



P.O. Box 5006
Fremont, CA 94537-5006

Environmental Sustainability Commission Regular Meeting Agenda and Report – September 3, 2020

General Order of Business

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|------------------------------------|---|
| 1. Call to Order - 3:00 p.m. | 4. Approval of Minutes/Agenda Review |
| 2. Roll Call | 5. Staff Presentations and Action Items |
| 3. Written and Oral Communications | 6. Adjournment |

IMPORTANT NOTICE REGARDING THE ENVIRONMENTAL SUSTAINABILITY COMMISSION MEETING

Pursuant to State of California Executive Order N-29-20 dated March 17, 2020, regarding the COVID-19 pandemic, the City offices will not be open for September 3, 2020 meeting of the Environmental Sustainability Commission. The meeting will be conducted remotely via video/teleconference.

The Public may watch and/or participate in the public meeting by joining the meeting through the Zoom Videoconference link provided below. The public may also join the meeting by calling the below listed teleconference phone number. Submission of Public Comments: For those wishing to make public comments at the September 3, 2020 Environmental Sustainability Commission meeting, you may either: (1) submit your comments by email prior to the meeting, or (2) by Spoken Public Comment during the meeting.

How to submit Public Communications/Public Comment by email prior to the meeting:

Send an email to rdifranco@fremont.gov by 10:00 a.m. the day of the meeting. Please identify the agenda item number and meeting date in the subject line of your email, or specify that it is not related to an agenda item. Emails will be compiled into files by agenda item number, distributed to the Environmental Sustainability Commission and staff, and published in the City's Agenda Center on www.fremont.gov. Electronic comments on agenda items for the meeting may only be submitted by email. Comments via text and social media (Facebook, Twitter, etc.) will not be accepted.

How to provide Spoken Public Comment during the meeting:

The meeting will begin at 3 p.m. Whether you participate online or by phone, you may wish to "arrive" early so that you can address any technology questions prior to the start of the meeting.

How to provide Spoken Public Comment during the meeting (cont.):

- 1) By online: Environmental Sustainability Commission Zoom Webinar:
<https://zoom.us/j/91584241683>
 - a. Use a current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer. Mute all other audio before speaking. Using multiple devices can cause an audio feedback.
 - b. Enter an email address and name. The name will be visible online and will be used to notify you that it is your turn to speak.
 - c. When the Chair calls for the item on which you wish to speak, click on “Raise Hand.” Speakers will be notified shortly before they are called to speak.
 - d. When called, please limit your remarks to the time limit allotted.
- 2) By phone: **1 (669) 900-9128; Webinar ID: 915 8424 1683**
 - a. For anyone dialing into the call, please note that your phone number may be visible to the public.
 - b. Dial *9 to enable the “Raise Hand” feature via phone.

Order of Discussion

Generally, the order of discussion after introduction of an item by the Chair will include comments and information by staff followed by Environmental Sustainability Commission (ESC) questions or inquiries. An authorized representative or interested citizen may then speak on the item. At the close of public discussion, the item will be considered by the ESC and action taken.

Addressing the Environmental Sustainability Commission

Any person may speak on any item under discussion by the ESC after receiving recognition from the Chair. When addressing the ESC, please state your name and address. In order to insure all persons have the opportunity to speak, a time limit may be set by the Chair for each speaker. In the interest of time, please limit your comments to new material; do not repeat what a prior speaker has said.

Oral Communications

Any person desiring to speak on a matter, which is not scheduled on this agenda, may do so under the Oral Communications section. Please be aware provisions of the California Government Code Section 54954.2(b) prohibit the ESC from taking any immediate action on an item, which does not appear on the agenda, unless it meets stringent requirements. The Chair may limit the length of your presentation.

Information

For agenda copies or information about the City or items scheduled on the Agenda and Report refer to: Community Development Department, P.O. Box 5006, Fremont, CA 94537-5006, phone (510) 494-4557.

