

## Appendix B: Energy Efficiency

### Introduction

Over 30 percent of Sonoma County GHG emissions are associated with energy use in buildings. Consequently, Sonoma County must include measures to increase building energy efficiency as part of its climate protection efforts. According to the U.S. Environmental Protection Agency, “Energy efficiency should be a cornerstone of energy and/or climate policies at all levels of government, based on its proven status as a cost-effective option for reducing carbon dioxide emissions and reducing the cost of climate policies.”<sup>1</sup>

### Key Recommendations:

	<b>Recommendation</b>	<b>Communities Employing Recommendation</b>	<b>Sonoma County Status and Applicability</b>
2.1	Identify and implement best practices for aggressively increasing the energy efficiency of buildings	Claremont, Portland, San Rafael, Seattle	Sonoma County is already implementing Property Assessed Clean Energy and Pay-As-You-Save financing programs that are not yet yielding the needed transformational change.
2.2	Expand and steepen energy use disclosure requirements	Austin, Berkeley, Boston, San Francisco	California has new energy use disclosure laws that Sonoma County can build upon.
2.3	Develop a commercial commissioning / retro-commissioning program	Los Angeles, New York, Seattle	Sonoma County currently has no commissioning or retro-commissioning program.
2.4	Use public-private partnerships such as performance contracts	Connecticut, Houston, Massachusetts, New York City	Some of the jurisdictions of Sonoma County are engaged in partnerships with private entities already, but more opportunities exist.

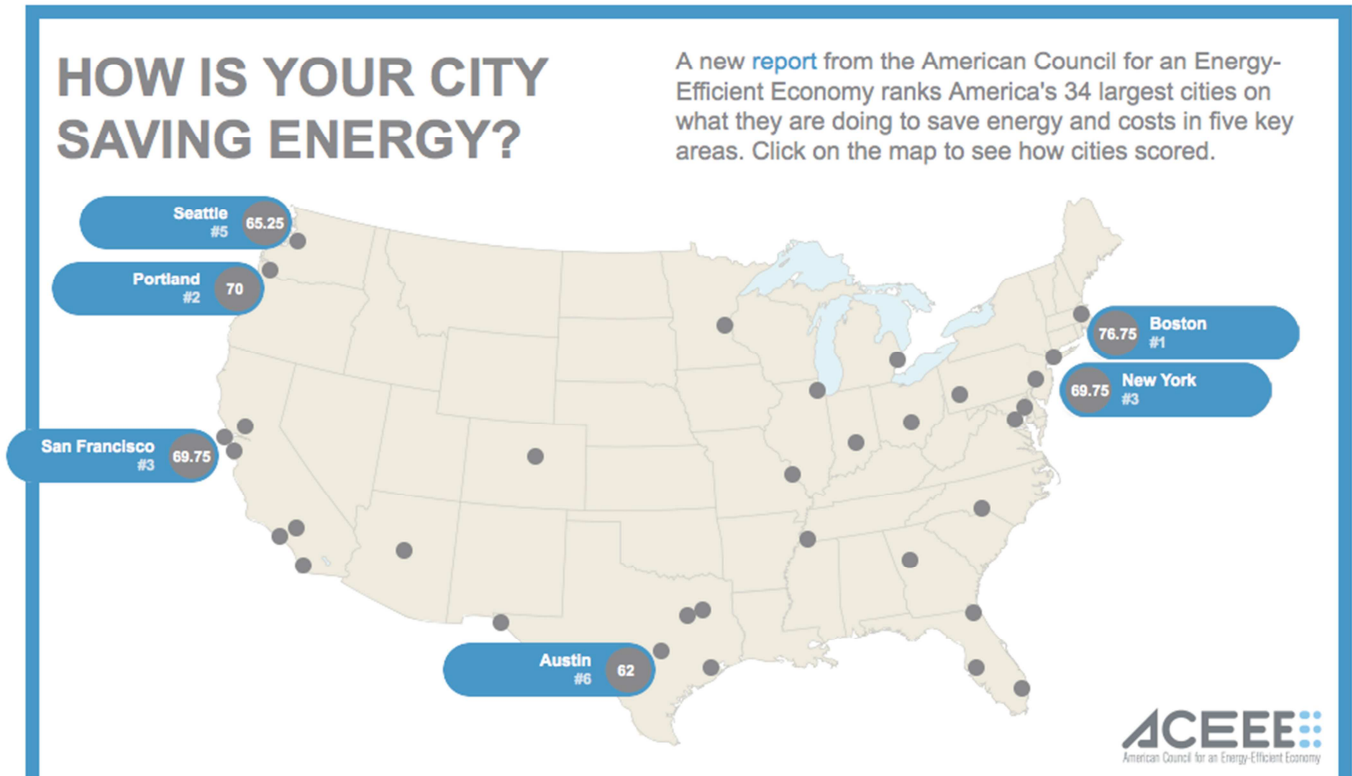
The 2008 Sonoma County Community Climate Action Plan identified broad steps that are still relevant for reducing emissions through energy efficiency:

