phono 435W Solar Photovoltaic Modules or Equivalent - 12 Year Warranty / 25 Year Performance Warranty
Inverters	1918	Enphase Microinverters (Enphase IQ8+ 240V) (25-Year Warranty)
Monitoring	348	Enphase IQ Gateway Monitoring System - Hardwired Connection - 10 Year Subscription
Racking		Ironridge Aluminum Racking System - FlashVue Attachment (1918 modules)
Balance of System		Balance of System Components

SYSTEM GOAL:

T24: 832 kW goal

348 Interconnection NEM per Unit PV System

PREPARED BY:

Hogan Petry
hogan.petry@calsolarinc.com

PRICING/INCENTIVES:

Total DC System Size	834.33	kW
CEC AC System Size	759.93	kW
Estimated First Year Annual System Production	1,206,942	kWh
Estimated Annual Energy Savings	\$144,833	

DESIGN ONLY FEES

Solar PV Design & Engineering	\$15,000
-------------------------------	----------

OPEN WAGE

Material Cost	\$1,690,761
Labor + Design Cost	\$699,935
Monitoring Labor	\$25,209
Monitoring Material	\$343,008
Turn-Key Installation Cost	\$2,758,913

BID ALLOWANCE ADD/ALTS:

Add/Alt Allowance for Plan Check & Permit Fees	\$139,200
Add/Alt Allowance for Utility Fees	\$154,860

BID ADD/ALTS:

Add/Alt Rough-in Romex (NM-B -12-2) from Roof to Ground Solar Disconnect and Ground Solar Disconnect to Each Unit Panel - Labor	\$147,013
---	-----------

Add/Alt Rough-in Romex (NM-B -12-2) from Roof to Ground Solar Disconnect and Ground Solar Disconnect to Each Unit Panel - Material	\$367,183
--	-----------

Add/Alt Install (4028) Blocking	\$153,848
---------------------------------	-----------

Add/Alt Procure (4028) Blocking	\$76,341
---------------------------------	----------

Add/Alt Cell Card Monitoring Cost	\$317,525
-----------------------------------	-----------

All price estimates are based on today's product cost and are at risk of price increase outside of 60 days

GENERAL/ASSUMPTIONS:

- 1 Sufficient space is available in the electrical room or exterior for inverters & solar transformers
- 2 Sufficient space is available in the electrical room for required AC disconnects

INCLUSIONS:

- 1 Design, structural/electrical engineering, permitting
- 2 Turlock Irrigation District NEM PV System with budgeted 348 utility interconnection(s) (Expected 120/208V Tie-in)
- 3 Modules to be installed in approved location and/or per plan
- 4 Solar roof racking attachments
- 5 Permanent roof anchors for future O&M (Estimated 450 Attachment Amount)
- 6 Flashing & waterproofing of roof attachments & conduit penetrations (Estimated 4028 Pitched Roof Attachment)
- 7 Inverter(s) to be mounted in approved location and/or per plan
- 8 Conduit and wire for modules and inverter(s) (Rough-In conduit from roof to electrical room by Others--See Exclusions)
- 9 All required disconnects, placards, labelling, etc. required by code and/or AHJ
- 10 Connection to existing electrical panel by solar circuit breaker(s) or line side tap(s) per NEC
- 11 Monitoring system connection(s), system startup/commissioning, and field training
- 12 Coordinate, attend, and pass all required inspections
- 13 Extended 10 year labor warranty

EXCLUSIONS:

- 1 Any other wage requirements outside of regular (non-prevailing) wages (i.e. PLA, Union Wages, etc.)
- 2 AHJ Plan check and permitting fees
- 3 Utility company interconnection and equipment fees
- 4 Additional house and solar subpanel per meter connection by Others (where VNEM is not possible)
- 5 Proposal excludes the replacement/repair of broken roof tiles
- 6 Structural reinforcements, concrete pads, concrete embed plates, welding, site upgrades, or special inspections
- 7 Rough in conduit (electrical & data) from electrical room(s) to roof(s), including in-attic conduit, by Others
- 8 Customer switchgear/panelboard solar breaker or electrical bus taps to be provided by Others
- 9 NEMA 4X equipment due to corrosive environment
- 10 Significant changes to preliminary solar layout that have a material effect on design, material,
- 11 or labor resources may result in a Change Order
- 12 Change in PV system design based on planset dated/labeled Plan Check Comments 9.15.2023
- 13 Active monitoring of the system and utility bill analysis
- 14 Performance and payment bonding
- 15 Equipment extended warranties beyond manufacture warranty

CLARIFICATIONS

- 1 Manufacturer's Warranty is dictated by each individual component's Manufacturer Warranty
- 2 The typical Inverter Manufacturer Product Warranty is 10 years.
- 3 Typical Module Manufacturer Product Warranty is 12 years with a Performance Warranty of 25 years which will show a small annual degradation in output over time as defined by Manufacturer's Warranty document for that specific PV Module.
- 4 Client will be given access to site specific monitoring portal and remote training will be offered upon completion of the project. CalSolar will not actively monitor the system during the workmanship warranty phase, but will assist in client identified issues upon request. Owner responsibility to maintain and manage the built system and communicate any issues or concerns to CalSolar.
- 5 CalSolar will not be responsible for broken Roofing Tiles that are Clay and/or Lightweight Tiles. Clay and Lightweight Tiles are extremely susceptible to breaking with a very small amount of weight applied. CalSolar recommends coordination with the roofer to sequence the work appropriately so that CalSolar workers are not required to stand on Clay and/or Lightweight Tiles. CalSolar Recommends to coordinate with roofer to install composition shingle under the array and provide composition shingle ingress and egress to array location.
- 6 This proposal is contingent upon a mutually agreeable Project Schedule and mutually agreeable date(s) that Liquidated Damages could be incurred.
- 7 Required excusable and compensable delays: material availability/delays, utility review & inspection delays, building department plan check & inspection delays
- 8 Cost Escalations may be incurred if the price of any material, equipment and related components, or supplies furnished by CalSolar increases from the date of this proposal (or any resulting agreements) to the date of release for procurement
- 9 CalSolar is not responsible for repair and replacement of damaged obstructed conduits or misplaced stub ups due to Other Trades' lack of proper protection of their work
- 10 Pricing is based on PV modules being directly attached to carport purlin/structure and does not account for any other structural components (e.g. corrugated decking between carport and PV modules)
- 11 CalSolar shall not be held responsible for the integrity, functionality, or maintenance of any existing items on the property that is not explicitly included within this proposal
- 12 If the Client does not furnish as-built drawings (or utility mapping), or the provided bidding information/documentation is inaccurate, CalSolar shall not be held responsible for any changes to design or damage incurred due to inaccurate information.
- 13 The major material and equipment (modules, inverters, etc.) designed for incorporation into the project are considered custom-built solutions due to the rapidly evolving technology associated with this scope of work. Therefore, upon execution of this contract, client becomes obligated to make full payment for the Major Material and Equipment (MME) based on the assigned schedule of value (SOV) associated with these items that includes OH&P mark-up.
- 14 Should client elect to pause a contract, client is to notify Cal Solar within seven (7) business days. Cal Solar will then prepare and submit a change order with a monthly storage rate to client within seven (7) business days that will be charged monthly until client notifies Cal Solar that the project is being re-started or cancelled. Should client elect to cancel the project or this contract, and only a deposit has been made for the Major Material and Equipment (MME), client will still be responsible for paying any outstanding balances and taking receipt of the MME.

CLARIFICATIONS CONTINUED

- 15** Pricing provided does not include any potential tariffs that may be imposed retroactively or in the future, which may impact costs if enacted. Good thru dates are not inclusive of potential tariff adjustments and are subject to change.
- 16** Trades to coordinate with CalSolar on rough in electrical and equipment layouts, and adhere to the coordinated layouts
- 17** Failure for Trades to adhere to coordinated layouts may result in a Change Order
- 18** CalSolar is not responsible for non-code compliant (AHJ, NEC, etc.) conduit path and stub ups performed by Others
- 19** Rough in conduits to be free and clear of any debris
- 20** CalSolar has excluded blocking, waterproofing, and rough-in conduit from its scope. However, please be aware that
- 21** whoever is responsible for providing these services may need to consider accounting for prevailing wage rates to
- 22** comply with AB2143 requirements.
- 23** Roofing anchors to be waterproofed by Others
- 24** Electrical switchboards to be solar ready with solar breaker or provided with PV Line Side Taps
- 25** Switchgear submittal must be reviewed and approved prior to Solar PV system going into plancheck
- 26** Proposal pricing accounts for standard OSHA safety requirements
- 27** The site shall be clear of any obstructions or obstacles that would delay delivery of materials or installation of work
- 28** This proposal assumes acceptable terms and conditions can be agreed to by CalSolar
- 29** CalSolar has included 24 mobilizations. Any additional mobilizations will be at the cost of \$2000 per each



Solar Proposal For:

The Pacific Companies

Job Site:

Monte Vista – Turlock

Address:

1525 W Monte Vista Dr, Turlock, CA 95382

System Type:

Rooftop PV

Prepared by:

Dan McIntyre

P: 714-970-4728

E: dan@tencosolar.net



**TENCO
SOLAR**

Large Enough To Deliver, Small Enough To Care

www.tencosolar.net
888-507-6937



Large Enough To Deliver, Small Enough To Care

The Pacific Companies,

We're thrilled that you're considering TENCO SOLAR, Inc. to manage the solar portion of your project. We've reviewed the project specifications and are excited about the prospect of working with you.

