



Cathedral City

CITY COUNCIL STUDY SESSION AGENDA

CITY COUNCIL CHAMBERS 68-700 AVENIDA LALO GUERRERO CATHEDRAL CITY, CA 92234

Tuesday, February 6, 2018

STUDY SESSION

4:30 PM

- **CALL TO ORDER**
- **ROLL CALL**
- **AGENDA FINALIZATION**

At this time, the City Council may announce any items being pulled from the agenda or continued to another date.

- **STATEMENT OF PARTICIPATION BY THE DEPUTY CITY CLERK**

1. PUBLIC COMMENT

Public Comment is limited to 3 minutes per person.

2. STUDY SESSION

Normally, no action is taken on Study Session items; however, the City Council reserves the right to give specific policy direction and take specific action as necessary. Presentations will be limited to 10 minutes unless other provisions are made in advance.

- 2.A. [2018-28](#) Update from the Cannabis Task Force Regarding Consumption Lounges and Employee Background Checks**

Recommendation: This item is provided for information, discussion and direction only.

- 2.B. [2018-34](#) Status on Solar Requirements for New Construction**

Recommendation: This item is provided for information, discussion and direction only.

3. CLOSED SESSION

The City Council may hear all or some of the following Closed Session Items if time permits, otherwise they will be heard at the end of the City Council Meeting.

3.A. [2018-29](#) Conference with Legal Counsel - Existing Litigation Pursuant to Government Code Section 54956.9(d)(1):

Case Name: Alirio Moulin v. City of Cathedral City, et. al.

Case Number: PSC 1800253

3.B. [2018-32](#) Conference with Legal Counsel - Existing Litigation Pursuant to Government Code Section 54956.9(d)(1):

Case Name: Cathedral City v. Anthony Davis, et al.

Case Number: PSC 1401152

3.C. [2018-35](#) City Council: Public Employee Performance Evaluation Per Government Code Section 54957 (B) Title: City Manager

3.D. [2018-30](#) Conference with Real Property Negotiator Pursuant to Government Code Section 54956.8.

Property Location: Eight (8) Parcels in the area of the southwest corner of East Palm Canyon Drive and W. Buddy Rogers with APN's of 687-195-002 through 007, 687-193-007 & 010.

Negotiating Parties: City Urban Revitalization Corporation & Successor Agency to the former Redevelopment Agency

Property Owner: City Urban Revitalization Corporation

Under Negotiations: Price & Terms on Sale of Real Property

3.E. [2018-31](#) Conference with Real Property Negotiator Pursuant to Government Code Section 54956.8.

Property Location: Two (2) parcels west of Van Fleet between B and C Streets with APN's of 687-214-007 & 008

Negotiating Parties: City of Cathedral as the Housing Successor Agency and Mario Perez, Inc.

Property Owner: City of Cathedral City as Housing Successor Agency

Under Negotiations: Price and Terms for potential sale of real property

ADJOURN

The next Study Session Meeting is scheduled to be held on Wednesday, February 28, 2018 at 4:30 p.m.

NOTES TO THE PUBLIC:

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in a City meeting or other services offered by this City, please contact the City Clerk's Office at (760)770-0322. Assisted-listening devices are available at this meeting. Ask the City Clerk if you desire to use this device. Notification at least 48 hours prior to the meeting or the time when services are needed will assist city staff in assuring reasonable arrangements can be made to provide accessibility to the meeting or service.

File #: 2018-28

Item No: 2.A.

City Council

MEETING DATE: 2/6/2018

TITLE:

Update from the Cannabis Task Force Regarding Consumption Lounges and Employee Background Checks

FROM:

Charlie McClendon, City Manager

RECOMMENDATION:

This item is provided for information, discussion and direction only.

BACKGROUND:

Section 5.88.140 of the Municipal Code established the Cannabis Task Force and prescribes the composition of its membership. The ordinance provides for the appointment of the task force by the City Manager. After an open application period, the appointments were made and were reported to the City Council on December 14, 2016. The members of the task force are:

- Charlie McClendon, City Manager
- Pat Milos, Community Development Director
- Paul Wilson, Fire Chief
- Commander Julio Luna, Police
- Roger Culbertson, resident and patient
- Robert Hargreaves, Mayoral appointment
- Alice Daby, resident at-large
- Maria Scagliotti, Dispensary owner
- Scott Lambert, Cultivation owner

-Bernard Steimann, Manufacturing owner

DISCUSSION:

The task force most recently met on January 22, 2018. The primary topic of conversation centered around consumption lounges. Palm Springs recently passed ordinance to allow lounges and Denver has an ordinance allowing and regulating social clubs. Both ordinances were provided to the task force for their consideration. Proposition 64 also has language allowing on-site consumption but limits it to licensed dispensaries and only with local approval.

The task force was generally supportive of developing a regulatory structure to allow on-site consumption at locations meeting certain criteria:

- The business seeking an on-site consumption permit must be a licensed dispensary in good standing.
- The dispensary must be in a free-standing building or occupy all the suites in a multi-tenant building. The task force members were concerned about creating odor issues for adjacent businesses in multi-tenant buildings if smoking were allowed in the building.
- The product consumed in the on-site lounge must be purchased on-site. Customers may not bring their own.
- The lounge must be in a separate room or patio in the facility and must not be directly accessible from the outside.
- Product purchased at the lounge but not consumed may be packaged by the dispensary for carry-out in accordance with state and city packaging requirements.
- The zoning code already establishes the locations, terms and conditions under which dispensaries can locate in the City and the task force recommended that no further zoning or land use restrictions are needed.

The task force also discussed the current City requirement that all employees of a cannabis business undergo a background check prior to hire. Industry representatives stated that the requirement makes it extremely difficult for them to maintain full staffing due to the time required to complete the background check when a position becomes vacant. They are supportive of the current requirement that all owners and management staff undergo a background check but recommend the Council consider revising the current requirement for other employees.

Staff seeks guidance from Council on these issues and if direction is received to modify the code, an item will be prepared for a future agenda.

FISCAL IMPACT:

None

ATTACHMENTS:

Palm Springs ordinance
Denver ordinance

**CITY AND COUNTY OF DENVER
DEPARTMENT OF EXCISE AND LICENSES**

**RULES GOVERNING MARIJUANA
DESIGNATED CONSUMPTION AREAS**

Effective Date: July 1, 2017

Approved as to Form and Legality:

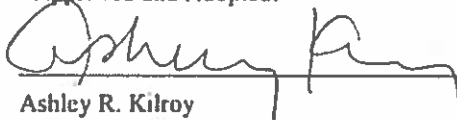


Kristin M. Bronson

City Attorney, City & County of Denver

Date: June 30, 2017

Approved and Adopted:



Ashley R. Kilroy

Executive Director, Excise and Licenses

Date: June 30, 2017

Adopted pursuant to Section 2.7.4 of the Charter of the City and County of Denver, and Article VI, Chapter 2 of the Denver Revised Municipal Code, and C.R.S. Section 12-47-313(1)(d)(III).

Notice of public rulemaking hearing published in The Daily Journal on May 18, 2017

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DEPARTMENT OF EXCISE AND LICENSES
RULES GOVERNING MARIJUANA DESIGNATED CONSUMPTION AREAS

ARTICLE I. GENERAL PROVISIONS

Section 1.01 Authority.

These rules and regulations are adopted by the City and County of Denver's Director of the Department of Excise and Licenses pursuant to Article IV of Chapter 2, Article VI of Chapter 6, Article V of Chapter 6, and Article I of Chapter 32 of the Denver Revised Municipal Code of the City and County of Denver. These rules and regulations are adopted for the purpose of administering and enforcing the provisions of the Cannabis Consumption Pilot Program and any other ordinances or laws relating to and affecting the issuance and operation of cannabis consumption permits.

Section 1.02 Severability.

Should any section, clause, or provision of these regulations be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof, other than the part declared to be invalid.

Section 1.03 Definitions. For purposes of these Rules, the following definitions shall apply unless the section declares otherwise:

- (a) "*Advertise, "Advertising" or Advertisement*" means the act of drawing the public's attention to promote the Designated Consumption Area (DCA).
- (b) "*Applicant*" means a person who has applied for a cannabis consumption permit.
- (c) "*Cannabis,*" as used in these Rules, shall have the same meaning as the term "marijuana" is defined in section 16(2)(f) of Article XVIII of the Colorado Constitution. This term will be used in conjunction with or as an alternative to marijuana in these rules and regulations.
- (d) "*Cannabis Consumption Accessory*" means a marijuana accessory as that term is defined in section 16(2)(g) of article XVIII of the Colorado Constitution that is used for the consumption of cannabis.
- (e) "*Cannabis Consumption Permit*" means a Cannabis Consumption Business Permit or a Cannabis Consumption Special Event Permit.
- (f) "*Cannabis Consumption Business Permit*" means an annual permit issued by the Director to an individual(s) or entity allowing for the consumption of marijuana in a Designated Consumption Area located inside of or adjacent to a licensed premise or other business.

- (g) *"Cannabis Consumption Special Event Permit"* means a permit issued by the Director to an individual(s) or entity allowing for the consumption of marijuana in a Designated Consumption Area temporarily located: (i) on or adjacent to a licensed premise or other business, or (ii) not located on or adjacent to a licensed premise or other business.
- (h) *"Child Care Establishment"* means any child care establishment as defined by and regulated under chapter 11 of the Code and licensed as such under applicable state and local law.
- (i) *"City"* means the City and County of Denver, State of Colorado.
- (j) *"City-owned Recreational Center"* and *"City-owned Outdoor Pool"* means all recreational centers and pools as defined in Chapter 39 of the Code, and any rules and regulations promulgated thereto.
- (k) *"Code"* means the Denver Revised Municipal Code.
- (l) *"Consumer"* means a person, twenty-one (21) years of age or older, who wishes to engage in the consumption of cannabis within a Designated Consumption Area.
- (m) *"Department"* means the Denver Department of Excise and Licenses.
- (n) *"Director"* means the Director of the Department of Excise and Licenses, or the Director's designee.
- (o) *"Designated Consumption Area (DCA)"* means a specific, designated location where consumption of cannabis is expressly permitted.
- (p) *"Eligible Neighborhood Organization"* means any of the following organizations that includes within its boundaries all or a portion of the property where a Designated Consumption Area is proposed to be located and is: (i) a registered neighborhood organization as defined in the Revised Municipal Code that has been in existence for more than two years; (ii) a business improvement district; or (iii) any other type of association of residents and owners of real property designated by the Director as an eligible neighborhood organization.
- (q) *"Evidence of Community Support"* means any of the following forms of documentation; provided that such documentation is authorized by an officer, director, or agent of one or more Eligible Neighborhood Organizations:
 - (i) A letter of community support or non-opposition;
 - (ii) A document or other written communication indicating community support or non-opposition;
 - (iii) A good neighborhood agreement; or
 - (iv) Any other form of community support or non-opposition that the Director creates, or deems sufficient, for the purpose of demonstrating evidence of community support.

- (r) *"Licensed Marijuana Establishment"* means a medical marijuana center, medical marijuana infused products manufacturer, optional premises, or medical marijuana transporter as those terms are defined in § 12-43.3-104, C.R.S., as amended, or a retail marijuana establishment or retail marijuana transporter as those terms are defined in § 12-43.4-103, C.R.S., as amended.
- (s) *"Liquefied petroleum gas (LPG)"* means a material which is composed predominantly of the following hydrocarbons or mixtures of them: propane, propylene, butane (normal butane or isobutane) and butylene.
- (t) *"Place Where Children Congregate"* means schools and child care establishments, as defined herein, playgrounds, and other places intended for use primarily by persons under 18 years of age.
- (u) *"Permitted Premises"* means the Designated Consumption Area specified on a Cannabis Consumption Business Permit or a Cannabis Consumption Special Event Permit.
- (v) *"Permittee or Permit Holder"* means a person or entity who receives a Cannabis Consumption Business Permit or Cannabis Consumption Special Event Permit.
- (w) *"Permit"* shall mean a Cannabis Consumption Business Permit or Cannabis Consumption Special Event Permit.
- (x) *"Person"* includes any individual, natural person, firm, company, association, organization, partnership, or corporation.
- (y) *"Public Place"* shall mean a place to which the public or a substantial number of the public have access without restriction, and includes, but is not limited to, streets and highways, transportation facilities, schools, places of amusement, parks, playgrounds, and the common areas of public and private buildings or facilities.
- (z) *"Rules"* means these Rules and Regulations Governing Cannabis Consumption Business Permits and Cannabis Consumption Special Event Permits.
- (aa) *"School"* means a public or private preschool or a public or private elementary, middle, junior high, or high school.
- (bb) *"Smoking"* means the burning of a lighted cigarette, cigar, pipe, or any other matter or substance that contains cannabis, but does not include Vaping.
- (cc) *"Vaping"* means the creation of vapor by an electronic cigarette or similar device.
- (dd) *"Waste"* means any marijuana product or marijuana byproduct which remains on the Permitted Premises which has been left, abandoned, or otherwise not consumed.

ARTICLE II. APPLICATION REQUIREMENTS

Section 2.01 Application.

- (a) All applications for a Cannabis Consumption Permit shall be made upon forms provided by the Department, and shall include any supplemental information required by the Director.
- (b) The Department will accept only complete applications. Complete applications must include, at a minimum, each of the following:
 - (i) The full address of the DCA.
 - (ii) The name, address, email (if applicable), and date of birth of the applicant, including all officers, partners, members, managers, and any Person who owns 5% or more of the entity or receives 5% or more of the profits of the entity, as well as all entity names and any trade names or assumed names.
 - (iii) For each Person described in this Article II, sSection 2.01(b)(ii), a national criminal history records check conducted by the Federal Bureau of Investigation upon submission of fingerprint records and all required documents.
 - (iv) For each Person described in this Article II, Section 2.01(b)(ii), suitable evidence of proof of lawful presence.
 - (v) A red-lined floor plan of the DCA showing the location of the DCA within the business or event.
 - (vi) A description and supporting evidence that details how the DCA complies with the Colorado Clean Indoor Air Act. C.R.S. § 25-14-201 *et seq.*
 - (vii) Proof of possession of the premises where the DCA is located that encompasses all dates of the DCA's operation and, if the premises are leased, written permission from the Owner of the Premises approving the applicant's use of the DCA for cannabis consumption.
 - (1) *Cannabis Consumption Business Locations.* Application must include a valid zone use permit and the most recent certificate of occupancy for the underlying business in which the DCA will be located.
 - (2) *Cannabis Consumption Special Event Locations.* Application must include a valid zone use permit for temporary use of "Bazaar, Carnival, Circus or Special Event."
 - (viii) Evidence of Community Support, including any additional restrictions on advertising and operational requirements attached thereto, as provided by an Eligible Neighborhood Organization.

- (ix) A description of the proposed hours of operation and, for all special event applications, the proposed duration of the permit.
- (x) A responsible operations plan which shall include a detailed explanation of how employees will monitor and prevent over-intoxication, underage access to the DCA, driving under the influence of marijuana, the illegal distribution of marijuana or marijuana products within the DCA, and any other potential criminal activity on the premises.
- (xi) A documented employee training program that addresses all components of the responsible operations plan.
- (xii) A health and sanitation plan for sanitization and cleaning of cannabis consumption accessories to be rented or otherwise made available for use, if applicable.
- (xiii) A marijuana waste plan that includes a detailed description of how employees will dispose of any Waste that is left, abandoned, or otherwise not consumed on the premises.
- (xiv) A Community Engagement Plan as provided in D.R.M.C. § 6-210(b).
- (xv) An Odor Control Plan in the same form and substance as would be required in D.R.M.C. § 4-10, and any rules promulgated thereto, if the Applicant intends to allow Smoking or Vaping of marijuana within the DCA.
- (xvi) Additionally, all Cannabis Consumption Special Event Permit applications must include a description and proposed dates of the event.

Section 2.02 Additional Information.

An applicant shall provide any additional information requested by the City. Unless otherwise specified, additional information must be provided to the City no later than seven (7) days after the request is made. Applications that do not contain the additional information shall be deemed incomplete and shall be rejected.

Section 2.03 Process for Issuing a New Cannabis Consumption Permit.

- (a) Each Applicant shall provide, at the time of application, the information required by D.R.M.C. § 6-308 and these Rules.
- (b) Upon receipt of an application, the Director shall give notice to the Department of Community Planning and Development, the Department of Environmental Health, and the Denver Fire Department. Any applicant for a Permit shall obtain all necessary permits, licenses and other regulatory approvals from the other affected city departments and agencies prior to the issuance of a Permit.

- (c) Upon receiving a complete application, the Director shall schedule a public hearing as provided in Article VI of these Rules.

Section 2.04 Additional Requirements.

- (a) A Permit issued by the Department constitutes a revocable privilege. The burden of proving an Applicant's qualifications for a Permit rests at all times with the Applicant.
- (b) A Cannabis Consumption Permit is non-transferable. Such Permit is not valid at any other location nor may any other Person exercise the privileges of said Permit, directly or indirectly.
- (c) A Permit for a Cannabis Consumption Special Event may not be issued to any applicant for more than ten (10) days in one (1) calendar year. A Cannabis Consumption Special Event Permit is not valid for any other date except the date or dates listed on the Application.
- (d) An application for a Permit for a Cannabis Consumption Special Event must be submitted at least 120 days prior to the proposed date of the event. An application meeting and presentation of the event may be requested by the City.

ARTICLE III. RESTRICTIONS ON APPLICATIONS FOR NEW PERMITS

Section 3.01 General Permit Restrictions. A Cannabis Consumption Permit shall be issued only for a DCA that complies with the following requirements:

- (a) All entrances to the DCA are monitored constantly by the Permit Holder or designee at all times when the DCA is being used for cannabis consumption.
- (b) Government-issued identification is required from all patrons before they are allowed access into the DCA.
- (c) Access to the DCA is restricted to persons age 21 and older.
- (d) Cannabis consumption occurring within the DCA is not visible to the public from a Place Where Children Congregate or from any Public Place.
- (e) A Cannabis Consumption Special Event Permit is not proposed to be located at an event that also has a special event liquor permit.

Section 3.02 Permit Proximity Restrictions. No Permit shall be issued within 1,000 feet of the following locations:

- (a) Any School, with the distance computed by direct measurement in a straight line from the nearest property line of the land used for the school to the nearest portion of the building in which the DCA is proposed to be located; or

- (b) Any Child Care Establishment, with the distance computed by direct measurement in a straight line from the nearest property line of the land used for the Child Care Establishment to the nearest portion of the building in which the DCA is proposed to be located.
- (c) Any alcohol or drug treatment facility, with the distance computed by direct measurement in a straight line from the nearest property line of the land used for the alcohol or drug treatment facility to the nearest portion of the building in which the DCA is proposed to be located.
- (d) Any city-owned recreation center or city-owned outdoor pools, with the distance computed by direct measurement in a straight line from the nearest property line of the land used for the recreation center or outdoor pool to the nearest portion of the building in which the DCA is proposed to be located.

Section 3.03 Permit Location Restrictions. No Permit shall be issued for the following locations:

- (a) Any School.
- (b) Any child care establishment.
- (c) Alcohol or drug treatment facility.
- (d) Any premise licensed pursuant to Title 12, Article 46, Article 47, or Article 48.
- (e) Any location where a liquor license exists, with "location" being defined, for purposes of this paragraph, by a distinct street address assigned by the City in accordance with article IV of chapter 49 of the Code, unless alcohol is not being served at that location while the DCA is operating and the DCA permitted-premises otherwise complies with paragraph (d) above.
- (f) Any Licensed Marijuana Establishment or any location where such Licensed Marijuana Establishment exists, with "location" being defined, for purposes of this paragraph, by a distinct street address assigned by the City in accordance with article IV of chapter 49 of the Code.
- (g) Any location deemed public property and owned by the City.
- (h) Any location that is situated in a residential zone district as defined by the zoning code of the City.

ARTICLE IV. INSPECTIONS

Section 4.01 Inspections.

City inspectors, investigators, and police shall be permitted access to the DCA at all times to inspect the premises in accordance with their duties and to enforce City ordinances and any rules and regulations promulgated pursuant thereto.

Section 4.02 Access required.

It shall be unlawful for a Permittee, or any agent or employee thereof, to refuse access to the premises as provided in section 4.01 or to hinder any investigation, visitation, or inspection.

Section 4.03 Records.

A Permittee must maintain the information required in these Rules for a period of one (1) year and in a format that is readily understood by a reasonably prudent business person. A Permittee must provide access to on-premises records during normal business hours or apparent hours of operation, and must provide access to off-premises records within three (3) business days following a request from the Department.

ARTICLE V. OPERATIONAL REQUIREMENTS

Section 5.01 Security.

- (a) Age Verification & Door Security. A Permittee shall employ sufficient staff so that all entrances to the DCA are constantly monitored during all times when the DCA is being used for cannabis consumption.
 - (i) Government-issued identification must be required from all patrons before they are allowed access into the DCA.
 - (ii) Access to the DCA must be restricted to persons age 21 or older.
- (b) Background Checks. A Permittee shall ensure that a NCIC background check is completed for all owners and managers, including fingerprinting. Background checks shall be kept for a period of one (1) year, and shall be made available to the Department upon request. The Department must be notified of any new managers of the DCA within 30 days of the new manager's hire date, and such notification must include a background check for the new manager, as provided in Article II, Section 2.01(b)(ii).

Section 5.02 Waste.

Permittees shall dispose of Waste in a secured waste receptacle that remains in possession and control of the Permittee.

Section 5.03 Odor.

A DCA shall maintain at all times an Odor Control Plan in the same form and substance as would be required by D.R.M.C. § 4-10, and any rules promulgated thereto, if the Applicant intends to allow Smoking or Vaping of marijuana within the DCA.

Section 5.04 Advertising.

- (a) **Misleading Advertising.** No Permittee shall use any advertising material that is misleading, deceptive, or false, or that, as evidenced either by the content of the advertising material or by the medium or the manner in which the advertising is disseminated, is designed to appeal to minors.
- (b) **Public Advertising.** Except as otherwise provided below, it shall be unlawful for any person to advertise a DCA anywhere in the city where the advertisement is visible to members of the public from any street, sidewalk, park or other Public Place, including advertising utilizing any of the following media: Any billboard or other outdoor general advertising device as defined by the Denver Zoning Code; any sign mounted on a vehicle, any hand-held or other portable sign; or any handbill, leaflet or flier directly handed to any person in a Public Place, left upon a motor vehicle, or posted upon any public or private property without the consent of the property owner. The prohibition set forth in this paragraph shall not apply to:
 - (i) Advertising inside a Licensed Marijuana Establishment or DCA;
 - (ii) Any fixed sign located within a DCA which exists solely for the purpose of identifying the location as a DCA and which otherwise complies with any other applicable city laws and regulations; or
 - (iii) Any advertisement contained within a newspaper, magazine, or other periodical of general circulation within the city; or
 - (iv) Limited advertising which is purely incidental to sponsorship of a charitable event by a Permittee.

Section 5.05 Required signage.

- (a) **Standardized Placard.** Any location operating a DCA must be clearly marked with a standardized placard conspicuously posted at all exterior entrances to the location. The standardized placard shall be posted no later than 3 hours prior to the opening of the DCA and shall be in a format as required by the Department.
- (b) **Access Restriction.** The DCA premises must be clearly marked with conspicuous signage measuring not less than forty (40) square inches in size that includes the statement "NO ENTRY UNDER 21" in all upper-case letters not less than one (1) inch high.

- (c) **Responsible Use.** The DCA premises must post signage that declares, at minimum, that patrons: are responsible for their own actions, will consume responsibly, will not drive impaired, and will not sell or distribute cannabis for remuneration. If applicable, the sign must contain a notice that indoor vaping and/or smoking may be occurring on the premises.

ARTICLE VI. PUBLIC HEARING REQUIREMENT

Section 6.01 Authority.

Section 6-316(b) of the Code authorizes the Director to create additional methods of obtaining community support. Therefore, in addition to the methods of obtaining community support specified in Article VI of Chapter 6 of the Code, applications for a DCA shall be scheduled for a public hearing pursuant to these Rules.

Section 6.02 Public Hearing Required.

- (a) All complete applications for a Cannabis Consumption Business Permit shall be scheduled for a public hearing not less than thirty (30) days from the date of the application, with notice to be provided to all registered neighborhood organizations within the designated area.
- (b) Applications for a Cannabis Consumption Special Event Permit may be scheduled for a public hearing if requested by parties-in-interest, as defined in § 6-212 of the Code. Such request must be submitted at least thirty (30) days prior to the proposed date of the event in the form of a petition prepared by the Department and must contain at least ten (10) valid signatures gathered within ninety (90) days of the event date.

Section 6.03 Hearing procedures.

- (a) **Procedures.** Procedures, posting requirements, and standards for public hearings held for Cannabis Consumption Permits shall be conducted in accordance with §6-212 of the Code and the “Policies and Procedures Concerning Excise and Licenses Hearings.”
- (b) **Other Considerations.** In addition to the standards set forth in §6-212(c), the Director shall also consider:
 - (i) Whether the Evidence of Community Support is valid and reliable; and
 - (ii) Whether the Eligible Neighborhood Organization was created for the primary purpose of supporting a Cannabis Consumption Permit.
- (c) **Standards for Denial.** In addition to the grounds set forth in Chapter 32, §6-212 of the Code, and the “Policies and Procedures Concerning Excise and Licenses Hearings,” a Permit shall be denied if:
 - (i) The Applicant fails to establish Evidence of Community Support;

- (ii) The Applicant fails to submit a complete application;
- (iii) The Applicant fails to establish, by a preponderance of the evidence, any of the qualifications for the Permit at a public hearing; or
- (iv) The Applicant submits an application that does not comply with all state and local laws, and any rules and regulations adopted pursuant thereto.
- (v) The premises for which application has been made or for which renewal of the permit has been requested is not approved for the purpose by the Department of Environmental Health, Public Works, Community Planning and Development, or the Denver Fire Department.
- (vi) The information and evidence available to and considered by the Director fails to reasonably establish that the proposed procedures for security and admission control will prevent the distribution of marijuana to underage persons.
- (vii) The information and evidence available to and considered by the Director reasonably establishes that the character or reputation of the Applicant, principal of the Applicant, or any manager, or the past record of operation of the establishment or business is such so as not to warrant the confidence of the Director that the DCA will be lawfully operated.
- (viii) The Applicant, principal of the Applicant, or any manager has discharged a sentence for a conviction of a felony pursuant to any state or federal law regarding the possession, distribution, manufacturing, cultivation, or use of a controlled substance in the ten years immediately preceding the application date, subject to the provisions of C.R.S. section 24-5-101, as amended, except that the Director may grant a permit if the sentence was for a state felony conviction based on possession or use of marijuana or marijuana concentrate that would not be a felony if the conviction had occurred on the date of application.

ARTICLE VII. MODIFICATION OF PREMISES

Section 7.01 Application Required to Change, Alter, or Modify DCA.

- (a) After obtaining a Permit, the Permittee shall make no physical change, alteration, or modification of the DCA that materially or substantially alters the DCA or the usage of the DCA from the plans originally approved, without the Department's prior written approval.
- (b) All applications to modify the DCA shall be processed in accordance with §6-217 of the Code and the Policies and Procedures Concerning Excise and Licenses Hearings.

Section 7.02 Community Support Required.

The Permit Holder may be required to provide new evidence of community support and the City may require a new public hearing upon any application to modify the DCA or to modify the usage of the DCA, including but not limited to, any modification to the hours of operation or any change to the permitted methods of cannabis consumption.

ARTICLE VIII. UNLAWFUL ACTS

- (a) It is unlawful to operate a DCA without first obtaining a permit as provided in Chapter 6, Article V of the Code, and these Rules.
- (b) It is unlawful to operate a DCA where the consumption of cannabis is visible to the public from a Place Where Children Congregate and a Public Place.
- (c) It is unlawful to cultivate, manufacture, store, sell, or distribute for remuneration marijuana or marijuana products within the DCA. It is unlawful to allow the cultivation, manufacturing, storage, sale, or distribution for remuneration of marijuana or marijuana products within the DCA.
- (d) It is unlawful for any person to possess more than one ounce of marijuana or more than eight (8) grams of marijuana concentrate or more than eighty (80) ten (10)-milligram servings of marijuana product within the DCA.
- (e) It is unlawful for any person to use LPG torches within the DCA.
- (f) It is unlawful for any person to consume or for any owner, manager, or employee of the DCA to allow the consumption of alcohol within the DCA while the DCA is operating and/or while marijuana consumption is occurring within the DCA.
- (g) It is unlawful for any owner, manager, or employee of the Permittee or Permit Holder to consume marijuana or marijuana products while working within the DCA.