1. Retrofit existing buildings
2. Maximize water efficiency in homes and businesses
3. Mandate green building standards
4. Improve efficiency of pumping operations for water and wastewater

<sup>1</sup> Page 14 of EPA 2009 Study, “Energy Efficiency as a Low-Cost Resource for Achieving Carbon Emissions Reductions”: [http://www.epa.gov/cleanenergy/documents/suca/ee\\_and\\_carbon.pdf](http://www.epa.gov/cleanenergy/documents/suca/ee_and_carbon.pdf)

Many U.S. cities are successfully implementing such strategies.

A new report by the American Council for an Energy-Efficient Economy (ACEEE) ranks America's 34 largest cities on energy and cost savings in five key areas.<sup>2</sup> The graphic below shows the top five cities that, according to ACEEE, are doing the most. These are Boston, Portland, New York, San Francisco, Seattle, and Austin.



These cities recognize the benefits of energy efficiency, which include improving community self-reliance and resilience, saving money for households, businesses, anchor institutions, and local governments, creating local jobs, extending the life and reducing the costs and risks of investments in critical infrastructure, catalyzing local economic reinvestment, improving the livability and the local asset value of the built environment, and protecting human health and the natural environment through reducing emissions of criteria pollutants and greenhouse gases.<sup>3</sup>

Sonoma County faces several challenges in retrofitting its housing stock. The county has 180,000 housing units (houses, apartments and condominiums) and four in ten housing units are occupied by renters, according to the U.S. Census Bureau.<sup>4</sup>

The 2008 Community Climate Action Plan contains the goal of retrofitting 80 percent of housing units (totaling 205,000 housing units as of the last census<sup>5</sup>) and 80 percent of the commercial building stock (totaling 177,000 commercial properties, according to Jeremy Scannell of SCEIP) in Sonoma County. This is a very steep goal (about 5,470 housing units per year for 30 years), but in line with what is needed to meet the GHG reduction targets that

<sup>2</sup> <http://aceee.org/city-infographic/>

<sup>3</sup> Page 1 of ACEEE 2013 City Energy Efficiency Scorecard, September 2013, Executive Summary: <http://aceee.org/files/pdf/summary/e13g-summary.pdf>

<sup>4</sup> <http://www.pressdemocrat.com/article/20131030/business/131039948#.UnHg01uWf5k.email>

<sup>5</sup> <http://quickfacts.census.gov/qfd/states/06/06097.html>

would satisfy the Intergovernmental Panel on Climate Change’s scientific mandate for GHG reductions. In order to meet this goal in a 30-year time frame, Sonoma County would have to retrofit 4,800 homes per year, or 400 homes per month. Moreover, the community would have to retrofit 4,720 commercial properties every year for 30 years.

The primary barriers to achieving this goal are insufficient incentives for energy efficiency, both for homeowners and business owners to make improvements for their own buildings, and for residential and commercial landlords to make improvements for their tenants.

The Institute for Local Governments in California recommends the following for energy efficiency improvements that involve collaboration with both businesses and residents<sup>6</sup>:

Working with local businesses to:

- Encourage community businesses to conduct energy audits and implement energy efficiency retrofits through activities such as energy efficiency workshops, energy fairs, agency websites and social media.
- Encourage businesses to install energy efficient exterior lighting that is appropriate for the location and use, considering security and decorative lighting issues.
- Collaborate with local retail businesses to encourage businesses to purchase energy efficient products.
- Promote and reward energy efficiency efforts of local retail businesses.
- Adopt an energy financing program, such as through a PACE (Property Assessed Clean Energy) financing district, to help businesses install energy efficiency retrofits in existing residential and commercial buildings.
- Require energy audits and/or retrofits for commercial properties at time of sale.
- Require new commercial buildings to exceed Title 24, California’s energy efficiency standard, to the extent permitted by law.
- Require new commercial construction to be net zero energy.

