

Feisthamel, Matthew

From: Ted Rees [REDACTED]
Sent: Friday, December 12, 2025 12:07 AM
To: Feisthamel, Matthew
Subject: Re: HTR-10112 (1145 Carver Place)
Attachments: slope and shade.jpg

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Hi Matt

Thanks for the quick response.

Those are all good questions.

Answers to your questions:

1) Permit applied for? No. There is no sense applying for a permit unless a feasibility study indicates that solar makes sense. To make sense, the panels must get adequate sunshine. In the early days, you could get credit for solar power sent to the grid, which would turn down the gas fired turbines, and get full credit any day of the 1 year period. That is economical for both the homeowner and PG&E. But a few years ago, that credit was eliminated giving (in my understanding) about 5 cents/KWH for dumping to the grid, accumulated monthly. That means in the winter with shade the panels are rather useless. Even without shade problems, and clear days, winter energy production is about half that of summer. So to avoid the 5 cent/KWH credit, it is required to have batteries to store the daytime excess for use at night. Batteries cost more than solar! That change for batteries was required because PGE did not have enough gas fired turbines to turn off in the summer. PG&E does not have any way to benefit from excess solar! What can they do?

2) Do I have a design to share?

In August of 2023, I got 7 quotes for solar with 1 battery from 7 different installers. They varied from 17 panels to 25 panels, from

5.1KW to 7.6KW, from \$25.7K to \$49.1K (no rebates included). But, these were initial offers with no analysis of where the panels would be placed. Below is a GMAP drawing showing some of the places with some southern exposure, and shade sources. In the lower left corner where the ash tree is to be removed, it is possible that a ground mount system could be placed that might be usable.

3)

1. If you have a design, how will the tree impact the solar arrays?

There is no sense making a solar system if in the months of winter the panels can't get enough sun. The attached drawings show the roof areas that might work. Note that there are a lot of roof hardware in the way. I was thinking of modifying the front roof to give it a large unobstructed solar area. Or recently putting a ground mount where the ash tree will be missing. ... But zoning may interfere with either of those possibilities. I was also considering putting solar in the back yard. But, that requires a shade analysis. The redwood will cast a shadow over the entire roof, and back yard in the winter.

A crazy thought is to lop off the lower branches of the redwood in concert with a modified front roof.. In winter the sun drops to 29 degrees slope at noon, and 15 degrees +/- 45 degrees from south from a panel. That means 55 feet rise for 100 feet panel to tree at 29 degrees, and 27 feet rise for 100 feet panel to tree at 15 degrees. A quick look suggests no branches up to 50 feet!

In the summer the shade doesn't extend so far. So it circles around the west, north, east side near the base of the tree, with a minimum northern radius of perhaps 50'. It might destroy summer solar benefits in the front yard.

No doubt there will be some houses that cannot benefit from solar PV, without drastic measures. For them battery-only systems may help. But, that will require help from PG&E. For instance, the batteries could be charged with excess solar dumped to the grid from 10:30 am to 2:30 PM, and then discharged to the home as required the rest of the day. But I think that now the difference between the cost of utility power between those hours and the rest of the day is not great enough to compensate for the ~10% loss in energy of the battery system.

I await your comments.

Ted

On Thu, Dec 11, 2025 at 11:42 AM Feisthamel, Matthew <Matthew.Feisthamel@mountainview.gov> wrote:

Hello Ted,

Appeal received for the redwood tree. I have a few follow up questions.

1. Did you submit for building permits to install solar panels?
2. Do you have a solar panel installation design you can share?
3. If you have a design, how will the tree impact the solar arrays?

Thank you,



Matt Feisthamel

Urban Forest Coordinator
Community Services Department

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