

Hirshfield-Gold, Shayna

From: Hirshfield-Gold, Shayna
Sent: Friday, December 02, 2016 5:17 PM
To: 'Frank Flores'
Cc: Ranelletti, Darin
Subject: RE: update on enhanced PEV code requirements

Good morning Frank,

Thanks for getting back to me. The link to the full staff report and ordinance is [here](#). I provide a summary below. I want to reiterate my appreciation for our conversation a few months ago; your enthusiasm about increased requirements for PEV readiness influenced the recommendations of the proposed ordinance. I agree with you that there was nothing “concerning” in our conversation. The proposed requirements are consistent with the direction that PEV adoption is going in Oakland and with local and regional goals for electric vehicle adoption. They’re also highly cost effective, as installing chargers post-construction will cost building owners/managers less than half of what it would otherwise be without readiness. As I mentioned before, we’re going to the CED Council Committee next Tuesday (12/6, 1pm) with the item.

Overview

As of 1/1/17, CALGreen has enhanced requirements for plug-in electric vehicle (PEV) readiness requirements for large multifamily buildings, nonresidential buildings, and single family residences. Upon examining the requirements, current PEV ownership in Oakland, and what we expect to see here in the very near future, industry experts (including members of the developer community such as yourself) and City staff agreed that CALGreen’s mandatory minimums are inadequate. Staff worked with a local consultant (Energy Solutions) to develop a cost-effectiveness study that showed dramatic lifetime cost savings for installing PEV readiness (defined below) at the time of new construction, versus later retrofit. Staff’s recommended code changes exceed CALGreen in all building types, taking into account the cost effectiveness findings, current rates of PEV ownership, projected adoption over the next few years, and strategic goals for promoting equity in clean transportation across the city. The recommended code is consistent with the goals of the Bay Area PEV Readiness Plan, written by the Bay Area Air Quality Management District (BAAQMD), Association of Bay Area Governments, and the Metropolitan Transit Commission.

Key Distinctions of the Proposed Local Code

Neither the mandatory nor voluntary CALGreen standards go far enough to address local needs. The Agenda Report has additional details; the following are the key shortcomings:

1. The required minimum number of PEV Ready spaces is too small to meet the level of local demand that Oakland is expected to see within the next few years. For example, approximately 5% of new vehicle sales in our region last year were electric, whereas the CALGreen mandatory standards – designed to be applicable statewide – only require 3% of spaces in new multifamily buildings to be PEV Ready. Even the voluntary tiers are unlikely to capture the level of growth we expect to see in less than five years. Moreover, CALGreen is too modest to facilitate the level of PEV adoption required in California by 2025.
2. Multifamily buildings, which currently represent the greatest challenge to PEV charging, are exempted from the requirements if they have fewer than 17 units.
3. CALGreen mandates a lower standard of PEV Readiness by not requiring that full circuits are installed; only electric panel capacity and inaccessible raceway are required, which still leaves substantial work to be done before PEV chargers can be installed – with a higher lifetime cost-increment.

The proposed amendments would satisfy and exceed CALGreen requirements, and meet anticipated local needs. The central components are as follows:

1. Increase the total number of spaces that are “PEV Ready” above CALGreen minimum requirements in all multifamily buildings (including those with fewer than 17 units) and nonresidential buildings;
2. Require that a specific number of PEV Ready spaces are equipped with full electric circuits at the time of new construction to support near-term installation of electric vehicle service equipment (EVSE) with reduced time and expense; and
3. Facilitate up to 100% EVSE installation in larger multifamily buildings, while giving developers and building owners wide latitude by allowing for load management technologies that reduce the needed panel capacity for widespread charging.

The proposed code does *not* require actual installation of chargers (the City of Fremont passed legislation last month that now requires actual chargers to be installed in new buildings). The proposed code addresses Level 2 charging only (240V), and says nothing about DC Fast chargers.

Summary of Proposed PEV Infrastructure Requirements

Building Type	Full Electric Circuits	PEV-Ready	Electric Panel Capacity*
New Multifamily Buildings (MUDs) with more than 20 parking spaces	10 percent of parking spaces	Remaining 90 percent of parking spaces	Capacity to supply 20 percent of parking spaces (may be dispersed among up to 100 percent of spaces at lower amperage with voluntary load management system**)
New MUDs with 11-20 parking spaces and nonresidential facilities with 11 or more parking spaces	10 percent of parking spaces	Additional 10 percent of parking spaces	Capacity to supply 20 percent of spaces
New MUDs and nonresidential facilities with 2-10 parking spaces	2 parking spaces	NA	Capacity to supply 2 spaces
New MUDs and nonresidential facilities with 1 parking space	1 parking space	NA	Capacity to supply 1 space

* Panel Capacity refers to 40-Amp 208/240-Volt electric circuits for the indicated number of spaces.

