# PCE Community Pilots
## Proposal Abstracts

| | Submitter | Proposal Name | Proposal Abstract |
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| 1 | Acterra | Electrify! Paving the Way for Heat Pump Water Heaters in San Mateo County | Acterra, in partnership with SunWork, seeks a $75,000 grant to launch the "Electrify!" Pilot Program in San Mateo County. Acterra is expanding its existing Green@Home program, which is focused on home energy waste mitigation, to encompass the next phase of education and awareness around the importance of shifting away from gas-fired home appliances such as cooktops, water heaters, dryers, and heating systems. This pilot project will seed the first phase of this expansion with a focus on advocacy for residential heat pump water heaters. The pilot program will consist of two main components:<br>•Workforce development: Hands-on training for plumbers and contractors who serve San Mateo County to do the electrical work associated with installing heat pump water heaters in residences.<br>•Demand development: Education and awareness for San Mateo County community members about the benefits of moving away from gas-fired water heaters, including the cultivation of a team of "Electric Ambassadors." |
| 2 | Anamatangi Polynesian Voices<br><br>* DISQUALIFIED - Late * | "Matae Ulua" (Top Level Quality) | Anamatangi is pleased to apply for a $75,000 grant, with Youth Community Service as our fiscal agent. Having partnered with Acterra and One East Palo Alto, we are the ones who translated your PCE flyer into Tongan. The goal of this grant is to "develop capacity and agency" within Pacific Islander communities in San Mateo County to educate ourselves in how to achieve greater participation in conservation and clean energy. We are filing under "Developing Local Community Benefits." In terms of metrics, it is our goal to reach 8,000 Pacific Islanders (out of 11,200 total) in San Mateo County and convert them to the 100% Equal Plus plan. Our strategy has three components: (1) "reaching out to Pacific Islanders in their churches;" (2) "following up with direct messaging to homes via radio" in Tongan, Samoan and Fijian; and (3) "empowering Pacific Islander youth and their parents" where the community studies its own needs, seeks grants, and (here) transitions to non-carbon energy |
| 3 | ARCA Recycling, Inc. | ARCA Recycling, Inc. Appliance Recycling Program Proposal | ARCA Recycling, Inc. (ARCA) proposes the implementation and management of a turnkey appliance recycling program (ARP) for Peninsula Clean Energy (PCE).<br><br>ARCA's ARP for PCE provides customers with a convenient and satisfying solution for disposal of their old appliances. PCE benefits from increased customer satisfaction and energy savings. Additionally, the ARP helps protect the environment through decreased greenhouse gas (GHG) emissions and reduced contamination of water and soil.<br><br>ARCA's forty-year history in energy efficiency and the company's commitment to<br>responsible appliance disposal provide the foundation for energy efficiency programs with seamless program operations. Comprehensive turnkey services ensure all aspects of program operations are handled professionally, with minimal work required by PCE. |
| 4 | Ardenna Energy, LLC | Peninsula Climate Comfort Pilot Project | Project will demonstrate a scalable program model for delivering residential electrification retrofits. A key focus will be to minimize installation and operating costs to support the feasibility of a Managed Energy Services Agreement.<br>Project will conduct in-depth assessments for 5 home owners who wish to electrify space heating and/or water heating. Assessments will evaluate the technical, financial, and performance opportunities and challenges, including opportunities to bundle electrification with energy efficiency, PV, electric vehicle, and energy storage. Project will offer participants up to $2,000 to offset installation costs. Completed projects will be documented and published as case studies.<br>Financial analysis will consider how added electric demand and load shape changes may reduce PCE's cost of service to its customers. One result will be a recommendations for a residential electrification tariff that rewards customer actions that support PCE's load serving needs. |
| 5 | Blue Strike Environmental | Low-Income Smart Thermostat Pilot | The Low-income Smart Thermostat Pilot aims equip disadvantaged community members within the PCE service area with a free smart thermostat. Once in place, these devices will create increased awareness of energy use and be supported by educational and community engagements that will catalyze energy savings, subsequent electric bill reductions, and the mitigation of greenhouse gas (GHG) emissions.<br><br>Immediate energy and gas savings of 8% are immediately available and supplemented by partnership with non-profit San Francisco - Peninsula Energy Services SFPES, a local installer and administrator of the Low Income Home Energy Efficiency Assistance Program (LIHEAP) program, enables match funding able to cover a portion of installation and assessment costs while providing sanctimonious LIHEAP Energy Efficiency measure installation for qualified low-income PCE customers. |
