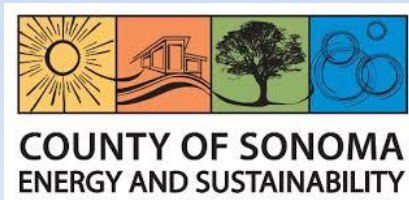




Sonoma County Sustainability Workshop

March 19, 2019



How We Serve: County of Sonoma, Energy and Sustainability

Everyone benefits when we increase community adoption of the County's sustainability programs.



Conduit to
Community

Over the last 12 years, Energy and Sustainability has:

- **Trust** - Established itself as a trusted resource in the community
- **Expertise** - Demonstrated technical and financial expertise
- **Service** - Created a reputation for excellent customer service
- **Grant Writing/ Funding** – Secured nearly \$8M in grant funds related to energy efficiency, commute, and electric vehicle charging



Homeowners



Commercial



Code Officials



Realtors &
Lenders



Municipalities



Contractors

Mission: To promote and deliver solutions necessary to mitigate environmental impacts and prepare for climate change.



ENERGY AND SUSTAINABILITY

How We Serve:

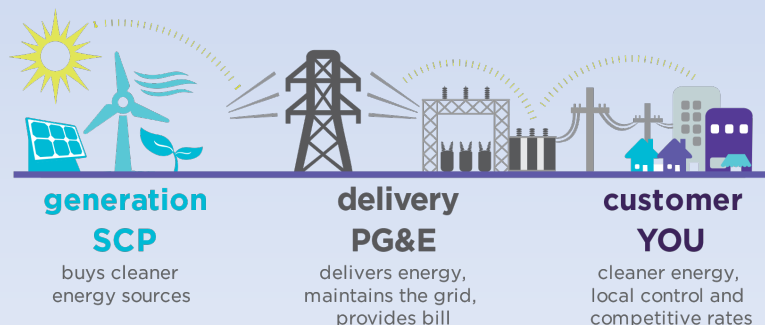
Regional Climate Protection Agency

- Venue for multi-jurisdiction policymaker collaboration
- Local engagement focused on local priorities
 - ☐ Convene Local Government Electric Vehicle (EV) Partnership
 - ☐ Shift – a low carbon transportation plan
 - ☐ Greenhouse gas emissions inventory
 - ☐ Pilot new community engagement platform to inspire individual action
- Regional leadership on building energy through the Bay Area Renewable Energy Network (BayREN)
- Track and engage on climate programs
 - ☐ State and federal legislation
 - ☐ Activities of State and regional agencies



How We Serve: Sonoma Clean Power

- Not-for-profit public agency established in 2014.
- Mission to reduce greenhouse gas emissions in Sonoma County and neighboring regions
- Generate electricity for approximately 600,000 customers in Sonoma and Mendocino counties.
- Pacific Gas & Electric (PG&E) provides distribution of electricity



Coordination between County and Regional Climate Protection Authority

- Leveraging Skills

BayREN

- Reduce energy use
- Save money and resources
- Increase community resilience



- Provide technical support and convening

Local Government Electric Vehicle Partnership

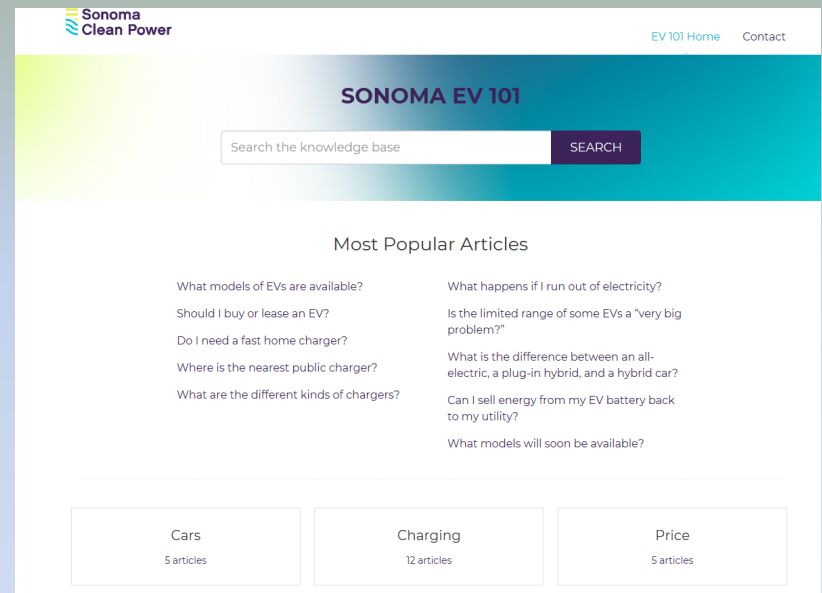
- Identify needs, common challenges and available resources
- Collaborative procurement for electric vehicles and charging stations