ARTICLE IX. STANDARDS FOR REVOCATION

- (a) In addition to the grounds provided in chapter 32 of the Code, a Permit may be suspended or revoked for any violation of these Rules or for any of the standards of denial set forth in these Rules.
- (b) Procedures for investigation of permit violations and for suspension, revocation, or other licensing sanctions as a result of any such violation shall be as provided in chapter 32 of the Code and any rules and regulations promulgated by the Director.

ORDINANCE NO. 1943

AN ORDINANCE OF THE CITY OF PALM SPRINGS, CALIFORNIA, AMENDING CHAPTERS 91, 92, AND 93 OF THE PALM SPRINGS ZONING CODE RELATIVE TO ZONING REQUIREMENTS AND DEVELOPMENT STANDARDS FOR COMMERCIAL MEDICAL AND ADULT-USE CANNABIS FACILITIES.

City Attorney Summary

This Ordinance amends provisions of the City's Zoning Code to establish and amend zoning regulations for new Commercial Medical and Adult-Use Cannabis Facilities, as permitted under the Medical and Adult Use Cannabis Regulation and Safety Act.

THE CITY COUNCIL OF THE CITY OF PALM SPRINGS FINDS:

A. The City of Palm Springs is a charter city organized pursuant to Article XI of the California Constitution and pursuant to the authority granted the City by Sections 5 and 7 of Article XI, the City has the power to make and enforce within its limits all ordinances and regulations in respect to municipal affairs not in conflict with general laws and its own charter. Such police powers include without limitation the ability to adopt comprehensive zoning regulations and regulations upon the use of land and property within the City.

B. Pursuant to Article XI, Section 7 of the California Constitution, the City of Palm Springs may adopt and enforce ordinances and regulations not in conflict with general laws to protect and promote the public health, safety, and welfare of its citizens.

C. The Federal Government has issued guidelines for states and local governments that have enacted laws authorizing cannabis-related conduct, requiring them to implement strong and effective regulatory and enforcement systems that will address the threat that medical and adult-use cannabis activity could pose to public safety, public health, and other law enforcement interests.

D. On June 27, 2017, Governor Brown signed into law the Medical and Adult Use Cannabis Regulation and Safety Act ("MAUCRSA"), legislation intended to provide and consolidate a comprehensive regulatory framework for licensing, control, and taxation of commercial medical and adult-use cannabis related businesses in California. MAUCRSA expressly protects a City's local licensing practices, zoning authority, and other local actions taken pursuant to the City's Constitutional municipal and police powers. State law, inclusive of MAUCRSA, contains statutory provisions that:

1. Allow local governments to enact ordinances expressing their intent to allow or prohibit the cultivation of cannabis and their intent to administer or not administer a conditional permit program pursuant to California Health and Safety Code section 11362.777 for the cultivation of cannabis;

2. Expressly provide that state law does not supersede or limit local authority for local law enforcement activity, enforcement of local ordinances or enforcement of local permit or licensing requirements regarding cannabis per California Business and Professions Code section 19315(a);

3. Expressly provide that state law does not limit the civil or administrative authority or remedies of a local government provision of law regarding cannabis including, but not limited to, a local government's right to make and to enforce within its limits all regulations not in conflict with general laws per California Business and Professions Code section 19316(c);

4. Specifically require, as a condition of state licensure, compliance with any and all local requirements for all cannabis-related operations.

E. With that purpose, the City Council has adopted Chapters 5.45 and 5.55 of the Palm Springs Municipal Code to accommodate businesses allowing the commercial medical and adult use of cannabis while protecting the health, safety, and general welfare of the residents and businesses within incorporated areas of the City of Palm Springs in compliance with all applicable state law.

F. It is the intent of the City Council to have a strong and effective regulatory and enforcement system with regard to commercial medical and adult-use cannabis that addresses identifiable challenges to public health, safety, and welfare, and advances law enforcement and community concerns through robust zoning controls and licensing procedures that are effective in practice.

G. The City Council desires to establish reasonable zoning regulations and development standards related to commercial medical and adult-use cannabis related businesses which are intended to address the negative impacts and nuisance impacts associated with the uses.

H. The City Council finds that the uses and activities permitted under this ordinance are consistent with and implement the goals and policies of the Palm Springs General Plan.

I. The City Council finds that the adoption of this ordinance is exempt from environmental review under the California Environmental Quality Act ("CEQA") pursuant to the following provisions of the CEQA Guidelines, 14 Cal. Code of Regulations, Chapter 3:

1. The ordinance is exempt under CEQA Guidelines Section 15378(b)(5) in

that it is not a "project" under CEQA, and is an organizational or administrative activity of the City that will not result in direct or indirect physical changes in the environment;

2. The ordinance is exempt under CEQA Guidelines Section 15061(b)(3) because it can be seen with certainty that there is no possibility that the administrative activity in question may have a significant effect on the environment. The commercial medical and adult-use cannabis businesses conforming to the various categories provided under state law and Palm Springs Municipal Code Chapters 5.45. and 5.55 will have environmental impacts that are similar to other farming, manufacturing, distribution, laboratory, and transportation and distribution activities already authorized within the City. The actual, potential, direct, indirect and cumulative environmental impacts of each of these businesses, if any, will be analyzed and mitigated, to the extent that any mitigation is required, on a project-by-project basis. Any identification of particular environmental impacts arising from or related to this administrative activity taken through this ordinance would be entirely speculative. Further, there is no possibility that this Ordinance would create cumulative impacts that are significant because this Ordinance does not authorize construction, development or other related activities or any other activities that are not already permitted, except that the ordinance allows the same activities but in relation to a different material (adult-use or commercial medical cannabis) that is being grown, sold, transported, or otherwise utilized in some form. There are no other significant impacts that could occur as a result of this ordinance, and there are no unusual circumstances that would cause any such significant impacts; and
3. The Ordinance is also exempt under CEQA Guidelines Section 15183 (projects consistent with existing zoning, the general plan, or a community plan) since the types of businesses permitted by the Ordinance are consistent with those contemplated by general plan and zoning, such as agriculture, manufacture, and distribution of other agricultural products and/or products to be used as pharmaceuticals.

THE CITY COUNCIL OF THE CITY OF PALM SPRINGS ORDAINS:

SECTION 1. Palm Springs Zoning Code (PSZC) Section 91.00.10(B) is hereby amended to read:

"Adult-Use Cannabis Dispensary" means a premises where Adult-Use Cannabis, Adult-Use Cannabis products, or devices for Adult-Use Cannabis or Adult-Use Cannabis products are offered, either individually or in any combination, for retail sale, and where the operator holds a valid adult-use cannabis business permit from the City of Palm Springs authorizing the operation of a dispensary, and a

valid state license as required by State Law to operate a dispensary.

"Adult-Use Cannabis Facility" means any business or operation which engages in adult-use cannabis activity.

"Cannabis Lounge" means a discrete facility where Medical or Adult Use Cannabis and Medical or Adult Use Cannabis products may be smoked or ingested within the confines of the facility.

"Downtown" means that portion of the City within the boundaries of Alejo Road on the north, Ramon Road on the south, Belardo Road/Museum Drive on the west and Indian Canyon Drive on the east. This area includes both sides of Palm Canyon Drive, Amado Road, Andreas Road, Tahquitz Canyon Way, Arenas Road and Baristo Road within such boundaries.

"Medical Cannabis Dispensary" means a premises where medical cannabis, medical cannabis product, or devices for the use of medical cannabis or medical cannabis products are offered, either individually or in any combination, for retail sale, and where the operator holds a valid medical cannabis business permit from the City of Palm Springs authorizing the operation of a dispensary, and a valid state license as required by State Law to operate a dispensary.

"Medical Cannabis Facility" means any business or operation which engages in medical cannabis activity.

"Medical or Adult-Use Cannabis Transportation and Distribution Facility" means a facility for the procurement, sale, storage, transfer and transport of cannabis and cannabis products between entities licensed pursuant to this chapter.

"Medical or Adult-Use Cannabis Cultivation Facility" means a facility where cannabis is cultivated and processed only for distribution to a licensed Medical or Adult-Use Cannabis Facility.

"Medical or Adult-Use Cannabis Manufacturing Facility" means a facility where cannabis is processed, extracted, or compounded into edible or topical products intended for consumption, inhalation, or topical application, including a facility that packages or repackages cannabis products, where the operator holds a valid permit for manufacturing from the City of Palm Springs, and a valid state license as required by State Law for manufacturing.

"Medical or Adult-Use Cannabis Testing Facility" means a facility, entity, or site that offers or performs testing of medical or adult-use cannabis, or medical or adult-use cannabis products and that is both of the following:

1. Accredited by an accrediting body that is independent from all other persons involved in any segment or aspect of the cannabis industry

- in the state; and
2. Registered with the California State Department of Public Health.

“Premises” means the land and any structures erected on it or the defined space within a building assigned to a single occupancy.

“Uptown” means that portion of the City within the boundaries of Alejo Road on the south, Vista Chino on the north, the west side of Palm Canyon Drive on the west, and Indian Canyon Drive on the east.

SECTION 2. PSZC Section 92.09.01(A) is hereby amended to read:

12. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

33. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 3. PSZC Section 92.12.01(A) is hereby amended to read:

17. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

35. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 4. PSZC Section 92.14.01(A) is hereby amended to read:

9. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

~~18-19.~~ Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 5. PSZC Section 92.14.1.01(A) is hereby amended to read:

2. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

4.5. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 92.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 6. PSZC Section 92.15.01(A) is hereby amended to read:

9. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

~~20. Medical cannabis cultivation facilities, subject to the property development standards contained in Section 93.23.15 of this Code and compliance with the provisions of Chapter 5.35 of this Code;~~

21. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

22. Medical or adult-use cannabis transportation and distribution facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 7. PSZC Section 92.15.01(C) is hereby amended to eliminate the following use:

~~14. Medical cannabis manufacturing facility and medical cannabis testing facility.~~

(Following uses renumbered accordingly)

SECTION 8. PSZC Section 92.15.01(D) is hereby amended to read:

9. Medical or adult-use cannabis cultivation facility, subject to the development standards contained in Section 93.23.15 of this Code;

10. Medical or adult-use cannabis manufacturing facility, subject to the development standards contained in Section 93.23.15 of this Code;

11. Medical or adult-use cannabis testing facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Other uses renumbered accordingly)

SECTION 9. PSZC Section 92.16.01(A) is hereby amended to read:

4. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

~~5. Medical cannabis cultivation facilities, subject to the property development standards contained in Section 93.23.15 of this Code and compliance with the provisions of Chapter 5.35 of this Code;~~

6. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

7. Medical or adult-use cannabis transportation and distribution facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 10. PSZC Section 92.16.01(C) is hereby amended to eliminate the following use:

~~4. Medical cannabis manufacturing facility and medical cannabis testing facility;~~

(Following uses renumbered accordingly)

SECTION 11. PSZC Section 92.16.01(D) is hereby amended to read:

9. Medical or adult-use cannabis cultivation facility, subject to the development standards contained in Section 93.23.15 of this Code;

10. Medical or adult-use cannabis manufacturing facility, subject to the development standards contained in Section 93.23.15 of this Code;

11. Medical or adult-use cannabis testing facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Other uses renumbered accordingly)

SECTION 12. PSZC Section 92.17.01(A) is hereby to read:

4. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

~~7. Medical cannabis cultivation facilities, subject to the property development standards contained in Section 93.23.15 of this Code and compliance with the provisions of Chapter 5.35 of this Code;~~

7. Medical or adult-use cannabis transportation and distribution facility, subject to the development standards contained in Section 93.23.15 of this Code;

~~11.12. Services.~~

i. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 13. PSZC Section 92.17.01(C) is hereby amended to eliminate the following use:

~~4. Medical cannabis manufacturing facility and medical cannabis testing facility;~~

(Following uses renumbered accordingly)

SECTION 14. PSZC Section 92.17.01(D) is hereby amended to read:

15. Medical or adult-use cannabis cultivation facility, subject to the development standards contained in Section 93.23.15 of this Code;

16. Medical or adult-use cannabis manufacturing facility, subject to the development standards contained in Section 93.23.15 of this Code;

17. Medical or adult-use cannabis testing facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Other uses renumbered accordingly)

SECTION 15. PSZC Section 92.17.1.01(A) is hereby amended to read:

3. Cannabis lounge, subject to the property development standards contained in Section 93.23.15 of this Code;

~~6. Medical cannabis cultivation facilities, subject to the property development standards contained in Section 93.23.15 of this Code and compliance with the provisions of Chapter 5.35 of this Code;~~

7. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

8. Medical or adult-use cannabis transportation and distribution facility,

subject to the development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 16. PSZC Section 92.17.1.01(C) is hereby amended to eliminate the following use:

~~3. Medical cannabis manufacturing facility and medical cannabis testing facility.~~

SECTION 17. PSZC Section 92.17.1.01(D) is hereby amended to read:

13. Medical or adult-use cannabis cultivation facility, subject to the development standards contained in Section 93.23.15 of this Code;

14. Medical or adult-use cannabis manufacturing facility, subject to the development standards contained in Section 93.23.15 of this Code;

15. Medical or adult-use cannabis testing facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Other uses renumbered accordingly)

SECTION 18. PSZC Section 92.17.2.01(A) is hereby amended to read:

~~7. Medical cannabis cultivation facilities, subject to the property development standards contained in Section 93.23.15 of this Code and compliance with the provisions of Chapter 5.35 of this Code.~~

7. Medical or adult-use cannabis transportation and distribution facility, subject to the development standards contained in Section 93.23.15 of this Code;

SECTION 19. PSZC Section 92.17.2.01(C) is hereby amended to eliminate the following use:

~~2. Medical cannabis manufacturing facility and medical cannabis testing facility;~~

SECTION 20. PSZC Section 92.17.2.01(D) is hereby amended to read:

10. Medical or adult-use cannabis cultivation facility, subject to the development standards contained in Section 93.23.15 of this Code;

11. Medical or adult-use cannabis manufacturing facility, subject to the

development standards contained in Section 93.23.15 of this Code;

12. Medical or adult-use cannabis testing facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 21. PSZC Section 92.18.01(A) is hereby amended to read:

~~10. Medical cannabis cultivation facilities, subject to the property development standards contained in Section 93.23.15 of this Code and compliance with the provisions of Chapter 5.35 of this Code;~~

11.10. Medical cannabis dispensary or adult-use cannabis dispensary, subject to the property development standards contained in Section 93.23.15 of this Code;

11. Medical or adult-use cannabis transportation and distribution facility, subject to the development standards contained in Section 93.23.15 of this Code;

SECTION 22. PSZC Section 92.18.01(C) is hereby amended to read:

5. Medical or adult-use cannabis cultivation facility, subject to the development standards contained in Section 93.23.15 of this Code;

(Following uses renumbered accordingly)

SECTION 23. PSZC Section 93.23.15 is hereby amended to read:

A. General Requirements. No land use entitlement, permit (including building permit) approval, site plan, certificate of occupancy, zoning clearance, or other land use authorization for a Medical Cannabis Facility or an Adult Use Cannabis Facility shall be granted or permitted except in conformance with this Section.

B. Regulatory Permit Required. Medical Cannabis Facilities and Adult Use Cannabis Facilities shall be permitted only upon application and approval of a regulatory permit in accordance with the criteria and process set forth in Chapter 5.35, Chapter 5.45 or Chapter 5.55 of this Code. Prior to initiating operations, and as a continuing requisite to conducting operations, the person or the legal representative of the person wishing to operate a Medical Cannabis Facility or an Adult Use Cannabis Facility, as those terms are defined in Section 91.00.10, shall secure a regulatory permit from the City Manager under the terms and conditions set forth in Chapter 5.35, Chapter 5.45, or Chapter 5.55 of this Code and shall otherwise fully comply with the provisions of this Section.

C. Separation Distances and Concentrations of Use. No Medical Cannabis Facilities or Adult Use Cannabis Facilities shall be established, developed or operated except in accordance with the following principles. All distances shall be measured in a straight line, without regard to intervening structures, from the nearest property line of the property on which the Cannabis Facility is, or will be located, and to the nearest property line of those uses described in this Subsection. These principles are not absolute; the City Council will exercise discretion in their application to individual cases, *via* modifications considered and granted by the Council, on a case-by-case basis, pursuant to Section 94.06.01.B.

1. Cannabis Facilities shall be separated by a minimum five hundred foot (500') distance, unless modified by the City Council as described above.
2. To prevent an over-intensive presence of cannabis uses in a particular area, there shall not be three (3) or more Cannabis Facilities within any measured distance of three thousand feet (3,000'), unless modified by the City Council as described above.
3. Notwithstanding any other verbiage in this Subsection 93.23.15.C., unless modified by the City Council as described above, there shall be no mandatory separation distance between:
 - a. Medical Cannabis Facilities or Adult Use Cannabis Facilities in any of the following zones:
 - i. C-M, commercial manufacturing;
 - ii. M-1-P, planned research and development park zone;
 - iii. M-1 service/manufacturing zone;
 - iv. M-2 [manufacturing zone], E/I [energy industrial zone].
 - b. Medical Cannabis Facilities or Adult Use Cannabis Facilities that are operated by a Permittee under Chapter 5.35, 5.45 or 5.55, or are the subject of a pending entitlement application filed by a Permittee and subject to review by the City as of January 5, 2018.
 - c. Medical Cannabis Facilities or Adult Use Cannabis Facilities that are under a single ownership and operating with a single street address.
4. Notwithstanding any other verbiage in this Subsection 93.23.15.C., unless modified by the City Council as described above, a minimum six hundred foot (600') separation distance shall be required between any Medical Cannabis Facility or Adult Use Cannabis Facility and any
 - a. School,
 - b. public playground,
 - c. public park,
 - d. day care/child care center, or
 - e. youth center.

D. Accessory Uses: A Medical Cannabis Facility or an Adult Use Cannabis Facility is not and shall not be approved as an accessory use to any other use

permitted by this Zoning Code. Medical Cannabis Facilities and Adult Use Cannabis Facilities may be located on the same parcel or on the same premises as otherwise permitted by this Zoning Code.

E. **Parking Requirements.** Except within the E-I Zone, where M-2 standards shall apply, Medical Cannabis and Adult Use Cannabis Facilities shall be parked at a rate of one (1) space for every three hundred (300) gross square feet of retail dispensary space or office space, and one (1) space for every eight hundred (800) gross square feet of warehouse/cultivation space. Cannabis Lounge facilities shall be parked at a rate of one (1) space for every three (3) seats, or one (1) space for every thirty-five (35) square feet where the public is served. Cannabis Lounge facilities within the "D" Downtown Parking Combining Zone may be parked at a rate of one (1) space for every four (4) seats, or one (1) space for every fifty (50) square feet where the public is served. Administrative modifications for this standard may be granted by the City Council pursuant to Section 94.06.01.B.

F. **Additional Requirements for Specific Cannabis Uses.**

1. **Medical Cannabis and Adult Use Cannabis Cultivation Facilities.** Any Medical Cannabis or Adult Use Cannabis Cultivation Facility in excess of ten thousand (10,000) square feet shall operate only within the E-I or M-2 Zones.
2. **Medical Cannabis Dispensaries and Adult Use Cannabis Dispensaries, Square Footage Restrictions – Downtown/Uptown.** Medical Cannabis Dispensaries and Adult Use Cannabis Dispensaries shall be limited to a maximum of one thousand five hundred (1,500) square feet in gross floor area on the street/ground level of any building in the defined Downtown/Uptown areas. Dispensaries (or portions thereof) located above the street/ground level shall be limited to a maximum of five thousand (5,000) square feet in gross floor area.
3. **Architectural Review.** All Cannabis Lounge Facilities, Medical Cannabis Dispensaries, and Adult Use Cannabis Dispensaries shall be subject to architectural review by the City Council upon a recommendation by the Architectural Advisory Committee. The Architectural Advisory Committee and City Council shall apply the criteria reflected in Section 94.04.00(D).
4. **Internal Testing Facility – Accessory to a Permitted Cannabis Facility.** An on-premises testing facility may be permitted accessory to a Medical or Adult Use Cannabis Cultivation Facility or a Medical or Adult Use Cannabis Manufacturing Facility for the

purpose of internal testing of cannabis products grown or produced at the facility. The internal testing facility shall be subject to the following requirements:

- a. The testing results cannot be published or shared with the public or any third party.
- b. Testing shall be limited to cannabis products grown or produced at the facility.
- c. The area dedicated to the internal testing facility shall be clearly shown and identified on any floor plans submitted to the City for the cannabis facility.
- d. No additional entitlement is required for an accessory internal testing facility; however, environmental analysis of the internal testing facility shall be performed as part of the environmental analysis for the associated cultivation or manufacturing use.
- e. Nothing in this Subsection (F)(3) shall be construed to limit the applicability of City regulations, including without limitation all provisions of Chapters 5.45 and 5.55 and any regulations promulgated by the City Manager pursuant thereto, to the colocation of the accessory internal testing facility.

5. Cannabis Lounge Facilities. Cannabis Lounge Facilities shall be subject to the following requirements:

- a. Concurrent Commercial Uses. In the event that a Cannabis Lounge Facility operates concurrent in a single premises with another commercial use, the Cannabis Lounge Facility shall be a permitted use in accordance with Chapter 92. In the absence of a concurrent commercial use, operation of a Cannabis Lounge Facility shall require a conditional use permit.
- b. Separate Premises. Cannabis Lounge Facilities shall be located on a separate parcel or within a tenant space that is segregated and apart from any other use. A Cannabis Lounge Facility shall have a dedicated entrance from the street or public sidewalk, and shall have no internal connections or passage to any other tenant space or use.
- c. Sale of Cannabis and Cannabis Products. Medical or adult-

use cannabis and medical or adult-use cannabis products may be sold on the premises of a Cannabis Lounge, subject to the following:

- 1) The operator must hold an Adult-Use Dispensary permit; however, only the distance separation requirements for the Cannabis Lounge use shall be applicable to the facility.
 - 2) Operators shall not permit patrons to bring their own personal cannabis or cannabis products to the Cannabis Lounge Facility.
 - 3) All cannabis or cannabis products purchased and opened at the facility must be smoked, inhaled, consumed or ingested on site, and shall not be permitted to leave the facility unless repackaged in a container that is compliant with all applicable state law and regulation.
 - 4) Operators shall only permit patrons to leave the Cannabis Lounge Facility with cannabis and cannabis products that remain in originally sealed and unopened packaging, or have been transferred by the Operator for repackaging in a container that is compliant with all applicable state law and regulation.
- d. Smoking of Cannabis. The smoking of cannabis may be permitted at a Cannabis Lounge Facility, as may be allowable under state law.
- e. Alcohol and Tobacco Products. The sale or consumption of alcohol or tobacco products is not allowed on the premises.
- f. Minors. Access to the Cannabis Lounge Facility shall be restricted to persons twenty-one (21) years of age and older.
- g. Visibility. The smoking, inhalation, consumption or ingestion of cannabis or cannabis products shall not be visible from any public place or any area where minors may be present. The Cannabis Lounge shall be located within a completely enclosed building.
- h. Odor Control.

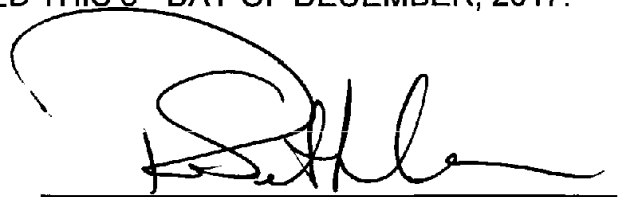
- 1) The operator of each Cannabis Lounge Facility shall provide adequate air filtration so as to prevent any detectable odor at the exterior of the premises. Within twenty-four (24) hours of any complaint concerning odors emanating from or originating within the facility, the operator shall respond to the complaint in question, and shall timely file a written disclosure to the Building Official documenting any and all actions taken and planned to address the odor complaints. The Building Official, upon a determination of the continued existence of detectable odor from the facility, may require an operator to submit an implementation plan and/or a performance schedule, above and beyond this written disclosure filed within twenty-four (24) hours, to ensure the employment of measures to control the odor.
- 2) The Building Official shall have the authority to require an operator of a Cannabis Lounge Facility to amend any implementation plan and/or performance schedule submitted pursuant to this Subparagraph F.5.h to cause compliance herewith.
- 3) Any failure to timely submit a written disclosure, a more detailed implementation plan and/or performance schedule or amendment thereto, to timely adhere to the terms of either, or to complete any required improvements within the timeframe specified by the Building Official shall be grounds for revocation of the permit for the cannabis lounge facility.
- 4) Odors from a Cannabis Lounge Facility are identified as a public nuisance pursuant to PSMC Chapter 11.72. The City may pursue all administrative, civil and criminal remedies identified in that chapter in relation to any nuisance determined to exist with respect to the operation of a cannabis lounge facility in violation of this Subparagraph F.5.h.

SECTION 24. This Ordinance is introduced and adopted based upon the true and correct recitals above, including without limitation the findings stated therein, *e.g.*, that adoption of this Ordinance is consistent with, and implements the goals and policies of the General Plan, that this Ordinance is exempt from environmental review under the California Environmental Quality Act ("CEQA") for the reasons reflected in the recitals, *etc.*

SECTION 25. On its effective date, this Ordinance shall supersede the Interim Urgency Ordinance with identical regulatory content adopted on even date herewith.

SECTION 26. The Mayor shall sign, and the City Clerk shall certify to the passage and adoption of this Ordinance and shall cause the same, or the summary thereof, to be published and posted pursuant to the provisions of applicable law; this Ordinance shall take effect thirty (30) days after passage.

PASSED, APPROVED AND ADOPTED THIS 6th DAY OF DECEMBER, 2017.

A handwritten signature in black ink, appearing to read 'R. Moon', written over a horizontal line.

ROBERT MOON
MAYOR

ATTEST:

A handwritten signature in black ink, appearing to read 'K. Hart', written over a horizontal line.

KATHLEEN D. HART, MMC
INTERIM CITY CLERK

CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF RIVERSIDE) ss.
CITY OF PALM SPRINGS)

I, KATHLEEN D. HART, Interim City Clerk of the City of Palm Springs, California, do hereby certify that Ordinance No. 1943 is a full, true, and correct copy, and was introduced at a regular meeting of the Palm Springs City Council on November 15, 2017 and adopted at a regular meeting of the City Council held on December 6, 2017 by the following vote:

AYES: Councilmembers Kors, Roberts, Mayor Pro Tem Foat, and Mayor Moon
NOES: Councilmember Mills
ABSENT: None
ABSTAIN: None
RECUSAL: None



KATHLEEN D. HART, MMC
INTERIM CITY CLERK



Cathedral City

Agenda Report

File #: 2018-34

Item No: 2.B.

City Council

MEETING DATE: 2/6/2018

TITLE:

Status on Solar Requirements for New Construction

FROM:

Charlie McClendon, City Manager

RECOMMENDATION:

This item is provided for information, discussion and direction only.

BACKGROUND:

Cathedral City currently has no provisions in the Municipal Code requiring solar on new construction for either residential or commercial structures. Likewise, the 2016 Building Code, which the City has adopted, has no such requirement.

DISCUSSION:

The City of Palm Springs has held some Council discussions recently with the intent of strengthening that city's position regarding solar requirements. CM Kaplan requested a study session discussion to review the status of solar requirements in Palm Springs and to consider if any revisions should be considered in Cathedral City.

Information on recent actions in Palm Springs is attached.

FISCAL IMPACT:

There is no cost to discuss this item. Any code revisions would likely affect construction costs in the community.

ATTACHMENTS:

Information on Palm Springs actions
2016 California Energy Code



CITY COUNCIL STAFF REPORT

DATE: January 3, 2018

NEW BUSINESS

SUBJECT: DISCUSSION REGARDING A PROPOSED POLICY TO ALLOW THE REQUIREMENT FOR SOLAR PHOTOVOLTAIC SYSTEMS AS PART OF DISCRETIONARY APPROVALS FOR NEW RESIDENTIAL DEVELOPMENT.