| 6 | Bright Energy 101 | Deep De-Carbonizationfor San Mateo County Schools | The Bright Energy 101 (BE101) grant proposal will fund implementation of its Program at a pilot high school in San Mateo County, expecting the success of that to support PCE in expanding the Program to schools throughout the County. The BE101 Program helps schools meet these critical goals: bettering the Environment, improving STEM Education and achieving Operational Cost Savings. The BE101 Program is a 10-year program. Through the grant funding, the Program will be implemented at a single high school in San Mateo County, and includes the following integrated elements: (1) BE101 Energy Intelligence Software, (2) a high school internship program and (3) implementation of energy efficiency, renewable energy and clean electrification measures. A key outcome of the BE101 Program is reducing the school's GHG emissions, from electricity and natural gas, by 80% by 2030. |

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| 7 | Build It Green | Healthy Home Connect | The Healthy Home Connect pilot program, developed and administered by Build It Green and its partners, will deliver upgrades to up to 16 low-income homes in East Palo Alto and Daly City that would otherwise be disqualified from housing assistance programs. Thanks to $75,000 in PCE gap funding, homes will receive healthy home remediations and roof repairs/replacements, allowing these formerly disqualified homes to then receive energy efficiency improvements and demand response ready technologies via complementary public programs which have historically been disconnected. The Program will smartly leverage PCE funds with existing corporate philanthropy, utility weatherization and solar programs, plus Hayward Score, a breakthrough technology to assess and improve the health of any home. |
| 8 | CA Interfaith Power & Light | Community Resiliency - Solar to Storage at Faith Institutions | This project will improve the Peninsula's resilience to climate change, energy outages and other emergencies by recruiting and equipping 3-5 faith institutions to be community hubs with clean energy back up power and cooling spaces open to all in need in the community.<br><br>Because faith institutions generally offer much more than worship services, providing space for everything from Girl Scout meetings to polling places to soup kitchens, they are uniquely visible, familiar and welcoming places for community members. In addition, the architectural style of houses of worship tend to make them naturally cooler on high heat days, which are occurring with increasing frequency as climate change intensifies.<br><br>These 3-5 faith institutions will be equipped with solar power, back up battery, at least two electric vehicle charging stations, space for at least 300 people to gather, a back-up water supply and first aid supplies. |
| 9 | CAST Energy Solutions Inc. | CAST Energy Solutions' Proposal | CAST Energy Solutions has a highly qualified team of energy experts capable of developing distributed energy resource solutions in Peninsula Clean Energy's (PCE) service territory. The proposal has five components: solar PV, wind, energy storage, EV charging infrastructure, and an energy management system. These five components can be adopted all at once, or incrementally. PCE could also choose just one or two components. The projects, initially proposed for the south San Francisco area, are scalable and replicable to cover PCE's entire service territory. The PCE strategic objectives for community pilots will all be achieved by this proposal, namely:<br>☐Reducing GHG emissions<br>☐Delivering local community benefits<br>☐Advancing innovation<br>☐Aligning energy supply and load |
| 10 | Center for Sustainable Energy | Water Heater Electrification Program | The Center for Sustainable Energy (CSE) proposes a water heater electrification pilot for consideration by Peninsula Clean Energy (PCE), designed to test the ability of heat pump water heaters (HPWH) to offer both greenhouse gas reductions and load shaping benefits. CSE proposes a streamlined pilot focused on replacing natural gas water heaters with heat pump water heaters in PCE territory. The initial pilot would target a small number of customers and identify key metrics to evaluate the overall performance and load shaping capability of these devices. The pilot is designed to work with a single contractor to ensure quality installation of devices and to potentially capture water heater replacements in addition to retrofits. |
