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## **BE Smart Program Proposal for Mass Decarbonization of Existing Residential Buildings via Beneficial Electrification Measures**

The “BE Smart” program is designed to address the main barriers to adoption, including up-front cost, scalability, split incentives and the reactive emergency replacement practices that favor business as usual. We make the case for electricity utilities and CCEs to initiate a market transformation by proactively deploying ultra-efficient electric devices to customers. The substantial initial outlay barrier is addressed by providing inclusive, tariffed on-bill financing to all customers.

*Additional submitted attachment is included below.*

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## Carbon Free Palo Alto

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# BE Smart Program Proposal

## OVERVIEW

Beneficial electrification (BE), which entails replacing fossil-fueled devices with their ultra-efficient electric counterparts, is a major strategy to achieve deep and lasting reductions. The proposed program, **BE Smart**, is a proactive approach to implementing beneficial electrification that uses marketing, finance and operational elements to jump start and accelerate adoption of the new electric devices that will be integrated into the future smart grid. We believe that electric utilities are uniquely qualified to drive this effort because of their strength in managing capital-intensive infrastructures over extended periods of time and maintaining long-term service relationships with customers. Community choice energy providers (CCEs) are also well positioned to implement BE Smart.

The BE Smart program design addresses most of the known barriers to the adoption of beneficial electrification in a significant portion of the building sector. It has the potential to reduce building emissions at a scale and pace that is consistent with global greenhouse gas reduction requirements. This program is aimed principally at the residential market segment, but it could also apply to small businesses where similar equipment and service needs are found. Applying this approach to larger scale business would require modifications not described here.

BE Smart includes two essential elements:

1. **The utility offers *tariffed on-bill financing (TOB)* to its customers:**

TOB is an inclusive financing approach that has been shown to have very high adoption rates when applied to energy efficiency programs. With TOB, the customer avoids the high up-front costs of replacing fossil-fueled devices with efficient electric devices by paying a few dollars more per month on their utility bill. The monthly charge is structured as an additional tariff paid by the current utility customer and not as a personal debt. The utility uses its access to low-cost, long-term capital to finance installations. It recovers costs from customers during the lifetime of the new device.

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## 2. The utility employs a proactive approach for replacing fossil-fueled devices:

The utility identifies customers who will benefit from beneficial electrification and offers them solutions that are economically attractive. The goal is to cause fossil-fueled devices to be voluntarily replaced with electric devices before or at end-of-life. Customers are offered a concierge service that facilitates the solution steps including evaluation, permitting, selection, installation, inspections and ongoing service. For space and water heating, the new electric devices will employ ultra-efficient heat pump technology.

## COMPARISON TO OTHER APPROACHES

[https://docs.google.com/spreadsheets/d/1MrRLuX\\_EPMdn4RcrUT-yuJpM7kZ1K7SFF-J72ZWdK5Y/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1MrRLuX_EPMdn4RcrUT-yuJpM7kZ1K7SFF-J72ZWdK5Y/edit?usp=sharing)

## WHITE PAPER

<https://www.dropbox.com/s/n2xcbkzep7f5y8r/Program%20Design%20for%20Beneficial%20Electrification%20of%20Water%20Heating%202018-Mar-2.pdf?dl=0>