** The electrical panel could supply up to 100% of spaces at 8-Amps per space by sharing available capacity.

Cost Savings

Installing PEV Readiness (inaccessible conduit and minimum panel capacity) or full circuits (Readiness plus pulled wire, circuit breakers, junction boxes, etc) during new construction vs. later retrofit is cost effective over the lifetime of the building. Installing infrastructure during new construction avoids construction retrofit costs such as trenching, breaking and repairing walls, building longer raceways, using more expensive methods overall, and upgrading the electric service. Additional retrofit costs come from pulling new permits, additional inspections, and project management. Our initial savings calculations, included in the Agenda Report, were refined recently after stakeholder meetings in San Francisco resulted in a recalculation based on less expensive in-slab construction methods. The additional savings include using PVC instead of rigid conduit, not needing certain fastenings, tying off the conduit to structural steel in the slab, and having more direct runs. The end result shows savings of between \$1,510 and \$2,790 per space.

Electric Load Management

As I mentioned above, we are aware of the large and growing number of load management technologies available on the market today. The benefit of these is that, in a larger building, you can accommodate 100% of parking spaces offering charging with a smaller panel by reducing the instantaneous amperage going to each space. Essentially, you can size your panel to what you would need for full-capacity charging of 20% of spaces, but have charging at 100% of spaces with as low as 8 amps per space. The exact way that this will be operationalized will vary greatly from building to building.

Please let me know if you have any questions. All the best,

Shayna H. Hirshfield-Gold

Energy Policy Analyst & Community Climate Coordinator, Environmental Services Division

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From: Frank Flores [<mailto:fflores@signaturedevelopment.com>]

Sent: Friday, December 02, 2016 10:11 AM

To: Hirshfield-Gold, Shayna

Cc: Ranelletti, Darin

Subject: RE: update on enhanced PEV code requirements

Shayna:

I haven't spoken to Mike about it specifically. I will try to catch him today to talk, but I don't remember anything from what we discussed that would be concerning? Adding EV charges into new development was the basic gist. Send me any notes or a draft of the ordinance so that I may have something to go by.

Best,

Frank Flores

Development Manager

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From: Hirshfield-Gold, Shayna [<mailto:SHirshfield-Gold@oaklandnet.com>]

Sent: Tuesday, November 29, 2016 12:13 PM

To: Frank Flores <fflores@signaturedevelopment.com>

Cc: Ranelletti, Darin <DRanelletti@oaklandnet.com>

Subject: RE: update on enhanced PEV code requirements

Hi Frank,

I'm just emailing to check in and make sure you saw my email below. Specifically, I'm still not sure if Mike Ghielmetti is aware that you and I spoke about the proposed PEV Readiness ordinance. Have you had a chance to talk with him about it? Is there anyone whom you think I should reach out to directly?

Shayna H. Hirshfield-Gold

Energy Policy Analyst & Community Climate Coordinator, Environmental Services Division

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From: Hirshfield-Gold, Shayna
Sent: Thursday, November 17, 2016 2:10 PM
To: 'Frank Flores'
Cc: Ranelletti, Darin
Subject: update on enhanced PEV code requirements

Hi Frank,

I appreciated our conversation a few months ago about the City's proposed new code amendments to require enhanced electric vehicle readiness in new construction. I want to give you a quick update and heads-up. We took your suggestions deeply to heart in crafting the proposed ordinance. The item was initially meant to be heard at the Community & Economic Development Council Committee this past Tuesday, but it was continued due to concerns, I believe from Gregory McConnell (Jobs Housing Coalition), about not having enough time to review the proposal. The item was rescheduled to 12/6. I reached out to Gregory, and am awaiting a response.

In the meanwhile, I wanted to let you know that I heard that Mike Ghielmetti wasn't aware of the conversation that you and I had in August. Should I be concerned about that? I'm happy to come and meet with either or both of you again. Please let me know what you think is best. Take care,

Shayna H. Hirshfield-Gold
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From: Frank Flores [<mailto:fflores@signaturedevelopment.com>]
Sent: Friday, August 05, 2016 5:00 PM
To: Hirshfield-Gold, Shayna
Subject: RE: Question on potential enhanced City code requirements

Hi Shayna:

Sorry for the late reply. Long week.

You are welcome to call me or we can set up a lunch here at the HIVE or at the City to chat. I actually bought an electric car last week! SmartCar.

Have a great weekend.

Frank Flores

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From: Hirshfield-Gold, Shayna [<mailto:SHirshfield-Gold@oaklandnet.com>]

Sent: Thursday, August 04, 2016 10:03 AM

To: Frank Flores <fflores@signaturedevelopment.com>

Subject: Question on potential enhanced City code requirements

Dear Frank,

Daren Ranelletti suggested that I contact you. I'm part of the City's Office of Sustainability, and I work with Darin on a number of matters including planning for increased electric vehicle (PEV) charging infrastructure. As you can imagine, making electric vehicle ownership and use more accessible is an important goal for the city as well as for the state. The new CalGreen code requires enhanced PEV readiness in new construction, and we're exploring how to best operationalize this for Oakland – potentially exceeding the voluntary requirement of the State code. Oakland is already ahead in many respects, and we want to not only continue our policy leadership, but also foster infrastructure that meets the outsized demand of Oaklanders, whose rate of PEV ownership exceeds the statewide average and is continuing to grow.

I'd like to chat with you at some point in the next week or two, either in person (I can come to you) or by phone, to go over what we're thinking and get your reactions. Please let me know if you have a half hour sometime soon. I look forward to speaking with you,

Shayna H. Hirshfield-Gold

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