| 11 | Design-Manage-Sustain LLC | Bridging the Gap: Energy Project Financing | Design-Manage-Sustain proposes to create a one-stop shop resource for PCE's residential, business and multifamily customers to discover and explore available financing options for energy-related projects, products and vehicles– the Financing Finder. It is an innovative tool that leverages private financing to provide a community benefit by producing more renewable energy, achieving greater energy efficiency and reducing carbon emissions. It will coordinate with, complement and enhance many of the region's existing energy programs. Energy financing influences energy savings and GHG reductions by enabling customers to overcome the "first-cost" barrier to completing projects driving energy efficiency, renewable energy and energy storage – allowing additional and more comprehensive projects to be completed. PCE's Financing Finder can be executed quickly with low risk by leveraging an existing financing database and incorporating lessons learned from previous implementation under the CPUC. |
| 12 | DNV GL | RICAPS Measures for Electrification and Distributed Energy Resources | PCE has the unprecedented opportunity to amplify existing work funded through the County's Office of Sustainability's RICAPS program that provides climate action technical assistance that will impact all communities across the County. Our local cities need support in meeting the state's 2030 targets, and the RICAPS assistance provides the vehicle to do so, but needs (currently) unavailable funding to incorporate new strategies related to electrification, load-shifting and equitable access to reliable, clean energy.<br><br>The proposed project will focus on updating the RICAPS Menu of Measures, which is used by cities to engage with stakeholders on key actions for local governments to reduce GHG emissions and provides standardized methodologies for estimating emissions savings, energy savings, cost savings and other benefits. The current tool focuses on energy efficiency and resource conservation, and does not include any measures related to electrification, zero net energy or other DERs. |

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| 13 | Electric Auto Association | Electric Vehicle 101 | Electric Vehicle 101 will present a series of classes to educate the EV curious about the feasibility of becoming electric vehicle owners in an open environment with no sales pressure. Experienced and passionate presenters will cover all the topics involved in choosing the right EV and having a successful ownership experience. Topics to be covered include the models of available vehicles including all-electric and plug-in hybrid vehicles, their respective ranges, prices, available rebates and incentives, the options available to charge vehicles, what's needed to set up personal charging infrastructure and the complications of multi-unit dwellings, along with public charging, as well as the individual, environmental and social benefits of ownership. All of this will be discussed in the context of communicating that switching from a gas or diesel to an electric car is likely the most significant action an individual or business can take to reduce their own GHG footprint. |
| 14 | Energy Solutions | City of San Mateo Decarbonization Framework-Phase 1 | The City of San Mateo Decarbonization Framework-Phase 1 project seeks to demonstrate a scalable framework for PCE to: engage cities in collaborative planning, support local policy development, and introduce programs that support city efforts. This Phase 1 project will seek to: (1) increase Electric Vehicle (EV) readiness in San Mateo by facilitating adoption of an EV reach code and (2) develop a roadmap of high-impact policy initiatives and program opportunities that can be undertaken by PCE and its member communities. The engagement process, tools and templates used for the project can be leveraged to support similar initiatives throughout PCE territory. At the end of the project, Energy Solutions will facilitate a workshop for all PCE's member cities to review the project and learn about and discuss opportunities to undertake similar initiatives in their territory. |
| 15 | Envoy Technologies Inc. | Disadvantaged Community Car Sharing Pilot Proposal | Envoy Technologies Inc. ("Envoy") is pleased to submit this Disadvantaged Community Car Sharing Pilot Proposal ("Proposal") under PCE's 2018 Community Pilots Call for Proposals.<br>Under this pilot, Envoy will deploy 3 pure electric vehicles (EVs) to be used for car sharing within a disadvantaged community in San Mateo County. Envoy will focus on deployment in support of designated low-to-moderate income areas, affordable housing communities, other areas defined as disadvantaged (based on further input and consensus from PCE stakeholders). Envoy will leverage the "Community Vulnerability Index," and work with stakeholders, to identify ideal locations for deployment, and will deploy the car sharing service for no less than 18 months. Envoy is also prepared to extend or expand this Pilot, depending on the program's success. |