Attached please find a completed bid proposal for the solar project. After carefully reviewing the project's specifications, we've broken down the scope, process, cost, projected timeline of completion, and all other expectations to help you make the best hiring decision possible for your project.

The information below is designed to give you a comprehensive overview of TENCO SOLAR's proposed approach to the management of your project, but of course if you have any questions, you can feel free to contact me at dan@tencosolar.net with any questions you may have.

We look forward to hearing from you!

Best,

Dan McIntyre
President
TENCO SOLAR, Inc.



 www.tencosolar.net

 888-50-POWER

 700 N Valley St. Suite C Anaheim, CA 92801

 CSLB # 1092568 | C10 & C46



California Businesses **Love** TENCO SOLAR

TENCO SOLAR boasts over three decades of expertise in designing and installing solar systems for commercial properties across California. As a comprehensive Engineering, Procurement, and Construction (EPC) provider, we manage all aspects of the project lifecycle, from initial contract signing to final operational approval, without subcontracting any of our solar operations.



Paseos at Ontario

Ontario, CA
2.7 MW • Roof + Carport



Lowe's Home Improvement

Rancho Cucamonga, CA
799.74 KW • Roof



Residence Inn

Rancho Cordova, CA
113.85 KW • Roof





Project Scope

Install a 348 x 2.43kW Turnkey Rooftop DC solar photovoltaic system including panels, inverters, and racking.

Project Owner Expectations

Materials and Services Included in Scope

- Qty 2,088: 405 JA Solar Tier 1 Solar Photovoltaic Modules (or equivalent)
- Qty 2,088: Enphase IQ8+ microinverters with panel level optimization & monitoring (or equivalent)
- Provide 10-year warranty on installation workmanship and materials impacted by workmanship error, and does not include manufactured defects
- Provide freight and shipping expenses for warranty claims within Year 1
- All necessary components, equipment, and attachments necessary for a complete system, this includes, but is not strictly limited to straps, monitoring, wiring, controls, grounding, cell card, and hardware, etc.
- Supply and install racking system in collaboration with roofing, and which shall be constructed to minimize the number of penetrations in the rooftop.
- Necessary Safety Disconnect Switch(s) and Subpanel(s) to safely interconnect in the Main Service Panels.
- Permitting included and all Design and Engineering fees
- Phasing work and coordination with all other subcontractors, specifically electrical, roofing, and plumbing subcontractors
- All testing and commissioning
- All equipment required for handling and installation (lifts, cranes, etc.)
- Replacement of any existing onsite improvements that are damaged and/or affected by TENCO SOLAR's construction activities
- Coordination with Utility Environmental, Facility Management and Departmental Stakeholders
- Net Energy Agreement and Fees for Utility Interconnection



Materials and Services Not Included in Scope

- Roofing Upgrades needed to install solar (comping out, blocking, etc).
- Waterproofing the flashings on the roof
- Any Framing/Structural Modifications
- Concrete Coring, Fire Calking
- Relocation of MEPs if needed
- Main service panel modifications
- Space on the main bus bar for required breaker(s) / Lug Kits
- Space in the main electric room for required disconnect(s) and subpanels
- Any grid required electrical upgrades required by the Utility
- Trenching or underground work
- Conduit runs from rooftop / BESS (if required) to main electric room
- Concrete Pad for BESS (if required)
- Critical Loads Panel for BESS (if required)
- Prevailing Wages or any wage restrictions

Project Costs

ITEM	System Size	Price
348 PV Rooftop System - Materials	845,640	\$ 2,573,000.00
348 PV Rooftop System - Labor	NA	\$ 834,000.00
Battery Energy Storage System	NA	\$ -
Total Proposed Price (including Sales Tax)		\$ 3,407,000.00

Additional Items not included in Proposed Price		Amount
Investment Tax Credit - Including Eligible Adders - See Exhibit A	30%	\$ (1,022,100.00)
30 Year Extended Warranty - See Exhibit B		\$ 126,846.00
Conduit Run from Roof to AC Disco to Unit Subpanel - Est. at 165ft / Unit - Material	348 Units	\$ 1,848,400.00
Conduit Run from Roof to AC Disco to Unit Subpanel - Est. at 165ft / Unit - Labor	348 Units	\$ 448,400.00
Waterproofing of Solar Mounts - Material	8032	\$ 40,160.00
Waterproofing of Solar Mounts - Labor	8032	\$ 401,600.00

UNFORESEEN CONDITIONS: Customer agrees to pay all costs arising from unforeseen issues such as unsafe or illegal conditions, poor weather conditions, rot or mold, inspector requirements, overlooked conditions, and identifying and removing hazardous materials (such as lead paint or asbestos) after the project has begun. If such circumstances arise, TENCO SOLAR, Inc. will work with you to determine the scope of the extra work, costs involved with remedying the unforeseeable conditions, and a date for payment through a written Change Order.

PAYMENT TERMS

Payment shall be made incrementally according to an agreed upon schedule of values developed during contract negotiations. All payments should be made via check/direct deposit/wire transfer to the order of TENCO SOLAR.

WORK SCHEDULE

TENCO SOLAR Inc has reviewed the specifications and necessary materials for the completion of the solar and will draw up a proposed timeline of work once the project has been awarded.

LIMITED LIABILITY: Contractor will not be held liable for delays to work schedule caused by project owner, permit approvals, poor weather conditions, and/or any circumstances beyond the contractor's control.

This bid is valid for 90 days from the date of receipt. TENCO SOLAR reserves the right to update pricing and/or cancel bids, prior to acceptance, for any reason.

The undersigned, having carefully examined and thoroughly perused specifications for the above-named project, and become fully familiar with all conditions affecting the work required by those specifications, hereby proposes to provide all materials, labor, services, etc. required thereby for the Total Project Cost.

Daniel McIntyre
DAN MCINTYRE
TENCO SOLAR, INC.

8/25/2025
Date

[Signature]

Date

Printed Name: _____

Title: _____

Company Name: _____



Large Enough To Deliver, Small Enough To Care

Prepared By: Dan McIntyre
P: 714-970-4728 E: dan@tencosolar.net

Exhibit A: Supplemental Investment Tax Credit Information

Note: TENCO SOLAR does not provide tax advice and requests all information below be reviewed with your CPA before any action / decisions are taken.

We wanted to provide you with some specific information on the site-specific incentives that are available to you on this project so you could investigate.

- **Elective Pay:** Designed specifically for Non-profits and other Non-taxable Organizations like local governments who now qualify and can receive a credit from the IRS in the form of a cash payment:
 - <https://www.tencosolar.net/solar-resources/itc-bonus-how-to-non-profit>
- **Low-Income Community Adder:** In 2024 the Department of Energy released new guidance on location that qualify for the Low Income Community 10% adder, and based on location you may qualify for this incentive:
 - <https://experience.arcgis.com/experience/12227d891a4d471497ac13f60fffd822/page/Page/>
- **Energy Community Adder:** In 2024 the Department of Energy released new guidance on California Counties that qualify for the energy Community 10% adder, and based on location you may qualify for this incentive:
 - <https://arcgis.netl.doe.gov/portal/apps/experiencebuilder/experience/?id=a2ce47d4721a477a8701bd0e08495e1d>

Here is a somewhat dated but still relevant video from our favorite tax attorney. It is specifically designed for low income housing but relevant to all industries and a quick synopsis for you to review as you find time:

<https://www.cohnreznick.com/insights/inflation-reduction-act-takeaways-affordable-housing>

Exhibit B:

Solar Warranty Comparison

SolarInsure		
Solar Panel		Inverter
Manufacturer		Manufacturer
 Parts 10-25 years	 Parts 30 year warranty for panels, inverters, optimizers, and racking	 Parts 10-25 years
 Labor \$0 for 0 years Some offer limited coverage up to 25 years.	 Labor \$100/hr and up to \$300 in truck rolls for 30 years	 Labor \$0-25/hr for 0-5 years
 Roof Penetrations 0 years	 Roof Penetrations 30 years	 Roof Penetrations 0 years
 Ownership Transfer No Transfer Fee	 Ownership Transfer No Transfer Fee	 Ownership Transfer Up to \$399
 Expedient Payouts Warranties typically paid & processed in 7-10 days.	 Zero Deductible System owners pay nothing even if the manufacturer defaults.	 Trusted Installers Backed by an approved network of installers and contractors.



About TENCO SOLAR

TENCO SOLAR delivers three decades of expertise in designing and installing solar systems across California residential and commercial properties. As a full-service EPC provider, we oversee projects from contract signing to final approval without outsourcing. Our services extend to solar financing, tailored to maximize client returns. Our integrity, innovation, and technical proficiency ensure flawless project execution at any scale.



Why Should You Choose TENCO SOLAR?

Title 24 Experts

We have a deep understanding of California's Title 24 building standards and will ensure your solar installation meets this code.

Vertically Integrated EPC Company

With a full in-house staff for design, procurement, and installation, you will work only with TENCO SOLAR throughout the process of purchasing and installing your solar system.

Three Decades of Pure Solar Expertise

Solar design, installation, and maintenance is all we do! We've installed over 25,400,000 watts of solar.