The City of Fremont is committed to providing reasonable accommodation for the public. Due to social distancing requirements, remote observation is highly encouraged. If you require accommodations, please call for assistance at 510-494-4557 at least 48 hours prior to the meeting.

Environmental Sustainability Commission:**City Staff**

Shreya Ramachandran, Student Commissioner
 Paul Kelley, Business Community
 John Rennels, Development/Construction Industry
 Richard Godfrey, Environmental Organization (Chair)
 Shiva Swaminathan, Public At Large
 Carolyn Obata, Public At Large
 Daniel O'Donnell, Public At Large (Vice Chair)
 Nate Ivy, FUSD Representative

Dan Schoenholz, Director,
 Community Development
 Rachel DiFranco, Sustainability Manager,
 Community Development
 Maria Salinas, Comm. Dev. Services Supervisor,
 Community Development
 Margaux Juta, Senior Office Specialist,
 Community Development

**AGENDA
 FREMONT ENVIRONMENTAL SUSTAINABILITY
 COMMISSION (ESC)
 REGULAR MEETING
 September 3, 2020, 3:00 p.m.**

Virtual Meeting via Zoom Webinar

1. **Call to order** (*Chair Godfrey*)
2. **Roll call and introduction of staff** (5 min)
3. **Oral and written communications** (5 min)
4. **Approval of minutes** ([March 5, 2020](#)) **and review of agenda** (5 min)
5. **Scheduled Items**
 - 5.1 **Staff Updates** (10 min)
 Staff will provide updates on various City sustainability efforts.
 - 5.2 **Commissioner Announcements** (10 min)
 This is an opportunity for Commission members to make announcements on matters of interest to the Commission as a whole.

5.3 Commission Consideration of Recommendation to City Council for Amendments to the 2019 California Building Code related to electric preferred and electric required construction design, mandatory solar energy systems, cool roofs, electric vehicle readiness, and greywater readiness, and electric appliance readiness. (60 min)

BACKGROUND:

October 15, 2019 Special ESC meeting, staff reviewed a number of potential sustainability-related building “reach codes” that the Commission had previously expressed interest in at the September 5, 2019 Regular ESC meeting. The Commission provided guidance to staff on areas of interest and requested further refinement.

Staff continued to collaborate with the statewide codes and standards team as well as reach codes consultants supported by East Bay Community Energy to further refine potential reach code recommendations to ensure that they would meet statewide cost-effectiveness requirements. Staff also collaborated with the City’s Economic Development Department to conduct outreach to key industry and development stakeholders and provided that feedback to the ESC at the March 5, 2020 Commission meeting.

Consistent with the Environmental Sustainability Commission’s duties and responsibilities, which include advising the City Council on emerging policy issues related to environmental sustainability, staff is recommending that the Commission recommend that the City Council adopt the following amendments to the CA Building Code:

A. Require all-electric new construction for low rise (≤ 3 story) and mid-rise (>3 and ≤ 7 story) single and multifamily residential buildings.

This measure mandates new low- and mid-rise single and multifamily residential construction projects be designed as all-electric with no gas appliances nor gas plumbing. This includes, but is not limited to, space-conditioning equipment (AC/heater), fireplaces, water-heating systems, clothes dryers, cooking ranges, and ovens. This measure excludes free standing Accessory Dwelling Units (ADUs) ≤ 400 sq. ft.

***NOTE:** An alternative to mandating electric-only construction would be to mandate electric-preferred design, allowing for construction to be designed as either all-electric -OR- mixed-fuel but with Energy Design Rating (EDR) of at least 10 EDR points less than the Total Energy Design Rating calculated for the Standard Design Building.