| 16 | EVmatch, Inc. | EVmatch Community Charging Network | Electric vehicles (EVs) serve as a critical clean energy solution with zero tailpipe emissions and lower life-cycle emissions compared to gasoline vehicles. Yet inadequate public charging infrastructure limits the range of current EV owners and causes them stress. This is especially problematic for EV drivers without home charging access. EVmatch directly addresses this infrastructure challenge through an innovative peer-to-peer network for EV charging. EVmatch harnesses the power of sharing to immediately create more reliable charging options. Drivers access the network through the company's application and can quickly find, reserve, and pay for use of a private charger. EVmatch will expand its service to San Mateo County through this project, recruiting a minimum of 50 charging hosts and 150 EV drivers over the course of twelve months. EVmatch will increase access to reliable charging options through this innovative pilot and directly reduce 55 metric tons of CO2e. |
| 17 | FIRM Clean energy<br><br>* DISQUALIFIED - Incomplete* | FIRM utility-scale community DER | Community utility-scale renewable generation co-located to leverage existing land use amongst a portfolio of local disturbed & industrial land parcels and interconnected directly to PG&E's distribution system at pre-determined locations (POI's) with potential to deliver maximum value to the rate-payer. |
| 18 | Home Energy Analytics | Accelerating Residential Beneficial Electrification | HEA proposes to enhance 2 existing HEA products, Smart Audit and AskDrPower.com to: promote and educate the community about BE; analyze home energy usage to better target BE candidates; and then measure the GHG savings by tracking the energy savings using AMI data. At the completion of this proposal PCE will have the technology to promote and manage an scalable community BE program. The proposal takes advantage of ongoing projects with both PG&E and the CEC to achieve greater customer outreach than could otherwise be achieved. |
| 19 | Intermountain Electric Company | Devil's Canyon Solar | Carport Solar and parking lot rehabilitation |
| 20 | Intertie Incorporated | Versailles Smart Grid Project | Versailles is an independent senior living community consisting of 61 condominium residences located in downtown San Mateo. Its residents recently asked Ash Street Green Partners, the manager of the services at Versailles, to provide EV charging and to reduce their GHG emissions. Ash Street Green Partners is working with Intertie Incorporated to build an innovative pilot project that meets the emerging EV needs of the Versailles community while advancing the grid of the future for PCE. The project will deploy Intertie's modular, smart-grid technology, the EV ChargePod, that draws power from available grid capacity and local solar resources, efficiently stores electricity; then optimally routes power to fast-charge EVs and supply the host or grid. The system provides fast-charging to EVs without stressing the grid, integrates local solar PV, provides backup power to the senior community, supplies demand response, peak shaving and other grid services while improving grid reliability. |

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| 21 | npc Solar | Solar4Cars: Selling solar electricity as vehicle “fuel” | An urgent need exists to reduce Greenhouse Gas emissions. Transportation is a large source of these in the Peninsula Clean Energy territory.<br><br>Switching transportation from gasoline-powered vehicles to plug-in vehicles enables the move to zero emissions, alongside the transition to renewable energy generation.<br><br>Solar systems are typically sold on their economic benefits versus buying grid electricity, however there is a more compelling case for solar electricity when it is used to offset vehicle “fuel”, potentially resulting in 80+% financial savings.<br><br>The Solar4Cars center will be a for-profit educational facility for customers to learn about plug-in vehicles, whilst also selling PV systems, Electric Vehicle Supply Equipment and Energy Storage Systems.<br><br>Center staff will be impartial regarding vehicle choice and can recommend a plug-in vehicle tailored to customer needs, whilst providing a commercial transaction on the solar + EVSE + energy stationary storage side. |
| 22 | Open Energy Efficiency | OpenEE Platform - Efficiency and Electrification | Open Energy Efficiency (OpenEE) offers Peninsula Clean Energy (PCE) a unique opportunity to manage its demand-side management portfolio, including energy efficiency and electrification efforts. OpenEE provides an advanced M&V platform to track and normalize metered consumption data from individual buildings so that portfolios of assets can be aggregated to provide a flexible, demand-side load balancing platform. The OpenEE platform enables near real-time performance analytics and supports performance-based procurements and programs. |