California Based

One of the few CA based solar companies that provides installation services across the entire state of California for any utility provider.

Best Warranty in the Industry

We take the time to understand each customer's unique needs and design the best system for you using premium products. Plus we offer the best warranty in the industry.

Large Enough to Deliver, Small Enough to Care

From small residential to large commercial projects, we have a proven track record of successful installations while providing personalized attention to each customer.



Large Enough To Deliver, Small Enough To Care

Prepared By: Dan McIntyre
P: 714-970-4728 E: dan@tencosolar.net

**Citadel Roofing & Solar**

761 Eubanks Drive

Vacaville, CA 95688

PHONE: (707) 446-5500

FAX: (707) 446-5501

LICENSE NO.: 647149

SOLAR PROPOSAL

DATE: 8/29/2025

COMPANY: Pacific West Builder

PROJECT: Monte Vista Apartments

1525 West Monte Vista Avenue Turlock CA 95382

Citadel Roofing & Solar is bidding the referenced project as an EPC Contractor and will supply and install all electrical & solar equipment required per plan. Our proposal is according to the provisions and terms of the contract documents. Our bid price will be per the scope of work below, sales tax included.

Bid Per Plans: Plan_Sheets_-_Bldg_100 – Building 1300

T-24 Notes: Builder supplied sizing for buildings per Title 24 reports. Sizing will need to be reviewed by Energy Consultant to ensure code compliance.

Pricing Summary:

Description	Material	Labor	Total
PV: 840.84 kW Qty (348) POIs	\$2,478,235	\$1,125,233	\$3,603,468
Permit			\$227,475
Total			\$3,830,943

Additional pricing:

Adders			
Description	Material \$	Labor \$	Total
Monitoring	\$ 147,204	\$ 16,356	\$ 163,560
Blocking	\$ 54,000	\$ 54,000	\$ 108,000
Total	\$ 201,204	\$ 70,356	\$ 271,560

*****Actual bid price may vary due to plan changes.*******Tax incentives are the owner's responsibility.*******Pricing pending due diligence and purchase orders being processed.*******Pricing is good for 30 days.**

761 Eubanks Drive, Vacaville, CA 95688 – Phone 707.446.5500 – License 647149



Solar Scope of Work:

1. Supply and install Qty 348 PV system on composite shingle roof top.
2. Supply and install:
 - JA Solar 440 W All Black Solar Panel or equivalent*,
 - Enphase microinverters
 - Enphase monitoring system.
3. Qty (1) interconnection per unit subpanel in building. AC run goes from the rooftop to AC disconnect at ground level and back up to tenant subpanel in unit.
4. Supply and install flush mount solar racking system
5. Supply and Install AC combiner panels, disconnect , junction boxes.
6. Supply & Install AC & DC wire and conduit.
7. Provide labeling of inverters, disconnect, panels, etc.
8. Assistance with Utility **NEM (Net Energy Metering)** application.
9. Permit Fees, \$450/system.
10. Design and engineering.
11. 25-year Enphase microinverter warranty
12. JA Solar panel warranty: 12-year product & 25-year performance.
13. 10-year workmanship warranty.
14. Non-Prevailing wages.

*Tier 1 PV module in full compliance with the CEC list of eligible PV Modules.

*Hardwire internet connection and service shall be provided by the property owner within 10 feet of the solar interconnection for inverter monitoring.

Exclusions:

1. Upgrades: Electrical, Structural, Utility Infrastructure.
2. Prevailing wages.
3. Supply and install blocking, if required. (see pg 1 for pricing)
4. Utility interconnection fee.
5. Batteries.
6. Third party billing fees.
7. UL Recertification.
8. HERS testing.
9. NEM 2.0 Rates
10. Title 24 calculations.

Payment Schedule:

Milestone 1: Contract Executed	10%
Milestone 2: Solar Panels Ordered	30%
Milestone 3: Module Installation	55%
Milestone 4: Permission to Operate	5%

Net 30 days from invoice

We appreciate the opportunity and your consideration. Let us know if you have any questions.

Sincerely,

Stephanie Morris

Sales Executive

smorris@citadelrs.com

707.933.6958

Builder

APPROVED BY _____ DATE _____

Citadel Roofing & Solar

APPROVED BY _____ DATE _____



Exhibit D

Project spreadsheet with cost category breakdown for the Monte Vista Apartments

Cost Spreadsheet for Monte Vista Apartments - Total Site

Prepared by Jeff Trirogoff 8/31/2025

System Size required:

832 kW DC

Description Cost analysis using CEC/NREL categories for PV Project on Monte Vista Apartments
Includes CalSolar, Tenco Solar and Citadel Roofing & Solar Bids + adders for turnkey design, engineering and installation
*Gross costs only - Federal tax credit not included here

Assumption Ironridge or equivalent racking design most flexible given roof profile
Enphase Microinverter and Monitoring system
Solar Contractor's scopes include complete turnkey solution, including attachment waterproofing, blocking, rough-in, monitoring, electrical, and fire safety requirements for first responders

CEC/NREL 2022 \$/Watt \$ 3.82 *using the higher value of \$3.82 and \$3.74 listed in Docket to be conservative*

Per sample file given by CEC Docket # 22-BSTD-04

Rooftop Microinverter - Enphase, Ironridge

Contractor	# Systems	PV Size - DC	Annual kWh/yr.	Cost	Total Cost	\$/Watt	\$/Watt
					Monte Vista	Monte Vista	CEC/NREL 2022
CalSolar	348	834.33	1,206,924				
	Workmanship Warranty			10 years			
	Base Bid	Material		1,690,761			
	Base Bid	Labor + Design		699,935			
	Permit Fees			139,200			
	Utility Fees			154,860			
	Rough-in Labor			147,013			
	Rough-in Material			367,183			
	Waterproofing Labor			included in base			
	Waterproofing Material			included in base			
	Monitoring Labor			25,209			
	Monitoring Material			660,533			
	Blocking Labor			\$ 153,848			
	Blocking Material			\$ 76,341	\$ 4,114,883	\$ 4.93	\$ 3.82

Cost Spreadsheet for Monte Vista Apartments - Total Site

Contractor	# Systems	PV Size - DC	Annual kWh/yr.	Cost	Total Cost	\$/Watt	\$/Watt
						Monte Vista	CEC/NREL 2022
Tenco Solar	348	845.64	<i>requested but Tenco did not create with bid</i>				
				Workmanship Warranty	10 years		
				Base Bid	Material	\$	2,573,000
				Base Bid	Labor + Design	\$	834,000
				Permit Fees	included in base		
				Utility Fees	included in base		
				Rough-in Labor	\$	448,400	
				Rough-in Material	\$	1,848,400	
				Waterproofing Labor	\$	401,600	
				Waterproofing Material	\$	40,160	
				Monitoring	included in base		
				Blocking	exluded	\$	6,145,560
						\$	7.27
						\$	3.82

Contractor	# Systems	PV Size - DC	Annual kWh/yr.	Cost	Total Cost	\$/Watt	\$/Watt
						Monte Vista	CEC/NREL 2022
Citadel Roofing & Solar	348	840.84	1,190.6				
				Workmanship Warranty	10 years		
				Base Bid	Material	\$	2,478,235
				Base Bid	Labor + Design	\$	1,125,233
				Permitting and Fees	\$	227,475	
				Utility Fees	excluded in bid		
					<i>using CalSolar fees to levelize</i>	\$	154,860
				Rough-in Labor	included in base		
				Rough-in Material	included in base		
				Waterproofing Labor	included in base		
				Waterproofing Material	included in base		
				Monitoring Labor	\$	16,356	
				Monitoring Material	\$	147,204	
				Blocking Labor	\$	54,000	
				Blocking Material	\$	54,000	
					\$	4,257,363	
					\$	5.06	
						\$	3.82

Cost Spreadsheet for Monte Vista Apartments - Total Site

Summary - Monte Vista Project - 832 kW DC			CEC/NREL 2022
Company	Cost	\$/W	\$/W
CalSolar	\$4,114,883	\$4.93	\$3.82
Tenco Solar	\$6,145,560	\$7.27	\$3.82
Citadel Roofing & Solar	\$4,257,363	\$5.06	\$3.82



Exhibit E

Email - PV exemption – from TID – VNEM not permitted

Please advise if this property will be granted a PV exception to T24. If you need anything from me, please let me know. If I need to draft a formal letter, I will do so ASAP.

Thank you.

Best Regards,

Jeff Trirogoff

Energy Project Manager

Pacific West Communities, Inc.

430 E. State St., Suite 100

Eagle, ID 83616

208-963-2240

www.tpchousing.com

Note: This message and any attachments are intended only for the use of the intended recipient or the entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify JeffT@tpchousing.com, and then delete it from your system. All rights reserved. This email is protected by The Electronic Communications Privacy Act of 1986 (ECPA) (18 U.S.C. §§ 2510-2521 (1998)).

From: solar <solar@TID.ORG>

Sent: Thursday, May 1, 2025 8:22 AM

To: Jeff Trirogoff <JeffT@tpchousing.com>

Cc: Dustin Messenger <DustinM@tpchousing.com>; Sukhdeep S. Gill <ssgill@TID.ORG>

Subject: RE: new apartment complex -

CMIT Solutions

Warning: Sender @solar@TID.ORG is not yet trusted by your organization.

Please be careful before replying or clicking/downloading the attachment.