Coordination between County and Sonoma Clean Power

- Leveraging Skills
 - County providing energy audits for Sonoma Clean Power commercial customers
 - Homeowner consultations for rebuild efforts which include Advanced Energy rebates
- Coordinate Planning
 - Advanced Energy Center
 - Do-It-Yourself Home Energy and Water Toolkits

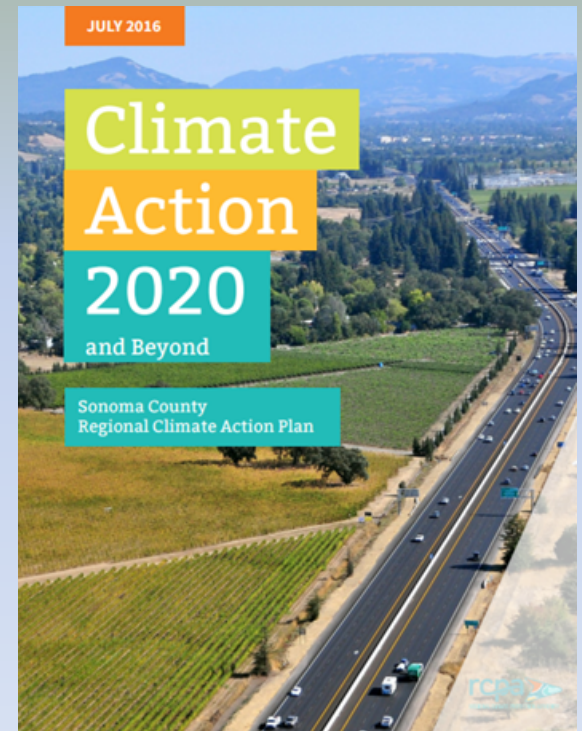
Coordination between Sonoma Clean Power and Regional Climate Protection Authority

- Cross Promotion
 - Drive EV
 - Energy Marketplace
- Pooling Resources and Planning
 - California Electric Vehicle Infrastructure Project
 - Advanced Energy Center
- Technical Assistance and Convening
 - Reach codes

