

ATTACHMENT C

J Logan

From: Theresa Yee
Sent: Tuesday, May 15, 2018 3:34 PM
To: Gary Hedden
Cc: Sarah M. Henricks; Laura Teksler; J Logan; Susanna Chan
Subject: RE: All Electric

Hello Gary,

I also attended this workshop in Cupertino and I agree that some of Mr. Kaneda's ideas were thought provoking, especially the idea of storing energy in ice.

I am excited that the Integral Group is our mechanical and plumbing engineer for the Hillview Community Center. We are working with John Andary (the other gentleman who spoke, mechanical engineer) and his team on this project. Behind the scenes, we are trying to see if we can't get this building to all electric, and it looks like we may be able to achieve this.

We will continue to work out the details of various environmentally synergistic elements as we move along in the design process. Our team is doing a good job in considering many of these things while balancing constraints. Thank you for sending your notes and thoughts on the workshop.

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From: J Logan
Sent: Friday, May 11, 2018 10:24 AM
To: Gary Hedden <patgaryh@gmail.com>
Cc: Sarah M. Henricks <shenricks@losaltosca.gov>; Theresa Yee <tyee@losaltosca.gov>; Laura Teksler <lteksler@me.com>
Subject: RE: All Electric

Hi Gary,

Thanks, your email was sent to EC. I will print your email and add to the EC correspondence binder that accompanies the agenda and materials binder on the front counter. This is the practice for correspondence received from the public on EC matters. JL

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From: hedden <patgaryh@gmail.com>

Sent: Friday, May 11, 2018 10:09 AM

To: J Logan <jlogan@losaltosca.gov>

Cc: Sarah M. Henricks <shenricks@losaltosca.gov>; Theresa Yee <tyee@losaltosca.gov>

Subject: All Electric

Hello J,

Please share with the Environmental Commission.

All Electric

We need to switch from fossil fuels to electricity, but can we? Yes, says David Kaneda and he knows how to make it happen.

Kaneda is an architect and engineer with Integral Group and he has over 30 years of experience designing electrical systems for buildings. He spoke May 9 at a workshop held before the regular meeting of the Board of Silicon Valley Clean Energy. He told us about some of the Zero Net Energy buildings that he has worked on, many in our area, and he showed pictures. It turns out ZNE buildings are beautiful as well as energy efficient.

A building doesn't have to be all electric to be ZNE, but Kaneda recommends it. With residential buildings, the sticky point often is the water heater and the cook top. The efficiency of heat pump water heaters is so good that the pay back to cover the higher installation cost is quick and that makes it a good deal. The cook top is more about giving up the familiar gas fired cook top to try something new. Kaneda's wife certainly wasn't interested, but he got her to try a Kuppertsbusch induction cook top with a "dimple" for the wok, and she loved it. The cook top doesn't get hot so she could spread a cloth under the wok to catch all the splatters. Quick and clean. Another tough test was from a restaurateur. He told Kaneda he wouldn't allow it in his new kitchen unless it would work with scallops. He went to a test kitchen, tried it and it passed with flying colors.

Isn't that often the case. We need to try things to become convinced. So what else should we try? Lithium ion batteries are typically mentioned for energy storage, but there are other choices. Ice is a phase change material that uses and generates a lot of energy without a temperature change. That could put some of the excess electricity we now have in the middle of the day to good use. Dirt could store energy by circulating hot water in pipes buried in the ground in the summer and then reversing it in the winter. Hydrogen is a source of stored energy. Kaneda does say that the first thing is to build as efficiently as possible. He described a retrofit of a concrete building in Sunnyvale that used the concrete in the walls and floors as insulation to maintain the inside temperature. On a day when it hit 90 degrees, the air conditioner wasn't even needed!

He had a few thoughts about electric cars as well. Since 1/3 of our energy use goes to transportation, we should switch to electricity and building codes and incentives can help with that switch. He also wondered about the transition to autonomous vehicles. He thinks it will happen, but he doesn't think it will reduce traffic or energy use. He sees these cars becoming an office or just a place to 'hang out.' It will allow the commute time to be put to a reasonably good use.

It was an entertaining and thought provoking presentation and he had some suggestions for our political leaders -

1. Show leadership/commitment by building ZNE facilities.
2. Celebrate ZNE buildings in your city.

3. Encourage all electric ZNE/zero carbon/energy storage in new buildings - Additional FAR for ZNE; Net metering at retail to 10% or 20% beyond zero; Provide incentives for energy storage when coordinated with SVCE; Provide incentives for using Watt Time.
4. Be a leader! Don't be afraid to be the first to pilot new ideas (on a limited scale).

Kind regards,

~ Gary Hedden