They also suggest working with homeowners and apartment owners to:

- Provide information about Energy Upgrade California™ to help homeowners increase energy efficiency.
- Provide rebates or other financial incentives to help residents pay for whole house retrofits.
- Sponsor a home energy makeover contest that includes energy efficient audit and improvements as prizes.
- Adopt an energy financing program, such as through a PACE (Property Assessed Clean Energy) financing district, to help homeowners install energy efficiency retrofits in existing residential buildings.
- Require energy audits and/or retrofits at time of sale for residential properties.
- Require energy audits and/or retrofits at time of residential remodeling or renovation projects.
- Require new residential buildings to exceed Title 24, California’s energy efficiency standard, to the extent permitted by law.
- Require new residential construction to be net zero energy.

Communities across the country are implementing some of these recommendations. However, in many cases these recommendations either do not offer enough financial incentive to be adopted widely or the mandates have received too much political backlash to be passed in any local ordinance. Also, some measures are not large enough in scale to make any real difference in emissions. While local mandates clearly have the most teeth, it is difficult to get political support for them. Below is a tour of some of the most promising strategies for reducing emissions from buildings and suggestions for how to navigate this challenging financial and political terrain.

---

<sup>6</sup> Page 6 of the Institute for Local Government’s “Sustainability Best Practices Framework”: [http://www.ca-ilg.org/sites/main/files/file-attachments/sustainability\\_best\\_practices\\_framework\\_7.0\\_version\\_june\\_2013\\_final.pdf](http://www.ca-ilg.org/sites/main/files/file-attachments/sustainability_best_practices_framework_7.0_version_june_2013_final.pdf)

## 2.1 Identify and implement best practices for aggressively increasing the energy efficiency of buildings

### *Background*

Even the most highly regarded energy efficiency programs are not producing results to the degree needed. Therefore, further research of energy efficiency best practices is recommended.<sup>7</sup> Research is a relatively low-cost upstream investment compared with the investment ultimately made on energy efficiency programs. Given that substantial energy efficiency funding is expected to come through Sonoma Clean Power, comprehensive and pro-active research can provide data-backed confidence that funds will be well spent.

---

### **Strategies to Consider:**

- A. *Investigate greener building codes*
  - B. *Examine successful whole house retrofit programs*
- 

#### *A. Investigate greener building codes*

Sonoma County should investigate the leaders in green building codes and glean wisdom from the experts in green building – namely the U.S. Green Building Council and Build It Green. The jurisdictions of the county should consider using Build it Green’s Green Point rating system for residential units and the Leadership in Energy & Environmental Design (LEED) rating system for non-residential buildings. Because the majority of the housing stock is existing buildings, Sonoma County should consider deep green energy efficiency requirements for major remodels and subsidizing audits and guaranteeing quick turnaround times for permits for projects that achieve LEED Gold or another comparable benchmark.

The **City of San Rafael’s** Green Building Ordinance requires the use of the Build it Green and Green Point rating system for residential units and the LEED rating system for non-residential buildings. For single family and duplex units, new construction must be verified by a GreenPoint rater and certified by Build it Green. Multi-family units must be verified by a LEED accredited professional plus certified by either a GreenPoint or a BPI rater. All new non-residential buildings or those with additions must be LEED certified, with the point requirements increasing with the project size. Projects over 50,000 square feet must be LEED Gold certified.

For already existing residential single family or duplex units, all remodeling projects must include insulation of hot water pipes and installation of radiant barriers when reroofing and sheathing is removed. For projects over \$50,000, owners must submit a completed GreenPoint Rated Existing Home checklist, but no minimum points are required. For projects over \$100,000, point requirements begin and increase with the project size. Owners must also submit evidence that a HERSII or BPI home performance audit has been completed within the past year. Projects over \$300,000 must submit verification of improvement in home performance audit results of 20% or more or a

---

<sup>7</sup> This recommendation is directed toward learning from others’ research of energy efficiency best practices and not toward original research.

minimum HERSII score of 100, plus provide evidence of verification by a GreenPoint Rater. Enforcement is handled through city inspectors.