FROM: David H. Ready, City Manager

BY: Department of Planning Services
Building and Safety Department

SUMMARY:

At the direction of the City Council Solar Installation Ordinance Subcommittee, staff has drafted a policy regarding requirements for solar photovoltaic systems for new residential development as part of discretionary reviews. The policy will replace the proposed solar ordinance, which was reviewed by the City Council at the meeting of October 4, 2017. The policy will allow the Planning Commission or the City Council to require the installation of solar photovoltaic panels as part of a discretionary review for new single-family and multifamily residential development.

RECOMMENDATION:

Adopt Resolution No. _____, "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM SPRINGS, ESTABLISHING A POLICY FOR THE PROVISION OF SOLAR PHOTOVOLTAIC SYSTEMS AS PART OF DISCRETIONARY APPROVALS FOR NEW RESIDENTIAL DEVELOPMENT."

BACKGROUND:

<u>Related Relevant City Actions</u>	
06/23/16	The City Council held a joint meeting with the Sustainability Commission and discussed mandatory solar requirements; while no action was taken on the matter, the City Council requested additional research relative to costs, incentives, threshold requirements, and impact to affordable housing.

ITEM NO. 5.E.

<i>Related Relevant City Actions</i>	
12/14/16	The Sustainability Commission held a joint study session with the Planning Commission on the topic of mandatory solar requirements.
12/21/16	The Sustainability Commission voted to recommend approval of a proposed solar ordinance to the City Council.
01/11/17	The Planning Commission considered the proposed solar ordinance and reviewed the recommendations of the Sustainability Commission. The Planning Commission expressed general support for the proposed ordinance, but requested additional analysis prior to making a recommendation to the City Council.
04/26/17	The Planning Commission voted to recommend approval of the proposed solar ordinance to the City Council.
10/04/17	The City Council considered the proposed solar ordinance, and appointed a subcommittee (Kors, Roberts) to further review the ordinance and provide direction to staff.
10/12/17	The City Council Solar Installation Ordinance subcommittee met and directed staff to prepare a policy that would allow the Planning Commission and City Council to require the installation of solar systems as part of discretionary reviews for new residential development.

STAFF ANALYSIS:

In anticipation of potential action by the State of California to adopt mandatory solar requirements for new residential construction in 2020, the Solar Installation Ordinance Subcommittee felt that adopting a solar policy would achieve nearly the same results as the previously-proposed ordinance, while allowing flexibility in adapting to any forthcoming State regulations. Based on direction from the subcommittee, staff has prepared a policy document for adoption by City Council, which will allow the Planning Commission or the City Council to require the provision of solar systems as a condition of approval of discretionary applications. A discussion of the policy and its application is provided in the following section of this staff report.

Draft Policy:

The proposed policy will allow either the Planning Commission and/or the City Council to impose a condition of approval for the mandatory provision of solar photovoltaic panels as part of discretionary reviews for new single-family and multifamily residential development. The requirement for solar systems would be considered for any of the following types of discretionary reviews:

- Architectural Review applications (Major Architectural applications only);
- Conditional Use Permit applications (where required for residential development);
- Development Agreements;

- Planned Development District applications (or Major Amendments to an approved Planned Development District);
- Specific Plan applications or amendments; and
- Variance applications.

The policy would exempt certain types of new residential construction from the provision of solar systems:

- Low-income housing (as defined in the California Public Utilities Code);
- Manufactured/factory-built housing (as defined in the California Health and Safety Code);
- Any housing developments which were fully entitled prior to the adoption of the policy;
- Accessory dwelling units, when constructed on a parcel with an existing residential dwelling;
- New residential dwelling units that are not subject to discretionary reviews.

The policy establishes a general requirement for solar photovoltaic systems with a wattage that is at least equal to 2.0 times the square footage of the residence (2.0 watts per square foot). Under the policy, the Planning Commission and the City Council would have the ability to reduce the wattage requirement or waive the solar requirement altogether, based on site conditions or affordability factors of the proposed housing.

In applying the policy, Planning Services staff would identify the applicability of the policy in staff reports for discretionary reviews, and would include the requirement for solar photovoltaic systems in the conditions of approval as appropriate. The Planning Commission or the City Council would then consider the application of the policy in their deliberations on the case, and could modify or waive the condition if appropriate.

Cost-Effectiveness Study:

City staff retained a consultant to prepare a cost-effectiveness study for the previous solar ordinance, which would have been required by the California Energy Commission (CEC) had the City moved forward in adopting the ordinance. While not required for the adoption of policies, the cost-effectiveness study provides helpful information in analyzing the costs and cost recovery timeframes associated with solar systems. The study was prepared by EcoMotion, a firm that has prepared cost-effectiveness studies for other jurisdictions who have adopted mandatory solar requirements. EcoMotion determined in its study that the proposed Palms Springs measures do not inhibit cost effectiveness, and that solar photovoltaic systems installed on new homes will provide considerable savings for homeowners over the life of the systems. The study also indicates that even if solar tax credits are eliminated and other incentives disappear, solar installations will still be cost effective. The cost-effectiveness study is included as an attachment to this report.

Future Changes to Energy Efficiency Standards:

The California Energy Commission (CEC) has now begun pre-rulemaking for the 2019 Building Energy Efficiency Standards, as the CEC moves towards its goal to achieve zero net energy (ZNE) levels by 2020 for residences and by 2030 for nonresidential buildings. Solar will be required statewide on new construction starting in 2020. Based on a presentation given by CEC staff in August 2017, the sizing requirements for the climate zone where Palm Springs is located is likely to be higher than the two watts per square foot standard that is proposed as part of the solar policy. A copy of the August 2017 CEC Powerpoint presentation is included as an attachment to this report.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) DETERMINATION:

The proposed policy is intended to preserve and enhance the environment of the City of Palm Springs. Accordingly, this policy is categorically exempt under the provisions of the California Environmental Quality Act ("CEQA") from environmental review pursuant to Section 15061(b)(3) of the CEQA Guidelines. There is no possibility that enhancing environmental conservation efforts would have a significant negative effect on the environment.

FISCAL IMPACT:

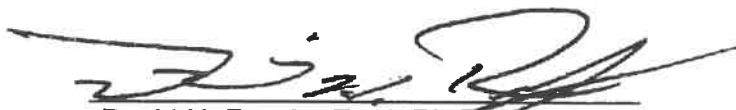
The proposed policy will not have a budgetary impact on the City, as the policy will be implemented as part of an existing discretionary review process. The fiscal impact to home buyers will be the initial cost of the PV system, which is estimated by the cost-effectiveness study as being approximately \$4.06 per watt (resulting in an approximate cost of \$17,500 for a 2,100 square foot house). However, the study indicates that home buyers will recoup the initial cost through savings in utility bills, with a payback period for the average system that varies between 11.7 and 14.2 years.



Flinn Fagg, AICP
Director of Planning Services



Marcus L. Fuller, MPA, P.E., P.L.S.
Assistant City Manager



David H. Ready, Esq., Ph.D.
City Manager

Attachments:

1. Draft Resolution
2. Draft Solar Policy
3. EcoMotion Study prepared for the City of Palm Springs (includes "Local PV Ordinance Cost Effectiveness Study" prepared by Davis Energy Group Inc. as an attachment)
4. City Council Minutes –Meeting of 10/04/17
5. Subcommittee Report – Sustainability Commission meeting of 12/15/16
6. Planning Commission Staff Report and Minutes – Meeting of 04/26/17
7. CEC Presentation – Proposed 2019 Building Energy Efficiency Standards (08/30/17)

ATTACHMENT #1

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
PALM SPRINGS ESTABLISHING A POLICY FOR THE
PROVISION OF SOLAR PHOTOVOLTAIC SYSTEMS AS
PART OF DISCRETIONARY APPROVALS FOR NEW
RESIDENTIAL DEVELOPMENT.

- A. The City of Palm Springs General Plan, adopted by the City Council in October 2007, establishes goals to encourage the use of alternative energy sources, incorporate energy efficiency in building design, and to make the maximum use of solar electric capabilities.
- B. The Sustainability Plan, adopted by the City Council in June 2016, establishes goals to increase the provision of energy from renewable sources and to require solar-generated power for new residential buildings.
- C. The City Council and the Sustainability Commission held a joint meeting on June 23, 2016, and at that meeting, the City Council directed the Sustainability Commission to initiate research into the costs, incentives, threshold requirements, and impacts of mandatory solar requirements.
- D. On December 21, 2016, the Sustainability Commission recommended approval of a draft solar ordinance to the City Council, requiring the provision of solar photovoltaic systems for new and remodeled residential units.
- E. On April 26, 2017, the Planning Commission recommended approval of a draft solar ordinance to the City Council.
- F. On October 4, 2017, a public hearing on the proposed solar ordinance was held by the City Council in accordance with applicable law, and at that meeting, after consideration of the staff report and all testimony presented in conjunction with the item, the City Council referred the ordinance to subcommittee for further review.
- G. On October 12, 2017, the Solar Installation Ordinance Ad Hoc Subcommittee of the City Council met and concluded that a policy for the installation of solar photovoltaic systems would provide flexibility in meeting the goals of the General Plan and the Sustainability Plan, while being mindful of efforts of the State of California to require solar systems for residential construction in the near future.
- H. On January 3, 2018, the City Council conducted a public meeting on the issue of a solar policy, at which meeting the Council considered the staff report, supporting documentation, and all testimony offered on the subject.
- I. The City Council finds that a solar policy will assist in the implementation of the following goals of the City of Palm Springs General Plan:

Goal RC8.2: Support and encourage the use of alternative energy sources in the construction of new buildings.

Goal RC8.3: Encourage and support the incorporation of energy efficiency and conservation practices in subdivision design and building design.

Goal RC8.13: Make the maximum use of solar electric capabilities.

J. The City Council finds that the solar policy will help achieve the following goals of the Sustainability Plan:

- Reduce energy use and carbon use from new homes and buildings.
- Supply 50% of all energy from renewable sources by 2030.
- Develop strategies to reduce community-wide contributions to greenhouse gas emissions to 1990 levels.

THE CITY COUNCIL OF THE CITY OF PALM SPRINGS DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. That the findings and determinations reflected above are true and correct, and are incorporated by this reference herein as the cause and foundation for the action taken by and through this Resolution.

SECTION 2. The policy regarding the requirement for solar photovoltaic panels as part of discretionary approvals for residential development, as contained in Exhibit A, is hereby approved and shall be implemented by staff, the Planning Commission, and the City Council in the review of discretionary applications for new residential development.

ADOPTED THIS 3rd DAY OF JANUARY, 2018.

David H. Ready, Esq., Ph.D.
City Manager

ATTEST:

Anthony J. Mejia, MMC
City Clerk

CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF RIVERSIDE) ss.
CITY OF PALM SPRINGS)

I, ANTHONY J. MEJIA, City Clerk of the City of Palm Springs, hereby certify that Resolution No. _____ is a full, true and correct copy, and was duly adopted at a regular meeting of the City Council of the City of Palm Springs on _____, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Anthony J. Mejia, MMC
City Clerk

ATTACHMENT #2



**City Council Policy Statement
Adopted January 3, 2018**

SOLAR PHOTOVOLTAIC SYSTEMS FOR NEW RESIDENTIAL DEVELOPMENT

In order to achieve the City's goals for energy efficiency and greenhouse gas reduction pursuant to the City of Palm Springs General Plan and the adopted Sustainability Plan, solar photovoltaic systems may be required as part of the discretionary review process for new residential development in accordance with the provisions listed below.

1. The Planning Commission and/or the City Council may require the provision of solar photovoltaic systems for new single-family and multifamily residential construction as a condition of approval of any of the following discretionary application types:

- a. Architectural Review application (Major only);
- b. Conditional Use Permit application;
- c. Development Agreement application;
- d. Planned Development District application or a major amendment thereto;
- e. Specific Plan application or amendment; or
- f. Variance application.

2. The wattage of the required solar photovoltaic system shall generally be equivalent to two (2) watts times the total square footage of the residential dwelling unit. The Planning Commission and/or the City Council may reduce the required wattage or eliminate the requirement for the solar photovoltaic system altogether due to site conditions, environmental factors, or to meet housing affordability goals.

3. This policy shall not be applicable to the following:

- a. Low-income residential housing, as defined in Section 2852(a)(3) of the California Public Utilities Code if the cost of installation of the system is not fully funded without recourse to the residents;

- b. Factory-built housing, as defined by Section 19971 of the California Health and Safety Code;
- c. Accessory dwelling units, when constructed on the same parcel as an existing single-family residential dwelling;
- d. Housing developments which were fully entitled prior to the date of adoption of this policy; and
- e. Housing which is compliant to the development standards of the zoning district in which it is located and which may be approved as a ministerial action.

ATTACHMENT #3



EcoMotion – Sustainability Solutions

601 Fifth Street, Suite 650 Los Angeles CA 90071 • (949) 450-7155 • www.EcoMotion.us

DRAFT 3/6/17 MW

Solar Ordinance Cost-Effectiveness Study

Presented to:

Flinn Fagg

Director of Planning Services

City of Palm Springs

3200 E. Tahquitz Canyon Way

Palm Springs, CA 92262

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Key Assumptions

Impact of Palm Springs's Utility Users Tax (UUT)

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Executive Summary

EcoMotion was retained by the City of Palm Springs to validate its proposed Solar Ordinance. The bottom line is that in all scenarios examined, the Palms Springs ordinance establishing mandatory solar photovoltaic measures does not inhibit cost effectiveness.

This report updates metrics, assumptions, and conclusions from the 2016 California Public Utilities Commission study prepared for PG&E and authored by Davis Energy Group, Inc. Enercomp, Inc. MistiBruceri & Associates, LLC entitled "Local PV Ordinance Cost Effectiveness Study" (also attached as Exhibit 2).

While the CPUC/PG&E study covers all regions and sectors of California, the EcoMotion update focuses only on the City of Palm Springs, the Southern California baseline Region 15 that it occupies, and the residential rates of the serving utility, Southern California Edison.

Whereas the 2016 CPUC/PG&E study states: "This report finds the evaluated solar PV ordinance to be both feasible and cost effective, and reduces energy demand in all 16 California climates zones.", the EcoMotion update affirms that PV systems will be cost-effective for the residential sector for the 25-year life of the solar measure, even if tax credits and incentives are not present.

The main difference between today's market and the assumptions made for the 2016 CPUC/PG&E study report is that a multi-year extension of the ITC was granted in 2016, alleviating concerns in the industry. Solar installation prices have continued to decline while utility rates have continued to increase, keeping solar even more cost-effective.

This update of 2016 CPUC/PG&E study report cost-effectiveness conclusions focuses on the original assumptions made, any new assumptions made to support current and continuing conditions, and focuses on Palm Springs based average consumption (5 kWh per square foot, a number furnished by SCE) to demonstrate cost-effectiveness.

Key Assumptions

Evaluating the cost-effectiveness of rooftop PV installations for newly constructed buildings is complex and depends on several variables. The CPUC/PG&E report addresses this complexity by using scenario analysis and categorizing results by climate zone and broad customer classes. In this report, EcoMotion uses some assumptions from the CPUC/PG&E report but focuses on scenarios that are most common in the City of Palm Springs. EcoMotion assumes all solar systems are in Palm Springs (Climate Zone 15) and accrue benefits over a 25 year economic lifetime.

Table 1: Prototype Characteristics*

	<u>Single Family</u> <u>One-Story</u>	<u>Single Family</u> <u>Two-Story</u>
Conditioned Floor Area	2,100 ft ²	2,700 ft ²
Num. of Stories	1	2
Num. of Bedrooms	3	3
Window-to-Floor Area Ratio	20%	20%

*2016 CPUC/PG&E study

2016 CPUC/PG&E Report assumptions	2016 EcoMotion Report assumptions
Utility electricity rate structures and Net Energy Metering (NEM) rules do not change significantly throughout the lifetime of rooftop PV systems	Given the dramatic impact NEM has on the cost-effectiveness of solar, this analysis assumes Time-of-use rate structures coming with NEM 2.0
Utility rates escalate at 0% (conservative assumption)	Utility rates escalate at 0%
Rooftop PV costs for Climate Zone 15 were placed at \$4.06 per watt (DC)	Rooftop PV costs continue to decline. EcoMotion will assume the same cost for Palm Springs although competitive bidding may yield lower prices
All systems are roof-mounted	All systems are roof-mounted
The CPUC/PG&E study defines cost effectiveness as lifecycle benefits (savings) being greater than lifecycle costs. The solar lifecycle being 30 years	EcoMotion also defines cost effectiveness as lifecycle benefits (savings) being greater than lifecycle costs. EcoMotion uses the more conservative lifecycle figure of 25 years
New Solar Homes Partnership (NSHP) rebates are represented	New Solar Homes Partnership (NSHP) rebates are not represented
Lifecycle cost estimates include the 30% Tax Credit	EcoMotion does not include the tax credit and shows cost effectiveness without it
No specific solar ordinance is referenced	EcoMotion assumes the Palm Springs PV requirement of 2 watts per square foot

Impact of Palm Springs's Utility Users Tax (UUT)

All residential SCE customers pay a 5% Utility Users Tax to the City of Palm Springs. The tax varies city by city. Some cities charge no tax. The tax is not mentioned in the CEC study. For Palm Springs and other cities, the UUT has the impact of raising the consumer utility costs by 5%. In terms of solar cost-effectiveness, it means that avoided utility cost has a 5% greater value and helps the payback term for solar deals.

Residential Cost Scale

2016 CPUC/PG&E Report	2016 EcoMotion Report
\$4.06/watt	\$4.06/watt

Residential Property Examples

While SCE rate TOU-D-T is the default rate required after July 1, 2017 for new solar installations, EcoMotion has provided analysis for the two other TOU rate options available in Palm Springs. Supporting spreadsheets with rate detail are in Exhibit 1.

Residential Cost-Effectiveness with SCE Rate TOU-D-T*

Annual kWh use	Square Feet	Required solar kW size (DC) and gross cost	First Year Bill Savings	Payback
10,500	2,100 (one story)	4.2 kW \$17,052	\$1,453	11.7 years
13,500	2,700 (two story)	5.4 kW \$21,924	\$1,856	11.8 years

*Assumes 30% of summer use is in "on peak" period

Residential Solar Cost-Effectiveness with SCE Rate TOU-D-Option A*

Use assumption of 5kWh per square foot for Climate Zone 15 provided by SCE

Annual kWh use	Square Feet	Required solar kW size (DC) and gross cost	First Year Bill Savings	Payback
10,500	2,100 (one story)	4.2 kW \$17,052	\$1,264	13.5 years
13,500	2,700 (two story)	5.4 kW \$21,924	\$1,614	13.6 years

*Assumes 30% of summer use is in "on peak" period

Residential Solar Cost-Effectiveness with SCE Rate TOU-D-Option B*

Annual kWh use	Square Feet	Required solar kW size (DC) and gross cost	First Year Bill Savings	Payback
10,500	2,100 (one story)	4.2 kW \$17,052	\$1,201	14.2 years
13,500	2,700 (two story)	5.4 kW \$21,924	\$1,544	14.2 years

*Assumes 30% of summer use is in "on peak" period

In many cases, the homeowner may elect to exceed the required kW size to maximize return on investment and lower the payback period.

Conclusion

Solar photovoltaic systems installed on new homes and during major remodels will provide considerable savings for homeowners over the life of the systems. Solar is cost-effective and pays for itself with utility bill savings. Solar is cost-effective today and will remain cost-effective into the future as installation prices decrease while utility rates increase. Even if solar tax credits go away and the all other incentives disappear, solar installations will still be cost effective.

Exhibit 1

Palm Springs SCE Solar Savings Calculations

(based on SCE rates effective 1/1/17)

PV Size

(kW dc)	Solar Generation kWh Estimate	SCE TOU-D-T Rate	Savings
4.2	Summer Peak	1,296 \$ 0.3542	\$ 459.04
	Summer Off Peak	1,595 \$ 0.1813	\$ 289.17
	Winter Peak	1,424 \$ 0.2343	\$ 333.64
	Winter Off Peak	2,118 \$ 0.1752	\$ 371.07
	Totals	6,433	\$ 1,452.93

PV Size

(kW dc)	Solar Generation kWh Estimate	SCE TOU-D-T Rate	Savings
5.4	Summer Peak	1,655 \$ 0.3542	\$ 586.20
	Summer Off Peak	2,038 \$ 0.1813	\$ 369.49
	Winter Peak	1,820 \$ 0.2343	\$ 426.43
	Winter Off Peak	2,707 \$ 0.1752	\$ 474.27
	Totals	8,220	\$ 1,856.38

PV Size

(kW dc)	Solar Generation kWh Estimate	SCE TOU-D-A Rate	Savings
4.2	Summer Peak	741 \$ 0.3564	\$ 264.11
	Summer Part Peak	1,823 \$ 0.1874	\$ 341.71
	Summer Off Peak	326 \$ 0.0393	\$ 12.82
	Winter Peak	689 \$ 0.2478	\$ 170.63
	Winter Part Peak	2,520 \$ 0.1825	\$ 459.94
	Winter Off Peak	333 \$ 0.0436	\$ 14.54
	Totals	6,433	\$ 1,263.74

PV Size

(kW dc)	Solar Generation kWh Estimate	SCE TOU-D-A Rate	Savings
5.4	Summer Peak	947 \$ 0.3564	\$ 337.47
	Summer Part Peak	2,330 \$ 0.1874	\$ 436.63
	Summer Off Peak	417 \$ 0.0393	\$ 16.38
	Winter Peak	880 \$ 0.2478	\$ 218.02
	Winter Part Peak	3,220 \$ 0.1825	\$ 587.70
	Winter Off Peak	426 \$ 0.0436	\$ 18.57
	Totals	8,220	\$ 1,614.78

Exhibit 1 (cont.)

Palm Springs SCE Solar Savings Calculations

(based on SCE rates effective 1/1/17)

PV Size

(kW dc)	Solar Generation kWh Estimate	SCE TOU-D-B Rate	Savings
4.2	Summer Peak 741	\$ 0.3351	\$ 248.32
	Summer Part Peak 1,823	\$ 0.1661	\$ 302.87
	Summer Off Peak 326	\$ 0.1308	\$ 42.66
	Winter Peak 689	\$ 0.2266	\$ 156.03
	Winter Part Peak 2,520	\$ 0.1612	\$ 406.26
	Winter Off Peak 333	\$ 0.1350	\$ 45.01
	Totals 6,433		\$ 1,201.15

PV Size

(kW dc)	Solar Generation kWh Estimate	SCE TOU-D-B Rate	Savings
5.4	Summer Peak 947	\$ 0.3351	\$ 317.30
	Summer Part Peak 2,330	\$ 0.1661	\$ 387.00
	Summer Off Peak 417	\$ 0.1308	\$ 54.52
	Winter Peak 880	\$ 0.2266	\$ 199.37
	Winter Part Peak 3,220	\$ 0.1612	\$ 519.11
	Winter Off Peak 426	\$ 0.1350	\$ 57.51
	Totals 8,220		\$ 1,534.81

CA Statewide Codes and Standards Program

Title 24, Part 11

Local Energy Efficiency Ordinances

Local PV Ordinance Cost Effectiveness Study

Prepared for:

Marshall Hunt

Codes and Standards Program

Pacific Gas and Electric Company

Prepared by:

Davis Energy Group, Inc.

Enercomp, Inc.

Misti Bruceri & Associates, LLC

Last Modified: September 23, 2016

LEGAL NOTICE

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1 Introduction

The California Building Energy Efficiency Standards Title 24, Part 6 (Title 24) (CEC, 2016a) is maintained and updated every three years by two state agencies, the California Energy Commission (Energy Commission) and the Building Standards Commission (BSC). In addition to enforcing the code, local jurisdictions have the authority to adopt local energy efficiency ordinances, or reach codes, that exceed the minimum standards defined by Title 24 (as established by Public Resources Code Section 25402.1(h)2 and Section 10-106 of the Building Energy Efficiency Standards). Local jurisdictions must demonstrate that the requirements of the proposed ordinance are cost effective and do not result in buildings consuming more energy than is permitted by Title 24. In addition, the jurisdiction must obtain approval from the Energy Commission and file the ordinance with the BSC for the ordinance to be legally enforceable. The Energy Commission staff approached the statewide Codes and Standards team to provide inputs on a draft solar photovoltaic model ordinance. The Energy Commission staff asked the IOU team to review the ordinance language and to suggest recommended solar PV system sizing based on size of home.

Based on conversations between the Energy Commission, the IOUs and their consultant teams, the following needs were identified for the proposed PV ordinance:

- a. Needs to be simple and easy to implement by the local jurisdiction
- b. Must be aligned with the overall vision for energy efficiency and ZNE driving to a “glide path” to meet 2020 goals for residential new construction.
- c. Must not result in oversized PV systems that may have grid impacts.

This report presents the results from analysis of the feasibility and cost-effectiveness of requiring new low-rise single family and multifamily residential construction to include rooftop PV systems in addition to meeting the 2016 Building Energy Efficiency Standards, which become effective January 1, 2017. The cost effectiveness analysis for all sixteen California climate zones in this report includes meeting minimum Title 24 efficiency performance targets plus on-site renewable energy generation sized to offset a portion of the total TDV loads of the building without risking sizing of the PV system larger than the estimated electrical energy use of the building. Additional scenarios including both PV and above-code energy efficiency measures are documented in a report delivered to Pacific Gas and Electric Company¹.

2 Methodology and Assumptions

2.1 Building Prototypes

The Energy Commission defines building prototypes which it uses to evaluate the cost-effectiveness of proposed changes to Title 24 requirements. Two single family prototypes and one multifamily prototype, are used in this analysis and development of the above-code efficiency packages. Table 2 describes the basic characteristics of each prototype. Additional

¹ Title 24, Part 11, Local Energy Efficiency Ordinances – CALGreen Cost Effectiveness Study, September 2, 2016

details on the prototypes can be found in the Alternative Calculation Method (ACM) Approval Manual (CEC, 2016b).

Table 2: Prototype Characteristics

	<u>Single Family One-Story</u>	<u>Single Family Two-Story</u>	<u>Multifamily</u>
Conditioned Floor Area	2,100 ft ²	2,700 ft ²	6,960 ft ² : (4) 780 ft ² & (4) 960 ft ² units
Num. of Stories	1	2	2
Num. of Bedrooms	3	3	(4) 1-bed & (4) 2-bed units
Window-to-Floor Area Ratio	20%	20%	15%

Additionally, each prototype building has the following features:

- Slab-on-grade foundation
- Vented attic. High performance attic in climates where prescriptively included (CZ 4, 8-16) with insulation installed below roof deck. Refer to Table 150.1-A in Appendix A.
- Ductwork located in the attic for single family homes and in conditioned space for multifamily.
- Split-system gas furnace with air conditioner that meets the minimum federal guidelines for efficiency
- Tankless gas water heater that meets the minimum federal guidelines for efficiency; individual water heaters in each multifamily apartment.

Other features are defined consistent with the Standard Design in the Alternative Calculation Method Reference Manual (CEC, 2016c), designed to meet, but not exceed, the minimum requirements.

The Energy Commission's standard protocol for the single family prototypes is to weight the simulated energy impacts by a factor that represents the distribution of single-story and two-story homes being built statewide, assuming 45% single-story homes and 55% two-story homes. Simulation results in this study are therefore characterized according to this ratio, which is approximately equivalent to a 2,430 ft² house².

2.2 Energy Simulations

The CBECC-RES 2016.2.0 Alpha2³ compliance simulation tool was used to evaluate energy impacts using the 2016 prescriptive standards as the benchmark and the 2016 time dependent valuation (TDV) values. TDV is the energy metric used by the Energy Commission since the 2005 Title 24 energy code to evaluate compliance with the Title 24 standards. TDV values energy use differently depending on the fuel source (gas, electricity, and propane), time of day, and season. TDV was developed to reflect the "societal value or cost" of energy including long-term projected costs of energy such as the cost of providing energy during peak periods of demand and other societal costs such as projected costs for carbon emissions. Electricity used

² 2,430 ft² = 45% * 2,100 ft² + 55% * 2,700 ft²

³ On June 14, 2016 the Energy Commission approved CBECC-Res 2016.2.0 Version of the software. The version used for this study is nearly identical to the approved version with the exception of minor changes that do not affect the cost effective analysis of the measures evaluated.

(or saved) during peak periods of the summer has a much higher value than electricity used (or saved) during off-peak periods (Horii et al, 2014).