| 23 | Powerley | PCE Live Home Energy Management Platform | PCE LIVE. A PCE-branded Home Energy Management solution for 50 residential customers comprised of a gateway that connects to the PG&E AMI meter, a mobile app, a thermostat and Alexa (optional).<br>PCE Live will deliver real-time energy consumption for the whole house, disaggregation of key loads, including HVAC, ability to conduct DR events and personalized coaching. Expected results include 5%-10% reduction in energy waste, 1.2kW in demand savings and a deeper relationship with customers.<br>PCE will have access to customer consumption and engagement data through the Powerley Portal which can be leveraged to increase awareness for 100% clean energy, drive up customer loyalty and unlock new services and revenue streams. |
| 24 | Presidio Graduate School | Renewable Energy Policies: Pilot Programs for San Mateo Businesses & Communities | Together with three San Mateo County cities -- starting with the City of Pacifica -- we will pilot requirements for commercial buildings to generate and purchase renewable energy.<br><br>The City of Pacifica has identified prospective businesses for the pilot. Reducing building energy consumption and GHG emissions through renewable energy generation will accelerate the city's progress toward achieving its goal of reducing emissions by 35% below 2005 levels by 2020, and 80% below 1990 levels by 2050. The community will benefit from improved health and safety, reduced pollution; green jobs; and enjoyment of living in a clean and responsible city.<br><br>We have contacts also at the Cities of South San Francisco and San Bruno. Together, three cities' exemplary action will inspire San Mateo County and all of California to achieve clean-energy and zero-carbon goals |
| 25 | San Mateo County Event Center | Proposal Narrative - San Mateo County Event Center | The San Mateo Event Center with the support of San Mateo County is seeking installation of a Solar PV rooftop and potential ground installation system to offset SMCEC’s retail energy usage and potentially generate excess supply that could be provided back to Peninsula Clean Energy (PCE). Project components include a system electrically interconnected to SMCEC’s onsite electrical facilities, providing energy savings that would accrue toward SMCEC’s annual operating budget. This project would underscores PCE’s, the Event Center, and the County’s commitment toward environmental sustainability. Additional consideration is being given to Solar PV rooftop and/or ground installation for wholesale energy supply to PCE due to available space by way of adding a Tier 1 stationary battery system. If realized, this would be the largest solar-microgrid site in San Mateo County. The proposal seeks grant funding for a feasibility study and preparation of Request for Proposal for Solar installation. |
| 26 | Sewer Authority Mid-Coastside | Cogeneration System Feasability Study | Sewer Authority Mid-Coastside (SAM) requests a grant from Peninsula Clean Energy (PCE) to perform a detailed feasibility study of a cogeneration system to produce clean electricity and heat from renewable, digester gas (biogas) already produced at SAM’s wastewater treatment plant. If awarded the grant, SAM would partner with kW Engineering, an energy efficiency and renewables engineering firm in Oakland, CA, to investigate current potential cogeneration (electric energy generation plus heat generation) capacity of the plant’s anaerobic digester’s biogas production, avoided utility energy costs from onsite generation, associated GHG reduction, secondary environmental benefits, project costs, and project financing options. When completed, the feasibility study will be presented to SAM’s board of directors to decide whether to pursue construction of a cogeneration system to produce clean electricity and heat from renewable biogas. |

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| 27 | Sewer Authority Mid-Coastside | Methane Fueled Microturbine Project | Sewer Authority Mid-Coastside (SAM) owns and operates the Regional Wastewater Treatment Plant . SAM processes and stabilizes its wastewater sludge in anaerobic digesters prior to dewatering and ultimately landfill disposal. Sludge digestion produces carbon dioxide and methane gas. Part of the methane is combusted and the methane gas that is not used in the digester heating process is wasted and combusted in a flare system on site. SAM is requesting a grant from PCE to install a combined heat and power (CHP) generation system that could make beneficial use of all of the plant's methane production by running it through a microturbine. The microturbine will generate electricity and heat. The heat will be captured and used to maintain optimal digester temperatures. The proposed SAM WWTP digester-gas-fueled CHP system will provide both a reduction in greenhouse gas (GHG) emissions and a reduction in PG&E/PCE purchased power costs for the plant. |
