

## Hirshfield-Gold, Shayna

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**From:** Ed Pike <epike@energy-solution.com>  
**Sent:** Wednesday, December 07, 2016 5:31 PM  
**To:** Hirshfield-Gold, Shayna  
**Subject:** RE: Oakland's proposed PEV Readiness regulations

Hi Shayna-

I will be there on Friday. I couldn't miss finding out about what the Architectural Dimensions Large Conference Room is ☺ I will be departing immediately afterwards for an off-site meeting at 1:30 pm so hopefully we will be first, otherwise I will join the other meeting in progress. Glad to hear that the OBA chair is supportive!

I have been making a few inquiries to potential interested stakeholders. Do you have contacts at SPUR? I haven't talked to anyone at SPUR recently and cannot recall who is the best contact at their Oakland office for this topic.

Best,  
Ed

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**From:** Hirshfield-Gold, Shayna [mailto:SHirshfield-Gold@oaklandnet.com]  
**Sent:** Wednesday, December 07, 2016 4:17 PM  
**To:** Ed Pike <epike@energy-solution.com>  
**Subject:** FW: Oakland's proposed PEV Readiness regulations

Ed,

1. Can you accompany Darin and me to the Oakland Builders' Alliance (OBA) meeting on Friday? It's 1pm at 300 Frank Ogawa Plaza, Suite 375 (Architectural Dimensions Large Conference Room. Go up the ramp and take a sharp right). We only have 10 minutes so I'm actually just asking you to come *in case* certain technical questions are raised that you would be better suited to answer. We're on the agenda for just 10 minutes, but I'm not certain if those 10 minutes start at 1 or if there are items before us. Greg McConnell will be there; however, you should know that I was invited by Jim Moore, the chair of OBA (a developer and former Planning Commissioner, and principal of Sustainable Neighborhoods), and he is supportive of the proposal.
2. Looks like the next CED Committee date is January 10. Should be starting at the same time (1pm).

Shayna H. Hirshfield-Gold

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**From:** Jim Moore [mailto:jmoore@sustainablehoods.com]  
**Sent:** Wednesday, December 07, 2016 3:06 PM  
**To:** Hirshfield-Gold, Shayna  
**Cc:** Ranelletti, Darin  
**Subject:** Re: Oakland's proposed PEV Readiness regulations

Hi Shayna,

It's a good idea to bring Ed along to make sure we can be as helpful to you as possible. I'm looking forward to hearing Greg's concerns as well.

Jim

On Dec 7, 2016, at 9:48 AM, Hirshfield-Gold, Shayna <[SHirshfield-Gold@oaklandnet.com](mailto:SHirshfield-Gold@oaklandnet.com)> wrote:

Jim,

I want to give you a heads-up on status prior to the OBA meeting on Friday. The PEV Readiness item was scheduled to be heard at CED yesterday, but it was continued again. I believe this was again the result of a request from Greg McConnell directly to members of the Council. I met with Greg for over an hour on Monday to explain the proposed changes, and I felt that it was a good conversation. I believe that his primary concern was insufficient time for more members of the developer community to review and provide feedback; he said that he's looking forward to discussion at OBA on Friday. He was also concerned about first cost. I explained to him that the proposed changes are intended to result in lifetime cost savings of 2-3 times the alternative, and I think he just wants more discussion on that point.

Just wanted to give you that context. In light of this, would you mind if I invited along our lead consultant, Ed Pike from Energy Solutions, to the meeting on Friday? I know we have limited time and I won't have him come with any prepared remarks; my thinking is that he may be more able to field certain technical questions than Darin and I, should they arise. Please let me know. All the best – and looking forward to Friday!

Shayna H. Hirshfield-Gold

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**From:** Sustainablehoods [<mailto:jmoore@sustainablehoods.com>]

**Sent:** Monday, November 21, 2016 11:44 AM

**To:** Hirshfield-Gold, Shayna

**Cc:** Ranelletti, Darin

**Subject:** Re: Oakland's proposed PEV Readiness regulations

Shayna,

I'd like to get this on the agenda ASAP but our next meeting has both PC Commissioner Monchamp and Andreas Cluver scheduled so I'm not sure how much time we have.

I'll talk to Laura and get the ball rolling.

We will circulate this draft via email for comment in the meantime.

Thanks,

Jim

On Nov 21, 2016, at 10:57 AM, Hirshfield-Gold, Shayna <[SHirshfield-Gold@oaklandnet.com](mailto:SHirshfield-Gold@oaklandnet.com)> wrote:

Jim,

It was great chatting with you over the last two weeks about the City's proposed new local code requirements for PEV Readiness in new construction. I was happy that we seemed to agree on the goals and proposed methodology for boosting the electric vehicle charging infrastructure in Oakland. As you requested, I'm providing below a brief overview of the proposed legislation; the full Agenda Report with all attachments can be found [here](#). I'm looking forward to presenting at the Builders' Alliance meeting, so please send me logistics and I'll calendar it in.

### **Overview**

As you know, the new CALGreen goes into effect 1/1/17, with enhanced requirements for plug-in electric vehicle (PEV) readiness requirements for large multifamily buildings, nonresidential buildings, and single family residences. After 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) and City staff agreed that the mandatory minimums in CALGreen are inadequate for Oakland. 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. The 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. Please see the Agenda Report, linked above, for additional details.

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 requires 3% of spaces in new multifamily buildings to be PEV Ready. Without local action to boost requirements, even CALGreen's voluntary tiers are unlikely to capture the level of growth we expect to see in less than five years. CALGreen also 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 in buildings with 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, meet anticipated local needs, and address the goals of Oakland's Energy & Climate Action Plan (ECAP), adopted by Council in 2012. The central components of the proposed amendments 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 week 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**

<b>Building Type</b>	<b>Full Electric Circuits</b>	<b>PEV-Ready</b>	<b>Electric Panel Capacity*</b>
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.

#### **Next Steps**

There's a lot more I can say about the proposed code, but I'll leave it here for now. Please let me know if there is anything you'd like me to explain further with the Builders' Alliance, or if there's anyone else you can think of whom I should speak with about this. As I mentioned on the phone, the item was continued to the 12/6 CED Committed meeting. I'll let you know as soon as we have firm details about that. In the meantime, I welcome any feedback or meeting suggestions. Take care,

Shayna H. Hirshfield-Gold

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**From:** Hirshfield-Gold, Shayna

**Sent:** Thursday, November 10, 2016 4:04 PM

**To:** 'jmoore@sustainablehoods.com'

**Subject:** Question re: Oakland's proposed PEV Readiness regulations

Jim,

I'm writing to follow up on the voicemail I left you earlier. As I mentioned, Daren Ranelletti (the City's Interim Director of Planning and Building) suggested that I contact you. Darin and I work together 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, including a proposal to exceed 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 your earliest convenience, either in person (I can come to you) or by phone, to go over what we're thinking and get your reactions. If you have time tomorrow, you can reach my on my cell (408-666-4850). Otherwise, feel free to email or call me back at the number below. I look forward to speaking with you,

*Shayna H. Hirshfield-Gold*

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