The methodology used in the analyses for each of the prototypical building types begins with a design that precisely meets the minimum 2016 prescriptive requirements (0% compliance margin). Standards Table 150.1-A, included in Appendix A lists the prescriptive measures that determine the base design in each climate zone.

2.3 PV Sizing Criteria

The minimum PV system size required by the proposed ordinance is determined using a performance-based (simulation) approach. There is a prescriptive sizing option that yields minimum system capacities equivalent to the performance option. The intent of the PV sizing assumptions is to size PV to offset building electricity use while minimizing the risk of requiring PV system sizes that produce significantly more than the building total electricity use on an annual basis. The following considerations were used for sizing the PV systems:

1. Solar PV capacities proposed in the ordinance are the minimum sizes required. A builder or homeowner may install larger systems.
2. Solar PV sizing is based on percent of total building TDV energy use. Initial calculations were conducted such that PV system size is equivalent to offsetting 80% of total building estimated electricity use for a typical gas/electric home built to the minimum 2016 Title 24 requirements.
3. The performance option is based on offsetting a certain percentage of total TDV energy use. System sizes calculated in Step 3 above were adjusted to reference a percentage of TDV energy use, and grouped into three bins depending on system size and climate zone (see Table 3). The sizing is fuel agnostic since it based on TDV and designed such that builders designing homes more efficient than 2016 code are not forced to install PV systems larger than the building's projected annual electricity use. The performance section of the ordinance uses TDV which needs to be incorporated into CBECC-Res software making the review process for building departments similar to that for regular Title 24 compliance review.
4. Based on these calculations, prescriptive PV capacity tables were developed for each climate zone (see Table 4) for single family buildings with conditioned floor areas less than 4,500 square feet. Larger homes must use the performance approach. Homes smaller than 4,500 square feet may comply either with the prescriptive or the performance path.
5. PV system values shown in Table 3 and Table 4 were calculated using the following methodology:
 - PV size was estimated based on percent of total building TDV for each climate zone and reflects a value that does not exceed 80% of total building electricity use.
 - Calculations are based on specs for a 2016 code compliant building and both TDV and electricity use were calculated using CBECC-Res software.
 - HVAC energy use (cooling, heating, IAQ fans) are based on per square foot energy using a weighted average of the 2,100 single-story and 2,700 2-story single family prototype buildings and assuming gas appliances. Values specific to each climate zone.

- Water heating energy use assumes a standard gas tankless water heater and is adjusted based on number of bedrooms consistent with the rules in the Alternative Calculation Method (ACM) Reference Manual (CEC. 2016c). Hot water usage capped at 5 bedrooms per ACM.
- Plug load, lighting, and appliance energy use based on algorithms developed from 2016 CASE report and used in CBECC-Res. Values are adjusted based on # of bedrooms and floor area. Values capped at 4,150 square feet and 7 bedrooms per ACM.
- PV production based on specific PV production for each climate zone, using PV modeling in CBECC-Res (PVWatts methodology). Assumes standard PV efficiency and assumptions consistent with the NSHP California Flexible Installation (CFI) criteria (170 degree azimuth, 5:12 roof pitch), along with a 96% efficiency inverter and standard system losses.

Table 3: Minimum Percent Reduction of Total Annual TDV Energy Use by Climate Zone (Performance Approach)

Climate Zone	% Total TDV
CZs 14, 16	35%
CZs 1, 2, 4, 9-13, 15	45%
CZs 3, 5-8	55%

Table 4: Minimum PV System Size (kW_{DC}) required to meet Solar PV Ordinance by Climate Zone

Conditioned Space (ft ²)	CZ1	CZ2	CZ3	CZ4	CZ5	CZ6	CZ7	CZ8	CZ9	CZ10	CZ11	CZ12	CZ13	CZ14	CZ15	CZ16
Less than 1000	1.6	1.4	1.5	1.3	1.4	1.5	1.3	1.5	1.4	1.4	1.7	1.5	1.8	1.3	2.1	1.3
1000 - 1499	2.0	1.7	1.7	1.5	1.6	1.7	1.5	1.8	1.7	1.7	2.2	1.9	2.3	1.6	2.8	1.6
1500 - 1999	2.4	2.0	2.1	1.8	1.9	2.0	1.8	2.1	2.0	2.0	2.7	2.3	2.8	2.0	3.5	1.9
2000 - 2499	2.8	2.3	2.4	2.1	2.1	2.3	2.0	2.4	2.3	2.3	3.2	2.7	3.4	2.3	4.2	2.3
2500 - 2999	3.2	2.6	2.7	2.4	2.4	2.6	2.3	2.7	2.6	2.7	3.7	3.1	3.9	2.7	4.9	2.6
3000 - 3499	3.6	2.9	3.0	2.6	2.7	2.9	2.5	3.0	2.9	3.0	4.2	3.4	4.4	3.0	5.6	3.0
3500 - 3999	3.9	3.2	3.2	2.9	2.9	3.2	2.7	3.3	3.2	3.3	4.7	3.8	4.9	3.4	6.3	3.3
4000 - 4499	4.3	3.5	3.5	3.2	3.1	3.4	2.9	3.6	3.5	3.6	5.1	4.2	5.4	3.7	7.0	3.6

2.4 Cost Effectiveness

A customer based approach to evaluating cost effectiveness was used based on past experience with reach code adoption by local governments. The current residential utility rates at the time of the analysis were used to calculate utility costs for all cases and determine cost effectiveness for the proposed packages. Annual utility costs were calculated using hourly electricity and gas output from CBECC-Res and applying the utility tariffs summarized in Table 5 and included in Appendix C. The standard residential rate (E1 in PG&E territory, D in SCE territory, & DR in SDG&E) was applied to the base case and all cases without PV systems. The

applicable residential time-of-use (TOU) rate was applied to all cases with PV systems.⁴ Any annual electricity production in excess of annual electricity consumption is credited to the utility account at the applicable wholesale rate based on the approved NEM tariffs for that utility. The net surplus compensation rates for the different utilities are as follows:

- PG&E: \$0.043 / kWh
- SCE: \$0.0298 / kWh⁵
- SDG&E: \$0.0321 / kWh⁶

Table 5: IOU Utility Tariffs used based on Climate Zone

Climate Zones	Electric / Gas Utility	Electricity (Standard)	Electricity (Time-of-use)	Natural Gas
1-5, 11-13, 16	PG&E	E1	E-TOU, Option A	G1
6, 8-10, 14, 15	SCE / SoCal Gas	D	TOU-D-T	GR
7	SDG&E	DR	DR-SES	GR

Table 6 below summarizes the incremental costs applied in this analysis. A range of PV pricing was evaluated. Case 1 assumes that the installed cost is reduced by the current NSHP incentive. Case 2 assumes no NSHP incentive in the cost. The 30% federal solar investment tax credit is applied in both cases.

Table 6: Measure Descriptions & Cost Assumptions

Case	Incremental Cost		Source & Notes
	Single Family	MF – Per Unit	
1) Includes current NSHP incentive	\$3.35 / W DC	\$3.03 / W DC	Average installed system costs in California from Go Solar California (http://www.gosolarcalifornia.ca.gov/) reduced by \$0.50/Watt to reflect NSHP incentives & 30% for the solar investment tax credit. ⁷
2) No NSHP Incentive	\$3.70 / W DC	\$3.38 / W DC	Same assumptions as above but without the \$0.50/Watt NSHP incentive

Cost effectiveness is presented according to lifecycle customer benefit-to-cost ratio. The benefit-to-cost ratio is a metric which represents the cost effectiveness of energy efficiency over a 30-year lifetime taking into account discounting of future savings and financing of incremental costs. A value of one indicates the savings over the life of the measure are equivalent to the incremental cost of that measure. A value greater than one represents a positive return on investment. The ratio is calculated as follows:

Lifecycle Customer Benefit-Cost Ratio =

⁴ Under NEM rulings by the CPUC (D-16-01-144, 1/28/16), all new PV customers shall be in an approved TOU rate structure. As of March 2016, all new PG&E net energy metering (NEM) customers are enrolled in a time-of-use rate. (<http://www.pge.com/en/myhome/saveenergymoney/plans/tou/index.page?>).

⁵ SCE net surplus compensation rate based on 1-year average September 2015 – August 2016.

⁶ SDG&E net surplus compensation rate based on 1-year average August 2015 – July 2016.

⁷ Avg. system cost for systems < 10kW (for the last 12 months) of \$5.29/Watt for single family (<http://www.gosolarcalifornia.ca.gov/>). For multi-family systems, an average of the < 10 kW and > 10kW system cost (\$4.37/Watt) was used; systems are expected to be typically greater than 10 kW, although not as large as some commercial systems reported on in the database.

$(\text{Annual utility cost savings} * \text{Lifecycle cost factor}) / (\text{First incremental cost} * \text{Financing factor})$

The lifecycle cost factor is 19.6 and includes the following assumptions:

- 30-year measure life & utility cost savings
- 3% real discount rate
- No utility rate escalation (conservative assumption)

The financing factor is 1.068 and includes the following assumptions:

- 30-year financing term
- 4.5% loan interest rate
- 3% real discount rate
- 20% average tax rate (to account for tax savings due to loan interest deductions)

Simple payback is also presented and is calculated using the equation below. Based on the terms described above the lifecycle cost-to-benefit ratio threshold of one is roughly equivalent to a simple payback of 18 years.

$\text{Simple payback} = \text{First incremental cost} / \text{Annual customer utility cost savings}$

2.5 Greenhouse Gas Emissions

Equivalent CO₂ emission savings were calculated using the following emission factors.

Electricity factors are specific to California electricity production.

Table 7: Equivalent CO₂ Emissions Factors

		Source
Electricity	0.724 lb. CO ₂ -e / kWh	U.S. Environmental Protection agency's 2007 eGRID data. ⁸
Natural Gas	11.7 lb. CO ₂ -e / Therm	Emission rates for natural gas combustion as reported by the U.S. Environmental Protection agency's GHG Equivalencies Calculator. ⁹

3 Results

3.1 Single Family Results

A comparison of cost effectiveness for each climate zone, with and without the NSHP incentive, is presented in Figure 1. Table 8 provides the results in tabular form for the case without the NSHP incentive, along with energy and greenhouse gas (GHG) savings. The lifecycle benefit-to-cost ratio threshold of one is roughly equivalent to a simple payback of 18 years.

The PV system capacity is sized based upon the values in Table 4 to provide approximately 80% of estimated annual kWh consumption with capacities ranging from 2.2 kW DC in mild climate zone 7 to 4.6 kW DC in hot climate zone 15. The solar package demonstrates cost effectiveness in all climate zones with a benefit-to-cost ratio ranging from 1.18 to 1.59 with the NSHP incentive and 1.07 to 1.44 without the NSHP incentive. Greenhouse gas (GHG) savings range from 25.7% to 63.8%.

⁸ <https://www.epa.gov/energy/ghg-equivalencies-calculator-calculations-and-references>

⁹ <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Figure 1: Single family cost effectiveness comparison

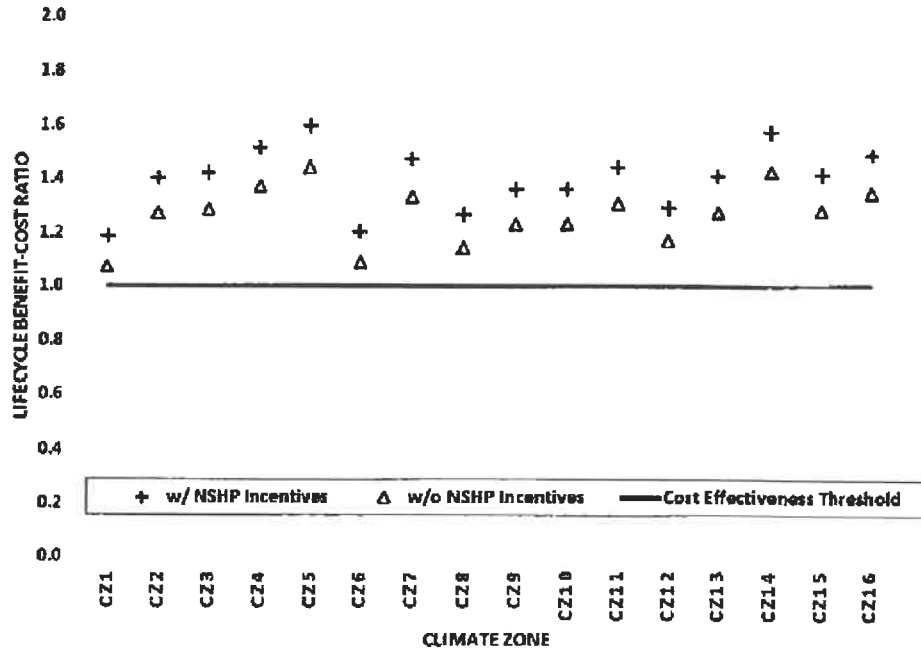


Table 8: Single Family PV Package Cost Effectiveness Results

Climate Zone	PV Capacity (kW)	Elec Savings (kWh)	% Carbon Savings ¹	Package Cost ²	Utility Cost Savings	Simple Payback	Lifecycle Benefit-Cost Ratio
CZ1	3.0	4,041	30.4%	\$12,301	\$719	17.1	1.07
CZ2	2.5	3,857	33.7%	\$10,041	\$694	14.5	1.27
CZ3	2.6	4,049	42.5%	\$10,448	\$732	14.3	1.29
CZ4	2.3	3,647	36.0%	\$9,226	\$688	13.4	1.37
CZ5	2.3	3,810	41.9%	\$9,226	\$725	12.7	1.44
CZ6	2.5	3,892	46.8%	\$10,041	\$596	16.8	1.09
CZ7	2.2	3,546	48.4%	\$8,819	\$639	13.8	1.33
CZ8	2.6	4,058	51.7%	\$10,448	\$652	16.0	1.15
CZ9	2.5	4,026	47.1%	\$10,041	\$674	14.9	1.23
CZ10	2.5	4,108	46.1%	\$10,265	\$688	14.9	1.23
CZ11	3.5	5,533	44.9%	\$14,155	\$1,007	14.1	1.31
CZ12	2.9	4,582	40.4%	\$11,894	\$757	15.7	1.17
CZ13	3.7	5,680	47.2%	\$14,969	\$1,040	14.4	1.27
CZ14	2.5	4,528	37.2%	\$10,265	\$796	12.9	1.42
CZ15	4.6	7,670	63.8%	\$18,676	\$1,303	14.3	1.28
CZ16	2.5	4,187	25.7%	\$10,041	\$738	13.6	1.35

¹ Based on CA electricity production and equivalent CO₂ emission rates of 0.724 lbCO₂e / kWh & 11.7 lb-CO₂e / therm.

² Includes 10% markup for builder profit and overhead. \$0.50 / W NSHP incentive not applied

Climate Zone	PV Capacity (kW)	Elec Savings (kWh)	% Carbon Savings ¹	Package Cost ²	Utility Cost Savings	Simple Payback	Lifecycle Benefit-Cost Ratio
to package costs							

3.2 Multifamily Results

A comparison of cost effectiveness for the multi-family prototype is presented in Figure 2. Table 9 provides the results in tabular form for the case without the NSHP incentive, along with energy and greenhouse gas savings. *All multifamily results are presented on a per dwelling unit basis.* The lifecycle benefit-to-cost ratio threshold of one is roughly equivalent to a simple payback of 18 years.

The solar package demonstrates cost effectiveness in all climate zones with a benefit-to-cost ratio ranging from 1.16 to 1.59 with the NSHP incentive and 1.04 to 1.43 without the NSHP incentive. Greenhouse gas (GHG) savings range from 30.8% to 54.9%. The required PV capacity per apartment ranges from 1.3 kW DC in the mild climates to 2.1 kW DC in hot climates (CZ15). For the multifamily prototype 8-unit apartment building, this is equivalent to 10.4 to 16.8 kW for the building.

Figure 2: Multifamily cost effectiveness comparison

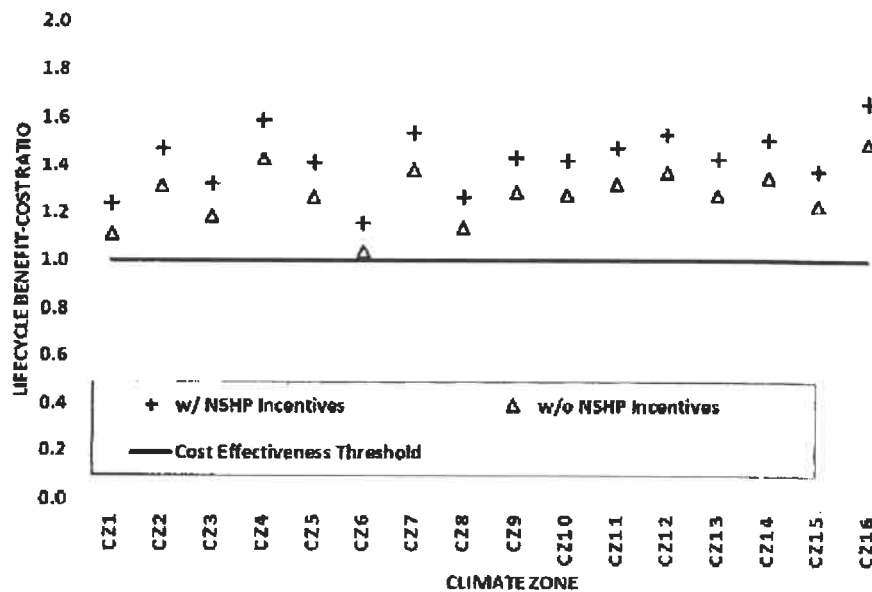


Table 9: Multifamily PV Package Cost Effectiveness Results

Climate Zone	PV Capacity (kW)	Elec Savings (kWh)	% Carbon Savings ¹	Package Costs ²	Utility Cost Savings	Simple Payback	Lifecycle Benefit-Cost Ratio
CZ1	1.6	2,141	35.5%	\$5,951	\$361	16.5	1.11
CZ2	1.4	2,191	39.2%	\$5,207	\$373	14.0	1.32
CZ3	1.5	2,368	46.6%	\$5,579	\$361	15.5	1.19
CZ4	1.3	2,093	39.8%	\$4,835	\$376	12.9	1.43
CZ5	1.4	2,355	46.9%	\$5,207	\$360	14.5	1.27
CZ6	1.5	2,368	49.5%	\$5,579	\$315	17.7	1.04
CZ7	1.3	2,129	46.2%	\$4,835	\$364	13.3	1.38
CZ8	1.5	2,373	48.9%	\$5,579	\$345	16.2	1.14
CZ9	1.4	2,287	45.4%	\$5,207	\$365	14.3	1.29
CZ10	1.4	2,282	44.3%	\$5,207	\$362	14.4	1.28
CZ11	1.7	2,707	44.2%	\$6,322	\$456	13.9	1.32
CZ12	1.5	2,354	41.1%	\$5,579	\$417	13.4	1.37
CZ13	1.8	2,782	45.9%	\$6,694	\$466	14.4	1.28
CZ14	1.3	2,336	38.5%	\$4,835	\$356	13.6	1.35
CZ15	2.1	3,513	54.9%	\$7,810	\$526	14.8	1.24
CZ16	1.3	2,208	30.8%	\$4,835	\$394	12.3	1.49

¹ Based on CA electricity production and equivalent CO₂ emission rates of 0.724 lbCO₂e / kWh & 11.7 lb-CO₂e / therm.

² Includes 10% markup for builder profit and overhead. \$0.50 / W NSHP incentive not applied to package costs

4 Conclusions & Summary

This report finds the evaluated solar PV ordinance to be both feasible and cost effective, and reduces energy demand in all 16 California climates zones.

The following describes the recommended PV sizing and requirements for all climate zones. The PV ordinance requires that all buildings meet code compliance for the 2016 Title 24, Part 6 without the use of the PV compliance credit (PVCC). Projects are also required to install a PV system based on the capacities shown in Table 3 and Table 4.

Lifecycle benefit-to-cost ratios for adding PV to a 2016 code compliant building are above one, demonstrating cost effectiveness for both the single family and multifamily prototypes in all climate zones.

This report has identified that an ordinance that requires compliance with the 2016 building code, without taking the PV credit, combined with PV systems sized to the values shown in Table 3 and Table 4 is cost effective for both single family and low-rise multifamily dwellings and can be adopted by cities and counties within investor-owned utility territories across California consistent to the requirements of the Public Resources Code (25402.1(h)) and to the benefit of the jurisdiction, its residents, and the state.

5 References

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Appendix A – Prescriptive Package

The following presents the residential prescriptive package as printed in the 2016 Building Energy Efficiency Standards (CEC, 2016a).

TABLE 150.1-A COMPONENT PACKAGE-A STANDARD BUILDING DESIGN

		C															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Building Envelope/ Roofs/ Ceilings	Option A (meets §150.1(c)(9A))	Continuous Insulation	Roofing Type	No Air Space ¹	NR	NR	NR	NR	R 8	R 8	R 8	R 8	R 8	R 8	R 8	R 8	R 8
					NR	NR	NR	NR	R 6	R 6	R 6	R 5	R 6	R 6	R 6	R 6	R 6
	Option B (meets §160.1(c)(9A))	Below Roof Deck	Roofing Type	No Air Space ²	R 38	R 38	R 30	R 30	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
					NR	NR	NR	NR	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18
	Option B (meets §160.1(c)(9A))	With Air	Roofing Type	No Air Space ²	NR	NR	NR	NR	R 13	R 13	R 13	R 13	R 13	R 13	R 13	R 13	R 13
					NR	NR	NR	NR	R 13	R 13	R 13	R 13	R 13	R 13	R 13	R 13	R 13
	Option B (meets §160.1(c)(9A))	Ceiling Insulation	Radiant Barrier	No Air Space ²	R 38	R 38	R 30	R 30	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
					NR	NR	NR	NR	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18
	Option B (meets §160.1(c)(9A))	Ceiling Insulation	Radiant Barrier	No Air Space ²	R 38	R 38	R 30	R 30	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
					NR	NR	NR	NR	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18
	Option B (meets §160.1(c)(9A))	Ceiling Insulation	Radiant Barrier	No Air Space ²	R 38	R 38	R 30	R 30	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
					NR	NR	NR	NR	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18	R 18

[illegible]

Maximum Total Area	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Maximum West Facing Area	NR	5%	NR	5%	NR	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%

TABLE 150.1-A COMPONENT PACKAGE-A STANDARD BUILDING DESIGN (CONTINUED)

		Climate Zone															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HVAC SYSTEM	Space Heating ¹¹	Electric-Resistance Allowed	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		If gas, AFUE	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
		If Heat Pump, HSPF ⁸	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
	Space cooling	SEER	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
		Refrigerant Charge Verification or Fault Indicator Display	NR	REQ	NR	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	NR
		Whole House Fan ¹⁰	NR	NR	NR	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	NR
Central System Air Handlers	Central Fan Integrated Ventilation System Fan Efficacy	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	
	Ducts ¹²	Duct Insulation	R-8	R-8	R-6	R-8	R-6	R-6	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8
		Roof/Ceiling Options A & B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Heating	All Buildings	Roof/Ceiling	R-8	R-8	R-6	R-8	R-6	R-6	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8	R-8
		Roof/Ceiling	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
		System Shall meet Section 150.1(c)8															

Footnote requirements to TABLE 150.1-A:¹⁰

1. Install the specified R-value with no air space present between the roofing and the roof deck.
2. Install the specified R-value with an air space present between the roofing and the roof deck. Such as standard installation of concrete or clay tile.
3. R-values shown for below roof deck insulation are for wood-frame construction with insulation installed between the framing members.
4. Assembly U-factors can be met with cavity insulation alone or with continuous insulation alone, or with both cavity and continuous insulation that results in an assembly U-factor equal to or less than the U-factor shown. Use Reference Joint Appendices JA4 Table 4.3.1, 4.3.1(a), or Table 4.3.4 to determine alternative insulation products to meet the required maximum U-factor.
5. Mass wall has a thermal heat capacity greater than or equal to 7.0 Btu/h-ft². "Interior" denotes insulation installed on the inside surface of the wall.
6. Mass wall has a thermal heat capacity greater than or equal to 7.0 Btu/h-ft². "Exterior" denotes insulation installed on the exterior surface of the wall.
7. Below grade "interior" denotes insulation installed on the inside surface of the wall.
8. Below grade "exterior" denotes insulation installed on the outside surface of the wall.
9. HSPF means "heating seasonal performance factor."
10. When whole house fans are required (REQ), only those whole house fans that are listed in the Appliance Efficiency Directory may be installed. Compliance requires installation of one or more WHFs whose total airflow CFM is capable of meeting or exceeding a minimum 1.5 cfm/square foot of conditioned floor area as specified by Section 150.1(c)12.
11. A supplemental heating unit may be installed in a space served directly or indirectly by a primary heating system, provided that the unit thermal capacity does not exceed 2 kilowatts or 7,000 Btu/hr and is controlled by a timelimiting device not exceeding 30 minutes.
12. For duct and air handler location: REQ denotes location in conditioned space. When the table indicates ducts and air handlers are in conditioned space, a HERS verification is required as specified by Reference Residential Appendix RA3.1.4.3.8.

¹⁰ Single family buildings are modeled with Option B and multifamily buildings are modeled with Option C.

Appendix B - Utility Rate Tariffs

Following are the PG&E electricity, both standard and time-of-use, and natural gas tariffs applied in this study. The PG&E monthly gas rate in \$/therm was applied on a monthly basis for the 12-month period ending March 2016.



Pacific Gas and Electric Company
San Francisco, California
U 39

Cancelling

Revised
Revised

Cal. P.U.C. Sheet No.
Cal. P.U.C. Sheet No.

36706-E
36470-E

ELECTRIC SCHEDULE E-1 RESIDENTIAL SERVICES

Sheet 1

APPLICABILITY This ⁽⁷⁾Rate is applicable to single-phase and polyphase residential service in single family dwellings and in flats and apartments separately metered by PG&E, to single-phase and polyphase service in common areas in a multifamily complex (see Special Condition 8), and to all single-phase and polyphase farm service on the premises operated by the person whose residence is supplied through the same meter.

The provisions of Schedule 5—Standby Service Special Conditions 1 through 6 shall also apply to customers whose premises are regularly supplied in part (but not in whole) by electric energy from a nonutility source of supply. These customers will pay monthly reservation charges as specified under Section 1 of Schedule 5, in addition to all applicable Schedule E-1 charges. See Special Conditions 11 and 12 of this rate schedule for exemptions to standby charges.

TERRITORY This rate schedule applies everywhere PG&E provides electric service.

RATES Total bundled service charges are calculated using the total rates below. Customers on this schedule are subject to the delivery minimum bill amount shown below applied to the delivery portion of the bill (i.e. to all rate components other than the generation rate). In addition, total bundled charges will include applicable generation charges per kWh for all kWh usage.

Customers receiving a medical baseline allowance shall pay for all usage in excess of 200 percent of baseline at a rate \$0.04000 per kWh less than the applicable rate for usage in excess of 200 percent of baseline. No portion of the rates paid by customers that receive a Medical Baseline allowance shall be used to pay the DWR Bond charge. For these customers, the Conservation Incentive Adjustment is calculated residually based on the total rate less the sum of: Transmission; Transmission Rate Adjustments; Reliability Services; Distribution; Generation; Public Purpose Programs; Nuclear Decommissioning; Competition Transition Charges (CTC); New System Generation Charges,¹ and Energy Cost Recovery Amount. Customers receiving a medical baseline allowance shall also receive a 50 percent discount on the delivery minimum bill amount shown below.

Direct Access (DA) and Community Choice Aggregation (CCA) charges shall be calculated in accordance with the paragraph in this rate schedule titled Billing.

TOTAL RATES

Total Energy Rates (\$ per kWh)	
Baseline Usage	\$0.18212
101% - 130% of Baseline	\$0.24000 (1)
131% - 200% of Baseline	\$0.24000 (1)
201% - 300% of Baseline	\$0.30000 (1)
Over 300% of Baseline	\$0.36000 (1)
Delivery Minimum Bill Amount (\$ per meter per day)	\$0.32654
California Climate Credit (per household, per semi-annual payment occurring in the April and October bill cycles)	(\$28.14)

¹ Per Decision 11-12-031 New System Generation Charges are effective 1/1/2012

(Continued)

Advice Letter No. 4810-E-A
Decision No. 15-07-001 and E-4782

Issued by
Steven Mainight
Senior Vice President
Regulatory Affairs

Date Filed May 31, 2016
Effective June 1, 2016
Resolution No.