[Report as Spam/Phishing](#) [Block as Spam](#) [Mark as Safe](#)

powered by Graphus®

Yes, you must install 348 solar systems, one for each apartment and one for the community building.

No, we are not able to connect 13 systems and then offset each tenant because that is VMN, which we do not allow.

I have attached our solar standards for you to review. Also, something to keep in mind, our current charges for residential solar applications is \$450 per application and non-residential is \$775 per application.

Let me know if you have any further questions.

Thanks,

Erin

From: Jeff Trirogoff <JeffT@tpchousing.com>
Sent: Wednesday, April 30, 2025 3:23 PM
To: solar <solar@TID.ORG>
Cc: Dustin Messenger <DustinM@tpchousing.com>
Subject: RE: new apartment complex -

CAUTION: This email from JeffT@tpchousing.com originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Are you saying we have to install 348 solar system on 13 buildings (12 tenant and 1 community building)?

Is there an option to connect 13 systems (1 per building to the house meter) and then you can offset each tenant per T24 from that house meter?

Please advise.

From: solar <solar@TID.ORG>
Sent: Wednesday, April 30, 2025 2:38 PM
To: Jeff Trirogoff <JeffT@tpchousing.com>; solar <solar@TID.ORG>
Subject: RE: new apartment complex -



Exhibit F

Email - PV exemption - City of Turlock Regarding Separate PV Disconnect at Ground Level

Jeff Trirogoff

From: Ethan Johnson <EJohnson@turlock.ca.us>
Sent: Monday, June 16, 2025 9:57 AM
To: Jeff Trirogoff
Cc: Ryan LeRoy; Kayla Scully
Subject: RE: 2022 Energy Code PV requirements for LR MF buildings in Turlock Utility service area

CMIT Solutions

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Thank you for your inquiry.

I have added the City of Turlock Fire Inspector to this reply email as you are required to have a Fire inspection prior to a building final.

The City of Turlock **DOES** require a solar PV disconnect at ground level for first responders as per the California Electrical Code article 690.

This disconnect(s) can be examples outlined in that code article.

Please submit your plans as per your recommended scope for approval.

Ethan Johnson

City of Turlock-Building Division
156 S. Broadway Ste. 130

Turlock, Ca. 95380

Office: 209.668.5560 Ext. 2208

EJohnson@turlock.ca.us



The **Building & Safety Division** is open Monday through Friday from 8 AM to 5 PM, excluding holidays. Please be advised that making an appointment is strongly encouraged to ensure that the necessary staff is available to assist you.

For more information or to schedule an appointment, you can contact the **Building Division by calling (209) 668-5560** or by emailing **building@turlock.ca.us**.

 Please consider the environment before printing this email

From: Jeff Trirogoff <JeffT@tpchousing.com>
Sent: Friday, June 13, 2025 1:00 PM
To: Kayla Scully <KScully@turlock.ca.us>
Cc: Saeed, Muhammad@Energy <Muhammad.Saeed@Energy.ca.gov>; Daemi, Sahar@Energy <Sahar.Daemi@Energy.ca.gov>; Sukhdeep S. Gill <ssgill@tid.org>; Achong, Gypsy@Energy <Gypsy.Achong@Energy.ca.gov>; Pennington, Bill@Energy <Bill.Pennington@energy.ca.gov>; Dustin Messenger <DustinM@tpchousing.com>
Subject: RE: 2022 Energy Code PV requirements for LR MF buildings in Turlock Utility service area

Kayla,

We are trying to get bids for this project for solar and need to know if you require a solar PV disconnect at the ground level at the meter that is readily accessible to first responders. It is part of the NEC code and need to know if you require that. The utility is requiring us to connect 348 different solar systems (1 for each unit) since they do not allow Virtual Net Metering.

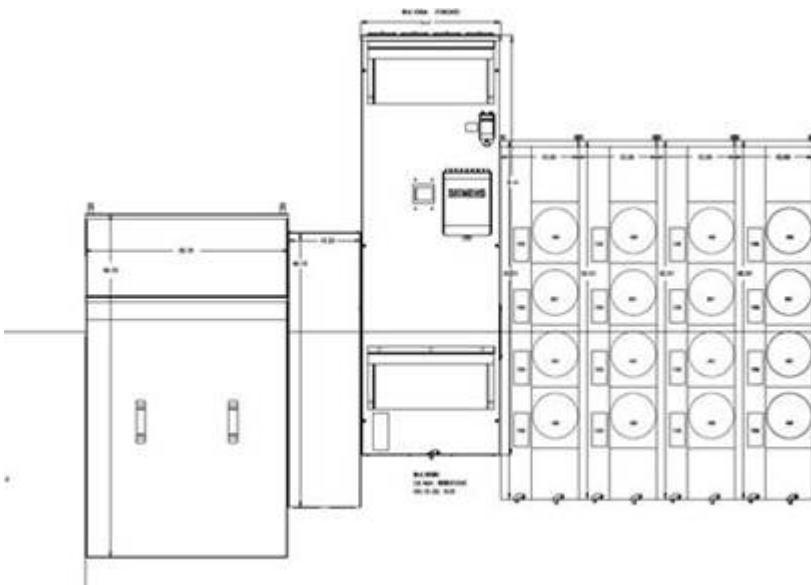
I have asked Sukhdeep at TID and he said:

- “In this scenario, **approval from the City is required before we can proceed**. If the City has no concerns with your proposed design, TID will have no objections. We kindly recommend securing the City’s approval first to ensure alignment across all parties “

I have cc’d Sukhdeep from TID.

Here is the switchgear that was ordered already, which will be downstairs at ground level. There is only a main circuit breaker on the meter. That circuit breaker is the OCPD for the in unit distribution panel for each unit. The string of microinverter would go from the roof to EACH of the tenant’s load center in their units to a 20A breaker. That 20A breaker in their unit is technically the PV disconnect, but it is not readily accessible to first responders, which is why I ask you if you require that to be at the ground level, with either another breaker at the meter or a bladed disconnect.

This is a 3 story apartment complex, which is typical and our switchgear is below for this project.



Please advise as it would significantly change the design and cost of the project.

Thank you.



Exhibit G

Email - PV exemption - TID Supporting Information

Jeff Trirogoff

From: Sukhdeep S. Gill <ssgill@TID.ORG>
Sent: Monday, June 16, 2025 8:50 AM
To: Jeff Trirogoff; solar; Aaron D. Donahue
Cc: Dustin Messenger; Pennington, Bill@Energy; Achong, Gypsy@Energy; Daemi, Sahar@Energy; Saeed, Muhammad@Energy
Subject: RE: new apartment complex -

CMIT Solutions

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Sorry, we do not allow 12 PV systems for 12 buildings. Each unit is supposed to have its own PV system.

From: Jeff Trirogoff <JeffT@tpchousing.com>
Sent: Friday, June 13, 2025 4:14 PM
To: Sukhdeep S. Gill <ssgill@TID.ORG>; solar <solar@TID.ORG>; Aaron D. Donahue <addonahue@TID.ORG>
Cc: Dustin Messenger <DustinM@tpchousing.com>; Pennington, Bill@Energy <Bill.Pennington@energy.ca.gov>; Achong, Gypsy@Energy <Gypsy.Achong@Energy.ca.gov>; Daemi, Sahar@Energy <Sahar.Daemi@Energy.ca.gov>; Saeed, Muhammad@Energy <Muhammad.Saeed@Energy.ca.gov>
Subject: RE: new apartment complex -

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Sukhdeep,

And for clarity, instead of 348 different systems for 348 tenants on 12 buildings, would you allow only 12 PV system (1 per building) to be installed and connected to the house meter and credit the tenants to comply with T24?

Or is connecting 348 different systems to each of the tenant distribution panels (inside each tenant unit) the only option you allow, per the attached load side .pdf you sent us?



Exhibit H

Reserved



Exhibit I

Turlock Irrigation District – DG Tariff Rate and Net Generation Compensation at SRMC



Schedule DG

Domestic Self - Generation Service

Effective January 1, 2025

Applicability

This schedule applies to customers who operate a privately-owned source of electric energy supply within and parallel to the District's system and where the District provides for a share of the customer's load at times for: (1) Domestic service use including lighting, heating, air conditioning, cooking and appliances where a single meter serves a single family dwelling; (2) apartments and multifamily dwelling units where each unit is individually metered by the District; (3) noncommercial or farm uses (except dairy milk barns, poultry houses, and similar type farm uses) with a total connected load of 20 kW or less, where such service is provided in conjunction with a residence on the same property; or (4) where a single meter serves noncommercial or farm uses (except dairy milk barns, poultry houses, and similar type farm uses) on the same property as the residence with a total connected load of 20 kW or less.

Character of Service

Single-phase alternating current will be provided at nominal voltages of 120 or 120/240 volts.

Three-phase alternating current service may be provided to a single-family residence for space conditioning use at nominal voltages of 120/240 or 120/208 volts at the discretion of the District. The additional transformers, for providing three-phase service, will be of standard size and at voltages as designated to be available by the District. A one-time Connection Charge will be billed to the customer to recover the costs of supporting three phase service as provided for in the "Electric Service Schedule of Charges".