Cost-Effectiveness Requirement:

For this measure, a cost-effectiveness study is required to be filed with the California Energy Commission, and a justification must be filed

with the Building Standards Commission. The supporting documentation used will be the [2019 Cost-effectiveness Study: Low-Rise Residential New Construction](#) (last modified August 1, 2019) and the [2019 Mid-Rise New Construction Reach Code Cost-Effectiveness Study](#) (last modified June 22, 2020) prepared for PG&E by Frontier Energy, Inc., Misti Bruceri & Associates, LLC, and EnergySoft.

B. Require electric-preferred new construction for non-residential buildings.

This measure mandates new non-residential and high-rise residential construction projects be designed as either:

- a) All-electric, with no gas appliances nor gas plumbing, -OR-
- b) As mixed-fuel, but with minimum solar photovoltaic systems (See item C. below) and energy performance requirements above the state minimum to the following levels:
 - +15% for office/retail;
 - +10% for hotel/motel and high-rise residential;
 - +10% for all other occupancies with both indoor lighting and mechanical systems;
 - +5% for all other occupancies in buildings with indoor lighting or indoor mechanical systems but not both.

Cost-Effectiveness Requirement:

For this measure, a cost-effectiveness study is required to be filed with the California Energy Commission, and a justification must be filed with the Building Standards Commission. The supporting documentation used will be the [2019 Nonresidential New Construction Reach Code Cost Effectiveness Study](#) (last modified July 25, 2019) prepared for SCE by TRC and EnergySoft.

C. Require minimum solar photovoltaic system sizing for nonresidential buildings that pursue mixed-fuel design.

This measure mandates that new non-residential and high-rise residential construction projects designed as mixed-fuel include mandatory solar photovoltaic systems sized to cover the portion of the roof designated as the Solar Zone (approx. 15% of available roofspace). New non-residential and high-rise residential construction projects designed as all-electric would be exempt from this requirement.

***NOTE:** Staff recommends that the Commission allow for an exemption of buildings located within specified [industrial zoning designations](#) from this requirement, as it could inadvertently limit the ability of a business to easily add a larger solar array to that facility at a later time.

Cost-Effectiveness Requirement:

For this measure, a cost-effectiveness study is required to be filed with

the California Energy Commission, and a justification must be filed with the Building Standards Commission. The supporting documentation used will be the [2019 Nonresidential New Construction Reach Code Cost Effectiveness Study](#) (last modified July 25, 2019) prepared for SCE by TRC and EnergySoft.

D. Require cool roof design for all building types.

This measure mandates that roofs be designed with increased levels of solar reflectance and thermal emittance in new construction to the following levels:

- a) For low-slope roofs (<2:12): Solar reflectance (SR) \geq .70, and thermal emittance (TE) \geq .85. This requirement applies to all building types.
- b) For steep slope roofs (>2:12): Solar reflectance (SR) \geq .23, and thermal emittance (TE) \geq .85. This requirement applies only to low-rise multifamily buildings.

***NOTE:** Measure could also be required in re-roofing when >50% of the roof is being replaced.

Cost Effectiveness Requirement:

For this measure, a cost-effectiveness study is required to be filed with the California Energy Commission, and a justification must be filed with the Building Standards Commission. The supporting documentation used will be the [Cost-Effectiveness Study for Cool Roof Draft Report for All Climate Zones](#) prepared for PG&E by TRC Solutions, Inc. (last modified March 30, 2016).

E. Require graywater-ready new construction for low rise (\leq 3 story) single family residential buildings.

This measure mandates graywater-ready dwellings with dedicated graywater collection and distribution plumbing in low-rise single family new construction. Sources of graywater collection include showers, baths, lavatory sinks, and laundry washing machines. The graywater system itself is not required to be installed per this measure; rather, this measure requires the installation of dual plumbing for future graywater use. This measure will not apply to dwellings with less than 500 sq. ft. of irrigated landscape.

Cost-Effectiveness Requirement:

For this measure, no cost-effectiveness study is required, but a justification must be filed with the Building Standards Commission. Nevertheless, supporting documentation is found in the [Cost-Effectiveness Study for Residential and Nonresidential Energy and Water Efficiency Measures](#) (last modified October 22, 2019) prepared for PG&E by Energy Solutions.