1C8



Pacific Gas and Electric Company
San Francisco, California
U39

Cancelling

Revised
Revised

Cal P.U.C. Sheet No.
Cal P.U.C. Sheet No.

36713-E
36500-E

**ELECTRIC SCHEDULE E-TOU
RESIDENTIAL TIME-OF-USE SERVICE**

Sheet 2

**RATES
(Cont'd)**

OPTION A TOTAL RATES

Total Energy Rates (\$ per kWh)	PEAK		OFF-PEAK	
Summer				
Total Usage	\$0.40327	(I)	\$0.32769	(I)
Baseline Credit (Applied to Baseline Usage Only)	(\$0.11709)	(R)	(\$0.11709)	(R)
Winter				
Total Usage	\$0.28530	(I)	\$0.27100	(I)
Baseline Credit (Applied to Baseline Usage Only)	(\$0.11709)	(R)	(\$0.11709)	(R)
Delivery Minimum Bill Amount (\$ per meter per day)	\$0.32854			
California Climate Credit (per household, per semi-annual payment occurring in the April and October bill cycles)	(\$26.14)			

Total bundled service charges shown on customer's bills are unbundled according to the components and rates shown below. Where the delivery minimum bill amount applies, the customer's bill will equal the sum of (1) the delivery minimum bill amount plus (2) for bundled service, the generation rate times the number of kWh used. For revenue accounting purposes, the revenues from the delivery minimum bill amount will be assigned to the Transmission, Transmission Rate Adjustments, Reliability Services, Public Purpose Programs, Nuclear Decommissioning, Competition Transition Charges, Energy Cost Recovery Amount, DWR Bond, and New System Generation Charges¹ based on kWh usage times the corresponding unbundled rate component per kWh, with any residual revenue assigned to Distribution.²

¹ Per Decision 11-12-031, New System Generation Charges are effective 1/1/2012.

² This same assignment of revenues applies to direct access and community choice aggregation customers.

(Continued)

Advice Letter No. 4810-E-A
Decision No. 15-07-001 and E-4782

Issued by
Steven Meinigke
Senior Vice President
Regulatory Affairs

Date Filed
Effective
Resolution No.

May 31, 2016
June 1, 2016

2C9



Pacific Gas and Electric Company
San Francisco, California
U 39

Cancelling

Revised
Revised

Cal. F.U.C. Sheet No.
Cal. F.U.C. Sheet No.

32682-G
32620-G

GAS SCHEDULE G-1 RESIDENTIAL SERVICE

Sheet 1

APPLICABILITY This rate schedule* applies to natural gas service to Core End-Use Customers on PG&E's Transmission and/or Distribution Systems. To qualify, service must be to individually-metered single family premises for residential use, including those in a multifamily complex and to separately-metered common areas in a multifamily complex where Schedules GM, GS, or GT are not applicable. Common area accounts that are separately metered by PG&E have an option of switching to a core commercial rate schedule. Common area accounts are those accounts that provide gas service to common use areas as defined in Rule 1.

TERRITORY Schedule G-1 applies everywhere within PG&E's natural gas Service Territory.

RATES Customers on this schedule pay a Procurement Charge and a Transportation Charge per meter, as shown below. The Transportation Charge will be no less than the minimum Transportation Charge as follows:

	<u>Minimum Transportation Charge**</u>		<u>Per Day</u>	
			\$0.00863	
			<u>Per Meter</u>	
	<u>Baseline</u>	<u>Excess</u>	<u>Baseline</u>	<u>Excess</u>
<u>Procurement</u>	\$0.20960 (R)	\$0.20960 (R)		
<u>Transportation Charge</u>	\$0.81592	\$1.30647		
Total	\$1.02552 (R)	\$1.51607 (R)		

Public Purpose Program Surcharge

Customers served under this schedule are subject to a gas Public Purpose Program (PPP) Surcharge under Schedule G-PPPS.

See Preliminary Statement, Part B for the Default Tariff Rate Components.

The Procurement Charge on this schedule is equivalent to the rate shown on international Schedule G-CP—Gas Procurement Service to Core End-Use Customers.

BASELINE QUANTITIES

The delivered quantities of gas shown below are billed at the rates for baseline use.

Baseline Territories***	BASELINE QUANTITIES (Therms Per Day Per Dwelling Unit)	
	Summer Effective Apr. 1, 2016	Winter Effective Nov. 1, 2015
P	0.48	2.15
Q	0.60	1.98
R	0.48	1.79
S	0.48	1.92
T	0.60	1.79
V	0.60	1.79
W	0.48	1.69
X	0.59	1.98
Y	0.85	2.55

* PG&E's gas tariffs are available online at www.pge.com.

** The minimum transportation charge does not apply to separately-metered tenants of master-metered buildings served under gas rate Schedules GS and GT.

*** The available baseline territory is described in Preliminary Statement, Part A.

(Continued)

Advice Letter No. 3715-G
Decision No. 97-10-095 & 98-07-029

Issued by
Steven Blainight
Service Vice President
Regulatory Affairs

Date Filed May 24, 2016
Effective June 1, 2016
Resolution No.

1C6

Local PUC Ordinance Cost Effectiveness Study

Following are the SCE electricity tariffs, both standard and time-of-use, and SoCalGas natural gas tariffs applied in this study.



Southern California Edison
Rosemead, California (USM-E)

Revised Cal PUC Sheet No 50026-E
Canceling Revised Cal PUC Sheet No 58237-E

Schedule D DOMESTIC SERVICE

Sheet 2

(Continued)

RATES

	Delivery Service Total ¹	Generation ²	
		12/1 ³	01/01/22 ⁴
Energy Charge: \$5.00/kWh/Day			
Standard Service			
Summer	\$ 24.70 (1)	\$ 0.0019 (1)	\$ 0.0022 (1)
Winter	\$ 25.70 (1)	\$ 0.0019 (1)	\$ 0.0022 (1)
Nonstandard Service ⁵			
100% - 200% of Baseline - Summer	\$ 15.00 (1)	\$ 0.0019 (1)	\$ 0.0022 (1)
Winter	\$ 15.00 (1)	\$ 0.0019 (1)	\$ 0.0022 (1)
Over 200% of Baseline - Summer	\$ 22.00 (1)	\$ 0.0019 (1)	\$ 0.0022 (1)
Winter	\$ 22.00 (1)	\$ 0.0019 (1)	\$ 0.0022 (1)
Basic Charge - Standard Day			
Single-Family Accommodation	\$ 0.31		
Multi-Family Accommodation	\$ 0.31		
Minimum Charge ⁶ - \$/kWh/Day			
Single-Family Accommodation	\$ 0.31		
Multi-Family Accommodation	\$ 0.31		
Minimum Charge (Medical Baseline) ⁷ - \$/kWh/Day			
Single-Family Accommodation	\$ 1.04		
Multi-Family Accommodation	\$ 1.04		
California Climate Credit ⁸	\$ 0.00		
Peak Time Rebate - \$/kWh		\$ 0.79	
Off-Peak Time Rebate - \$/kWh		\$ 1.00	

1. Standard Service includes all applicable baseline applications as described in Promissory Statement, Part 14 Baseline Service.
2. The Minimum Charge is applicable when the Delivery Service (Port) Charge plus the applicable Basic Charge is less than the Minimum Charge.
3. The existing Competition Transition Charge (CTC) of \$1.00/kWh is applicable in the LRP agreement of Generation.
4. Total = Total Delivery Service plus all applicable to Standard Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRMC rate component or the Schedule but instead pay the DWRMC as provided by Schedule GACRS or Schedule CCA.CPR.
5. Generation = The Generation rates are applicable only to Standard Service Customers.
6. DWRMC = Department of Water Resources (DWR) Energy Credit. For more information on the DWR Energy Credit, see the Existing Calculation Special Condition of this Schedule.
7. Applied on an equal basis per household semi-annually. See the Special Conditions of this Schedule for more information.

(Continued)

- Standard Service includes all kWh in excess of applicable baseline allocations as specified in Preliminary Statement, Part A: Standard Service.
- The Minimum Charge is applicable when the Delivery Service Energy Charge, plus the applicable Basic Charge is less than the Minimum Charge.
- The existing California Transition Charge (TC) of \$0.0019 per kWh is included in the 12/1 component of Generation.
- Total = Total Delivery Service rates are applicable to Standard Service (Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRMC rate component of the Schedule D rates unless they are provided by Schedule D/CAS or Schedule CCA/CAS.
- Generation = The Generation rates are applicable only to Bundled Service Customers.
- DWRMC = Department of Water Resources (DWR) Energy Credit. For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.
- Applied on all-meter bills, per household, semi-annually. See the Special Conditions of this Schedule for more information.

(Continued)

(To be inserted by utility)

Advice: 3401-E
Decision: 18-03-030

2018

Issued by

R. O. Nichols
Senior Vice President

(To be inserted by Cal PUC)

Date Filed: May 2, 2018
Effective: Jan 1, 2018

Resolution: _____



Southern California Edison
Rosemead, California (U 338-E)

Revised Cal PUC Sheet No. 59059-E
Cancelling Revised Cal PUC Sheet No. 58249-E

Schedule TOU-D.1
TIME-OF-USE TIERED DOMESTIC

Sheet 7

(Continued)

RATES

	Delivery Service Total ¹	Generation ²	
		LOS AN	DWRB-C
Energy Charge - \$/kWh/Min/Day			
Summer Season - On Peak			
Level 1 (up to 100% of Baseline)	\$ 1252.4 (1)	\$ 21680 (2)	\$ 20032
Level 2 (More than 100% of Baseline)	\$ 18152 (2)	\$ 21680 (2)	\$ 20032
Summer Season - Off Peak			
Level 1 (up to 100% of Baseline)	\$ 1452.2 (1)	\$ 10219 (2)	\$ 10002
Level 2 (More than 100% of Baseline)	\$ 18152 (2)	\$ 10219 (2)	\$ 10002
Winter Season - On Peak			
Level 1 (up to 100% of Baseline)	\$ 1532.2 (1)	\$ 10660 (2)	\$ 10002
Level 2 (More than 100% of Baseline)	\$ 18152 (2)	\$ 10660 (2)	\$ 10002
Winter Season - Off Peak			
Level 1 (up to 100% of Baseline)	\$ 1025.8 (1)	\$ 10146 (2)	\$ 10002
Level 2 (More than 100% of Baseline)	\$ 15352 (2)	\$ 10146 (2)	\$ 10002
Blank Charge - \$/Month/Day			
Single Family Accommodation	\$ 831		
Multi-Family Accommodation	\$ 804		
Blank Charge - \$/Month/Day			
Single Family Accommodation	\$ 229		
Multi-Family Accommodation	\$ 329		
Minimum Charge (Electricity Demand) ³ - \$/Month/Day			
Single Family Accommodation	\$ 184		
Multi-Family Accommodation	\$ 184		
California Climate Credit ⁴	(10.00)		
California Alternate Rates for Energy Demand ⁵ - %	140.00%		
Peak Time Rate - \$/kWh		\$ 79	
Non Time Range overriding technology - \$/kWh		(1.25)	

* The Minimum Charge is applicable when the Delivery Service Energy Charge plus the applicable Blank Charge is less than the Minimum Charge.

** Represents 100% of the demand percentage as shown in the applicable Special Condition of this Schedule.

*** The existing Competition Threshold Charge (CTC) of \$5.00/kWh is not relevant in the TOU context of Generation.

1 Total = Total Delivery Service rates are applicable to Standard Service, Direct Access (DA) and Community Choice Aggregator Service (CCA) Service Customers, except DA and CCA Service Customers are not subject to the DWRB rate component of this Schedule but instead pay the DWRB as provided by Schedule DA-CRS or applicable CCA-CRS.

2 Generation = The Gen rates are applicable only to Standard Service Customers.

3 DWRB = Department of Water Resources (DWR) Energy Credit. For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.

4 Applied on an annual basis, per household, semi-annually. See the Special Conditions of this Schedule for more information.

(Continued)

(To be inserted by utility)

Advice 3401-E

Decision 16-03-030

16

Issued by

R. D. Nichols
Senior Vice President

(To be inserted by Cal PUC)

Date Filed May 2, 2016

Effective Jun 1, 2016

Resolution _____

Local PV Ordinance Cost Effectiveness Study

SOUTHERN CALIFORNIA GAS COMPANY Revised CAL PUC SHEET NO. 52782-G
106 ANGELES, CALIFORNIA (CANTING) Revised CAL PUC SHEET NO. 52751-G

Schedule No. GR RESIDENTIAL SERVICE (Includes GR, GR-C and GT-R Rates)

Sheet 1

APPLICABILITY

The GR rate is applicable to natural gas procurement service to individually metered residential customers.

The GR-C, cross-over rate, is a core procurement option for individually metered residential core transportation customers with annual consumption over 50,000 therms, as set forth in Special Condition 11.

The GT-R rate is applicable to Core Aggregation Transportation (CAT) service to individually metered residential customers, as set forth in Special Condition 11.

The California Alternate Rates for Energy (CARE) discount of 20%, reflected as a separate line item on the bill, is applicable to income-qualified households that meet the requirements for the CARE program as set forth in Schedule No. GR-CARE.

TERRITORY

Applicable throughout the service territory.

RATES	GR	GR-C	GT-R
Customer Charge, per meter per day:	16.438¢	16.438¢	16.438¢
For "Space Heating Only" customers, a daily Customer Charge applies during the winter period from November 1 through April 30:	33.149¢	33.149¢	33.149¢
Baseline Rate, per therm (baseline usage defined in Special Conditions 3 and 4):			
Procurement Charge ¹	34.536¢	34.536¢	N/A
Transmission Charge ²	56.280¢	56.280¢	55.758¢
Total Baseline Charge	90.816¢	90.816¢	55.758¢
Non-Baseline Rate, per therm (usage in excess of baseline usage):			
Procurement Charge ¹	34.536¢	34.536¢	N/A
Transmission Charge ²	82.280¢	82.280¢	81.758¢
Total Non-Baseline Charge	116.816¢	116.816¢	81.758¢

¹ For the summer period beginning May 1 through October 31, with some exceptions, usage will be accumulated to at least 20 Ccf (100 cubic feet) before billing.

(Footnotes continue next page.)


(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 4989
DECISION NO.

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE PRESENTED BY CAL PUC)
DATE FILED Jul 7, 2016
EFFECTIVE Jul 10, 2016
RESOLUTION NO. G-3351

Following are the SDG&E electricity, both standard and time-of-use, and natural gas tariffs applied in this study.



SDGE
San Diego Gas & Electric Company
San Diego, California

Revised _____ Cal PUC Sheet No. 27050-E

Canceled Revised Cal PUC Sheet No. 26948-E

SCHEDULE DR
RESIDENTIAL SERVICE
(Includes Rates for DR-LI)

Sheet 1

APPLICABILITY

Applicable to domestic service for lighting, heating, cooking, water heating, and power, or combination thereof, in single family dwellings, flats, and apartments, separately metered by the utility, to service used in common for residential purposes by tenants in multi-family dwellings under Special Condition B, to any approved combination of residential and nonresidential service on the same meter, and to incidental farm service under Special Condition 7.

This schedule is also applicable to customers qualifying for the California Alternate Rates for Energy (CARE) Program and/or Medical Baseline, residing in single-family accommodations, separately metered by the Utility, and may include Non-profit Group Living Facilities and Qualified Agricultural Employee Housing Facilities, if such facilities qualify to receive service under the terms and conditions of Schedule E-CARE. The rates for CARE and Medical Baseline customers are identified in the rates tables below as DR-LI and DR-MB rates respectively.

Customers on this schedule may also qualify for a semi-annual California Climate Credit \$(17.44) per Schedule GHG-ARR.

TERRITORY

Within the entire territory served by the Utility

RATES

Total Rates

Description - DR Rates	UDG Total Rate	DRMB-DR Rate	GHG Rate + GHG Credit	Total Rate
Summer				
Baseline Energy (\$/kWh)	\$ 0.5482 I	\$ 0.0035	\$ 1.2905	\$ 1.8422 I
Above 100% of Baseline	\$ 2.7045 R	\$ 0.0035	\$ 1.2905	\$ 3.9985 R
Winter				
Baseline Energy (\$/kWh)	\$ 1.0350 I	\$ 0.0035	\$ 0.8804	\$ 1.9189 I
Above 100% of Baseline	\$ 2.8737 R	\$ 0.0035	\$ 0.8804	\$ 3.7576 R
Minimum Bill (\$/month)	\$ 3.70			\$ 3.70

Description - DR-LI Rates	UDG Total Rate	DRMB-DR Rate	GHG Rate + GHG Credit	Total Rate
Summer - CARE Rates				
Baseline Energy (\$/kWh)	\$ 0.2222 I	\$ 0.0000	\$ 1.2905	\$ 1.5127 I
Above 100% of Baseline	\$ 2.5000 R	\$ 0.0000	\$ 1.2905	\$ 3.7905 R
Winter - CARE Rates				
Baseline Energy (\$/kWh)	\$ 1.0001 I	\$ 0.0000	\$ 0.8804	\$ 1.8805 I
Above 100% of Baseline	\$ 2.6602 R	\$ 0.0000	\$ 0.8804	\$ 3.5406 R
Minimum Bill (\$/month)	\$ 3.64			\$ 3.64

(Continued)

IC 12

Advis. Ltr. No. 2011-E-A

Decision No. 15-07-001

Issued by
Don Shoup
Vice President
Regulatory Affairs

Date Filed Jun 29, 2016

Effective Jul 1, 2016

Resolution No. E-4787



San Diego Gas & Electric Company
San Diego, California

Revised Cal P.U.C. Sheet No.

20002-E

Cancelling Revised Cal P.U.C. Sheet No.

20006-E

SCHEDULE DR-SES

Sheet 1

DOMESTIC TIME-OF-USE FOR HOUSEHOLDS WITH A SOLAR ENERGY SYSTEM

APPLICABILITY

Service under this schedule is available on a voluntary basis for individually metered residential customers with Solar Energy Systems. Service is limited to individually metered residential customers with a Solar Energy System with domestic service for lighting, heating, cooking, water heating and power, or combination thereof, in single family dwellings and flats. Qualifying California Alternative Rates for Energy (CARE) customers are eligible for service on this schedule, as further described under Special Condition B of this schedule.

Customers on this schedule may also qualify for a semi-annual California Climate Credit \$(17.44) per Schedule GHG-ARR.

TERRITORY

Within the entire territory served by the Utility.

RATES

Total Rates:

Description - DR-SES Rates	UDC Total Rate	DR-SES Rate	DR-SES Rate 7 DASH Credit	Total Rate
Energy Charges (\$/kWh)				
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35
On-Peak - Summer	\$ 120.35	\$ 0.0000	\$ 0.0000	\$ 120.35

- (1) Total Rates are based on UDC, Schedule DR-SES, Department of Water Resources (State College), and Schedule DR-SES (State College). Customers, with the DR-SES, will receive a DASH Credit of \$0.0000 per kWh. Customers receive on this monthly bill.
- (2) Total Rates presented are for customers that receive domestic supply and delivery service from SDGE. Differences in total rates paid by Direct Access (DA) and Community Choice Aggregation (CCA) customers are identified in Schedule DR-SES and CCA-SES respectively.
- (3) DR-SES charges do not apply to CARE or Weather-Sensitive customers.

UDC Rates

Description-DR-SES	TRAC	UDC	PPF	RS	CTC	LSC	RS	TRAC	UDC Total
Energy Charges (\$/kWh)									
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000
On-Peak - Summer	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ 0.0000

(Continued)

109

Advice Ltr No. 2840-E

Decision No.

Issued by
Dan Skopec
Vice President
Regulatory Affairs

Date Filed Dec 29, 2015

Effective Jan 1, 2016

Resolution No.



San Diego Gas & Electric Company
San Diego, California

Revised Cal PUC Sheet No

21921-G

Cancelling Revised Cal PUC Sheet No

21908-G

Sheet 1

SCHEDULE GR
RESIDENTIAL NATURAL GAS SERVICE
(Includes Rates for GR, GR-C, GTC/GTCA)

APPLICABILITY

The GR rate is applicable to natural gas procurement service for individually metered residential customers.

The GR-C cross-over rate is a core procurement option for individually metered residential core transportation customers with annual consumption over 50,000 therms, as set forth in Special Condition 10.

The GTC/GTCA rate is applicable to interstate gas transportation-only services to individually metered residential customers, as set forth in Special Condition 11.

Customers taking service under this schedule may be eligible for a 20% California Alternate Rate for Energy (CARE) program discount, reflected as a separate line item on the bill, if they qualify to receive service under the terms and conditions of Schedule G-CARE.

TERRITORY

Within the entire territory served natural gas by the utility.

RATES

	<u>GR</u>	<u>GR-C</u>	<u>GTC/GTCA</u> ¹
<u>Baseline Rate</u> , per therm (baseline usage defined in Special Conditions 3 and 4)			
Procurement Charge ²	\$0.34561	\$0.34561	N/A
Transmission Charge ³	\$0.90805	\$0.90805	\$0.90805
Total Baseline Charge	\$1.25366	\$1.25366	\$0.90805
<u>Non-Baseline Rate</u> , per therm (usage in excess of baseline usage)			
Procurement Charge ²	\$0.34561	\$0.34561	N/A
Transmission Charge ³	\$1.08354	\$1.08354	\$1.08354
Total Non-Baseline Charge	\$1.42915	\$1.42915	\$1.08354

¹ The rates for core transportation-only customers, with the exception of customers taking service under Schedule GT-NGV, include any FERC Settlement Proceeds Memorandum Account (FBPMA) credit adjustments.

² This charge is applicable to Utility Procurement Customers and includes the GPC and GPC-A Procurement Charges shown in Schedule GPC which are subject to change monthly as set forth in Special Condition 7.

(Continued)

153
Advice Ltr No 2489-G
Decision No _____

Issued by
Don Skopac
Vice President
Regulatory Affairs

Date Filed Jul 7, 2016
Effective Jul 10, 2016
Resolution No _____

ATTACHMENT #4



CITY OF PALM SPRINGS

OFFICE OF THE CITY CLERK

3200 E. Tahquitz Canyon Way

Palm Springs, CA 92262

(760) 323-8204

EXCERPTS OF MINUTES

At the City Council meeting of the City of Palm Springs held October 4, 2017, the City Council took the following action:

**5.A. DISCUSSION REGARDING PROPOSED MANDATORY SOLAR
INSTALLATION REQUIREMENTS FOR RESIDENTIAL
CONSTRUCTION:**

Director of Planning Services Fagg presented the background information as outlined in the staff report.

Council discussion ensued.

ACTION:

By consensus, the Council directed staff to bring back an ordinance and Mayor Moon appointed Councilmember Kors and Councilmember Roberts to a Solar Installation Ordinance Ad Hoc Subcommittee, with a sunset date of March 31, 2018.

I, CYNTHIA A. BERARDI, Chief Deputy City Clerk of the City of Palm Springs, hereby certify that the above action took place at a regular meeting of the City Council held on the 4th day of October, 2017.

Cynthia A. Berardi, CMC
Chief Deputy City Clerk

ATTACHMENT #5



SUBCOMMITTEE REPORT

PRESENTED FOR COMMISSION MEETING DATE: 12/20/16

SUBMITTED BY: David Freedman

SUBCOMMITTEE NAME: Green Building / Solar (with Planning Commission Nelson)

SUBMITTED DATE: 12/15/16

SUBCOMMITTEE MEETING DATES: 11/21, 12/5, 12/12, 12/15/16

NEXT SUBCOMMITTEE MEETING DATE: 01/12/17

Subcommittee Meeting Goals:

- Meet with Staff to prepare for study session with Planning Commission on proposed solar mandate (meetings of 11/21, 12/5 and 12/12/16).
- Meet with Staff to follow up on study session with Planning Commission on proposed solar mandate and prepare for full Commission meeting (meeting of 12/15/16).

Summary:

Subcommittee members met with Staff to prepare for and follow up on the study session with the Planning Commission on a proposed solar mandate that took place on December 14, 2016.

The study session included a presentation of the Subcommittee's research and proposals by Planning Commissioner Middleton and Commissioner Freedman, testimony from invited stakeholders representing a broad range of views on the topic, public comment, and comments from the Planning Commissioners and the Director of Planning Services. Based on the input received, the Subcommittee's recommendations for a proposed solar ordinance are set out below. The Planning Commission will consider the recommendations at its meeting of January 11, 2017.

Recommendation/Request

- Require the installation of a solar electric photovoltaic (PV) system with a nameplate wattage 2.0 times or greater than the square footage of the home (2.0 watts per square foot).
- Applicable to all new construction of single and multifamily residential dwellings.
- Also applicable to any addition to an existing single-family residential building that increases the square footage by 25% or greater, provided that the increase is at least 500 square feet, and to all single-family residential remodels, alterations or renovations that are made involving demolition, remodel or renovation of more than 50% of the structure.
- At the time of submittal of a building permit application for any residential dwelling or retrofit project meeting the thresholds, an applicant must submit plans and an application for the

mandatory solar photovoltaic system.

- Retrofit requirements may be waived or reduced, by the minimum extent necessary, where production of electric energy from solar panels is technically infeasible due to lack of available and feasible unshaded areas.
- Retrofit requirements for additions not applicable where the addition is an accessory second unit (e.g., casita).
- New construction requirements not applicable to affordable housing (as defined in state and federal standards) if the additional cost is not fully funded without recourse to the residents, unless solar installation is already mandated by state or federal law.
- For market-rate new construction of less than 1,500 square feet for single-family residences and less than 1,250 square feet for multifamily residences, the solar requirement may be satisfied by meeting the requirements to achieve "Green Leaf" status under CVAG's Green Building Program checklist.

ACTION ITEMS REQUEST TO COMMISSION	Recommend proposed solar ordinance to City Council for adoption.
ACTION ITEMS REQUEST TO OFFICE OF SUSTAINABILITY	Assist Department of Planning Services as needed in its preparation for discussion of proposed solar ordinance at its meeting of January 11, 2017. If recommendations are approved by Planning and Sustainability Commissions, work with relevant staff members and City Attorney to prepare an ordinance, findings resolution and Staff Report for consideration by City Council.
POTENTIAL FISCAL IMPACT/REQUEST IF ANY:	Adoption of a local amendment to the energy efficiency requirements in the Green Building Standards Code will require approval by the California Energy Commission (CEC). A cost effectiveness study must be submitted to the CEC as part of the approval process. The cost of that study is not determinable at this time.

ATTACHMENT #6



CITY OF PALM SPRINGS

DEPARTMENT OF PLANNING SERVICES

MEMORANDUM

Date: April 26, 2017

To: Planning Commission

From: Flinn Fagg, AICP
Director of Planning Services

Subject: Proposed Mandatory Solar Photovoltaic Measures for Residential Construction

A proposed residential solar strategy has been developed by the Green Building/Solar Subcommittee of the Sustainability Commission (Freedman, Otto), with input by a liaison from the Planning Commission (Middleton). The proposal was presented to the Sustainability Commission on December 20, 2016, and the commission voted to recommend approval of the proposal.

The proposal was presented to the Planning Commission at a study session on December 20, 2016 (held jointly with members of the Sustainability Commission), and was presented for discussion at the Planning Commission meeting of January 11, 2017. The item was continued to a date uncertain to allow for additional study materials to be prepared.

After the January 11th meeting, staff retained the firm of EcoMotion to prepare a solar cost-effectiveness study (see Attachment #2). The study updates general solar metrics for California Climate Zone 15, which includes the Coachella Valley. In addition, the calculations provided in the study are based on Southern California Edison's new rate structure, which is proposed to go into effect on July 1, 2017. The study concludes that photovoltaic systems will be cost effective for the residential sector, even if tax credits and incentives are not present.

The draft language of the proposed ordinance has been updated to reflect some of the input received from stakeholder groups and members of the Planning Commission. The following summary reflects the proposed language that is included as Attachment #1 to this memo:

- Require the installation of a solar electric photovoltaic (PV) system with a nameplate wattage 2.0 times or greater than the square footage of the home (*no change from 1/11/17 version*).
- Applicable to all new construction of single and multifamily residential dwellings (*no change from 1/11/17 version*).
- Applicable to any addition to an existing single-family residential building that increases the square footage by 25% or greater, provided that the increase is at least 500 square

feet, and to all single-family residential remodels, alterations or renovations that are made involving demolition, remodel or renovation of more than 50% of the structure (*no change from 1/11/17 version*).