To incentivize higher achievements, the City of San Rafael assists projects achieving 100+ GreenPoints or LEED Gold by paying for a GreenPoint rater, guaranteeing a 2-week turnaround for plan checks and providing a bronze wall plaque. All new construction must pre-wire and plumb for PV and solar hot water. The ordinance also sets requirements to divert material waste from the landfill.<sup>8</sup>

*B. Examine successful whole house retrofit programs*

The County of Sonoma has been involved in energy efficiency programs for several years, but so far none have yielded the level of adoption needed to meet Sonoma County's goals. Several whole house retrofit programs around the country have enjoyed successes that hold lessons for Sonoma County.

In the **City of Claremont**, the Community Home Energy Retrofit Project (CHERP®) is a volunteer, non-profit organization engaged in a community-wide program to help achieve aggressive goals for improved energy efficiency in buildings through education about the impact of buildings on greenhouse gas emissions and the many benefits that accrue to building owners and the city from retrofitting buildings. The program started as the Claremont Home Energy Retrofit Program in the City of Claremont. When it was acknowledged for being the first city in the State of California to retrofit one percent of its homes with the Energy Upgrade California program, the program's founder recognized the potential to expand to other cities and changed the program's name to Community Home Energy Retrofit Program.<sup>9</sup> CHERP's focus is grassroots, city, and community engagement programs.<sup>10</sup>

The results so far:<sup>11</sup>

- Homes retrofitted: 232
- Rebates received by homeowners: \$826,000+
- Dollars invested in local real estate: \$3,000,000+
- Carbon mitigated (metric tons): 400+
- Homes green labeled: 162
- Percent energy saved per home on average: 30%
- Local residents educated: 2,500+

In the **City of Portland**, Clean Energy Works Oregon (CEWO) is a non-profit program for residential energy efficiency. CEWO is funded through a grant to the City of Portland through EERE's Better Buildings Neighborhood Program, as part of the American Recovery and Reinvestment Act of 2009. The program offers home energy assessments (valued at \$500) and advice from independent energy advisors at no cost to customers. CEWO is Oregon's one-stop shop for home energy upgrades and services. It connects residents with ENERGY STAR® qualified contractors certified through the Building Performance Institute to perform home energy assessments and the follow-up upgrade work. Homes that can achieve energy savings of 15 percent or more are eligible for low-cost, long-term financing to cover the cost of home upgrades. Loan obligations can be repaid directly or through homeowners' monthly utility bills. Since September 2010, CEWO has completed more than 6,000 residential energy assessments and 2,700 residential energy upgrades, and provided more than 2,400 residential loans—totaling \$30

---

8 <http://www.cityofsanrafael.org/commdev-building-green/>

9 <http://www.cherp.net/about-us>

10 <http://www.cherp.net/how-it-works>

11 <http://www.cherp.net/about-us>

million. CEWO estimates that for every 100 projects completed, 10 construction jobs are created, \$1.4 million in economic activity is generated, and homeowners collectively save \$28,000 in annual energy costs.<sup>12</sup>

The **City of Seattle** designed and implemented the Community Power Works (CPW) program after receiving a Better Buildings Neighborhood Program grant from the U.S. Department of Energy. During its pilot phase, Community Power Works operated in the residential, commercial and institutional sectors. Since 2010, the program has upgraded more than 3,000 homes, 1.5 million square feet of commercial space, four projects in three major hospitals, and 17 municipal buildings. Community Power Works projects will avoid 332,777 metric tons of carbon over the lifetime of efficiency measures, and the program has created more than 250,000 hours of work for 1,250 people.<sup>13</sup>

CPW has implemented energy efficiency programs in the residential, commercial, and institutional sectors. For residential customers, they provide a “one-stop shop” for energy upgrades in single-family homes by offering low-cost energy assessments, rebates, financing, and pre-approved contractors. They also partner with HomeWise, the City of Seattle’s low-income weatherization program, which funds energy efficiency improvements in multifamily buildings. For the commercial sector, CPW offers free energy assessments, financing, and rebates for restaurants, corner stores, and small to medium grocers. Individuals and organizations from the environmental, labor, business and energy sectors advise and support CPW and its participants. CPW was funded through a federal grant through September 2013 with 92% of the funding now spent. CPW offers rebates and customer service that complement programs offered by Seattle City Light and Puget Sound Energy. Single-family homes that are not served by utilities for heating fuel are also eligible for energy upgrade rebates through CPW.<sup>14</sup>