Rates

The rates consist of the following Customer, Demand and Energy Charges:

	Effective January 1, 2025	Effective January 1, 2026	Effective January 1, 2027
Customer Charge – per month	\$22.00	\$26.00	\$30.00
Demand Charge – Winter, per kW	\$2.55	\$3.40	\$4.25
Demand Charge – Summer, per kW	\$3.00	\$4.00	\$5.00
Energy Charge(s)			
Winter Billing Months			
On-peak, per kWh	\$0.1198	\$0.0994	\$0.0835
Off-peak, per kWh	\$0.0749	\$0.0622	\$0.0522
Summer Billing Months			
On-peak, per kWh	\$0.1559	\$0.1294	\$0.1087
Off-peak, per kWh	\$0.1122	\$0.0931	\$0.0782

Periods

On-Peak - 12 noon to 9 p.m. Monday through Friday only

Off-Peak - All other hours and holidays

Holidays

New Year's Day – January 1

Washington's Birthday – third Monday in February

Memorial Day – last Monday in May

Independence Day – July 4

Labor Day – first Monday in September

Veteran's Day – November 11

Thanksgiving Day – fourth Thursday in November

Christmas Day – December 25

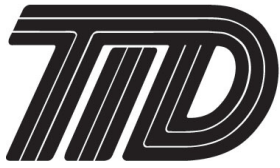
Minimum Charge

The minimum charge for each monthly billing period or portion thereof shall be the Customer Charge and Demand Charge.

Special Conditions

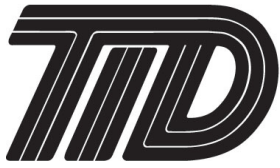
1. Customer accounts billed under this schedule are subject to additional charges as stated in the Conditions and Surcharges.
2. For customers changing schedules between billing dates, the schedule in effect at the time of the end of the normal billing period will be used to compute the bill.
3. Winter billing months shall be the December through May bills. Summer billing months shall be the June through November bills.
4. Customers whose meter reading for the month shows net generation in the On-Peak and/or Off-Peak period shall be compensated at the District's Short Run Marginal Cost of electricity (SRMC) per kWh applicable to the time of delivery. The SRMC shall be calculated and published each month to the TID website.
5. The maximum demand in any month will be the maximum kW delivery metered during any 15-minute interval in the month, and will be used in computing the Demand Charge. The Demand shall be prorated on opening and closing bills where the billing period is greater or less than the average 30-day period.
6. The availability of metering equipment may dictate time required to begin service under Schedule DG.
7. Life-support discount rates for this schedule must meet the criteria in Electric Service Rule 21. The life-support discount is equal to a 50% reduction on the first 500 kWh of usage per month. For the purpose of applying the Life-support discount, 35% of the first 500 kWh shall be attributed to On-Peak pricing, and the remainder to Off-Peak pricing.
8. If applicable, a discount will be applied as outlined in the Residential Service Energy Assistance Program (RSEAP) tariff sheet as adopted by the TID Board of Directors. For the purpose of applying the RSEAP discount, 35% of kilowatt hours applicable to the discount shall be attributed to On-Peak pricing, and the remainder to Off-Peak pricing.
9. The District shall compensate customers for certified environmental attributes based on the short run marginal cost of those environmental attributes applicable to the time period of delivery, at a rate which leaves non-generating customers economically indifferent to the payments. The short run marginal cost of environmental attributes shall be published to the District website quarterly.

Revised Date: January 1, 2025



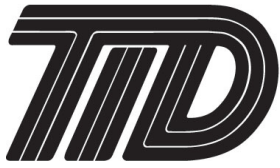
Short Run Marginal Cost Daily Average

Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)
8/26/2025	0.053303	0.046095	7/24/2025	0.037551	0.037645	6/21/2025	-	0.015708
8/25/2025	0.064259	0.050150	7/23/2025	0.033820	0.036953	6/20/2025	0.019862	0.027667
8/24/2025	-	0.051251	7/22/2025	0.032327	0.036933	6/19/2025	0.034184	0.033211
8/23/2025	-	0.053747	7/21/2025	0.037791	0.039985	6/18/2025	0.039914	0.033615
8/22/2025	0.074014	0.051100	7/20/2025	-	0.034395	6/17/2025	0.033480	0.030184
8/21/2025	0.072041	0.048111	7/19/2025	-	0.034777	6/16/2025	0.030148	0.030067
8/20/2025	0.047594	0.041021	7/18/2025	0.039259	0.041039	6/15/2025	-	0.026568
8/19/2025	0.041243	0.039965	7/17/2025	0.040340	0.040693	6/14/2025	-	0.022379
8/18/2025	0.037239	0.038127	7/16/2025	0.041954	0.042065	6/13/2025	0.022347	0.028493
8/17/2025	-	0.033272	7/15/2025	0.042652	0.041839	6/12/2025	0.028770	0.028827
8/16/2025	-	0.031742	7/14/2025	0.047680	0.041622	6/11/2025	0.032558	0.032259
8/15/2025	0.036092	0.036121	7/13/2025	-	0.040290	6/10/2025	0.041699	0.035335
8/14/2025	0.036831	0.037609	7/12/2025	-	0.037660	6/9/2025	0.045271	0.037873
8/13/2025	0.037229	0.036444	7/11/2025	0.047301	0.040979	6/8/2025	-	0.032107
8/12/2025	0.044806	0.038889	7/10/2025	0.047889	0.038435	6/7/2025	-	0.028386
8/11/2025	0.046659	0.039031	7/9/2025	0.042799	0.039637	6/6/2025	0.034398	0.033607
8/10/2025	-	0.039743	7/8/2025	0.047739	0.041401	6/5/2025	0.036377	0.037679
8/9/2025	-	0.038364	7/7/2025	0.048864	0.042095	6/4/2025	0.034826	0.034097
8/8/2025	0.045712	0.038676	7/6/2025	-	0.034130	6/3/2025	0.033266	0.034765
8/7/2025	0.045478	0.037639	7/5/2025	-	0.029607	6/2/2025	0.028618	0.032277
8/6/2025	0.044009	0.037796	7/4/2025	-	0.028265	6/1/2025	-	0.034250
8/5/2025	0.036666	0.036873	7/3/2025	0.035952	0.035078	5/31/2025	-	0.040886
8/4/2025	0.035046	0.033407	7/2/2025	0.039058	0.036996	5/30/2025	0.049754	0.043351
8/3/2025	-	0.028913	7/1/2025	0.046168	0.041900	5/29/2025	0.035862	0.034588
8/2/2025	-	0.033728	6/30/2025	0.048912	0.042412	5/28/2025	0.035276	0.036612
8/1/2025	0.037474	0.036797	6/29/2025	-	0.040339	5/27/2025	0.034222	0.032849
7/31/2025	0.040821	0.038752	6/28/2025	-	0.036210	5/26/2025	0.018892	0.023057
7/30/2025	0.042240	0.038208	6/27/2025	0.036479	0.036477	5/25/2025	-	0.016798
7/29/2025	0.044261	0.038104	6/26/2025	0.033833	0.034017	5/24/2025	-	0.016747
7/28/2025	0.041843	0.037543	6/25/2025	0.033290	0.033210	5/23/2025	0.015263	0.025476
7/27/2025	-	0.026876	6/24/2025	0.030781	0.034281	5/22/2025	0.022470	0.028806
7/26/2025	-	0.024899	6/23/2025	0.034099	0.035453	5/21/2025	0.032237	0.033424
7/25/2025	0.032583	0.033640	6/22/2025	-	0.024147	5/20/2025	0.019552	0.022886