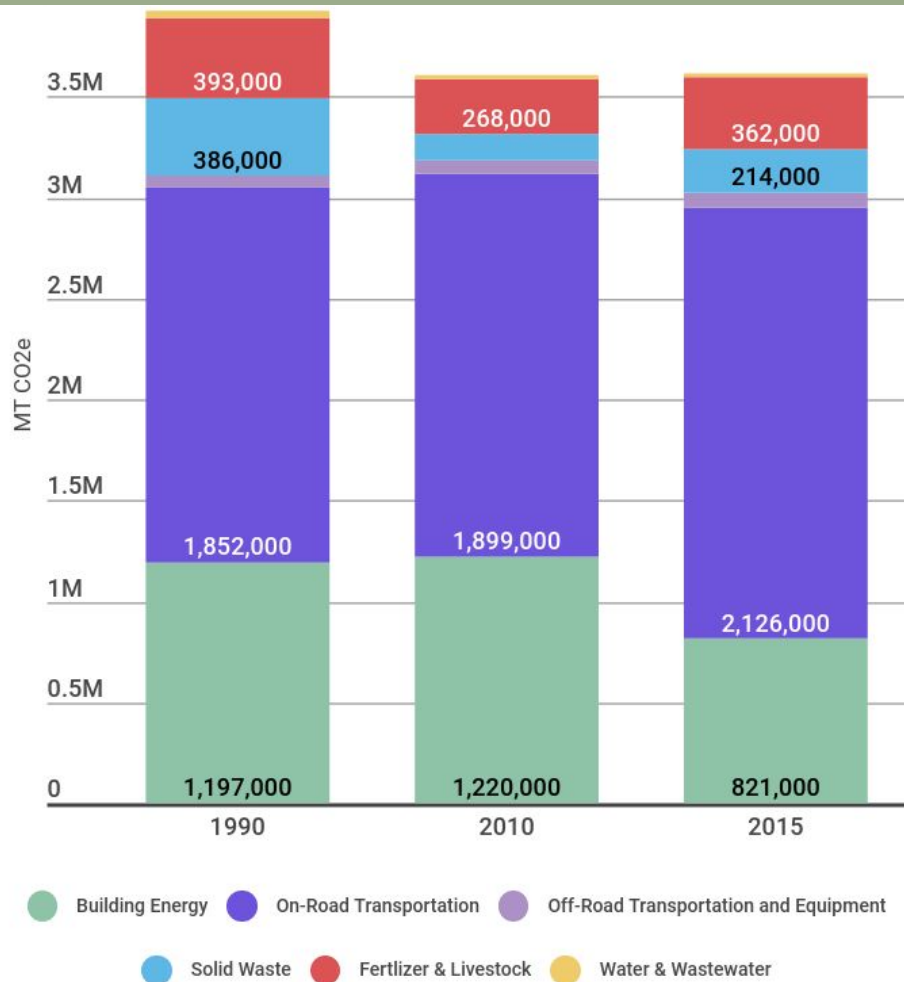


Challenges

- 2015 Inventory shows we are not on track to meet 2020 goals
- Countywide Goals
 - **25% below 1990 levels by 2020**
 - 40% below 1990 levels by 2030
 - 80% below 1990 levels by 2050



Countywide Greenhouse Gas Emissions



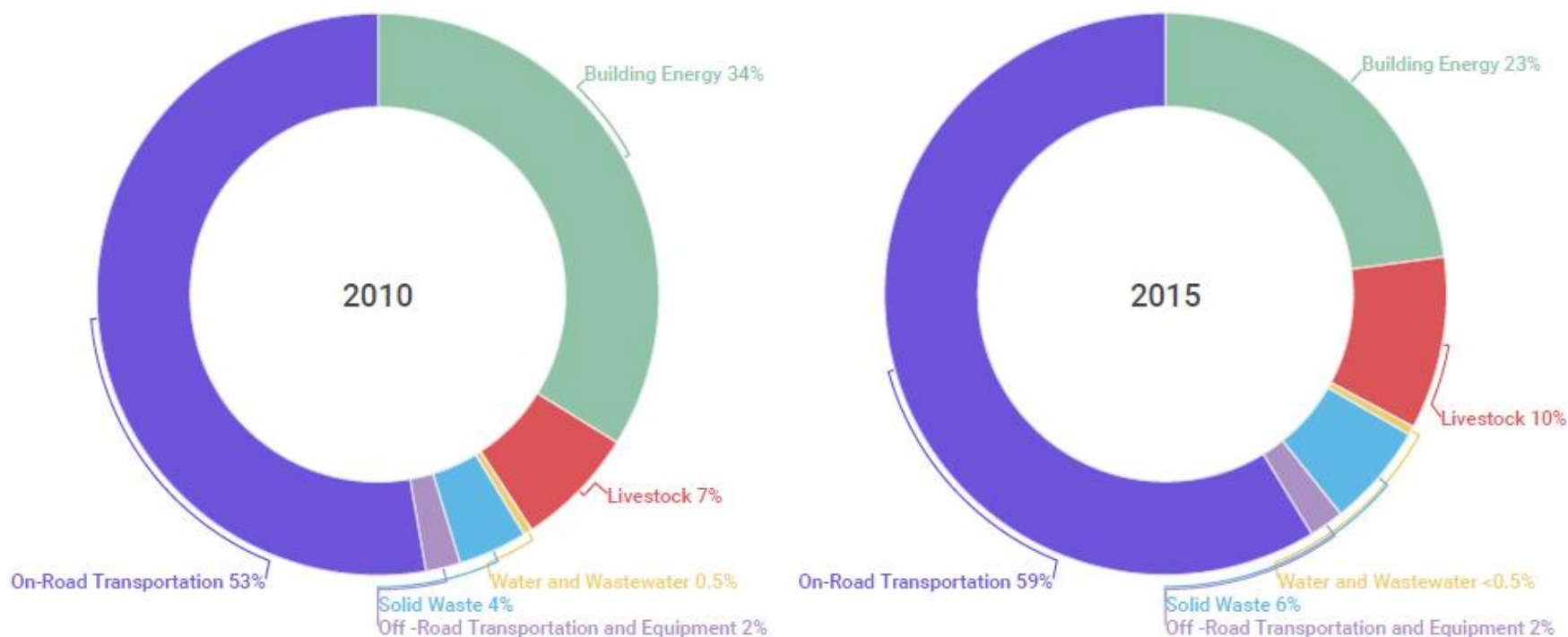
Countywide emissions remain around 9% below 1990 levels.

260,000 more miles were driven per day in 2015 when compared to 2010

Energy efficiency, local solar and Sonoma Clean Power's launch lead to 33% reduction in emissions from building energy use.