## **2.2 Expand and steepen energy use disclosure requirements**

### *Background*

California law now requires energy use disclosure prior to sale, lease, or financing of a nonresidential building.<sup>15</sup> This requirement can be expanded to the residential sector. Water use disclosure should be included in any energy use disclosure requirement, given the embodied energy in water use. With knowledge about the energy performance of a building, buyers will know the operating costs of any buildings they are considering for purchase. Such information should make energy efficient buildings more valuable, thereby creating more demand for such buildings and making owners more likely to make energy efficiency upgrades to their buildings.<sup>16</sup> Disclosure requires assessment of building performance, and according to a recent finding by the U.S. Environmental Protection Agency, assessment of buildings leads to energy efficiency improvements.<sup>17</sup>

The most important aspects of energy use disclosure laws include:

1. Enforcement approach
2. Definition of the amount of square footage of buildings affected (for example, >50k sq. ft.)

---

12 U.S. Department of Energy: [http://apps1.eere.energy.gov/successes/success\\_story.cfm/news\\_id=19462/prog=200](http://apps1.eere.energy.gov/successes/success_story.cfm/news_id=19462/prog=200), <http://www.cleanenergyworksoregon.org/>

13 <http://www.communitypowerworks.org/about-community-power-works/history/>

14 [http://www.communitypowerworks.org/wp-content/uploads/2012/06/CPW-Infographic\\_September.pdf](http://www.communitypowerworks.org/wp-content/uploads/2012/06/CPW-Infographic_September.pdf)

15 [http://www.energy.ca.gov/ab1103/rulemaking/documents/2013-06-13\\_AB\\_1103\\_FAQ.pdf](http://www.energy.ca.gov/ab1103/rulemaking/documents/2013-06-13_AB_1103_FAQ.pdf)

16 EPA Analysis Shows Big Benchmarking Savings, Oct 11, 2012: <http://www.imt.org/news/the-current/epa-analysis-shows-big-benchmarking-savings>

17 EPA Analysis Shows Big Benchmarking Savings, Oct 11, 2012: <http://www.imt.org/news/the-current/epa-analysis-shows-big-benchmarking-savings>

3. Frequency of disclosure (e.g., annually/every 5 years/only at time of sale?) and the level of disclosure (e.g., just a benchmark or a full audit?)
4. Deadlines for the various requirements; if they are too distant they are meaningless.
5. Whether or not to include water usage
6. Whether or not to require mandatory rating

Sonoma County can analyze various ordinances using a new online tool that enables comparison of policies across cities and states: <http://buildingrating.org/policy-comparison-tool>

---

### **Strategies to Consider:**

- A. *Institute an energy use disclosure ordinance that includes single-family and multi-family properties*
  - B. *Require regular and frequent disclosure and an energy assessment (full audit) and ratings*
- 

- A. *Institute an energy use disclosure ordinance that includes single-family and multi-family properties*

Sonoma County has a large single-family and multi-family housing stock and will benefit from including them in any energy use disclosure requirements not covered by the state law.

In the **City of Austin**, an Energy Conservation Audit & Disclosure Ordinance provides efficiency information to homebuyers, apartment renters, and building owners to reinforce the value of energy efficiency.<sup>18</sup> The ordinance was developed in cooperative effort between City staff, the real estate industry, commercial property managers and the Austin apartment community. For single-family residential properties an energy audit must be performed before being sold and must be disclosed to potential buyers. Audits must be performed by auditors certified by Residential Energy Service Network (RESNET) as a Home Energy Rater or by Building Performance Institute (BPI) as a Building Analyst.<sup>19</sup> According to ACEEE's 2013 City Energy Efficiency Scorecard, Austin has seen improved compliance with residential energy codes upon its adoption and implementation of third-party testing requirements to verify compliance. The city leveraged the technical expertise in the private sector to design a third-party testing requirement. Austin Energy sponsors free classes at Austin Community College that teach commercial customers how to use the free online rating tools. The utility also sends college-trained interns to small businesses without charge to assist owners in developing their energy ratings.<sup>20</sup>

The **City of Berkeley**, which has had a Residential and Commercial Energy Conservation Ordinance (RECO/CECO) for years, is now opting to switch to an energy use disclosure ordinance for single-family, multi-family, and commercial properties. The ordinance will be modeled after pieces of ordinances from Boston, New York City, Chicago, and Seattle, and is expected to yield greater energy savings. Berkeley opted for this change because the required measures under their RECO/CECO are out of date and the energy code requirements exceed those measures. In addition, the City won't have to update the ordinance continually to keep up with technology and state policy changes. The new ordinance aims to be more nuanced than the RECO/CECO was, and it will not trigger