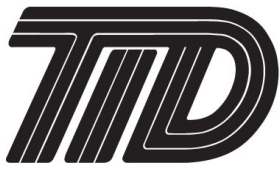
Short Run Marginal Cost Daily Average

Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)
5/19/2025	0.008337	0.019635	4/16/2025	0.013696	0.028200	3/14/2025	0.042483	0.052769
5/18/2025	-	0.004157	4/15/2025	0.023447	0.032827	3/13/2025	0.030349	0.047087
5/17/2025	-	0.017449	4/14/2025	0.030013	0.035843	3/12/2025	0.047278	0.050999
5/16/2025	0.026458	0.030861	4/13/2025	-	0.017967	3/11/2025	0.042417	0.054041
5/15/2025	0.019334	0.030959	4/12/2025	-	0.014210	3/10/2025	0.031894	0.047986
5/14/2025	0.011722	0.023729	4/11/2025	0.016704	0.026796	3/9/2025	-	0.022244
5/13/2025	0.016892	0.029629	4/10/2025	0.018988	0.030218	3/8/2025	-	0.028597
5/12/2025	0.027882	0.035581	4/9/2025	0.016682	0.029658	3/7/2025	0.023481	0.039131
5/11/2025	-	0.027208	4/8/2025	0.008528	0.026354	3/6/2025	0.038258	0.047167
5/10/2025	-	0.040699	4/7/2025	0.015484	0.028145	3/5/2025	0.052696	0.055305
5/9/2025	0.043533	0.044757	4/6/2025	-	0.018193	3/4/2025	0.036626	0.045069
5/8/2025	0.034163	0.037327	4/5/2025	-	0.020781	3/3/2025	0.031786	0.038193
5/7/2025	0.023984	0.035507	4/4/2025	0.011887	0.033277	3/2/2025	-	0.034543
5/6/2025	0.024240	0.034589	4/3/2025	0.012012	0.029117	3/1/2025	-	0.026175
5/5/2025	0.028706	0.033359	4/2/2025	0.008620	0.029449	2/28/2025	0.029197	0.038651
5/4/2025	-	0.017577	4/1/2025	0.008864	0.022307	2/27/2025	0.034754	0.041492
5/3/2025	-	0.020775	3/31/2025	0.009792	0.025041	2/26/2025	0.034192	0.040746
5/2/2025	0.016129	0.028182	3/30/2025	-	0.010923	2/25/2025	0.014338	0.027109
5/1/2025	0.024832	0.030717	3/29/2025	-	-0.001223	2/24/2025	0.032181	0.039551
4/30/2025	0.024496	0.031538	3/28/2025	0.000039	0.014569	2/23/2025	-	0.028763
4/29/2025	0.017404	0.031249	3/27/2025	0.006526	0.018624	2/22/2025	-	0.036817
4/28/2025	0.012984	0.028587	3/26/2025	0.009729	0.025420	2/21/2025	0.039310	0.044942
4/27/2025	-	0.024392	3/25/2025	0.027491	0.034105	2/20/2025	0.034662	0.041241
4/26/2025	-	0.028733	3/24/2025	0.021046	0.034488	2/19/2025	0.047178	0.049061
4/25/2025	0.016001	0.030231	3/23/2025	-	0.015096	2/18/2025	0.050610	0.050067
4/24/2025	0.019037	0.031627	3/22/2025	-	0.016598	2/17/2025	-	0.036383
4/23/2025	0.015860	0.033219	3/21/2025	0.015193	0.036743	2/16/2025	-	0.038439
4/22/2025	0.019166	0.032717	3/20/2025	0.021119	0.043655	2/15/2025	-	0.037106
4/21/2025	0.016386	0.026683	3/19/2025	0.036149	0.048964	2/14/2025	0.033969	0.042545
4/20/2025	-	0.011593	3/18/2025	0.029017	0.043159	2/13/2025	0.052963	0.049687
4/19/2025	-	0.011578	3/17/2025	0.031680	0.047571	2/12/2025	0.057593	0.054377
4/18/2025	0.008012	0.024970	3/16/2025	-	0.030309	2/11/2025	0.045333	0.050781
4/17/2025	0.014243	0.027315	3/15/2025	-	0.024452	2/10/2025	0.049232	0.053414



Short Run Marginal Cost Daily Average

Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)
2/9/2025	-	0.038775	1/7/2025	0.043496	0.048653	12/5/2024	0.050533	0.049779
2/8/2025	-	0.034940	1/6/2025	0.040198	0.042828	12/4/2024	0.051681	0.049650
2/7/2025	0.036278	0.043707	1/5/2025	-	0.037603	12/3/2024	0.052951	0.050379
2/6/2025	0.059141	0.049579	1/4/2025	-	0.036073	12/2/2024	0.055980	0.057035
2/5/2025	0.052661	0.050039	1/3/2025	0.042697	0.044400	12/1/2024	-	0.052245
2/4/2025	0.063682	0.056913	1/2/2025	0.039653	0.041137	11/30/2024	-	0.047599
2/3/2025	0.061649	0.051572	1/1/2025	-	0.037743	11/29/2024	0.047648	0.045640
2/2/2025	-	0.043543	12/31/2024	0.043876	0.044425	11/28/2024	-	0.044638
2/1/2025	-	0.039238	12/30/2024	0.035671	0.032894	11/27/2024	0.050058	0.046981
1/31/2025	0.043754	0.046465	12/29/2024	-	0.031002	11/26/2024	0.052809	0.049157
1/30/2025	0.042459	0.045745	12/28/2024	-	0.031387	11/25/2024	0.066514	0.053714
1/29/2025	0.043582	0.050355	12/27/2024	0.034861	0.033614	11/24/2024	-	0.049678
1/28/2025	0.048312	0.057967	12/26/2024	0.041072	0.039127	11/23/2024	-	0.044694
1/27/2025	0.053254	0.058003	12/25/2024	-	0.037818	11/22/2024	0.058978	0.051571
1/26/2025	-	0.050679	12/24/2024	0.038710	0.042015	11/21/2024	0.060384	0.052729
1/25/2025	-	0.044765	12/23/2024	0.045919	0.042310	11/20/2024	0.055140	0.050529
1/24/2025	0.041921	0.049013	12/22/2024	-	0.040070	11/19/2024	0.056156	0.054335
1/23/2025	0.046120	0.055071	12/21/2024	-	0.041796	11/18/2024	0.037881	0.036755
1/22/2025	0.044469	0.053911	12/20/2024	0.043510	0.044583	11/17/2024	-	0.038315
1/21/2025	0.059716	0.070923	12/19/2024	0.049364	0.047619	11/16/2024	-	0.040506
1/20/2025	0.051282	0.063717	12/18/2024	0.043898	0.045535	11/15/2024	0.044600	0.043688
1/19/2025	-	0.058224	12/17/2024	0.049236	0.048899	11/14/2024	0.041859	0.042456
1/18/2025	-	0.063061	12/16/2024	0.051478	0.050549	11/13/2024	0.044457	0.041308
1/17/2025	0.045172	0.050040	12/15/2024	-	0.044790	11/12/2024	0.038272	0.036607
1/16/2025	0.044088	0.050776	12/14/2024	-	0.046502	11/11/2024	-	0.034246
1/15/2025	0.051370	0.054093	12/13/2024	0.051493	0.047653	11/10/2024	-	0.035353
1/14/2025	0.052336	0.057824	12/12/2024	0.055442	0.053212	11/9/2024	-	0.037921
1/13/2025	0.044558	0.048840	12/11/2024	0.056700	0.054880	11/8/2024	0.042936	0.045772
1/12/2025	-	0.041910	12/10/2024	-	-	11/7/2024	0.045819	0.045090
1/11/2025	-	0.031270	12/9/2024	0.049531	0.046432	11/6/2024	0.038847	0.038047
1/10/2025	0.033047	0.038194	12/8/2024	-	0.040844	11/5/2024	0.035292	0.035133
1/9/2025	0.040972	0.045231	12/7/2024	-	0.045403	11/4/2024	0.033686	0.036952
1/8/2025	0.043057	0.043908	12/6/2024	0.052016	0.050243	11/3/2024	-	0.019692



Short Run Marginal Cost Daily Average

Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)	Date	On-Peak (\$/KWH)	Off-Peak (\$/KWH)
11/2/2024	-	0.030052	9/30/2024	0.048142	0.040477	8/28/2024	0.038196	0.030426
11/1/2024	0.038338	0.043718	9/29/2024	-	0.034694	8/27/2024	0.039498	0.028983
10/31/2024	0.049684	0.048782	9/28/2024	-	0.035958	8/26/2024	0.037636	0.030645
10/30/2024	0.051981	0.054695	9/27/2024	0.041687	0.035652	8/25/2024	-	0.020277
10/29/2024	0.045013	0.046895	9/26/2024	0.038342	0.036631	8/24/2024	-	0.016202
10/28/2024	0.042066	0.040853	9/25/2024	0.034308	0.035322	8/23/2024	0.024351	0.027499
10/27/2024	-	0.039791	9/24/2024	0.046259	0.036413	8/22/2024	0.031144	0.031861
10/26/2024	-	0.043535	9/23/2024	0.042897	0.035616	8/21/2024	0.036363	0.030541
10/25/2024	0.048779	0.047341	9/22/2024	-	0.036677	8/20/2024	0.037766	0.031395
10/24/2024	0.044161	0.040497	9/21/2024	-	0.030433	8/19/2024	0.039602	0.033279
10/23/2024	0.040151	0.039295	9/20/2024	0.030459	0.033283	8/18/2024	-	0.031283
10/22/2024	0.040794	0.038651	9/19/2024	0.031696	0.034623	8/17/2024	-	0.032033
10/21/2024	0.037741	0.036876	9/18/2024	0.036001	0.034804	8/16/2024	0.041572	0.032824
10/20/2024	-	0.034022	9/17/2024	0.022568	0.028163	8/15/2024	0.034926	0.030297
10/19/2024	-	0.033361	9/16/2024	0.027328	0.031049	8/14/2024	0.036093	0.031166
10/18/2024	0.033837	0.038215	9/15/2024	-	0.023878	8/13/2024	0.033123	0.030631
10/17/2024	0.037377	0.040749	9/14/2024	-	0.026200	8/12/2024	0.036591	0.032964
10/16/2024	0.045324	0.044636	9/13/2024	0.030838	0.029785	8/11/2024	-	0.032739
10/15/2024	0.050389	0.046055	9/12/2024	0.021808	0.026010	8/10/2024	-	0.034912
10/14/2024	0.045018	0.040907	9/11/2024	0.025489	0.028585	8/9/2024	0.043387	0.034590
10/13/2024	-	0.040825	9/10/2024	0.036003	0.033278	8/8/2024	0.047844	0.037199
10/12/2024	-	0.041971	9/9/2024	0.047272	0.035811	8/7/2024	0.058036	0.040577
10/11/2024	0.049803	0.047073	9/8/2024	-	0.038422	8/6/2024	0.103982	0.044703
10/10/2024	0.062667	0.050833	9/7/2024	-	0.042378	8/5/2024	0.103140	0.048040
10/9/2024	0.071052	0.054325	9/6/2024	0.075136	0.040210	8/4/2024	-	0.052598
10/8/2024	0.071884	0.055158	9/5/2024	0.170601	0.045048	8/3/2024	-	0.062121
10/7/2024	0.093649	0.057862	9/4/2024	0.095654	0.038429	8/2/2024	0.096190	0.052753
10/6/2024	-	0.059225	9/3/2024	0.048887	0.032799	8/1/2024	0.080873	0.046322
10/5/2024	-	0.058866	9/2/2024	-	0.030268	7/31/2024	0.052971	0.038573
10/4/2024	0.053764	0.049503	9/1/2024	-	0.031028	7/30/2024	0.035568	0.031647
10/3/2024	0.072062	0.047212	8/31/2024	-	0.030120	7/29/2024	0.039200	0.035171
10/2/2024	0.080430	0.048705	8/30/2024	0.035097	0.029111	7/28/2024	-	0.032160
10/1/2024	0.071571	0.050424	8/29/2024	0.035291	0.031007	7/27/2024	-	0.037100

