



SUNVOY

Sunvoy - Technical Assistance Request

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Sunvoy is most interested in working with the University of Arizona Center (UACI) for Innovation and Oak Ridge National Laboratory on validating the hypotheses associated with this funding request. Sunvoy plans to develop our proof of concept during the Set! Phase of the competition, and requires assistance on the behavioral science behind which piece of energy data from existing solar homes drive non-solar homeowners to generate interest in solar energy for their own homes.

Aggregating the data from hundreds of thousands of homeowners and hundreds of installers of varying sizes comes with its own set of opportunities and challenges.

We would like to test our hypotheses at the University of Arizona Center for Innovation, specifically with respect to how an improved customer experience and referral incentives result in a lower cost of acquisition. We would like support to have our core thesis peer-reviewed and industry validated. We would like help to find partners who could be engaged in the work of bringing the solar cost of acquisition to zero.

- Identifying common bottlenecks in the installation process across states and territories and
- Testing different solutions on their effectiveness to resolve or accelerate those, testing different combinations of inverters, panels and installation methods for failure rates and other reliability and performance metrics,
- Finding underdeveloped or overdeveloped territories or analyzing the social and economic distribution within those territories.
- Analyze and test different usability and retention metrics like 1, 7 and 30 day active users, average engagement time and test different hypotheses and gamification

features to enhance those metrics similar to other popular consumer apps like Duolingo.¹ We would like to find a consultant who can advise on the gamification design tailored to solar-specific engagement.

This can be further refined with advancement in machine learning and artificial intelligence, for example for spotting production problems ahead of time based on patterns in data before they become evident or finding the perfect time for homeowners to take positive action for example by helping them reduce their carbon footprint based on their consumption data.

Sunvoy would like to work with Oak Ridge National Laboratory at their residential research home to study how a Sunvoy display or “Kiosk Mode” conveying all of the energy data in one place (solar production, whole home consumption, circuit-level consumption, energy storage state of charge, EV charging, and load control) could be best positioned both to inform the behavior of individuals living in the home, as well as to encourage visitors to ask questions about the energy performance of the home, inviting referrals.

Sunvoy’s Kiosk Mode provides data that would ordinarily live in 4-5 different apps, in a single location, with the brand, logo and colors of the solar installation company. We are seeking guidance on behavioral research work to be done in a laboratory setting, to better understand how this data could encourage more energy efficient behavior, and act as a conversational piece for visitors to the home who might inquire about the home’s performance and their own eligibility for solar energy, energy storage, electric vehicle charging, and home energy management.

By working with UACI and Oak Ridge we can significantly expand upon existing and further development of these Sunvoy features to help advance our mission of reducing the solar cost of acquisition to zero.

¹ <https://www.tandfonline.com/doi/abs/10.1080/23247797.2017.1396071>