---

18 <http://www.aceee.org/sector/local-policy/case-studies/austin-energy-con>

19 Ibid

20 <http://www.aceee.org/sites/default/files/publications/researchreports/e13g.pdf>

permit requirements, which vexed building owners and realtors.<sup>21</sup>

*B. Require regular and frequent disclosure and an energy assessment (full audit) and ratings*

If the building stock in Sonoma County is to be rapidly transformed at the speed and scale required to meet Sonoma County's goals, energy use disclosure must happen more frequently than just at the time of sale of a building. In addition, the energy use disclosure must go beyond a basic benchmark to catalyze energy efficiency upgrades with an actionable audit that suggests upgrades – not just a benchmark that compares the building against other similar buildings. The more involved audit could be required every five years, with the basic benchmarking happening annually.

The **City of Boston's** Building Energy Reporting and Disclosure Ordinance (BERDO) requires Boston's large- and medium-sized buildings to report their annual energy and water use to the City of Boston after which the City makes the information publicly available. In addition, every five years buildings need to complete an energy assessment or energy action. Exemptions are provided for buildings that are already efficient or are making significant progress on energy efficiency.<sup>22</sup>

The **City of San Francisco** has a Benchmark and Audit Ordinance whereby non-residential buildings must benchmark energy use every year, and get an energy audit every five years. This allows decision-makers to compare performance to other buildings.<sup>23</sup>

In January of 2010 the **City of Seattle** passed the Energy Disclosure Ordinance, which requires large commercial and multi-family property owners in Seattle to annually benchmark energy use and provide the City with ratings to allow comparison across different buildings. Building owners will also be required to share energy usage and ratings with prospective buyers, tenants and lenders during the sale, lease or financing of properties.<sup>24</sup>

## **2.3 Develop a commercial commissioning / retro-commissioning program**

### *Background*

Commissioning is a process that ensures that a new building operates as efficiently as the designer intended and that building staff operate its systems and equipment properly. It is an intensive quality assurance process for buildings that begins during design and continues through construction, occupancy, and operations. Retro-commissioning mirrors a similar process for existing buildings. Retro-commissioning can resolve problems that occurred during design or construction, or address problems that have developed throughout the building's life.<sup>25</sup>

According to a report by Lawrence Berkeley Lab, commissioning and retro-commissioning of commercial buildings are potentially the most cost-effective strategies for reducing energy, costs, and GHG emissions in buildings today.<sup>26</sup>

---

21 Phone call with Timothy Burroughs at the City of Berkeley on May 20, 2014.

22 <http://www.cityofboston.gov/eos/reporting/>

23 <http://www.sfenvironment.org/energy/energy-efficiency/commercial-and-multifamily-properties/existing-commercial-buildings-energy-performance-ordinances>

24 <http://www.icleiusa.org/news/seattle-approves-energy-disclosure-ordinance>

25 <http://cx.lbl.gov/definition.html>

26 Commissioning Report by Lawrence Berkeley Lab: <http://cx.lbl.gov/cost-benefit.html>



Retro-commissioning a few large buildings (more likely commercial) is more cost effective than retro-commissioning many small ones (more likely homes). Furthermore, commercial building owners are more apt than home owners to view energy efficiency retrofits as a business decision and thus implement cost-saving measures.

Some places are better suited for mandatory commercial energy efficiency ordinances, for example, Manhattan where the location is so desirable that businesses are highly motivated to stay despite extra energy efficiency requirements. In contrast, if Sonoma County adopted tough energy efficiency mandates it might drive businesses away, thus causing “leakage” of emissions to other communities. Such leakage merely moves emissions elsewhere rather than reducing them. The key may be to create commercial hubs that are so unique and attractive to businesses that mandated upgrades become an accepted up-front cost for businesses and a welcome long-term savings. Voluntary financing programs that feature no up-front cost for energy upgrades and guarantees for savings may succeed where mandatory programs would not.