Exhibit J

The Monte Vista Apartments Project Title 24 CF1R (T24 PV Requirements Per Building Type)

CERTIFICATE OF COMPLIANCE
Project Name: Monte Vista Bldg A

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-06-20T00:30:57-07:00

Input File Name: Monte Vista Building (A).rld19x

CF1R-PRF-01E
(Page 4 of 24)
REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
52	NA	Premium	Fixed	Microinverters	true	105-300	n/a	n/a	<=7:12	97	98

CERTIFICATE OF COMPLIANCE
Project Name: Monte Vista Bldg B

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-06-20T00:31:11-07:00

Input File Name: Monte Vista Building (B).rld19x

CF1R-PRF-01E
(Page 4 of 27)
REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
70	NA	Premium	Fixed	Microinverters	true	105-300	n/a	n/a	<=7:12	97	98

CERTIFICATE OF COMPLIANCE
Project Name: Monte Vista Bldg C

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-06-20T00:33:12-07:00

Input File Name: Monte Vista Building (C).rld19x

CF1R-PRF-01E
(Page 2 of 25)
ENERGY DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency ¹ (EDR)	Total ² (EDR)	Efficiency ¹ (EDR)	Total ² (EDR)
Standard Design	61.9	33.3		
Proposed Design	60	32	1.9	1.3

RESULT: ³ COMPLIES
¹: Efficiency EDR includes improvements to the building envelope and more efficient equipment

²: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries

³: Building complies when efficiency and total compliance margins are greater than or equal to zero

• Standard Design PV Capacity: 66.02 kWdc

ENERGY USE SUMMARY

Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	15.32	16.21	-0.89	-5.8
Space Cooling	30.54	26.21	4.33	14.2
IAQ Ventilation	9.09	9.09	0	0
Water Heating	23.4	21.13	2.27	9.7
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	78.35	72.64	5.71	7.3

REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
69	NA	Premium	Fixed	Microinverters	true	105-300	n/a	n/a	<=7:12	97	98

Exhibit J

The Monte Vista Apartments Project Title 24 CF1R (T24 PV Requirements Per Building Type)

CERTIFICATE OF COMPLIANCE
Project Name: Monte Vista Bldg D

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-06-20T00:33:34-07:00

Input File Name: Monte Vista Building (D).ribd19x

CF1R-PRF-01E
(Page 4 of 28)
REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
78	NA	Premium	Fixed	Microinverters	true	105-300	n/a	n/a	<=7:12	97	98

CERTIFICATE OF COMPLIANCE
Project Name: Monte Vista Bldg E

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2025-06-20T00:33:56-07:00

Input File Name: Monte Vista Building (E).ribd19x

CF1R-PRF-01E
(Page 2 of 26)
ENERGY DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency ¹ (EDR)	Total ² (EDR)	Efficiency ¹ (EDR)	Total ² (EDR)
Standard Design	62.4	33.8		
Proposed Design	60.5	33	1.9	0.8
RESULT: ³ COMPLIES				
1: Efficiency EDR includes improvements to the building envelope and more efficient equipment				
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries				
3: Building complies when efficiency and total compliance margins are greater than or equal to zero				
• Standard Design PV Capacity: 73.11 kWdc				

ENERGY USE SUMMARY

Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	17.58	17.54	0.04	0.2
Space Cooling	27.79	24.48	3.31	11.9
IAQ Ventilation	9.18	9.18	0	0
Water Heating	21.56	19.42	2.14	9.9
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	76.11	70.62	5.49	7.2

REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
75	NA	Premium	Fixed	Microinverters	true	105-300	n/a	n/a	<=7:12	97	98



Exhibit K

The Monte Vista Apartments ECON1 Forms

ENERGY USE AND COST SUMMARY

ECON-1

Project Name

Monte Vista Apts Bldg A

Date

8/21/2025

	Rate:			Fuel Type: Electricity					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)
Jan	5,913	26.7		6,004	26.8		-92	-0.1	
Feb	2,690	29.8		2,797	29.8		-107	0.0	
Mar	1,203	21.8		1,312	21.8		-109	0.0	
Apr	-182	27.8		-81	27.0		-100	0.8	
May	-625	30.3		-655	27.7		31	2.6	
Jun	-783	35.2		-946	33.2		163	2.0	
Jul	405	38.7		67	36.1		338	2.6	
Aug	425	36.5		172	33.8		253	2.7	
Sep	1,608	37.4		1,395	34.7		212	2.7	
Oct	1,584	25.4		1,649	25.4		-65	0.0	
Nov	4,126	23.6		4,218	23.8		-93	-0.2	
Dec	5,543	25.9		5,636	26.0		-93	-0.1	
Year	21,906	38.7		21,568	36.1		338	2.6	
CO ₂		tons/yr			tons/yr			tons/yr	

	Rate:			Fuel Type: Natural Gas					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan	611	422.8		582	381.9		29	40.9	
Feb	413	422.1		402	383.2		12	39.0	
Mar	331	338.8		318	315.1		13	23.8	
Apr	295	356.0		295	333.9		1	22.1	
May	196	164.4		181	233.3		15	-68.9	
Jun	160	92.4		143	80.3		17	12.1	
Jul	152	84.8		137	74.2		15	10.6	
Aug	150	74.8		135	65.7		15	9.1	
Sep	151	79.6		136	70.0		15	9.6	
Oct	164	146.3		149	185.4		14	-39.1	
Nov	347	420.5		343	377.7		4	42.8	
Dec	591	422.8		562	381.4		29	41.4	
Year	3,562	422.8		3,383	383.2		179	39.6	
CO ₂		tons/yr			tons/yr			tons/yr	

Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate
Electricity	21,568 kWh	36 kW	\$ 0	\$ 0.00 /sqft	\$ n/a /kWh
Natural Gas	3,383 therms	383 kBtu/hr	\$ 0	\$ 0.00 /sqft	\$ 0.00 /therm
		Total	\$ 0	\$ 0.00 /sqft	

Site Energy Use Index: 21.51 kBtuh/yr

ENERGY USE AND COST SUMMARY

ECON-1

Project Name

Monte Vista Apts Bldg B

Date

8/21/2025

	Rate:			Fuel Type: Electricity					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)
Jan	7,775	31.8		7,838	31.9		-63	-0.1	
Feb	3,529	36.4		3,573	36.4		-44	0.0	
Mar	1,517	28.0		1,522	28.0		-5	0.0	
Apr	-272	31.4		-296	30.5		24	0.9	
May	-797	41.6		-980	39.7		183	1.9	
Jun	-1,151	46.4		-1,489	44.6		338	1.8	
Jul	460	50.9		-60	48.3		520	2.6	
Aug	530	47.2		90	44.1		440	3.2	
Sep	2,085	48.5		1,706	46.2		380	2.3	
Oct	1,984	30.6		1,936	30.6		48	0.0	
Nov	5,453	32.2		5,493	32.2		-40	0.0	
Dec	7,350	30.6		7,410	30.7		-60	-0.1	
Year	28,463	50.9		26,743	48.3		1,720	2.6	
CO ₂		tons/yr			tons/yr			tons/yr	

	Rate:			Fuel Type: Natural Gas					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan	809	558.5		768	502.2		41	56.3	
Feb	550	545.1		536	494.0		14	51.1	
Mar	436	453.7		422	419.2		14	34.5	
Apr	394	487.3		395	452.6		-1	34.7	
May	262	227.1		242	313.0		20	-86.0	
Jun	210	102.5		188	89.3		22	13.2	
Jul	204	97.5		183	85.3		21	12.1	
Aug	198	112.9		178	98.5		20	14.4	
Sep	198	96.7		178	85.1		20	11.6	
Oct	214	192.1		195	247.6		19	-55.5	
Nov	461	551.0		456	493.7		5	57.3	
Dec	785	563.7		745	506.2		41	57.4	
Year	4,721	563.7		4,486	506.2		236	57.4	
CO ₂		tons/yr			tons/yr			tons/yr	

Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate
Electricity	26,743 kWh	48 kW	\$ 0	\$ 0.00 /sqft	\$ n/a /kWh
Natural Gas	4,486 therms	506 kBtu/hr	\$ 0	\$ 0.00 /sqft	\$ 0.00 /therm
		Total	\$ 0	\$ 0.00 /sqft	

