

# Planning Sustainable Communities

SUSTAINABLE FAIRFAX

September 10, 2020

Kellen Dammann

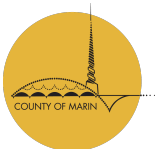
Sustainability Marketing and Outreach

Marin County Sustainability Team

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Photo Credit: Jeff Wong

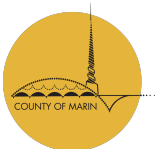
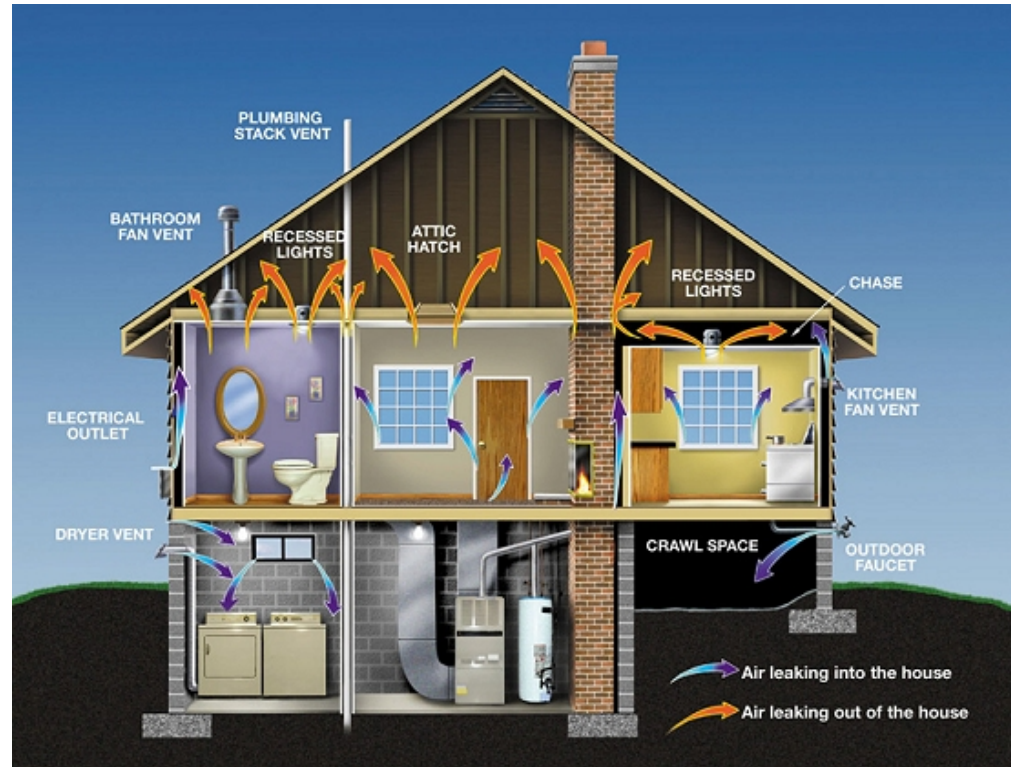


Community Development Agency  
3501 Civic Center Drive, Rm 308  
San Rafael, CA  
[www.marinsustainability.org](http://www.marinsustainability.org)



# Whole Home Approach

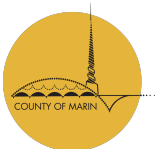
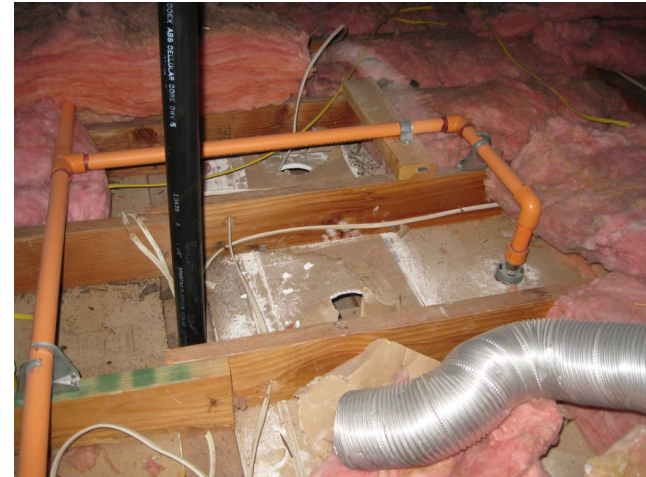
- Much like your car, your home has a number of systems that work together to heat, cool and move air through space.
- Improving each of these systems even by a little bit can add up to big energy savings.
- Example: insulation and air sealing



# Whole Home Approach

## INEFFICIENT HOMES

- Problems: leaky, disconnected, uninsulated ducts; unsealed, dirty attic
- Solutions: duct repair/replacement, duct insulation, building envelope air sealing
- Benefits Beyond Energy Efficiency: **better air quality!**



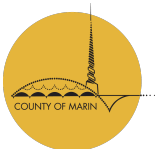
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# Reduce then Produce

## INEFFICIENT HOMES



- Problems: poorly installed, or not insulation.
- Solutions: properly installed insulation
- Benefits Beyond Energy Efficiency: **better home comfort!**



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# What Should Get Done First?