2010 and 2015 Greenhouse Gas Emissions

Greenhouse Gas Emissions by Source, 2010 and 2015



Source: 2015 GREENHOUSE GAS INVENTORY
SONOMA COUNTY SNAPSHOT
More detail at: rcpa.ca.gov/emissions

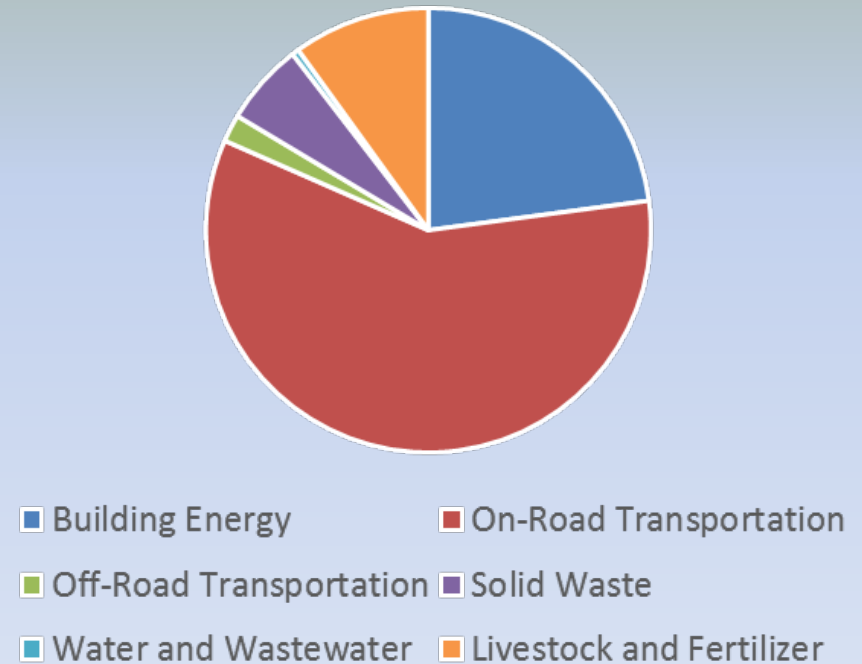
Advance 20 Greenhouse Gas Emission Reduction Goals

Sector	Goals	GHG Potential (MTCO ₂ e)
Building Energy	 <ol style="list-style-type: none"> 1. Increase building energy efficiency 2. Increase renewable energy use 3. Switch equipment from fossil fuel to electricity 	324,000 37% of CAP goal
Transportation & Land Use	 <ol style="list-style-type: none"> 4. Reduce travel demand through focused growth 5. Encourage a shift toward low-carbon transportation options 6. Increase vehicle and equipment fuel efficiency 7. Encourage a shift toward low-carbon fuels in vehicles and equipment 8. Reduce idling 	436,900 50% of CAP goal
Solid Waste Generation	 <ol style="list-style-type: none"> 9. Increase solid waste diversion 10. Increase capture and use of methane from landfills 	65,400 8% of CAP goal
Water Conveyance & Wastewater Treatment	 <ol style="list-style-type: none"> 11. Reduce water consumption 12. Increase recycled water and greywater use 13. Increase water and wastewater infrastructure efficiency 14. Increase use of renewable energy in water and wastewater systems 	22,600 3% of CAP goal
Livestock & Fertilizer	 <ol style="list-style-type: none"> 15. Reduce emissions from livestock operations 16. Reduce emissions from fertilizer use 	16,300 2% of CAP goal
Advanced Climate Initiatives	 <ol style="list-style-type: none"> 17. Protect and enhance the value of open and working lands 18. Promote sustainable agriculture 19. Increase carbon sequestration 20. Reduce emissions from consumption of goods and services, including food 	Not quantified

Priorities

- Emissions Reductions
 - Building Emissions
 - Transportation
 - Power Supply
- Electrification/Fuel Switch
 - Energy Efficiency
- Grid Resilience and Preparedness
 - Grid Management