Site Energy Use Index: 20.79 kBtuh/yr

ENERGY USE AND COST SUMMARY									ECON-1																								
Project Name Monte Vista Apts Bldg C								Date 8/21/2025																									
	Rate:			Fuel Type: Electricity																													
	STANDARD			PROPOSED			MARGIN																										
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)																								
Jan	7,752	34.1		7,898	34.3		-146	-0.2																									
Feb	3,393	33.3		3,582	33.3		-190	0.0																									
Mar	1,641	31.0		1,855	31.1		-214	0.0																									
Apr	-462	32.3		-243	31.3		-219	1.0																									
May	-911	40.6		-858	38.6		-54	2.0																									
Jun	-1,210	47.6		-1,375	44.7		165	2.9																									
Jul	667	49.7		314	46.9		353	2.7																									
Aug	868	48.2		582	45.8		286	2.4																									
Sep	2,296	50.7		2,095	48.2		201	2.5																									
Oct	1,981	33.7		2,137	33.7		-156	0.0																									
Nov	5,476	32.2		5,637	32.2		-161	0.0																									
Dec	7,363	32.6		7,512	32.7		-149	-0.2																									
Year	28,852	50.7		29,136	48.2		-284	2.5																									
CO ₂		tons/yr			tons/yr			tons/yr																									
	Rate:			Fuel Type: Natural Gas																													
	STANDARD			PROPOSED			MARGIN																										
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)																								
Jan	770	529.2		732	476.2		38	53.1																									
Feb	523	520.1		509	472.4		14	47.7																									
Mar	426	425.2		412	397.0		14	28.2																									
Apr	373	476.0		379	448.0		-6	28.0																									
May	262	175.9		242	291.4		20	-115.5																									
Jun	211	106.3		189	93.0		22	13.3																									
Jul	206	97.0		185	85.0		21	12.0																									
Aug	204	107.4		183	93.8		21	13.6																									
Sep	199	94.4		178	83.1		20	11.3																									
Oct	211	137.5		193	208.1		18	-70.5																									
Nov	431	549.0		427	489.9		5	59.1																									
Dec	742	558.2		706	500.8		37	57.3																									
Year	4,558	558.2		4,334	500.8		224	57.3																									
CO ₂		tons/yr			tons/yr			tons/yr																									
<table><tr><td>Annual Totals</td><td>Energy</td><td>Demand</td><td>Cost</td><td>Cost/sqft</td><td>Virtual Rate</td></tr><tr><td>Electricity</td><td>29,136 kWh</td><td>48 kW</td><td>\$ 0</td><td>\$ 0.00 /sqft</td><td>\$ n/a /kWh</td></tr><tr><td>Natural Gas</td><td>4,334 therms</td><td>501 kBtu/hr</td><td>\$ 0</td><td>\$ 0.00 /sqft</td><td>\$ 0.00 /therm</td></tr><tr><td></td><td></td><td>Total</td><td>\$ 0</td><td>\$ 0.00 /sqft</td><td></td></tr></table>										Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate	Electricity	29,136 kWh	48 kW	\$ 0	\$ 0.00 /sqft	\$ n/a /kWh	Natural Gas	4,334 therms	501 kBtu/hr	\$ 0	\$ 0.00 /sqft	\$ 0.00 /therm			Total	\$ 0	\$ 0.00 /sqft	
Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate																												
Electricity	29,136 kWh	48 kW	\$ 0	\$ 0.00 /sqft	\$ n/a /kWh																												
Natural Gas	4,334 therms	501 kBtu/hr	\$ 0	\$ 0.00 /sqft	\$ 0.00 /therm																												
		Total	\$ 0	\$ 0.00 /sqft																													
Site Energy Use Index:								19.87	kBtuh/yr																								
EnergyPro 8.3 by EnergySoft 5 User Number: 50018 ID: 2021-518 Page 1 of 1																																	

ENERGY USE AND COST SUMMARY

ECON-1

Project Name

Monte Vista Apts Bldg D

Date

8/21/2025

	Rate:			Fuel Type: Electricity					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)
Jan	8,588	36.6		8,663	36.7		-75	-0.1	
Feb	3,914	32.3		3,982	32.3		-68	0.0	
Mar	1,613	31.3		1,654	31.4		-40	-0.1	
Apr	-370	33.2		-354	32.4		-16	0.8	
May	-978	48.0		-1,129	45.6		151	2.3	
Jun	-1,522	54.1		-1,840	51.5		318	2.6	
Jul	511	56.0		-5	52.5		516	3.5	
Aug	565	55.4		136	51.4		429	4.1	
Sep	2,126	51.1		1,745	47.3		382	3.8	
Oct	2,185	32.8		2,166	32.8		18	0.0	
Nov	6,042	34.6		6,101	34.6		-59	-0.1	
Dec	8,326	31.2		8,399	31.3		-73	-0.1	
Year	31,000	56.0		29,519	52.5		1,481	3.5	
CO ₂		tons/yr			tons/yr			tons/yr	

	Rate:			Fuel Type: Natural Gas					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan	940	635.7		877	562.4		63	73.4	
Feb	643	615.3		617	554.3		26	61.0	
Mar	505	529.6		486	481.7		19	47.9	
Apr	455	586.7		453	536.9		3	49.7	
May	298	275.7		275	365.3		23	-89.5	
Jun	234	116.8		209	102.2		25	14.6	
Jul	229	106.6		205	93.5		24	13.1	
Aug	223	116.2		200	101.5		23	14.7	
Sep	218	99.1		195	87.0		23	12.0	
Oct	239	235.4		217	288.9		22	-53.5	
Nov	539	652.4		522	576.9		17	75.4	
Dec	913	670.9		850	596.2		63	74.7	
Year	5,436	670.9		5,105	596.2		331	74.7	
CO ₂		tons/yr			tons/yr			tons/yr	

Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate
Electricity	29,519 kWh	53 kW	\$ 0	\$ 0.00 /sqft	\$ n/a /kWh
Natural Gas	5,105 therms	596 kBtu/hr	\$ 0	\$ 0.00 /sqft	\$ 0.00 /therm
		Total	\$ 0	\$ 0.00 /sqft	

Site Energy Use Index: 19.16 kBtuh/yr

ENERGY USE AND COST SUMMARY

ECON-1

Project Name

Monte Vista Apts Bldg E

Date

8/21/2025

	Rate:			Fuel Type: Electricity					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)
Jan	8,592	36.6		8,816	36.9		-224	-0.3	
Feb	3,913	32.3		4,238	32.3		-325	0.0	
Mar	1,607	31.3		2,017	31.4		-410	-0.1	
Apr	-381	33.1		70	32.4		-451	0.7	
May	-987	48.0		-645	46.0		-343	2.0	
Jun	-1,521	54.2		-1,311	52.1		-209	2.0	
Jul	528	56.1		565	53.2		-37	2.9	
Aug	576	55.7		688	52.1		-112	3.5	
Sep	2,123	51.2		2,252	48.3		-128	2.9	
Oct	2,176	32.8		2,523	32.8		-347	0.0	
Nov	6,042	34.6		6,318	34.6		-276	-0.1	
Dec	8,330	31.2		8,562	31.3		-232	-0.1	
Year	30,999	56.1		34,093	53.2		-3,095	2.9	
CO ₂		tons/yr			tons/yr			tons/yr	

	Rate:			Fuel Type: Natural Gas					
	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan	950	639.5		883	568.2		68	71.3	
Feb	651	619.7		615	559.7		36	60.1	
Mar	509	533.4		481	485.9		29	47.5	
Apr	459	590.8		450	542.0		9	48.8	
May	299	282.5		275	370.1		24	-87.6	
Jun	234	116.8		209	102.2		25	14.6	
Jul	229	106.6		205	93.5		24	13.1	
Aug	223	116.2		200	101.5		23	14.7	
Sep	218	99.1		195	87.0		23	12.0	
Oct	239	240.2		217	283.8		22	-43.6	
Nov	546	655.9		522	582.3		24	73.6	
Dec	923	674.8		856	601.4		67	73.4	
Year	5,481	674.8		5,107	601.4		374	73.4	
CO ₂		tons/yr			tons/yr			tons/yr	

Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate
Electricity	34,093 kWh	53 kW	\$ 0	\$ 0.00 /sqft	\$ n/a /kWh
Natural Gas	5,107 therms	601 kBtu/hr	\$ 0	\$ 0.00 /sqft	\$ 0.00 /therm
		Total	\$ 0	\$ 0.00 /sqft	

Site Energy Use Index:

19.66 kBtuh/yr

ECON-1

Date
8/21/2025

	Rate:						Fuel Type: <i>Natural Gas</i>		
	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan	60	70.9		54	63.5		5	7.4	
Feb	48	52.9		44	48.8		4	4.1	
Mar	38	46.2		36	42.7		2	3.5	
Apr	33	44.4		33	41.3		0	3.1	
May	19	27.6		18	25.3		1	2.3	
Jun	14	27.3		13	23.5		1	3.7	
Jul	14	26.1		13	22.6		1	3.5	
Aug	15	27.9		14	24.1		1	3.8	
Sep	16	24.2		15	21.0		1	3.2	
Oct	15	29.2		14	25.2		1	4.0	
Nov	41	46.2		37	42.7		4	3.5	
Dec	58	52.9		53	48.1		6	4.7	
Year	372	70.9		344	63.5		29	7.4	
CO ₂		tons/yr			tons/yr			tons/yr	

Site Energy Use Index: 13.77 kBtuh/yr