## **GENERAL** LOADING ORDER FOR HOME ENERGY UPGRADES

- Low-hanging fruit first
  - LED Light Bulbs
  - Power Strips
  - Faucet Aerators

No to low cost
- Building Shell Upgrades
  - Insulation
  - Air Sealing
  - Duct Sealing/Insulation

Medium cost
- Mechanical Upgrades
  - HVAC
  - Water Heating (caveat: rebates for heat pump water heaters are really good right now)

Larger cost
- Windows, Solar, Battery Backup, Electric Vehicles, Etc.

Big investments



# Programs for Energy Efficiency Improvements

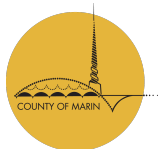
- No-cost energy saving kits
  - BayREN Toolkits
  - Rising Sun Center for Opportunity Green House Call
- Home energy audit program
  - Home Energy Score
- Home energy efficiency improvement project rebate program
  - BayREN Home+



# Free Energy Efficiency Toolkits

TWO OPTIONS AVAILABLE

- BayREN Energy Efficiency Toolkits
  - Include LED light bulbs, a smart power strip, faucet aerators, and a shower head
  - Kits are mailed to your home after completing an online energy-use survey
  - BayRENResidential.org
- Rising Sun Center for Opportunity Green House Calls
  - Free kits delivered
  - Remote assistance with installation
  - <https://risingsunopp.org/green-house-call-form/>
  - (510) 665-1501 ext. 300



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# Home Energy Score

GET TO KNOW YOUR HOME

## U.S. DEPARTMENT OF ENERGY Home Energy Score



Know your home. Know your Score.

- Get a professional energy evaluation for your home with Home Energy Score
  - \$200 rebate for each score in BayREN territory
  - 1-10 rating indicating how efficient your home is
  - Custom recommendation for making improvements
  - Connected to Home+ rebate measures
  - Developed by US Department of Energy
  - Good step for folks that are just getting started
- [www.HomeScoreCA.org](http://www.HomeScoreCA.org)
- (866) 878-6008



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# Home Energy Score

## HOME ENERGY SCORE

Address **555 Park Lane  
Pittsburgh, PA 99999**

Total Energy **190 MBTUs / year**  
Home Size **1,500 square feet**  
Air Conditioning **Yes**

Climate Zone



Uses  
More  
Energy



Uses  
Less  
Energy

Energy use reported in Million British Thermal Units (MBTUs). Estimated savings reflect the amount a homeowner will save on their annual utility bill if all recommended improvements are made. Both energy use and savings estimates assume that 2 adults and 1 child live in the home. Your actual energy use and savings will depend on how you maintain your home, how many people live there, your day-to-day habits and weather. To learn more about how to save energy and money in your home, as well as more about the home energy score, visit:

[homeenergyscore.gov](http://homeenergyscore.gov)



U.S. DEPARTMENT OF  
**ENERGY**

Assessor # **85317** Assessment Date **11/05/2010** Label # **000062465**

# BayREN Home+

## REBATES FOR HOME ENERGY EFFICIENCY IMPROVEMENTS



- Up to \$5,000 in rebates depending on scope of work
  - Extra \$1,000 through September (might get pushed out further)
- No-cost technical support through the Home Energy Advisors



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# BayREN Home+

## O&M AND BUILDING SHELL MEASURES

Measure	2020 Rebate Amount
<b><i>Operations and Maintenance Measures</i></b>	
Smart Thermostat (must be listed on the ENERGY STAR qualified product list for Smart Communicating Thermostat)	\$150
Duct sealing $\leq$ 10% total leakage	\$200
Duct Replacement $\leq$ 5% total leakage	\$800
<b><i>Building Shell Measures</i></b>	
Attic insulation $\geq$ R-44 (includes attic air sealing)	\$0.75 / sq. ft. (not to exceed \$1,000 per home)
Wall insulation $\geq$ R-13 (2x4 framing) or $\geq$ R-19 (2x6 framing)	\$2.00 / sq. ft. (not to exceed \$1,000 per home)
Building air sealing $\geq$ 30% total leakage reduction	\$150

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## HVAC AND WATER HEATING MEASURES

Measure	2020 Rebate Amount
<b><i>Heating and Cooling Measures</i></b>	
High efficiency central gas furnace $\geq 95\%$ AFUE w/ Variable Speed Motor (must replace existing central gas furnace)	\$300
High-efficiency central air conditioner $\geq 17$ SEER (must replace existing central air conditioner)	\$800
High-efficiency heat pump $\geq 17$ SEER / 9.4 HSPF (must replace entire load associated with existing electric heating system or heat pump)	\$1,000
<b><i>Water Heating Measures</i></b>	
High-efficiency gas storage water heater medium usage $\geq 0.64$ UEF, high usage $\geq 0.68$ UEF Instantaneous water heater $\geq 0.87$ UEF (must replace existing gas storage water heater)	\$400
Heat pump water heater $\geq 3.1$ UEF (must replace existing gas or electric water heater)	\$1,000