| 28 | Sewer Authority Mid-Coastside | Aeration System blower Efficiency Pilot Study | Sewer Authority Mid-Coastside (SAM) owns and operates the Regional Wastewater Treatment Plant and currently operates three 125 horsepower centrifugal multistage blowers that deliver air to the aeration tanks as part of the wastewater treatment processes. These blowers continuously operate at a higher speed than desired. This causes SAM to spend more electricity than what is necessary to supply sufficient amount of air to sustain the biological processes in the secondary aeration tanks.<br>SAM is requesting a grant from PCE to conduct pilot study to evaluate the energy efficiency of various turbo blower units. Replacing these blowers with modern high efficiency units will reduce greenhouse gas (GHG) emission by 35%, and save SAM over $40,000 on energy costs every year. The avoided GHG over 10 years is expected to be over 400 tons. In addition, this will allow SAM to optimize their operation and improve the infrastructure resilience at the plant. |
| 29 | SMC Office of Sustainability | Wind and PV in Pescadero | The County has set a goal of reducing emissions for unincorporated areas and for the County's operations. The County completed a feasibility study to construct a solar PV and wind installation at the Pescadero landfill site. This project has the capacity to generate 4MW of innovative, local renewable energy, which is 1/5 of PCE's goal of 20MW by 2025 and the revenue generated has a long-term benefit of continuing to provide recycling options for South Coast residents. Considering Pescadero's location for wind and solar viability, staff estimates the site to generate around 7.5 kWh each year, equivalent to 5.6 MTCO2e. This equals 1,200 cars driven each year, and 840 homes' electricity for one year. For sequestration, it is around 6,600 acres of U.S. forests in one year and 145,000 tree seedlings grown for 10 years. If awarded the grant, the County plans to complete the site assessment and prepare a Report to the Board and an RFP for construction of this renewable energy project. |
| 30 | SMC Office of Sustainability | A Roadmap for Municipal Green Fleets | Local governments own and operate fleets of vehicles that serve a variety of critical functions from heavy duty vehicles including fire trucks and road maintenance to sedans for staff to use for government business. The function of these vehicles is to serve, protect and advance our communities. Often overlooked is how fleets can be managed and upgraded to align with organizational and local climate action goals. The Office of Sustainability is proposing to develop a clean fuel fleet toolkit for local governments to support the planning and scoping phases of a municipal fleet overhaul. In addition, the creation of a toolkit, the Office of Sustainability is poised to provide technical assistance to jurisdictions interested in strategic planning of their fleets to identify a custom roadmap based on vehicle use cases, budget, and climate goals. With commitment from the County of San Mateo's fleet, budget would be used for direct implementation of electric transportation solutions. |
| 31 | SPIN Storage Systems | SPIN Flywheel Energy Storage | SPIN is developing an advanced 30kWh/10kW flywheel for grid energy Storage. First units will be available in early 2019. We propose to install one or more of these in San Mateo County in conjunction with a new or existing solar generation facility. The project will consist of three phases. 1) Site Selection. In conjunction with PCE and other local partners SPIN will conduct a survey of potential sites and identify one that would benefit form the addition of up to five SPIN storage units. Criteria for selection will be GHG Benefit and total site installation cost. 2) Deployment. SPIN will engage suitable contractors for the deployment of the storage units, electrical integration, and connection to our remote monitoring systems. 3) Evaluation. SPIN will operate the units for a minimum of three years and provide annual reports on GHG benefit, usage, and any service anomalies. At the end of the Monitoring Period SPIN will continue to support the system use under a ten year warranty. |
| 32 | Sustainable Silicon Valley | Solar Pump Up Pilot | The Solar Pump Up Pilot will implement the new technology of Heat Pump Water Heaters (HPWHs) in select homes that have solar in East Palo Alto, then develop a guide establishing best practices. This pilot will bring attention to the low-income community of EPA as an innovation leader by being a testbed for the new technology of HPWHs. HPWHs are the most efficient way to turn electricity into heat. SSV has already received a $20K grant from the Bay Area Air Quality Management District (BAAQMD) to gather data in preparation for the installation of HPWHs in homes with solar. HPWHs and solar pair well together for several reasons. Solar improves the ROI of moving to HPWHs by lowering the cost of electricity. HPWHs also enable load shifting as they can be used for thermal storage and demonstrate a way for households to reduce greenhouse gas (GHG) emissions to comply with AB 32 and SB 350. This pilot will lay the groundwork for market transformation of the fuel we use to provide heat. |