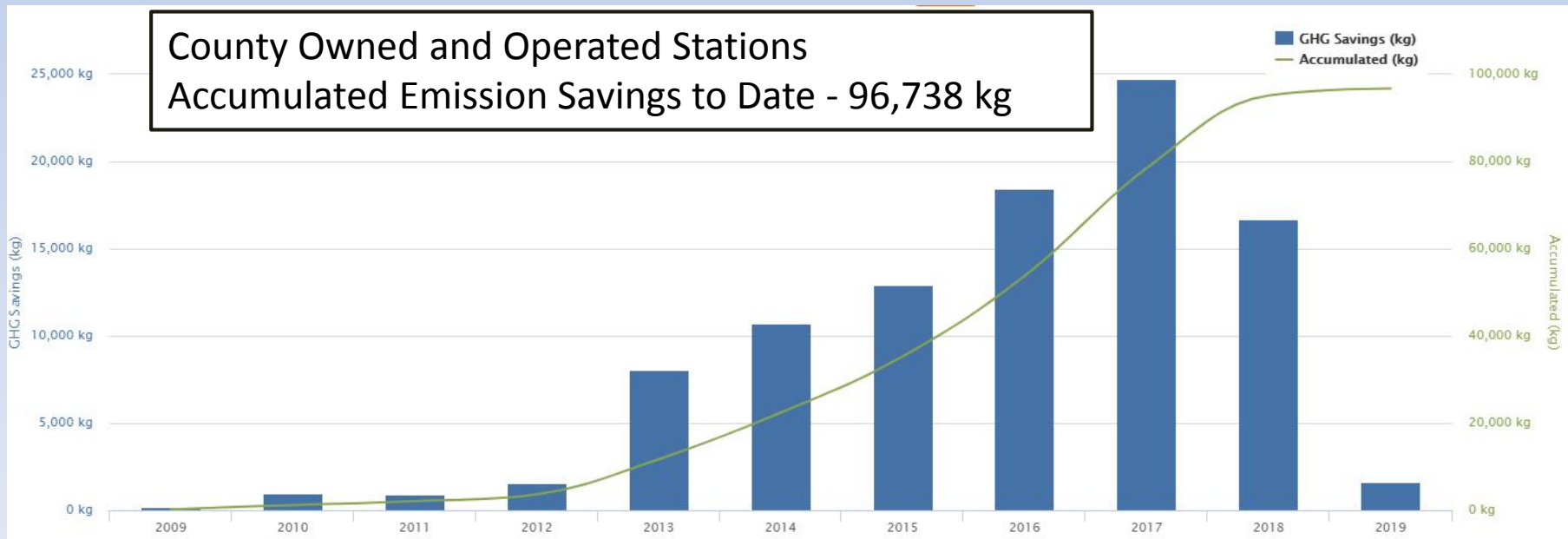
2015 Countywide Greenhouse Gas Emissions by Source