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HVAC, WATER HEATING MEASURES, AND ELECTRIFICATION MEASURES

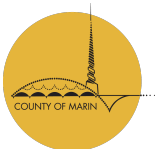
Measure	2020 Rebate Amount
<b><i>Heating and Cooling Electrification Measures</i></b>	
High efficiency heat pump $\geq$ 17 SEER / 9.4 HSPF (must replace existing central natural gas furnace and air conditioner with ducted direct exchange (non mini-split) heat pump or replace wall furnace and window air conditioner with a ductless mini-split heat pump.)	\$1,000
<b><i>Water Heating Electrification Measures</i></b>	
Heat pump water heater $\geq$ 3.1 UEF (must replace existing gas water heater)	\$1,000  <b>+ \$1,000 to contractor from MCE</b>



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## APPLIANCE ELECTRIFICATION MEASURES

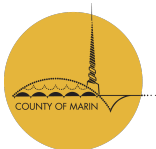
Measure	2020 Rebate Amount
<b><i>Appliance Electrification Measures</i></b>	
Induction electric range (no hybrid) or cooktop (must replace existing natural gas range or cooktop)	\$300
Heat pump clothes dryer  4.50 Combined Energy Factor (CEF) (must replace existing natural gas clothes dryer and listed as ENERGY STAR Efficient heat pump clothes dryer.	\$300
<i>Note: In order to receive appliance electrification incentives, these measures require the PG&amp;E account holder to submit a rebate application through the customer facing BayREN Home+ Portal and provide photographs of installed equipment and proof of existing natural gas equipment</i>	



# BayREN Home+

## BONUS REBATES

Measure	2020 Rebate Amount
<b><i>Bonus Rebates</i></b>	
Combine one or more Building Shell measures with a Heating or Cooling measure	\$500  <i>+\$1,000 by 9/31 (maybe longer)</i>
Downsize heating and/or cooling system compared to existing system	\$100
Combustion Appliance Safety (CAS) test-out	\$150

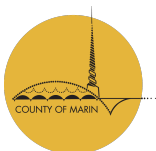


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LAYERED REBATE EXAMPLE FOR MARIN RESIDENTS

Heat Pump Water Heater	Incentive
<i>Program</i>	
BayREN Home+ (includes \$150 CAZ testing)	\$1,150
Midstream Incentive (paid to contractor)	\$1,000
Electrify Marin HPWH Rebate	\$1,000

Total: \$3,150



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# BayREN Home+

PROGRAM CONTRACTORS



Specially trained in building performance

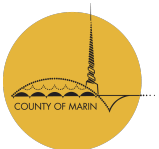
Vetted through program requirements

Those not meeting program guidelines and best practices are removed

Handle all the paperwork

Quality control checks

Safety testing required



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# BayREN Home+

CHOOSING A CONTRACTOR

BayRENResidential.org

## Find a Contractor

Participating contractors are specially trained to provide the highest quality service and installation for qualified home energy improvements. Your contractor will also assist you through the rebate process to make sure you get the best price on your projects.

*Different ways to search*

### Search Criteria

BUSINESS NAME

SERVICES PROVIDED

Select All That Apply

LANGUAGES SPOKEN

Select All That Apply

COUNTY SERVED

Select All That Apply

Search



## Participating Contractors

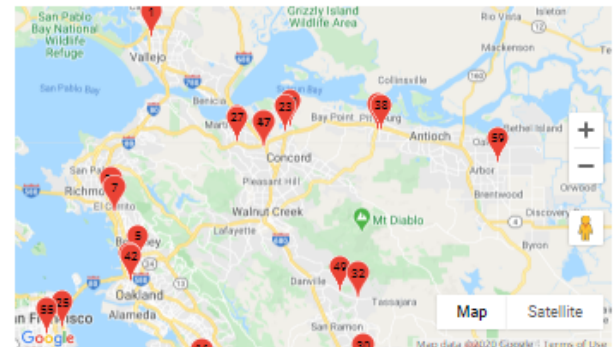
60 results | [Reset search criteria](#) | [Print results](#)

#800887  
**Pelle Heating & Air Conditioning**  
3751-d Charter Park Ct, San Jose, CA 95136  
(408) 800-2791  
[www.pelleheatandairconditioning.com](http://www.pelleheatandairconditioning.com)

#835016  
**Synergy Companies**  
28436 Satellite St, Hayward, CA 94545  
(877) 836-1329  
[www.synergycompanies.org](http://www.synergycompanies.org)

#918680  
**Andre's Air Inc.**  
P.O. Box 6296, Vacaville, CA 95696  
(707) 386-2313  
[www.andresair.com](http://www.andresair.com)

#769446  
**Air Quality Heating & Air Conditioning Inc**



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# Home Energy Advisors



- Free, independent advice for completing your improvement
- Technical and programmatic experts
- Assistance finding a Participating Contractor
- Refers to complementary programs

**(866) 878-6008**  
**[www.BayRENResidential.org](http://www.BayRENResidential.org)**

Agency

org

# Contact Info



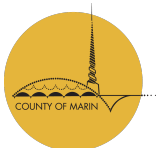
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