- Retrofit requirements for additions not applicable where the addition is an accessory second unit (*no change from 1/11/17 version*).
- Requirements not applicable to affordable housing (as defined in state law) if the additional cost is not fully funded without recourse to the residents, unless solar installation is already mandated by state or federal law (*no change from 1/11/17 version*).
- Requirement for solar PV system may be reduced or waived by the Building Code Appeals Board upon of the following criteria:
 1. Price of single-family house will be less than 75% of current median sales price or less than 50% of current median sales price for multifamily unit; or
 2. Site-specific conditions make solar installation infeasible, such as building site conditions, limited rooftop availability, or shading from nearby structures or vegetation; or
 3. Participation in other certification programs (Green for Life, LEED, Passive House Institute US) which will result in greater energy savings than Title 24 requirements (*revised from 1/11/17 version*).

This item is being presented to the Planning Commission as an informational item, as it does not propose changes to the City's zoning ordinance. The Planning Commission may choose to forward comments on the draft measures to the City Council. As the proposal may impact future development proposals, it is appropriate for the Planning Commission to review the draft measures and provide comments accordingly.

The following documents are provided as attachments to this memo:

1. Proposed Draft – Mandatory Solar Photovoltaic Measures for Residential Construction
2. Solar Ordinance Cost-Effectiveness Study (03/06/17)
3. Subcommittee Report – Sustainability Commission (dated 12/20/16)
4. Materials from the Planning Commission Study Session (12/14/16)
5. Minutes from the Planning Commission meeting of January 11, 2017

Draft Ordinance:
Mandatory Solar Photovoltaic Measures for Residential Construction

PSMC Section 8.04.072. California Green Building Standards Code-Amendments and Deletions.

The California Green Building Standards Code adopted by reference pursuant to Section 8.04.070 of this Chapter is hereby modified by the following additions:

4.201.2 Residential Solar Photovoltaic - When Required

1. The provisions of Section 4.201.3 apply to:
 - (a) all newly constructed single-family residential buildings;
 - (b) all newly constructed multiple-family residential buildings classified in Residential Groups R-2 and R-3, as defined respectively in Sections 310.4 and 310.5 of the California Building Code adopted by reference pursuant to Section 8.04.010 of this Chapter;
 - (c) any addition to an existing single-family residential building that increases its square footage by 25% or greater, provided that the increase is at least 500 square feet, except where the addition is an accessory second unit; and
 - (d) any remodel, alteration or renovation to an existing single-family residential building that is made involving demolition, remodel or renovation of more than 50% of the structure.
2. The provisions of Section 4.201.3 do not apply to low-income residential housing as such term is defined in Section 2852(a)(3) of the California Public Utilities Code if the cost of installation of the solar photovoltaic system is not fully funded without recourse to the residents of such low-income residential housing, ~~unless the installation is already mandated by applicable state or federal law or regulation.~~
3. The provisions of Section 4.201.3 do not apply to factory-built housing as such term is defined in Section 19971 of the California Health and Safety Code.
4. The provisions of Section 4.201.3 do not apply to any project that was fully entitled as of the date of entry into effect of such Section.
5. At the time of submittal of a permit application for a residential building meeting the scoping requirements of subdivision 1 of this Section, an applicant shall submit plans and an application for a solar photovoltaic

system in accordance with the sizing requirements of subdivision 1 of Section 4.201.3.

4.201.3 Residential Solar Photovoltaic Installations

1. All residential buildings meeting the scoping requirements of subdivision 1 of Section 4.201.2 shall install a solar photovoltaic system with a minimum total wattage equal to two (2) watts times the total square footage of the subject building. The system shall be located on-site.
2. ~~With respect to single family residential buildings having a projected retail sales price of less than 75% of the median sales price of single family homes in Palm Springs during the previous fiscal year and multiple family residential having a projected retail sales price of less than 50% of the median sales price of single family homes in Palm Springs during the previous fiscal year, the requirements of subdivision 1 of this Section may be satisfied by meeting the requirements to achieve "Green Leaf" status under the Coachella Valley Association of Government's Green Building Program checklist in effect at the time of submittal of the permit application. At the beginning of each fiscal year, the Building and Safety Department shall calculate the median sales price of single family homes in Palm Springs during the previous fiscal year based on data from the Multiple Listing Service, and shall publish this figure on the Department's website.~~

The requirement for installation of a solar photovoltaic system may be waived or the total wattage requirement may be reduced upon a determination by the Building Code Appeals Board. The board shall consider one or more of the following criteria in making a determination for a waiver or reduction:

(a) The residential building(s) will be developed or sold at a price that is less than 75% of the current median sales price for new single-family construction or 50% of the median sales price for new multifamily home construction in Palm Springs, whichever may be applicable;

(b) Practical challenges make the installation of a solar photovoltaic system infeasible, such as building site location, limited rooftop availability, shading from nearby structures, topography, or vegetation; or

(c) Participation in other certification programs (CVAG's Green for Life program, LEED certification, Passive House Institute US certification, or similar) which will result in energy savings greater than what would be required under Title 24 of the California Building Standards Code.

- ~~3. With respect to single-family residential buildings meeting the scoping requirements of subdivisions 1(c) or 1(d) of Section 4.201.2, the requirements of subdivision 1 of this Section may be waived or reduced, by the minimum extent necessary, where the Director of Building and Safety determines there are sufficient practical challenges to make satisfaction of the requirements infeasible. Practical challenges may be a result of the building site location, limited rooftop availability, or shading from nearby structures, topography or vegetation. The applicant is responsible for demonstrating requirement infeasibility when applying for an exemption.~~
4. Solar energy systems that are leased by the end-use customer (tenant or owner) or that supply electricity to the end-use customer through a power purchase agreement (PPA) may be used to satisfy the requirements of subdivision 1 of this Section.
5. Newly constructed residential buildings meeting the scoping requirements of subdivision 1 of Section 4.201.2 shall comply with the 2016 Title 24 Building Energy Code without claiming the solar compliance credit described in Section 2.2.3 of the 2016 Title 24, Part 6, Residential Alternative Calculation Method.

EXCERPT OF MINUTES

At the Planning Commission meeting of the City of Palm Springs, held April 26, 2017, the Planning Commission took the following action:

3B. RECEIVE A REPORT FROM THE SUSTAINABILITY COMMISSION RELATING TO A PROPOSED MANDATORY REQUIREMENT FOR THE INSTALLATION OF SOLAR SYSTEMS FOR RESIDENTIAL CONSTRUCTION. (FF)

Vice-Chair Weremiuk said she supports the solar ordinance and did some research with the largest solar builder in town said that 100% of the purchasers bought the solar package. She left the Council Chamber at 5:43 pm for the remainder of the meeting.

Planning Director Fagg provided background information on the proposed solar ordinance.

Commissioner Middleton said one of the biggest hurdles they faced was trying to carve out some measure that would allow an exemption for affordable homes. Ultimately, they came up with a process that allows a developer file an appeal to the Building Codes Appeal Board for an exemption on their project.

Chair Calerdine said he supports the proposed ordinance; however, he still has reservations over the affordability issues and does not see this addressed. He requested a note to the City Council that they remain concerned about the impact of affordability.

Commissioner Donenfeld said we are in the forefront of a major change statewide and Palm Springs should be a leader in this area. He is concerned about affordability but supports the framework as proposed.

ACTION: Receive the report and forward a recommendation to the City Council.

Motion: Commissioner Middleton, seconded by Chair Calerdine and unanimously carried 6-0-1 on a roll call vote.

I, TERRI HINTZ, Planning Administrative Coordinator for the City of Palm Springs, hereby certify that the above action was taken by Planning Commission of the City of Palm Springs on the 26th day of April, 2017, by the following vote:

AYES: Chair Calerdine, Commissioner Donenfeld, Commissioner Hirschbein, Commissioner Hudson, Commissioner Lowe, Commissioner Middleton
NOES: None
ABSENT: Vice Chair Weremiuk (*Vice Chair Weremiuk left the meeting before the vote was taken*)



Terri Hintz
Planning Administrative Coordinator

ATTACHMENT #7

DOCKETED

Docket Number: 17-BSTD-01

Project Title: 2019 Building Energy Efficiency Standards PreRulemaking

TN #: 220969

Document Title: Presentation - Proposed 2019 Building Energy Efficiency Standards ZNE Strategy

Description: Presentation by Maziar Shirakh, made at the 8-30-17 Staff Workshop.

Filer: Adrian Ownby

Organization: California Energy Commission

Submitter Role: Commission Staff

Submission Date: 8/30/2017 3:53:13 PM

Docketed Date: 8/30/2017



Building Energy Efficiency Standards

Proposed 2019 Building Energy Efficiency Standards ZNE Strategy

Building Standards Office:

Mazi Shirakh, PE

ZNE Lead and Advisor for Building Energy
Efficiency Standards (BEES)

Christopher Meyer

Manager, Building Standards Office

Bill Pennington

Senior Technical and Program Advisor to the
Energy Efficiency Division

Payam Bozogchami, PE

Project Manager, BEES

Danny Tam

Mechanical Engineer

Countdown to 2020

August 30, 2017



2019 ZNE Strategy

Content

1. Proposed ZNE Strategy – Parts 6 and 11
2. CBECC-Res Software Tools for ZNE

2019 Standards Goals – Path to the Future



1. Increase building energy efficiency cost effectively
2. For Part 6, make progress toward the ZNE goal as possible within the confines of NEM and life cycle costing rules, while recognizing that Part 6 is an important but not the only tool for achieving ZNE
3. Contribute to the State's GHG reduction goals
4. Promote self-utilization of the PV generation by encouraging or requiring demand flexibility and grid harmonization strategies
5. Provide independent compliance path for both mixed-fuel and all electric homes
6. Achieve the above goals while ensuring real benefits for the building occupants with positive benefit to cost ratios for all efficiency and generation measures
7. Provide the tools for local governments to adopt ordinances to achieve ZNE through Part 11 Reach Codes, and other beyond code practices

The proposed 2019 Standards strategy will accomplish all seven goals listed above



ZNE Goals – Grid Harmonization



Grid harmonization strategies (GHS) must be coupled with customer owned PV systems to bring maximum benefits to the grid, environment, and the home owner

GHSs are strategies that maximize self-utilization of the PV array output and minimize exports back to the grid; examples of GHS include but are not limited to battery storage, demand response, thermal storage, and for some homeowners, EV grid integration.



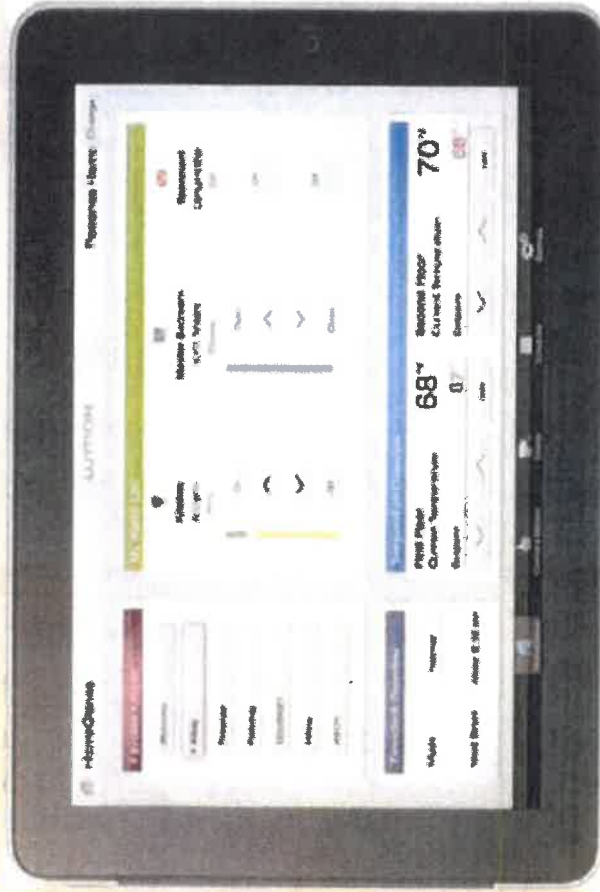
ZNE Goals – 2019 Standards Approach



The 2019 Standards will recognize the following priority for efficiency and generation resources:

1. Envelope efficiency,
2. Appropriately sized PVs, and
3. Grid harmonization strategies that maximize self-utilization of the PV output and limit exports to the grid

Further, the standards must be framed in a way to **encourage competition, innovation, and flexibility** to foster new solutions as the grid and technologies evolve.



Standards and PV Sizing



- For Part 6, PV is sized to net out the buildings annual kWh; larger PV array may be installed but will not receive additional compliance credit
- For Part 11 compliance, CBECC allows PV array coupled with a 6 kWh battery storage system to be oversized by a factor of 1.6; this PV size:
 - Provides additional flexibility for the grid; the battery enables the increased PV capacity to be used by the utility to meet high demand during critical peak periods
 - Promotes self-utilization on peak since PV is coupled with battery storage
 - The 1.6 cap ensures a greater than 1.0 benefit to cost ratio for the building owner even if hourly exports are compensated only at avoided cost
- CBECC provides a size limit bypass checkbox that once checked allows exceeding the 1.6 times size limit, with a warning that this option may violate NEM sizing rules

PV Solar Systems & Battery Storage



Builds on Commission's Energy Design Rating Tool



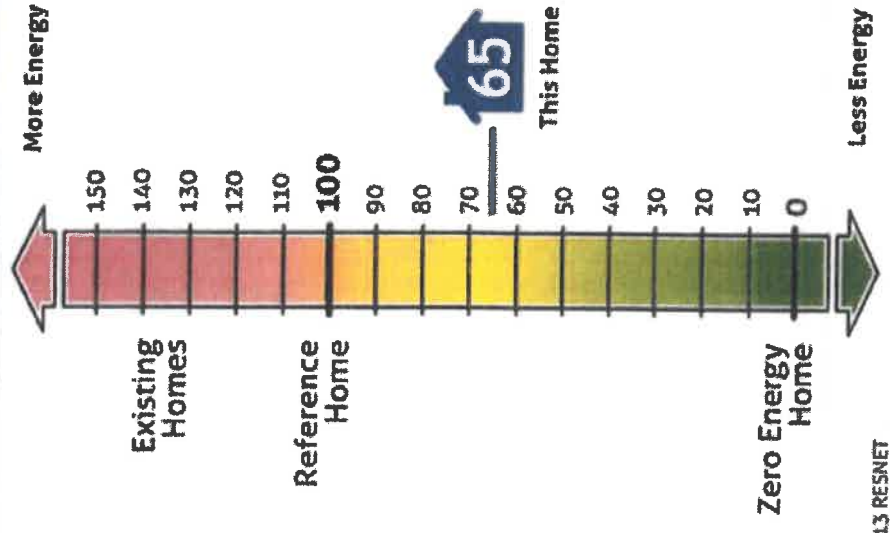
- Energy Design Rating (EDR) score show how close a home is to the ZNE target
 - Aligned with RESNET
 - Reference home is a 2006 IECC compliant home, EDR=100
 - A score of zero means the house is a ZNE building

- CEC's CBECC-Res software has the capability to calculate EDR scores for EE and PV
- Builders can use a combination of envelope energy efficiency features, better appliances, PVs, and other strategies to get to the target EDR

Download CBECC-Res here for free:

<http://www.bwilcox.com/BEES/BEES.html>

HERS® Index



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Proposed 2019 Standards Approach



Energy Design Rating (EDR) targets for each climate zone:

1. An EDR level for energy efficiency features based on 2019 prescriptive measures – This EDR target can only be met using energy efficiency measures, i.e., no PV tradeoff
2. An EDR Contribution for the **PV system** that is sized to displace the **home's annual kWhs**
3. Subtract the PV EDR Contribution from the energy efficiency EDR to determine the final target EDR

Proposed 2019 Standards Approach



1. Maximize envelope efficiency as allowed by LCC and calculate EE EDR

- i. HPA to R19 in severe CZs – Currently R13
- ii. HPW to 0.043 ~ 0.046 U-factor in severe CZs – Currently 0.051
- iii. Windows U-factor of 0.30 and SHGC of 0.23 – Currently 0.32 and 0.25
- iv. QII as a prescriptive requirement

Establish an Energy Design Rating (EDR) for energy efficiency in each CZ that can only be met with efficiency measures (no PV tradeoff against EE)

2. Calculate EDR of PV system as follows:

- i. Calculate the PV size required to displace the kWh in each CZ
- ii. Calculate the EDR contribution of the PV array

3. Subtract the PV EDR contribution from the EE EDR contribution to establish the final EDR that the building must meet to comply in each CZ

Note: Examples are presented in later slides

Target EDR's Many Advantages



1. A target EDR establishes a performance benchmark that the building must meet to comply; consistent with the Warren-Alquist Act performance standards expectation to provide builders with compliance flexibility
2. Target EDR allows the builder to use more efficiency and less PV to get to the target; such as high performance glazing, Energy Star appliances, and higher than minimum HVAC systems that we are prevented from requiring because of preemption issues
3. The EDR concept can be used to right size the PV system for low EDR and ZNE goals by taking advantage of grid harmonization strategies including battery storage, thermal storage, and demand response and flexibility strategies
4. Target EDR is fully compatible with setting reach codes, local jurisdiction simply identifies a lower target EDR (or zero) that can be met with a combination of additional EE, PV, demand response/flexibility, EV integration, or storage
5. Target EDR works well with varying building sizes – static PV size does not



Target EDR Advantages - Example

Here is an example of how CBECC-Res calculates the Target EDR for both EE and PV in CZ12 for the 2,700 sf house:

2019_CZ12_2700r12 - 030 12 327 G20 %401

Compliance Summary | Energy Design Rating | Energy Use Details

EDR of Proposed Efficiency: 41.9 - EDR of Prop PV + Flexibility: 19.1 = Final Proposed EDR: 22.8

EDR of Standard Efficiency: 43.2 - EDR of Minimum Required PV: 18.5 = Final Std Design EDR: 24.7

End Use	Reference Design Site (kWh)	Reference Design Site (therms)	Reference Design (kUDV/ft ² -yr)	Proposed Design Site (kVth)	Proposed Design Site (therms)	Proposed Design (kUDV/ft ² -yr)	Design Rating Margin (kUDV/ft ² -yr)
Space Heating	204	406.0	45.09	107	217.2	19.51	25.50
Space Cooling	1,729		59.71	317		17.22	42.49
IAQ Ventilation	194		1.99	194		1.99	0.00
Other HVAC			0.00			0.00	0.00
Water Heating		176.3	13.03		119.9	8.86	4.17
Photovoltaics				-5,022		-43.51	43.51
Battery						0.00	0.00
Inside Lighting	2,615		30.42	616		6.98	23.44
Appl. & Cooking	989	73.4	15.66	1,040	45.1	14.46	1.19
Plug Loads	3,267		35.06	2,371		25.03	10.03
Exterior	328		3.54	152		1.61	1.93
TOTAL	9,705	735.7	204.49	-146	382.3	52.15	152.34

Done

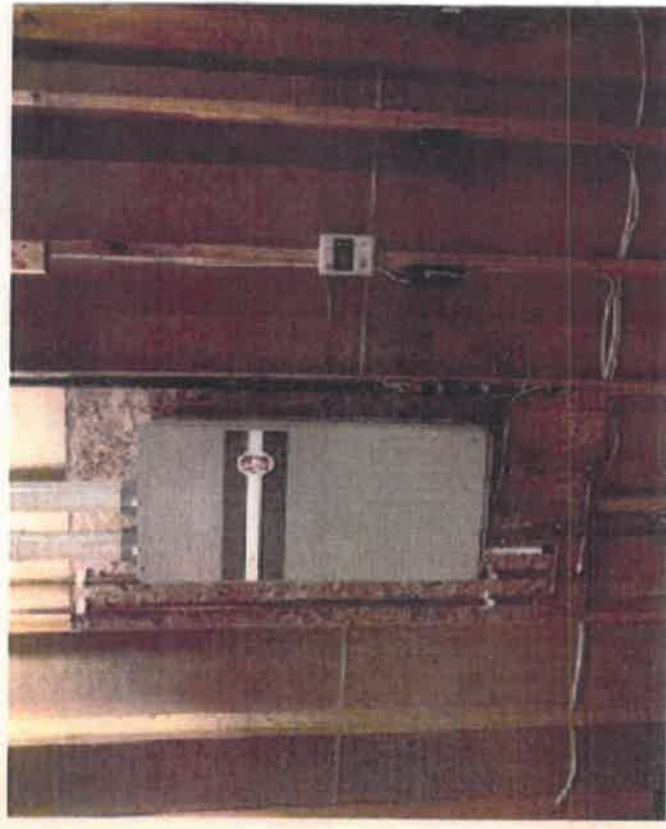
Parallel Prescriptive Paths



There will be two parallel prescriptive paths for compliance, one for each of:

- 1. Mixed Fuel Homes**
- 2. All-Electric Homes**

This allows the all-electric and mixed fuel homes to have their own prescriptive paths, NEEA Tier 3 HPWH models can easily be used to meet or exceed standard design using the performance path



All-Electric Homes and GHG Goals



Home electrification when combined with PVs and demand flexibility strategies can result in environmental benefits as well as grid, and occupant benefits



Extreme Efficiency and ZNE



Can extreme energy efficiency regardless of cost achieve full ZNE (EDR of 0)?

- Even if we eliminate all heating, cooling, hot water, and IAQ loads, we'll still end up with an EDR score of 25-30, the theoretical limit for efficiency EDR!
- That is because in most climate zones plug loads are now the dominant loads and they are unaffected by efficiency measures, extreme or not
- 2019 Standards efficiency EDRs are in the 43-48 range depending on the CZ
- "Practical" efficiency measures – without renewables and demand flexibility - can move the EDR score by no more than 7-9 points in severe CZs, less in milder CZs to ~34-41 range!

Conclusions:

1. Limited opportunity for regulated loads to lower EDR in the future
2. Need PV + demand flexibility to achieve low EDR scores or ZNE



Calgreen Tiers and Target EDR Scores



- 2016 Standards have efficiency EDR scores in mid 50s in most CZs
- 2016 Calgreen has three tiers
 - Tier 1 - 15% better than Part 6
 - Tier 2 - 30% better than Part 6
 - And a ZNE tier with EDR score of zero
- 2019 Standards final EDR scores including PVs are in mid 20s in most CZs
- No need (room) for three Calgreen tiers anymore; two tiers may be sufficient
 - A tier 1 that will get halfway to EDR 0 established based on default battery controls and PV oversizing factor of ~ 1.3 or less
 - A second tier with EDR score of zero established based on advanced battery controls and PV oversizing factor of ~ 1.4 or less

Builders may use a combination of PV, efficiency measures including higher appliances efficiencies, and demand flexibility measures to reach these target EDRs most cost effectively

Note for following slides: each EDR point is ~ 170 watts of PV, roughly about half a PV panel

Target EDR Examples by Climate Zone



Here is are examples of how Target EDRs might look for different scenarios

2700 sf Prototype, Mixed Fuel

	Part 6			Tier 1				Tier 2		Recommended EDR Scores For	
	2019 Efficiency EDR	Part 6 PV Size, kW DC	2019 EDR PV with Part 6	EDR with 1.3 OS Factor and Basic Battery	EDR with 1.2 OS Factor and Basic Battery	EDR with 1.1 OS Factor and Basic Battery	EDR with 1.0 OS Factor and Basic Battery	Tier 2 PV Size with Adv Battery & EDR=0, kW DC	Tier 2 Factor	Tier 1	Tier 2
CZ											
1	48.0	3.4	26.5	15.5	17.9			4.5	1.3	16.0	0.0
2	44.6	2.9	23.8	13.1	15.1			3.6	1.2	12.0	0.0
3	42.7	2.5	22.4	11.8	14.2			2.8	1.1	12.0	0.0
4	43.6	2.9	22.4	9.4	11.5	13.6		3.0	1.0	12.0	0.0
5	40.1	2.3	20.9	10.5	12.1	14.6		2.5	1.1	12.0	0.0
6	48.7	2.9	22.6	6.5		11.8	14.7	3.1	1.1	12.0	0.0
7	47.5	2.7	19.6	4.5		9.6	12.8	2.4	0.9	12.0	0.0
8	45.2	3.0	20.3	4.2		8.9	11.4	3.0	1.0	12.0	0.0
9	46.4	3.1	23.4	6.2		9.9	12.5	3.6	1.1	12.0	0.0
10	45.3	3.3	23.5	4.6		9.3	11.7	3.8	1.2	12.0	0.0
11	42.5	4.0	22.6	6.5	8.5	10.5	12.9	5.2	1.3	12.0	0.0
12	42.7	3.2	24.0	9.0	11.3	13.3	15.4	4.4	1.4	12.0	0.0
13	43.9	4.1	23.7	7.3	10.1	11.9		5.9	1.4	12.0	0.0
14	44.1	3.5	23.6	7.2	9.7	11.8		5.0	1.4	12.0	0.0
15	46.7	5.8	20.4	4.8	7.2	10.1	13.1	7.5	1.3	12.0	0.0
16	46.6	2.9	27.8	16.6	11.0			5.1	1.8	16.0	0.0

Target EDR Examples by Climate Zone



Here are examples of how Target EDRs might look for different scenarios

2100 sf Prototype, Mixed Fuel

	Part 6			Tier 1				Tier 2		Recommended EDR Scores For	
	2019 Efficiency EDR	Part 6 PV Size, kW DC	2019 EDR with Part 6 PV	EDR with 1.3 OS Factor and Basic Battery	EDR with 1.2 OS Factor and Basic Battery	EDR with 1.1 OS Factor and Basic Battery	EDR with 1.0 OS Factor and Basic Battery	Tier 2 PV Size with Adv Battery & EDR=0, kW DC	Tier 2 OS Factor	Tier 1	Tier 2
CZ											
3	47.7	2.2	25.0	13.7	16.4		20.1	2.4	1.1	12.0	0.0
7	49.5	2.3	20.7		7.8	11.6	14.1	2.0	0.9	12.0	0.0
10	46.9	2.7	24.5			9.8	12.6	2.7	1.0	12.0	0.0
12	45.0	2.7	25.3	10.5	12.5			3.2	1.2	12.0	0.0
13	46.6	3.5	25.6	6.1	8.8	11.2	15.0	4.4	1.3	12.0	0.0
15	49.9	5.2	21.8	0.6		7.4	10.8	6.1	1.2	12.0	0.0
16	49.3	2.3	30.2	16.9				4.1	1.8	16.0	0.0

Target EDR Examples by Climate Zone



Here is are examples of how Target EDRs might look for different scenarios

2700 sf Prototype, All Electric

	Part 6		Tier 1						Tier 2		Recommended EDR Scores For	
	2019 Efficiency EDR	Part 6 PV Size, kW DC	2019 EDR with Part 6 PV	EDR with 1.4 OS Factor and Basic Battery	EDR with 1.3 OS Basic Battery	EDR with 1.2 OS Factor and Basic Battery	EDR with 1.1 OS Factor and Basic Battery	EDR with 1.0 OS Factor and Basic Battery	Tier 2 PV Size with Adv Battery & EDR=0, kW DC	Tier 2 OS Factor	Tier 1	Tier 2
CZ												
3	50.9	2.8	28.8	14.3	17.3				4.0	1.4	14.0	0.0
7	51.3	2.9	23.3			13.2	13.2	16.4	3.0	1.0	14.0	0.0
10	47.3	3.4	26.2			12.3	12.3	15.2	4.3	1.3	14.0	0.0
12	45.6	3.3	27.4	10.4		13.9	16.7		5.1	1.5	14.0	0.0
13	46.5	4.3	26.8		9.4	11.8	15.0	18.4	6.7	1.6	14.0	0.0
15	48.0	6.1	22.4		4.6		10.6	13.8	8.1	1.3	14.0	0.0
16	61.4	3.2	44.3	32.2	34.3	36.9	38.9	40.8	8.0	2.5	22.0??	0.0

Note: There may not a cost effective or practical way to get to EDR score of zero in CZ16, especially for all-electric homes; winters are too cold with too much resistance heating for HP water and space heating. EDR score of 22 requires a 6.1 kW PV system, an oversizing factor of 1.9, exceeding the 1.6 limit; EDR score of zero requires oversizing factor of 2.5!