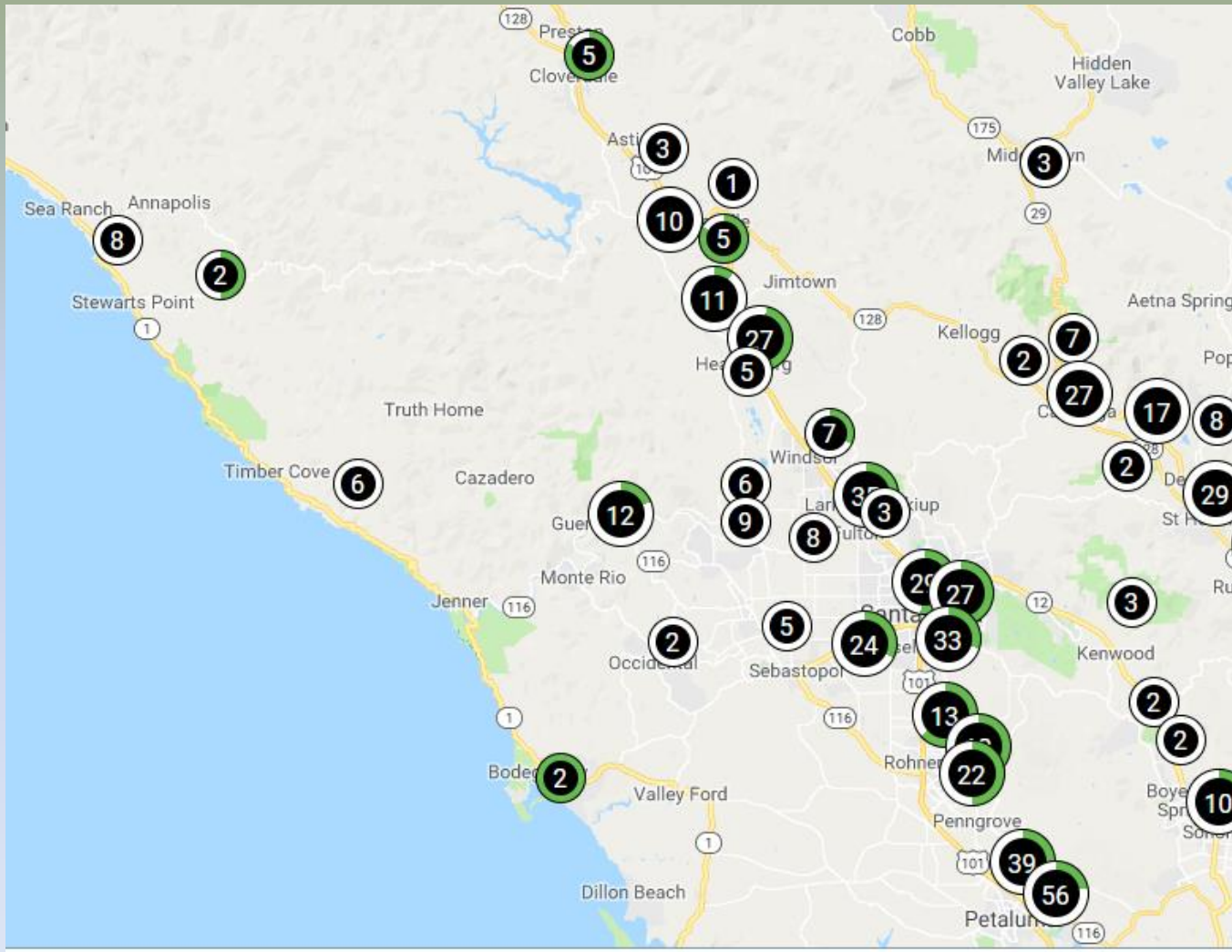
Emissions Reductions - Transportation

Electric Vehicle (EV) Charging Stations in County

Description	Available to Public	County Fleet Only
Electric Vehicle Supply Equipment Hardware (EVSE)	195	33
Charging Ports	306	66



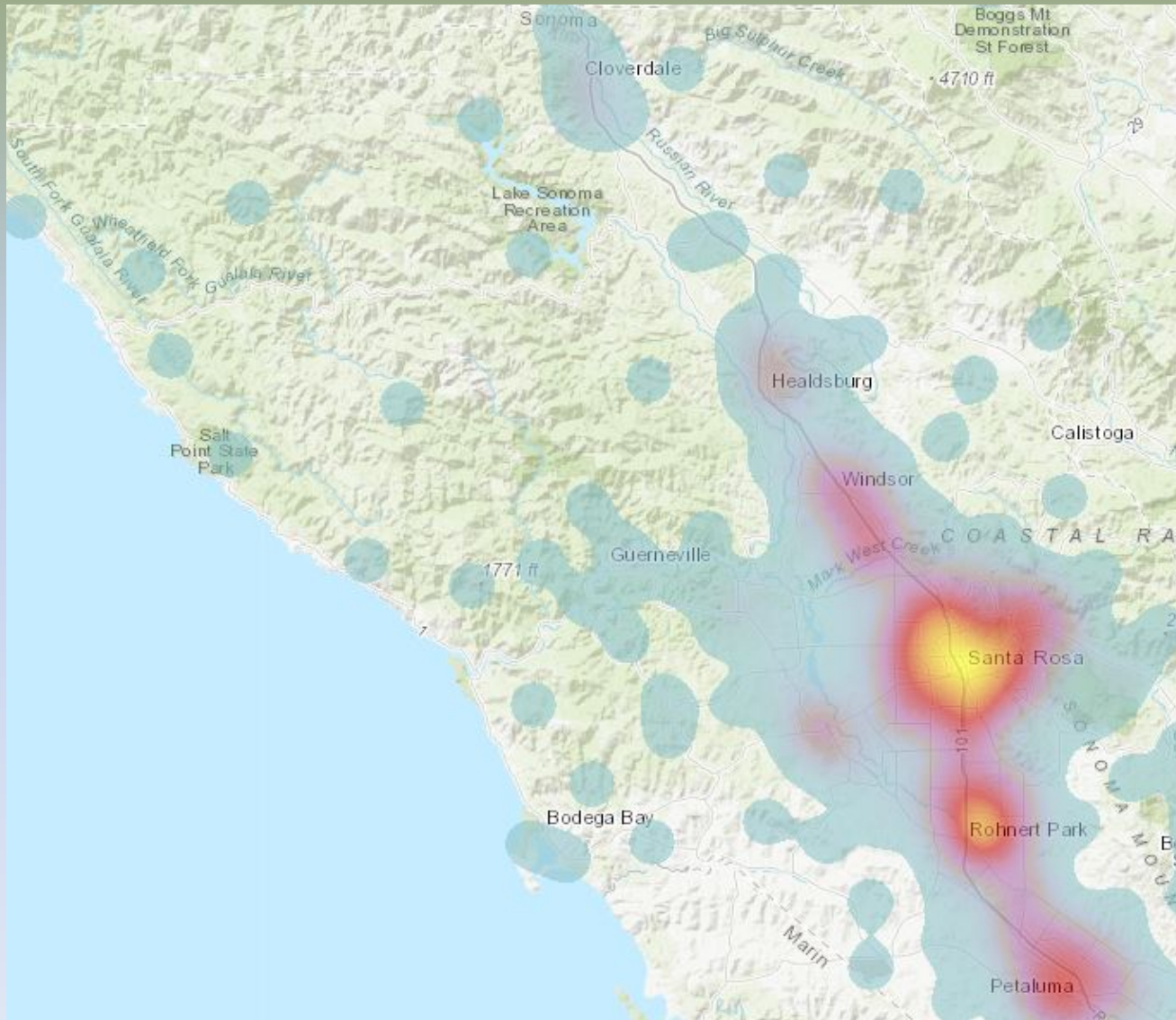
Current Charging Locations Available to the Public