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| 33 | The HEAL Project | Solar Powered Learning | Solar Powered Learning is a partnership to install solar power at two sites to provide renewable energy and community education from The HEAL Project (THP) and Elkus Ranch, 501(c)3 nonprofits offering farm-based outdoor education in San Mateo County. THP operates the SMC School Farm and Elkus Ranch is operated by UC Cooperative Extension. Under the California Healthy Soils Initiative, Elkus Ranch and THP have initiated Carbon Farm Plans designed to reduce GHG and sequester carbon using a suite of sustainable farm practices. Solar Powered Learning provides each farm with solar arrays, and in turn, each farm will provide lessons about renewable energy to the combined 11,000 visitors from SMC and the greater Bay Area who visit the two sites annually. Elkus Ranch, where solar production will supply energy back to PCE's load, will receive the bulk of the funding. As the SMC School Farm is not on the grid, InterMountain Electric will build a small solar array to replace a gas generator. |
| 34 | TRC Energy Services | TRC Community Pilot Grant Proposal | Gas wall furnaces are a common heating system type in multifamily buildings. These systems are inefficient and contribute indoor air pollutants into residents' living spaces. Like-for-like (in-kind) replacement options for older wall furnaces are limited and not significantly more efficient than the old equipment they replace. We propose to use Peninsula Clean Energy grant funding to explore energy efficient and clean space heating alternatives to wall furnaces. Our proposal leverages PCE grant funding, building owner contributions, and PG&E funding to replace wall furnaces with efficient heat pump solutions that will deliver energy savings, GHG reduction and improved indoor air quality. There are also many challenges and cost uncertainties related to the heat pump replacement options and this funding will also support a detailed case study to document challenges and key considerations to scale this retrofit option in the multifamily market. |
| 35 | University of California, San Francisco | Oyster Point Heat Pump Replacement | University of California has pledged to become carbon neutral by 2025, becoming the first major university to accomplish this achievement . At UCSF, nearly 75% of our carbon emissions is due to on site burning of natural gas for heating and electrical generation. UCSF Oyster Point building is currently in the process of installing solar panels on the roof. The panels are expected to generate enough electricity to serve the entire building. UCSF is exploring the possibility of increasing the solar generating capacity and replacing natural gas burning equipment to all electric equipment. Replacing the natural gas burning carbon emitting heat pumps with solar electric heat pumps will contribute to UCSF overall pledge of reducing carbon emissions. |
| 36 | Weave Grid | Smart Charging Management for Connected Electric Vehicles | Weave Grid uses connected vehicle data from electric vehicles to remotely optimize EV charging management. By utilizing machine learning to predict consumer driving patterns and create "virtual fleets", we aggregate the EVs into a powerful grid asset that can reduce the strain on the grid. The EVs can then be used as a flexible demand-side resource, both at the macro grid level and also at the nodal, neighborhood-level distribution grid. This enables us to better predict EV demand and then manage the charging of electric vehicles, hence reducing the cost of real time supply-demand imbalances for Community Choice Aggregators (CCAs) and utilities. Additionally this reduces the need for costly grid upgrades, can help better integrate renewable energy (esp. excess solar), and save EV owners money on their energy bills. Our use of vehicle telematics data enables us to be agnostic to charger or car type, and given driving behaviors can optimize EV charging both across time and location. |
| 37 | YellowTin Inc | Accelerating Clean Electrification | Objective for PCE residential customers: The project targets residential customer base but can be conceivably scaled to the C&I customer base longer term.<br>1.Provide education on building and automotive solutions to help them electrify their homes.<br>2.Empower homeowners with a personalized set of unbiased recommendations based on an analysis of their preferences, their energy-usage data (obtained from PG&E), current technology costs, available incentives, etc.<br>3.Enable homeowners to easily understand and evaluate quotes from vendors so they can make informed decisions confidently.<br>4.Accelerate the adoption of electric technologies, including PV, EVs, battery storage, and heat pumps that can help customers save money and reduce the need for fossil fuels.<br>5.Improve the overall economics of technology adoption by reducing the soft costs (especially customer acquisition costs) of implementation. |