Target EDR Examples by Climate Zone



Here is are examples of how Target EDRs might look for different scenarios in different CZs for the 2,700 sf **Mixed Fuel Homes**:

Note: At this time these numbers are examples only and may change as our tools evolve

NEM = Net Energy Metering; GH = Grid Harmonization; Dumb PV = No Battery Storage

1	2	3	4	5	6	7	8	9	10	11
CZ	Efficiency EDR without PV, based on 2019 Efficiency Measures	Target Design Rating Score for Displacing kWh Elect with PV from Col 4	PV Sized to Displace Annual kWh Electric – Cool with NEM, Violates NEM, not so Cool with GH	Dumb PV Sized to Zero EDR – Violates NEM, Not Cool with GH	PV Size for Zero EDR with Basic Battery Controls – May Violate NEM, OK with GH	PV Size for Zero EDR with Optimum Battery Controls – Cool with NEM and GH	Similar to Col 7 But With 95 WH Furn, 0.95 WH – Real Cool with NEM and GH	Col 6 to 4 Ratio	Col 7 to 4 Ratio	Col 8 to 4 Ratio
1	48.0	26.5	3.4	7.7	6.9	4.6	4.1	2.0	1.4	1.2
2	41.2	18.0	2.9	6.1	5.5	3.1	2.8	1.9	1.1	1.0
3	46.9	22.7	2.6	5.8	5.3	3.2	2.9	1.9	1.1	1.0
6	48.0	20.9	2.9	5.3	4.5	2.9	2.8	1.6	1.0	1.0
7	48.0	14.9	2.7	4.6	3.9	2.4	2.3	1.4	0.9	0.9
8	43.0	14.6	2.9	5.3	4.3	2.7	2.6	1.5	0.9	0.9
11	43.3	23.4	3.8	8.5	6.5	4.4	4.2	1.7	1.2	1.1
12	43.1	24.5	3.1	7.0	5.8	3.8	3.5	1.9	1.2	1.1
13	44.8	22.1	4.0	9.0	6.2	4.9	4.6	1.6	1.2	1.2
14	44.6	21.3	3.4	7.4	5.4	4.4	4.1	1.6	1.3	1.2
15	48.0	17.9	5.7	10.5	8.1	6.9	6.8	1.4	1.2	1.2
16	46.3	27.5	3.0	7.6	6.5	4.8	4.3	2.2	1.6	1.4

2. Software Tools

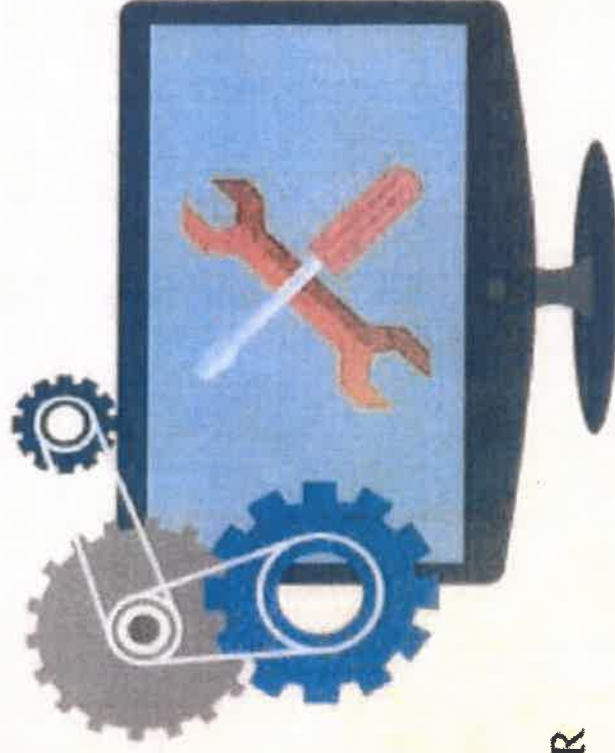


The CBECC-Res Compliance Software May Be Used For:

- Part 6 Compliance, and
- Part 11 (CALGreen, Reach Codes, etc)

The Software can be used to:

- Size PV for Part 6 compliance or lower target EDRs for Reach Codes
- Assess the impact of battery storage on lowering EDR
- Assess the impact of precooling and other DR strategies on lowering EDR
- Assess the impact of HPWH DR on lowering EDR
- And other options



Software Tools – Input Screens



This screen can be used to specify an EDR target that may be required by reach codes to size the PV system

2019_CZ12_2100ft2-Unvented - v30.12.S21.G20.M01

Project | Analysis | EDR / PV | Battery | Notes | Building | Lighting | Appliances | IAQ | Cool Vent | People | ▶

☒ Perform Energy Design Rating

☒ Specify Target Energy Design Rating - Score: May be superseded by Max PV Gen Ratio of 1 (Battery tab)
Target EDR lengthens analysis runtime

Photovoltaic System(s):

Inputs:

DC System		Array Orientation and Location		Inverter
Size (kW)	Module Type	CFI?		Eff. (%)
<input type="text" value="3"/>	<input type="button" value="Standard"/>	<input type="checkbox"/> CFI?	<input type="text" value="170° azimuth, 22.6° tilt (5.0-in-12)"/>	<input type="text" value="96"/>
<input type="text" value="2"/>	<input type="button" value="Standard"/>	<input checked="" type="checkbox"/> CFI?		<input type="text" value="96"/>
<input type="text" value="0"/>				

OK

Software Tools – Input Screens



2019_CZ12_2100ft2-Unvented - v30 12 S21 G20 M01

Project | Analysis | EDR / PV | Battery | Notes | Building | Lighting | Appliances | IAQ | Cool Vent | People

Battery Capacity: 14 kWh

PV generation will be capped @ 1.6 x proposed design electric use
☐ Allow Excess PV Generation EDR Credit for above code programs

Control: Default

- specify -
Default
Best Case

Discharging

Efficiency: 0.95

Rate: 5 kW 5 kW

The battery model doesn't currently include energy consumption for cooling the battery during charging in environments above 77°F or to keep the battery from freezing in winter if outdoors.

OK

Software Tools – Input Screens



2019_CZ12_2700ft2 - v30 12 S27 G20 M01

Project | Analysis | EDR / PV | Battery | Notes | Building | Lighting | Appliances | IAQ | Coal Vent | People | >

Building Description: CEC Prototype with tile roof ☒ Use PreCooling

Air Leakage Status: New

Air Leakage: 5 ACH @ 50Pa

Insul. Construction Quality: Improved

☐ Perform Multiple Orientation Analysis

Front Orientation: 0 deg

☒ Single Family ☐ Multi-family

Number of Bedrooms: 4

☒ Natural Gas is available at the site Gas Type: Natural Gas

☐ Zonal Control Credit (living vs. sleeping)

☒ Has attached garage

OK



Software Tools – Results Screens

For Compliance for Part 6 and Part 11

2019_CZ12_2700F-2 - v30 12 537 620 M01

Compliance Summary | Energy Design Rating | Energy Use Details

EDR of Proposed Efficiency: 41.9 EDR of Prop PV + Flexibility: 19.1 Final Proposed EDR: 22.8

EDR of Standard Efficiency: 43.2 EDR of Minimum Required PV: 18.5 Final Std Design EDR: 24.7

End Use	Reference Design Site (kWh)	Reference Design Site (therms)	Reference Design (kTOD/M ² -yr)	Proposed Design Site (kWh)	Proposed Design Site (therms)	Proposed Design (kTOD/M ² -yr)	Design Rating Margin (kTOD/M ² -yr)
Space Heating	504	400.0	45.09	107	217.2	19.51	25.50
Space Cooling	1,729		59.71	317		17.22	42.49
IAQ Ventilation	194		1.99	194		1.99	0.00
Other HVAC			0.00			0.00	0.00
Water Heating		176.3	13.03		119.9	8.86	4.17
Photovoltaic's				-5,022		-43.51	43.51
Battery						U.UU	U.UU
Inside Lighting	2,615		30.42	616		6.98	23.44
Appl. & Cooking	989	73.4	15.65	1,040	45.1	14.46	1.19
Plug Loads	1,767		35.06	2,371		25.03	10.03
Exterior	328		3.54	152		1.61	1.93
TOTAL	9,705	735.7	204.49	-146	382.3	52.15	152.34

Done

Software Tools – Results Screens



Compliance Pass/Fail

2019_CZ12_2700112 - v30 12 S27 020 M01

Compliance Summary | Energy Design Rating | Energy Use Details

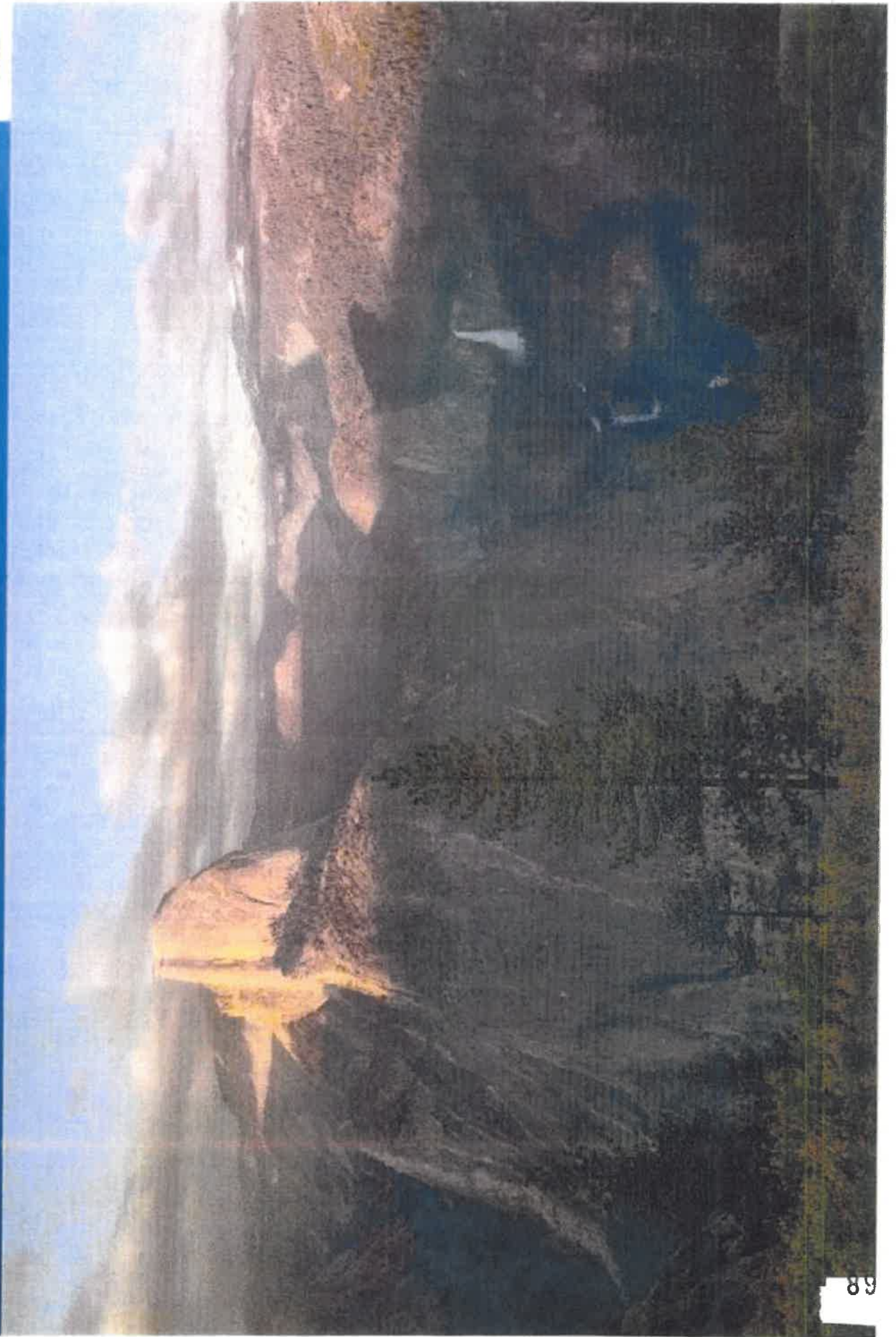
	Energy Design Ratings		Compliance Margins	
	Efficiency ¹ (EDR)	Final ² (EDR)	Efficiency ¹ (EDR)	Final ² (EDR)
Standard Design	43.2	24.7		
Proposed Design	41.9	22.8	1.3	1.9

Result: **COMPLIES**
(not current)

¹ Efficiency measures include improvements like a tighter building envelope and more efficient equipment
² Final EDR includes efficiency, photovoltaics and batteries
* Building complies when all efficiency and final margins are greater than or equal to zero

Done

Questions?

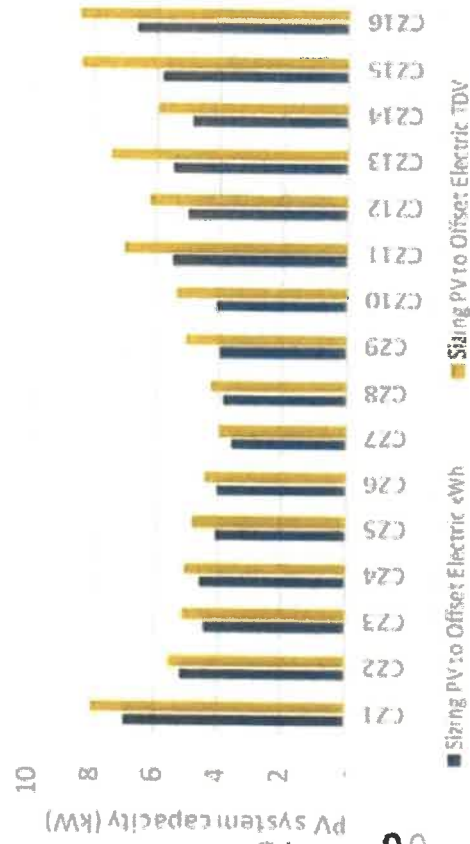




TDV ZNE requires a larger PV system than Site ZNE

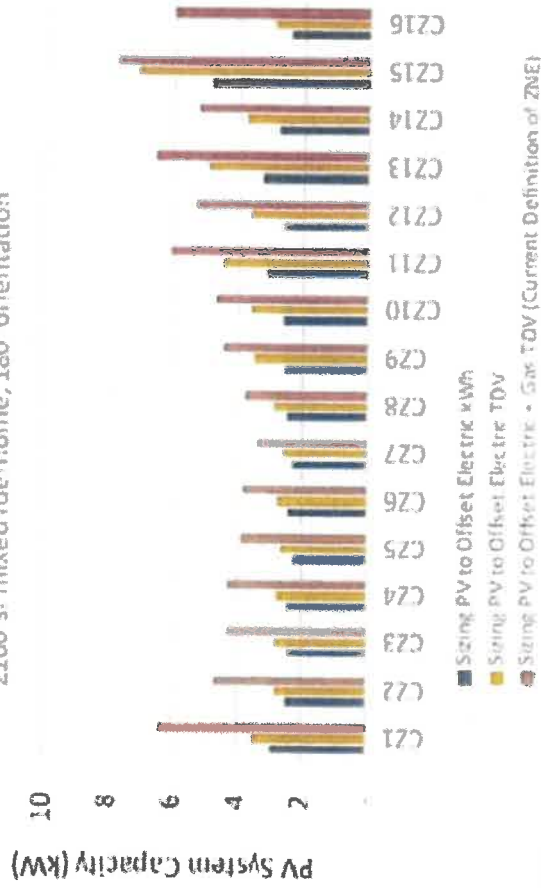
- + Solar production occurs during low TDV hours, and households demand energy during high TDV hours
 - PV must be sized larger to reach TDV ZNE vs. Site ZNE (which doesn't account for the changing value of kWh)
- + For a 2,100 ft² home with 180° PV orientation, TDV ZNE requires 7% - 44% larger PV capacity than Site ZNE (average: 21%)
- + Because PV interconnection rules limit sizing to electric kWh, this presentation focuses on that size

All-Electric Home PV system capacity (kW)
(2,100 sq ft all-electric home, 180° PV orientation)



Mixed Fuel Home PV System Capacity (kW)

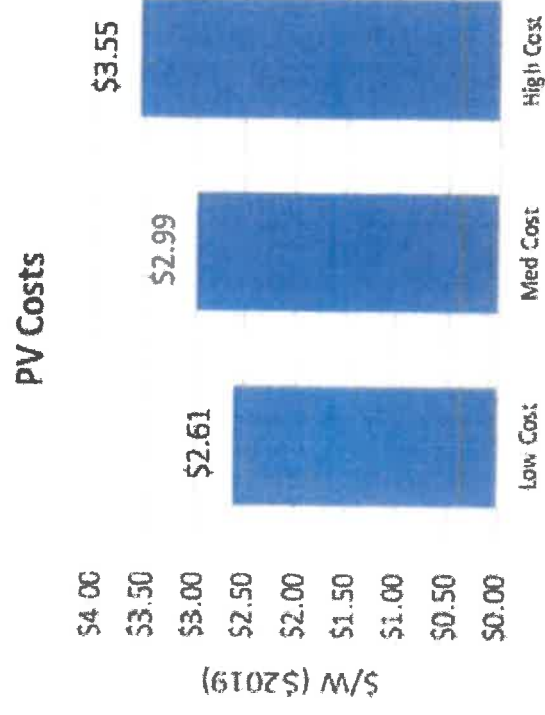
2100 sq ft mixed fuel home, 180° orientation





PV Costs

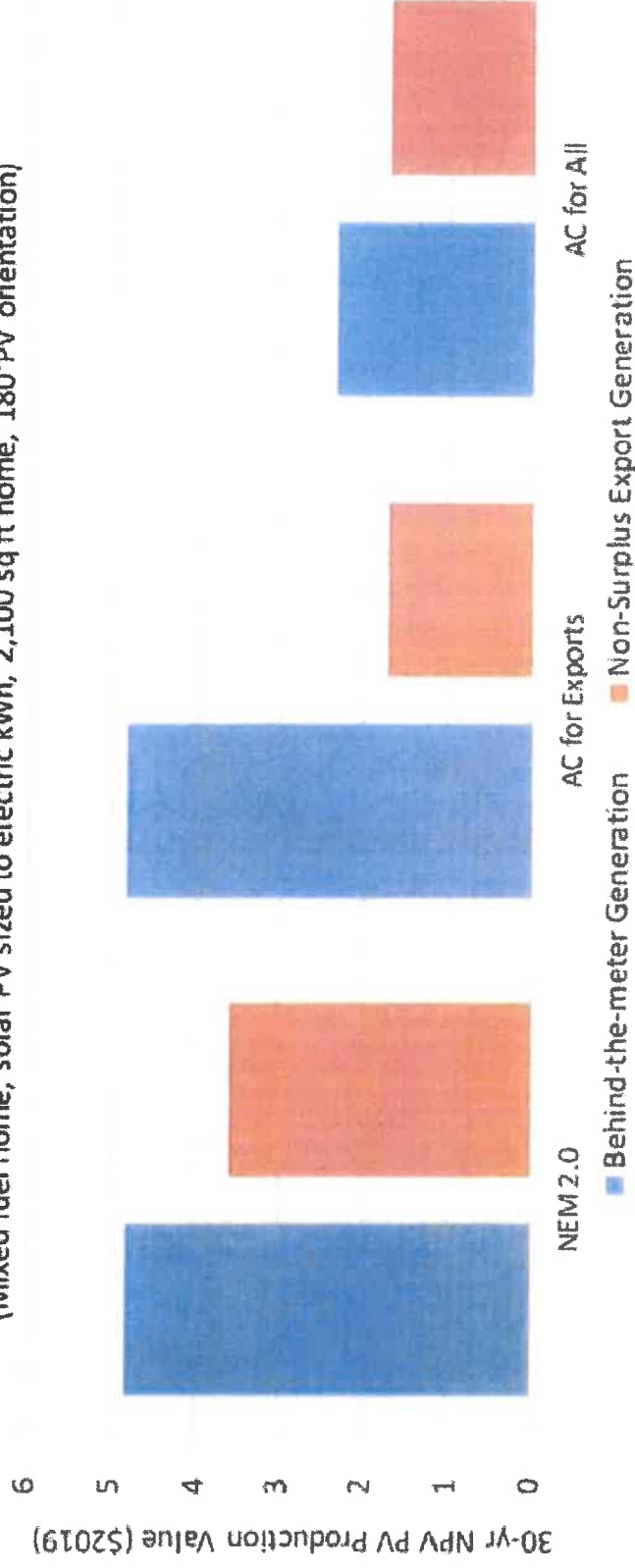
- + **No ITC Assumed** - The ITC is scheduled to step down throughout the 2020-2022 building standard cycle (26%, 22%, 20%) and then to 0% for residential systems beginning in 2023
- + All costs assume a 30-yr panel life and inverter replacements after 10 and 20 years (comprises ~\$0.40/W in the costs)
- + Price based on NREL 2016 Installer Price
 - Low cost case:
 - 30% cost reduction 2016 - 2020 (GreenTech Media)
 - Medium cost case:
 - 18% cost reduction 2016 - 2020 (Bloomberg)
 - High cost case:
 - No cost reduction 2016 - 2020





Three solar compensation policies

Average per-kWh compensated value (TDV) of rooftop PV
(Mixed fuel home, solar PV sized to electric kWh, 2,100 sq ft home, 180°PV orientation)



AC = Avoided Costs

Non-surplus Export Generation are the hourly exports

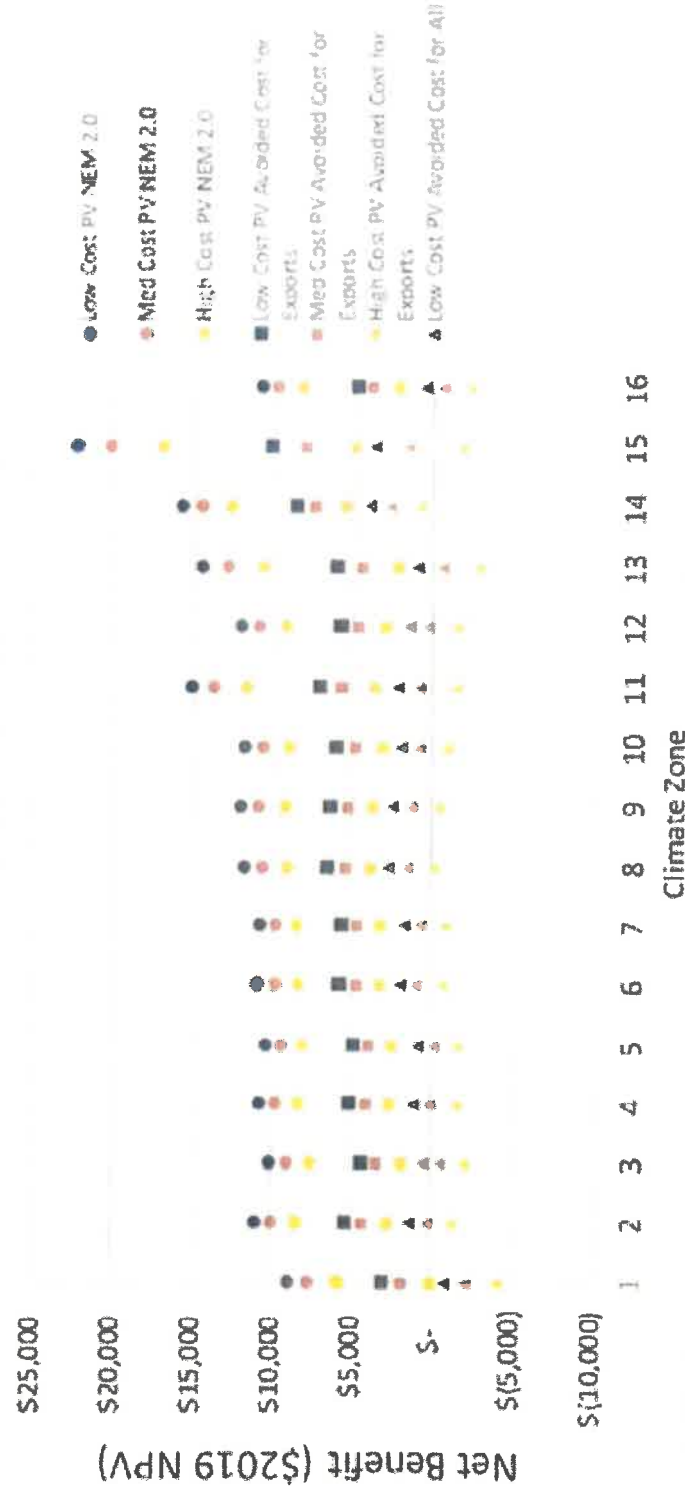


Cost-Effectiveness of Offsetting Elec kWh in a Mixed Fuel Home

+ Offsetting electric kWh with solar PV is cost-effective except under the most aggressive NEM reform scenarios

Net Benefit of Offsetting Electric kWh in a Mixed Fuel Home

2700 sf - PV 180°



CZ	PV kW
1	2.89
2	2.46
3	2.38
4	2.36
5	2.22
6	2.38
7	2.26
8	2.46
9	2.51
10	2.58
11	3.10
12	2.58
13	3.28
14	2.73
15	4.83
16	2.37



3 - Strategies for Reach Codes

NEM Rules and Oversizing PV - DRAFT

March 2, 2017

Snuller Price, Zachary Ming, Brian Conlon



PV Sizing Methods

+ Electric kWh

- PV scaled such that annual generation = annual electric load

+ Maximize Net Benefits

- PV scaled to maximize net TDV benefit to customer
 - Practically, this is the same capacity as sizing to kWh, i.e., further generation will only receive Net Surplus Compensation (NSC)

+ Electric TDV

- PV scaled such that annual TDVs generated = annual TDV of electric load

+ Zero Net Benefits (Breakeven Point)

- PV scaled to point at which a larger system will not be cost-effective
- Cost of PV system = Revenue from PV generation

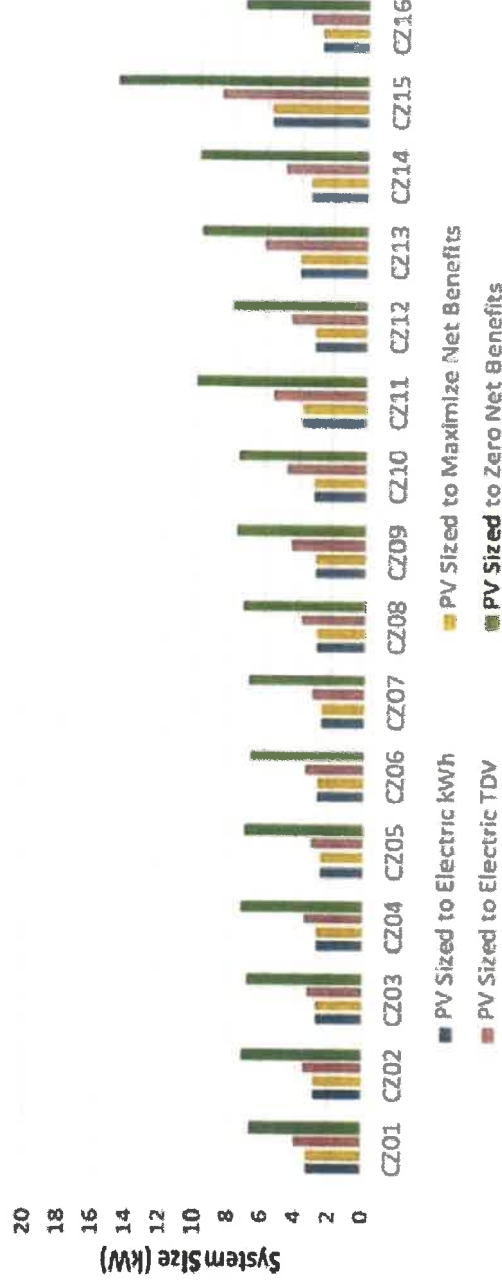


Sizing Comparison NEM 2.0, Mid Cost PV

- ✦ **PV sized to max net benefits is smaller than sized to electric TDV**
 - Sizing to TDV does not reflect lower compensation for exports from NEM 2.0
- ✦ **At sizes beyond max net benefits, incremental kW only receive NSC**
 - Large net benefit and small marginal net cost (PV cost – NSC) at the point of maximum net benefits require much larger systems to zero out net benefits
- Retail for self-use and exports, **NSC** for net surplus – NEM2