Source:
ChargePoint.com

Showing Public Level 2 and DC Fast
Charge Locations

Forecasted Demand for Charging



Near-term demand for workplace and opportunity charging based on the Sonoma County Travel Model and Shift Sonoma County analysis.

Emissions Reductions - Transportation

Sonoma Clean Power

- Drive Electric Vehicle (EV) Program has incentivized 1,260 electric vehicles, saving customers an estimated \$10 million dollars
- Funded 7-8 charging stations including those located in Courthouse Square in Santa Rosa and the West County Health Center facility in Forestville.
- Grid Savvy Program has deployed 2,500 residential chargers

Funding Opportunities for Electric Vehicles

Funding Opportunity	Eligible type of infrastructure	Funding Amount	Funding Deadline
Northern Sonoma County Air Pollution Control District, Go Green!	Public Level 1 Level 2 Level 3 – DC Fast Charging	Level 1: \$1,000 Level 2: \$2,000 DC Fast Charger: \$5,000 Installation: \$3,000 each or \$15,000 total	Rolling applications, available until funds are spent
Bay Area Air Quality Management District, Charge!	Public Level 1 Level 2 Level 3 – DC Fast Charging	\$10,000-\$500,000 per application Level 1: \$750 Level 2: \$1,500-\$3,000 DC Fast Charger: \$18,000 Plus-Up Funding available	June 30, 2019 Note: Has been an annual program
EV Charge Network	Workplace Multi-unit dwellings	All infrastructure paid for and portion of the charging equipment (typically 60-80% of the project cost)	Rolling applications through 2020 (or until 7,500 ports are installed)

Emissions Reductions - Buildings

BayREN: Expanding impact through proven programs

- Upgraded over 728 Sonoma County multifamily units, awarding \$546,000 in incentives and a reduction of 16.4% in onsite energy use
- Enabled nearly 1,000 Sonoma County Home Upgrade projects, awarding nearly \$2M in incentives
- Commercial Property Assessed Clean Energy (PACE) assisted with successful closing of \$117,000 lighting retrofit in Petaluma
- Brought 13 local trainings for building dept. staff and officials to Sonoma County that served over 126 participants
- Windsor Efficiency Pay As You Save® (PAYS®) served 5% of homes in Windsor, processed over \$425,000 in on-bill surcharges