---

### Strategies to Consider:

- A. *Create a voluntary program through Sonoma Clean Power*
- B. *Mandate retro-commissioning for huge energy wasters in large commercial hubs*

- 
- A. *Create a voluntary program through Sonoma Clean Power*

Sonoma Clean Power’s plan already includes energy efficiency programs. A commercial retro-commissioning program would be especially useful in tackling some of the largest energy wasters with deep energy efficiency retrofits.

In the greater **Los Angeles** area, Southern California Edison’s commercial retro-commissioning program called RCx offers financial incentives to SCE customers for their retro-commissioning projects. SCE asserts that RCx typically saves owners up to 15 percent of annual energy costs and has a low simple payback from energy savings, averaging two years or less.<sup>27</sup>

- B. *Mandate retro-commissioning for huge energy wasters in large commercial hubs*

In conjunction with energy use disclosure requirements, Sonoma County can mandate retro-commissioning for huge energy wasters in large commercial hubs, where real estate values are high and businesses are highly motivated to stay put.

**New York City’s** Energy Audit & Retro-commissioning Ordinance mandates that buildings over 50,000 gross square feet undergo periodic energy audit and retro-commissioning measures as part of the Greener, Greater Buildings Plan.<sup>28</sup>

---

<sup>27</sup> <http://www.sce-rcx.com/>

<sup>28</sup> <http://www.nyc.gov/html/gbee/html/plan/1187.shtml>

## 2.4 Use public-private partnerships such as performance contracts

### *Background*

Municipalities control buildings and infrastructure that consume significant amounts of energy. Municipalities often lack the upfront capital to conduct energy audits and invest in needed energy efficiency upgrades. By utilizing public-private partnerships such as performance contracts, the municipality can make upgrades, save money, avoid upfront costs, and lead by example.<sup>29</sup>

---

### **Strategies to Consider:**

- A. Pursue energy performance contracts to make energy efficiency upgrades to public facilities*
  - B. Support private sector financial institutions to catalyze an energy efficiency retrofit industry*
- 

- A. Pursue energy performance contracts to make energy efficiency upgrades to public facilities*

Some of the jurisdictions in Sonoma County have already pursued energy performance contracts to help finance energy efficiency upgrades with no up-front cost to tax payers and substantial energy savings. Many more projects are possible both at the city and county level.

**Massachusetts, Connecticut, and New York City** implemented Open Market ESCO, a \$9 million pilot program that will finance energy-efficient retrofits for an estimated 1,200 units of low-income housing and allow property owners to pay for the upgrades through reduced energy costs. The Open Market ESCO program is establishing a network of qualified subcontractors and professionals to conduct all work.<sup>30</sup>

The **City of Houston** awarded Siemens Industry, Inc., a multi-phase performance contract for 5.5 million sq. ft. of buildings. Upgrades included a solar thermal collector system, lighting upgrades, ballpark and outdoor field lighting, and HVAC efficiency improvements. Anticipated annual savings include more than 8,800,000 kWh of electricity, 960 MMBtu of natural gas, 57,440 kgal of water, 9,267,208 pounds of GHG, operational savings of \$907,665, and an excess of \$30 million over the 13-year contract.<sup>31</sup>

- B. Support private sector financial institutions to catalyze an energy efficiency retrofit industry*

---

<sup>29</sup> Government Code 4217 allows a public entity to enter into and deliver a public energy efficiency project by permitting the award of public contracts going through formal public bidding, thus saving the costs of that process which often exceed \$100,000. <https://www.acia.com/ACIA-News/Inspector-Magazine/Energy-Drives-our-Society.html>

<sup>30</sup> <http://www.nyceec.com/wp-content/pdf/OpenMarket%20ESCO%20Press%20Release.pdf>

<sup>31</sup> Page 2 of <http://w3.usa.siemens.com/topics/us/en/sustainable-cities/Documents/houston-building-efficiency.pdf>

Ygrene in Sonoma County offers unlimited private financing for its energy districts, allowing property owners to finance projects without finding their own loans in a difficult market.<sup>32</sup> The County of Sonoma should find ways to support Ygrene and encourage similar endeavors that can jump-start the local energy efficiency retrofit industry.

**New York City** used \$37 million of its ARRA funding to establish a new financing agency called the NYC Energy Efficiency Corporation (NYCEEC), an independent, non-profit financial corporation whose goal is catalyzing the development of a market-driven energy efficiency retrofit industry.<sup>33</sup>

---

<sup>32</sup> <https://ygrene.us/model.html>

<sup>33</sup> [www.nyceec.com](http://www.nyceec.com)