Ratio of
PV Sized to Zero Net Benefits
PV Sized to Electric kWh

2700 sqft, PV180, NEM 2.0, Mid Cost PV

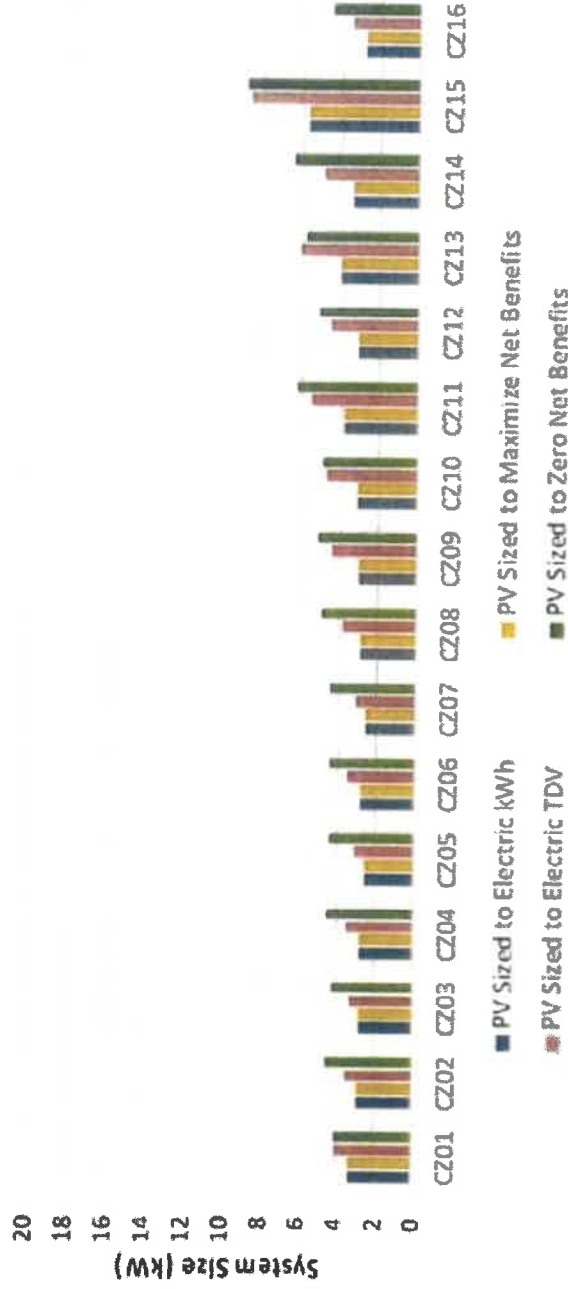




Sizing Comparison AC for Exports, Mid Cost PV

- + Valuing export PV generation at avoided cost reduces cost-effectiveness of PV sized to offset kWh
 - Smaller net benefits for systems sized to offset kWh means less kW at marginal net cost are needed to zero out net benefits
- Retail for self-use, AC for exports, NSC for net surplus, NEM"3"

2700 sqft, PV180, Avoided Cost for Exported Energy, Mid Cost PV





Sizing Comparison BTM TDV, Mid Cost PV

+ BTM TDV means

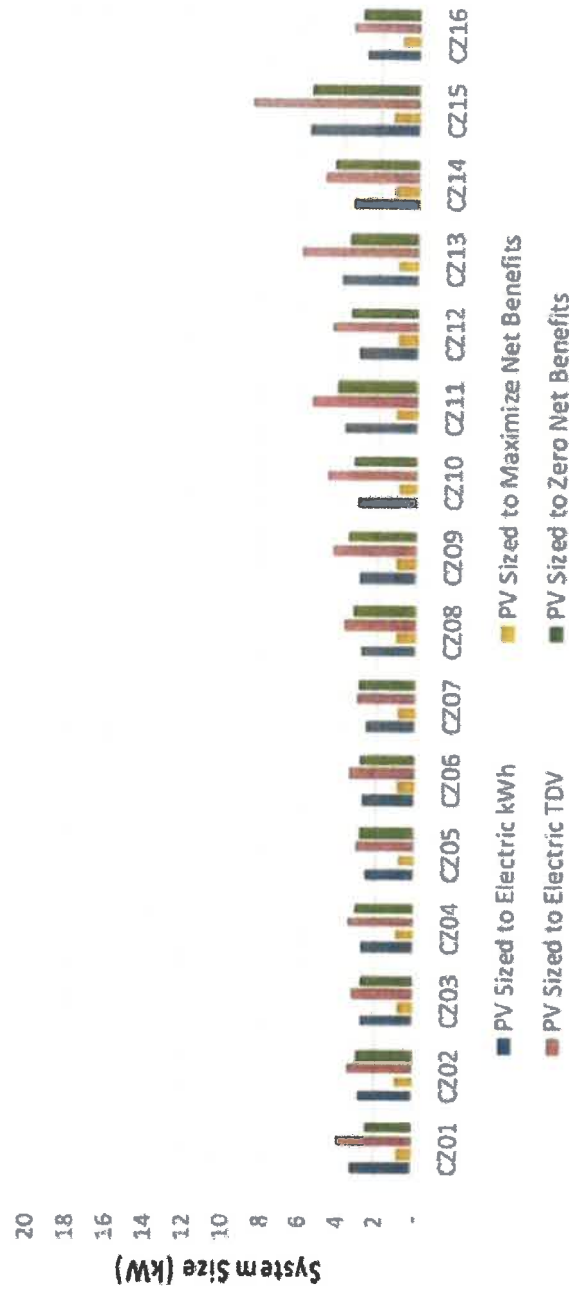
- All PV production consumed behind-the-meter (BTM) receives full TDV value
- All PV production exported to the grid as well as all net surplus above a system sized to annual kWh receives net surplus compensation (NSC)

+ PV sized to electric kWh and electric TDV are unchanged from previous rate structures

+ PV sized to maximize net benefits and PV sized to zero net benefits are substantially reduced

+ Retail for self-use, NSC for exports and annual surplus

2700 sqft, PV180, BTM TDV, Mid Cost PV



Ratio of
PV Sized to Zero Net Benefits
PV Sized to Electric kWh

CZ1	0.74
CZ2	1.05
CZ3	1.01
CZ4	1.11
CZ5	1.14
CZ6	1.04
CZ7	1.12
CZ8	1.11
CZ9	1.18
CZ10	1.05
CZ11	1.11
CZ12	1.14
CZ13	0.89
CZ14	1.30
CZ15	0.98
CZ16	1.07



Storage Overview

- + **E3 analyzed the additional value of a battery storage system to an existing PV system of a 2700 sf, mixed fuel home**
- + **BTM TDV rate scenario**
 - BTM generation receives full TDV value ($\sim \$0.20/\text{kWh}$); exported generation receives net surplus compensation value ($\sim \$0.03/\text{kWh}$)
- + **Battery assumptions**
 - 14 kWh
 - 5 kW
 - 90% round trip efficiency
 - \$500/kWh fully installed

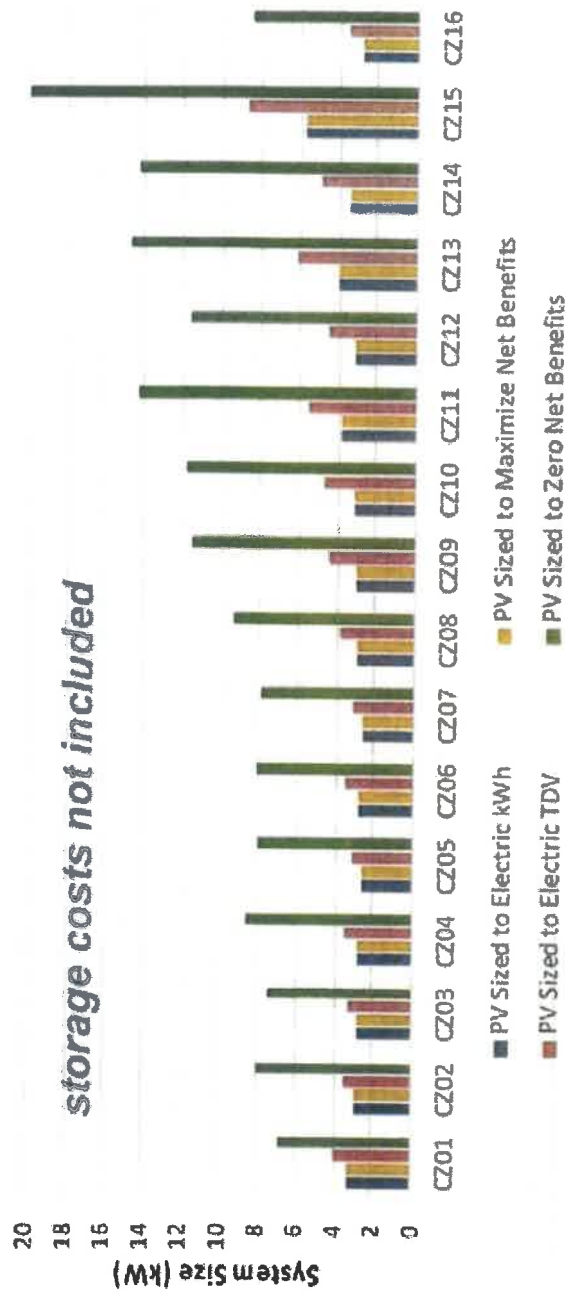


Sizing Comparison BTM TDV With Storage, Mid Cost PV

- + Installing storage (without accounting for the **storage costs**) increases the benefits to the homeowner, allowing them to install more solar
- + The Generous Santa option: Demonstrates how PV value increases if coupled with storage at no cost

+ Retail for self-use, and NSC for exports and annual surplus

2700 sqft, PV180, BTM TDV, Mid Cost PV



Ratio of	
PV Sized to Zero Net Benefits	PV Sized to Electric kWh
CZ1	2.05
CZ2	2.78
CZ3	2.70
CZ4	3.09
CZ5	3.09
CZ6	2.89
CZ7	2.97
CZ8	3.17
CZ9	3.77
CZ10	3.75
CZ11	3.76
CZ12	3.71
CZ13	3.66
CZ14	4.26
CZ15	3.47
CZ16	3.02



Sizing Comparison

Avoided Cost for Exported Energy

With Storage, Mid Cost PV

NEW

- Changing the rate structure to avoided cost for exported energy increases the net benefits of solar + storage and therefore increases the amount of solar that can be installed before net benefits are reduced to zero; annual surplus at **NSC**
- The Stingy Santa option – Demonstrates the impact on the PV if Santa charges you for the storage

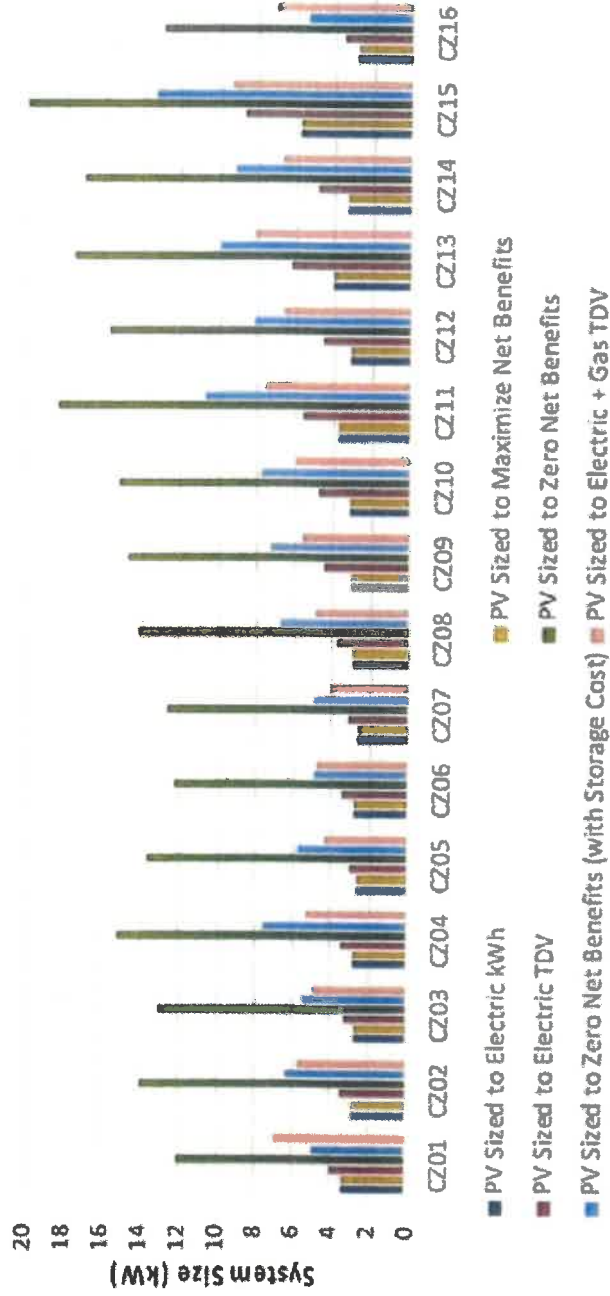
Retail for self-use, AC for exports, and NSC for annual surplus – NEM"3"

Ratio of

PV Sized to Zero Net Benefits
(with Storage Costs)

2700 sqft, PV180, Avoided Cost for Exported Energy, Mid Cost PV

PV Sized to Electric kWh



PV Sized to Electric kWh

PV Sized to Electric TDV

PV Sized to Zero Net Benefits (with Storage Cost)

PV Sized to Maximize Net Benefits

PV Sized to Zero Net Benefits

PV Sized to Electric + Gas TDV

Energy+Environmental Economics



POU PV Cost/Benefit Breakeven Analysis

Not cost-effective at any retail rate

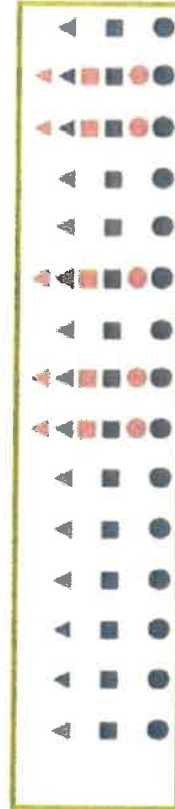


For avoided cost only rate structures, increasing the retail rate does not increase cost-effectiveness



IEPR Rate Forecast

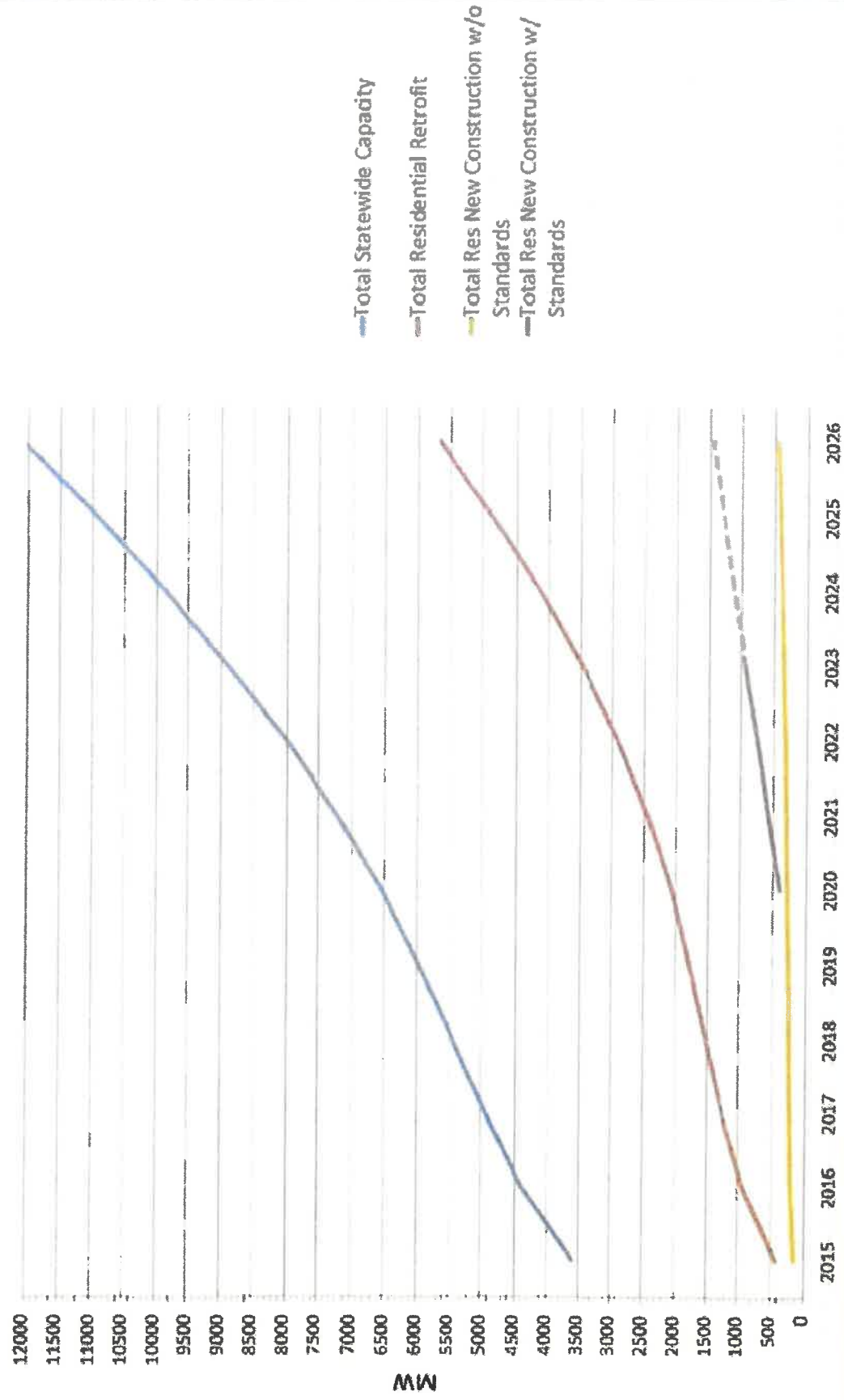
Climate Zone



When solar is cost-effective while only being compensated at avoided cost, it is cost-effective regardless of the retail rate level

Cost-effective at any retail rate

Limited Impact of Standards PV Requirements Compared to Other Forecasted PV Development



(f) **Ballasts for residential recessed luminaires.** To qualify as high efficacy for compliance with Section 150.0(k), any compact fluorescent lamp ballast in a residential recessed luminaire shall meet all of the following conditions:

1. Be rated by the ballast manufacturer to have a minimum rated life of 30,000 hours when operated at or below a specified maximum case temperature. This maximum ballast case temperature specified by the ballast manufacturer shall not be exceeded when tested in accordance to UL 1598 Section 19.15; and
2. Have a ballast factor of not less than 0.90 for nondimming ballasts and a ballast factor of not less than 0.85 for dimming ballasts.

SECTION 110.10 MANDATORY REQUIREMENTS FOR SOLAR READY BUILDINGS

(a) Covered occupancies.

1. **Single-family residences.** Single-family residences located in subdivisions with ten or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete by the enforcement agency shall comply with the requirements of Sections 110.10(b) through 110.10(e)
2. **Low-rise multifamily buildings.** Low-rise multifamily buildings shall comply with the requirements of Sections 110.10(b) through 110.10(d).
3. **Hotel/motel occupancies and high-rise multifamily buildings.** Hotel/motel occupancies and high-rise multifamily buildings with ten habitable stories or fewer shall comply with the requirements of Sections 110.10(b) through 110.10(d).
4. **All other nonresidential buildings.** All other nonresidential buildings with three habitable stories or fewer shall comply with the requirements of Sections 110.10(b) through 110.10(d).

(b) Solar zone.

1. **Minimum area.** The solar zone shall have a minimum total area as described below. The solar zone shall comply with access, pathway, smoke ventilation and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area shall be comprised of areas that have no dimension less than five feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet.
- A. **Single-family residences.** The solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet.

Exception 1 to Section 110.10(b)1A: Single-family residences with a permanently installed solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than 1000 watts.

Exception 2 to Section 110.10(b)1A: Single-family residences with a permanently installed domestic solar water-heating system meeting the installation criteria specified in the Reference Residential Appendix RA4 and with a minimum solar savings fraction of 0.50.

Exception 3 to Section 110.10(b)1A: Single-family residences with three habitable stories or more and with a total floor area less than or equal to 2000 square feet and having a solar zone total area no less than 150 square feet.

Exception 4 to Section 110.10(b)1A: Single-family residences located in climate zones 8–14 and the Wildland-Urban Interface Fire Area as defined in Title 24, Part 2 and having a whole house fan and having a solar zone total area no less than 150 square feet.

Exception 5 to Section 110.10(b)1A: Buildings with a designated solar zone area that is no less than 50 percent of the potential solar zone area. The potential solar zone area is the total area of any low-sloped roofs where the annual solar access is 70 percent or greater and any steep-sloped roofs oriented between 110 degrees and 270 degrees of true north where the annual solar access is 70 percent or greater. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

Exception 6 to Section 110.10(b)1A: Single-family residences having a solar zone total area no less than 150 square feet and where all thermostats comply with Reference Joint Appendix JA5 and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency.

Exception 7 to Section 110.10(b)1A: Single-family residences meeting the following conditions:

- A. All thermostats comply with Reference Joint Appendix JA5 and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency.
- B. Comply with one of the following measures:
 - i. Install a dishwasher that meets or exceeds the ENERGY STAR® Program requirements with either a refrigerator that meets or exceeds the ENERGY STAR Program requirements or a whole house fan driven by an electronically commutated motor; or
 - ii. Install a home automation system capable of, at a minimum, controlling

the appliances and lighting of the dwelling and responding to demand response signals; or

- iii. Install alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the *California Plumbing Code* and any applicable local ordinances; or
- iv. Install a rainwater catchment system designed to comply with the *California Plumbing Code* and any applicable local ordinances, and that uses rainwater flowing from at least 65 percent of the available roof area.

B. Low-rise and high-rise multifamily buildings, hotel/motel occupancies and nonresidential buildings. The solar zone shall be located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building or on covered parking installed with the building project and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area.

Exception 1 to Section 110.10(b)1B: Buildings with a permanently installed solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than one watt per square foot of roof area.

Exception 2 to Section 110.10(b)1B: Buildings with a permanently installed domestic solar water-heating system complying with Section 150.1(c)8Ciii.

Exception 3 to Section 110.10(b)1B: Buildings with a designated solar zone area that is no less than 50 percent of the potential solar zone area. The potential solar zone area is the total area of any low-sloped roofs where the annual solar access is 70 percent or greater and any steep-sloped roofs oriented between 110 degrees and 270 degrees of true north where the annual solar access is 70 percent or greater. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

Exception 4 to Section 110.10(b)1B: Low-rise and high-rise multifamily buildings meeting the following conditions:

- A. All thermostats in each dwelling unit comply with Reference Joint Appendix JA5 and are capable of receiving and responding to Demand Response Signals prior to granting

of an occupancy permit by the enforcing agency.

B. In each dwelling unit, comply with one of the following measures:

- i. Install a dishwasher that meets or exceeds the ENERGY STAR Program requirements with either a refrigerator that meets or exceeds the ENERGY STAR Program requirements or a whole house fan driven by an electronically commutated motor; or
- ii. Install a home automation system capable of, at a minimum, controlling the appliances and lighting of the dwelling and responding to demand response signals; or
- iii. Install alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the *California Plumbing Code* and any applicable local ordinances; or
- iv. Install a rainwater catchment system designed to comply with the *California Plumbing Code* and any applicable local ordinances, and that uses rainwater flowing from at least 65 percent of the available roof area.

Exception 5 to Section 110.10(b)1B: Buildings where the roof is designed and approved to be used for vehicular traffic or parking or for a heliport.

2. Orientation. All sections of the solar zone located on steep-sloped roofs shall be oriented between 110 degrees and 270 degrees of true north.

3. Shading.

A. No obstructions, including but not limited to, vents, chimneys, architectural features and roof mounted equipment, shall be located in the solar zone.

B. Any obstruction, located on the roof or any other part of the building that projects above a solar zone shall be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.

Exception to Section 110.10(b)3: Any roof obstruction, located on the roof or any other part of the building, that is oriented north of all points on the solar zone.

4. Structural design loads on construction documents. For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load

shall be clearly indicated on the construction documents.

Note: Section 110.10(b)4 does not require the inclusion of any collateral loads for future solar energy systems.

(c) Interconnection pathways.

1. The construction documents shall indicate a location for inverters and metering equipment and a pathway for routing of conduit from the solar zone to the point of interconnection with the electrical service. For single-family residences the point of interconnection will be the main service panel.
2. The construction documents shall indicate a pathway for routing of plumbing from the solar zone to the water-heating system.

(d) Documentation. A copy of the construction documents or a comparable document indicating the information from Sections 110.10(b) through 110.10(c) shall be provided to the occupant.

(e) Main electrical service panel.

1. The main electrical service panel shall have a minimum busbar rating of 200 amps.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation.
 - A. **Location.** The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.
 - B. **Marking.** The reserved space shall be permanently marked as "For Future Solar Electric."

10. testing transformer;
11. transformer with tap range of 20 percent or more;
12. uninterruptible power supply transformer; or
13. welding transformer.

SECTION 110.11 MANDATORY REQUIREMENTS FOR ELECTRICAL POWER DISTRIBUTION SYSTEM

Certification by Manufacturers. Any electrical power distribution system equipment listed in this section may be installed only if the manufacture has certified to the Commission that the equipment complies with all the applicable requirements of this section.

(a) Low-voltage dry-type distribution transformer shall be certified by the Manufacturer as required by the Title 20 Appliance Efficiency Regulations.

EXCEPTION to Section 110.11(a):

1. autotransformer;
2. drive (isolation) transformer;
3. grounding transformer;
4. machine-tool (control) transformer;
5. nonventilated transformer;
6. rectifier transformer;
7. regulating transformer;
8. sealed transformer;
9. special-impedance transformer;



Cathedral City

Agenda Report

File #: 2018-29

Item No: 3.A.

City Council

MEETING DATE: 2/6/2018

TITLE:

Conference with Legal Counsel - Existing Litigation Pursuant to Government Code Section 54956.9(d)(1):

Case Name: Alirio Moulin v. City of Cathedral City, et. al.

Case Number: PSC 1800253

FROM:

Charles McClendon, City Manger



Cathedral City

Agenda Report

File #: 2018-32

Item No: 3.B.

City Council

MEETING DATE: 2/6/2018

TITLE:

Conference with Legal Counsel - Existing Litigation Pursuant to Government Code Section 54956.9(d)(1):

Case Name: Cathedral City v. Anthony Davis, et al.

Case Number: PSC 1401152

FROM:

Charles McClendon, City Manger



Cathedral City

Agenda Report

File #: 2018-35

Item No: 3.C.

City Council

MEETING DATE: 2/6/2018

TITLE:

**City Council: Public Employee Performance Evaluation Per Government Code Section 54957
(B) Title: City Manager**

FROM:

Cathedral City City Council



Cathedral City

Agenda Report

File #: 2018-30

Item No: 3.D.

Successor Agency to the Former Redevelopment Agency

MEETING DATE: 2/6/2018

TITLE:

Conference with Real Property Negotiator Pursuant to Government Code Section 54956.8.

Property Location: Eight (8) Parcels in the area of the southwest corner of East Palm Canyon Drive and W. Buddy Rogers with APN's of 687-195-002 through 007, 687-193-007 & 010.

Negotiating Parties: City Urban Revitalization Corporation & Successor Agency to the former Redevelopment Agency

Property Owner: City Urban Revitalization Corporation

Under Negotiations: Price & Terms on Sale of Real Property

FROM:

Tami Scott, Administrative Services Dir.



Cathedral City

Agenda Report

File #: 2018-31

Item No: 3.E.

Housing Successor Agency

MEETING DATE: 2/6/2017

TITLE:

Conference with Real Property Negotiator Pursuant to Government Code Section 54956.8.

Property Location: Two (2) parcels west of Van Fleet between B and C Streets with APN's of 687-214-007 & 008

Negotiating Parties: City of Cathedral as the Housing Successor Agency and Mario Perez, Inc.

Property Owner: City of Cathedral City as Housing Successor Agency

Under Negotiations: Price and Terms for potential sale of real property

FROM:

Tami E. Scott, Administrative Services Director