Emissions Reductions - Buildings

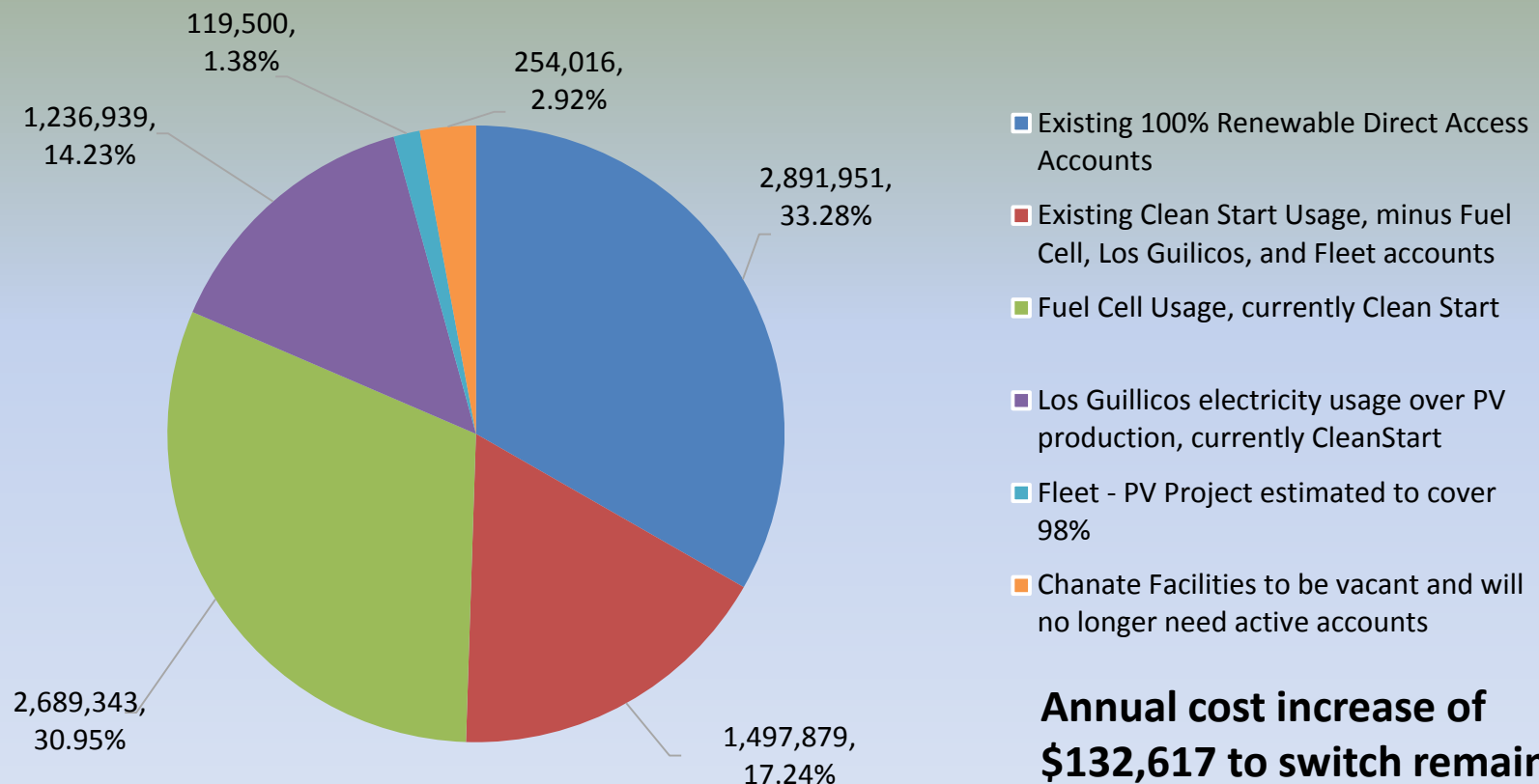
Sonoma Clean Power

- Offer free energy saving toolkits
- Lending customers induction cooktops to test in their homes
- Santa Rosa “Energy Store” for existing buildings
- Offering support for jurisdictions looking at all-electric reach codes
- On-bill repayment options to bring energy efficiency to all
- Expanding GridSavvy Community to help technologies connect to the grid

Emissions Reductions

Power Supply for County Buildings

Sonoma Clean Power – Evergreen Product vs. Clean Start (Current)



**Annual cost increase of
\$132,617 to switch remaining
County accounts to Evergreen**

2018 kWh Usage for County Electric Accounts Paid by
General Services, Energy and Sustainability General Funds

Emissions Reductions - Electrification/Fuel Switch

Sonoma Clean Power incentives with PG&E and Air District for Advanced Rebuild Incentive

- Collaboration with PG&E and Bay Area Air Quality Management District.
- Up to \$17,500 in incentives with one easy online application.
- 168 homes have applied for the program through mid-February 2019. Approximately 38% of which are all-electric.
- Homes are projected to be 26% better than current energy code and are predicted to save \$650 annually on utility bills.

Grid Resilience and Preparedness

- County Energy Efficiency and Grid Management
- Sonoma Clean Power Programs
 - Battery storage pilot program for industrial customers
 - GridSavvy program for “smart” home technologies that help grid resilience.
 - Working with 15 pilot homes to test the latest energy efficiency technologies.

Conclusion

- Action at all levels is necessary to mitigate the impacts of climate change.
- Sonoma County's climate champions work collaboratively and coordinate efforts to support local decisions and actions.
- Priorities to meet 2030 greenhouse gas reduction goals
 - Emissions Reductions
 - Transportation
 - Power Supply
 - Grid Resilience and Preparedness