F. Require electric vehicle readiness in all new construction.

This measure modifies the City's existing electric vehicle readiness requirements adopted under the 2016 Building Code to require the installation of electric vehicle charging station (EVCS) under the Building Code (currently, the EV Ready requirement is in the Building Code and the EVCS requirement is within the Zoning Code). This measure also modifies/increases the requirements as follows:

- a) Single family residential: Require (1) Level 2 EV Ready Space and (1) Level 1 EV Ready Space. If only one parking space is available, then only (1) Level 2 EV Ready Space is required. If (2) Level 2 EV Ready Spaces are installed, load sharing between those two 2 spaces is allowable. This measure excludes free standing Accessory Dwelling Units (ADUs) ≤ 400 sq. ft.
- b) Multifamily residential (unit-dedicated spaces):
For unit-dedicated parking garages or unit-designated parking spaces, the following requirements apply:
 - ≤ 20 units: (1) Level 2 EV Ready Space per dwelling unit.
 - > 20 units: (1) Level 2 EV Ready Space for 75% of dwelling units.
- c) Multifamily residential (non-dedicated spaces) & nonresidential office buildings:
When 10 or more parking spaces are constructed, require 20% of available parking spaces be equipped with Level 2 EVCS. An additional 30% required to be Level 2 EV Capable. Load sharing between two adjacent Level 2 spaces is allowable after a minimum of 10 Level 2 EVCS spaces are installed.
- d) All other nonresidential buildings: When 10 or more parking spaces are constructed, require 10% of available parking spaces be equipped with Level 2 EVCS. Load sharing between two adjacent Level 2 spaces is allowable after a minimum of 10 Level 2 EVCS spaces are installed. Installation of (1) DC Fast Charger may substitute for 10 EVCS spaces after a minimum of 10 Level 2 EVCS spaces are installed.

***NOTE:** Staff recommends that the Commission allow for applicant requests for modification to this requirement, particularly for buildings located within specified [industrial zoning designations](#), as EV charging equipment in large commercial and industrial applications may pertain to operational fleet vehicles rather than employee or retail parking. Staff recommends that applicant requests for modification be submitted to the City's Building Official.

Required Supporting Documentation:

For this amendment, no cost-effectiveness study is required to be filed with the California Energy Commission, but a justification must be filed with the Building Standards Commission.

G. Require electric appliance readiness in existing buildings.

This measure requires that when a residential electrical panel is being upgraded, a minimum service of 200 amps is required with additional dedicated breakers to accommodate existing and/or future electric loads. This requirement would be exempted only where utility level service constraints exist. Dedicated 240 volt circuits are to be allocated for each of the following future electric loads: clothes dryer, heat pump space heater, heat pump water heater, electric induction range/oven, EV charging, and solar PV system.

Required Supporting Documentation:

For this amendment, no cost-effectiveness study is required to be filed with the California Energy Commission, but a justification must be filed with the Building Standards Commission.

RECOMMENDATION: Staff recommends that the Environmental Sustainability Commission recommend that City Council adopt amendments to the 2019 Building and Energy Codes related all-electric and electric-preferred building design, mandatory solar PV, cool roofs, graywater readiness, and EV readiness as detailed above.

5.4 Updates on Climate Action Plan 2.0 Analyses and Outreach (25 min)

Staff will review with the Commission the current timeline for the CAP update, work to be completed by the City's selected CAP consultant, and outreach activities currently scheduled and forthcoming. Staff will also review and discuss the agenda for the upcoming virtual CAP community engagement workshop scheduled for September 22, 2020 at 6pm. Staff welcomes additional feedback and recommendations from the entire Commission regarding forthcoming CAP outreach activities.

RECOMMENDATION: Receive and consider.

6. Adjourn