Background

City of San Rafael
Climate Change Action Plan
April 2009

25% x 2020
REDUCTIONS

40/48
MEASURES
New Interim State Targets

40% x 2030

CALIFORNIA CLIMATE STRATEGY

An Integrated Plan for Addressing Climate Change

VISION

Reducing Greenhouse Gas Emissions to 40% Below 1990 Levels by 2030

GOALS

- 50% reduction in petroleum use in vehicles
- Carbon sequestration in the land base
- 50% renewable electricity
- Double energy efficiency savings at existing buildings
- Reduce short-lived climate pollutants
- Safeguard California
2009 CCAP Status: 18% Reduction

**COMPLETED**

**ONGOING**

**IN PROGRESS**

**NOT STARTED**
CCAP 2030 Process
Plan Structure: Local Actions

- Low Carbon Transportation
- Energy Efficiency
- Renewable Energy
- Waste Reduction
- Water Conservation
- Sequestration and Adaptation
- Community Engagement
- Implementation and Monitoring
Economy and Equity

ECONOMY
ENVIRONMENT
SOCIAL EQUITY
Local Actions: 97,100 MTCO2e

- Renewable Energy: 32%
- Energy Efficiency: 19%
- Low Carbon Transportation: 38%
- Waste Reduction: 10%
- Water Conservation: 1%
Key Actions

**Key Actions:**

1. Energy Efficiency
2. Benchmarking building energy use
3. Apply EE to smaller projects
4. EE financial benefits & streamlining
5. Solar
6. Green electricity
7. Mandatory recycling/composting
8. Recycling equipment
9. Greywater/recycled water
10. Sequestration (plants, trees, soil)
11. Adaptation (lightly: plan!)
Low Carbon Transportation

**Key Actions:**

1. Expand the City’s EV charging network.
2. Develop policies and programs to encourage ZEV’s.
3. Create more bicycle/pedestrian infrastructure.
4. Encourage public transportation and electric buses.
5. Work with rideshare and carshare programs to utilize ZEV’s.
6. Transition City fleet to ZEV’s.
### TABLE 3: LOW CARBON TRANSPORTATION MEASURES TO REDUCE COMMUNITY EMISSIONS

<table>
<thead>
<tr>
<th>ID</th>
<th>Measure</th>
<th>GHG Reduction by 2030 (MTCO₂e)</th>
<th>Share of Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCT-C1</td>
<td>Zero Emission Vehicles</td>
<td>30,935</td>
<td>84%</td>
</tr>
<tr>
<td>LCT-C2</td>
<td>Bicycling</td>
<td>1,910</td>
<td>5%</td>
</tr>
<tr>
<td>LCT-C3</td>
<td>Walking</td>
<td>580</td>
<td>2%</td>
</tr>
<tr>
<td>LCT-C4</td>
<td>Safe Routes to School</td>
<td>320</td>
<td>1%</td>
</tr>
<tr>
<td>LCT-C5</td>
<td>Public Transit</td>
<td>1,035</td>
<td>3%</td>
</tr>
<tr>
<td>LCT-C6</td>
<td>Employee Trip Reduction</td>
<td>1,030</td>
<td>3%</td>
</tr>
<tr>
<td>LCT-C7</td>
<td>Traffic System Management and Vehicle Idling</td>
<td>1,075</td>
<td>3%</td>
</tr>
<tr>
<td>LCT-C8</td>
<td>Parking Requirements</td>
<td>55</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>LCT-C9</td>
<td>Smart Growth Development</td>
<td>n/a*</td>
<td>n/a</td>
</tr>
<tr>
<td>LCT-C10</td>
<td>Electric Landscape Equipment</td>
<td>110</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>37,040</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Emissions reductions due to smart growth development are embedded in vehicle miles traveled projections utilized in the development of the emissions forecast. In order to avoid double-counting, they are not included here.
Where our emissions come from

- Passenger Vehicles: 45%
- Natural Gas: 21%
- Off-Road Emissions: 1%
- Waste: 4%
- Electricity: 13%
- Buses: 2%
- Commercial Vehicles: 14%
Community Engagement

What You Can Do

#1 Buy only as much as you need.

#2 Buy locally grown food and eat less meat.

#3 Put your food scraps in the green can and/or compost them at home.

#4 Donate extra food and used clothing and housewares to charities.

#5 Don’t be a “wishful” recycler. Be scrupulous about how you sort your recyclables.
Consumption

• In-boundary vs. consumption

• Consumption-based:
  • Upstream emissions
  • Mining, growing, producing, packaging, shipping
  • Air travel
  • Food production

- In-Boundary: 17 MTCO2e
- Consumption-based: 44 MTCO2e
Timeline

October
Council Presentation

November
Draft Plan for Public Review

December
BAAQMD and Environmental Review

January/February
Planning Commission Review and Council Adoption

Then develop the online platform & Implement!
QUESTIONS?
Early Priority Items

- Expand EV charging network
- Develop policies and programs to encourage ZEV's
- Incentivize building energy reductions
- Increase promotion of rooftop solar and renewable electricity
- Explore early adoption of mandatory recycling
- Begin adaptation planning
- Initiate local business engagement
Consumption Inventory

https://baaqmd.maps.arcgis.com/apps/MapSeries/index.html?appid=94b9eff6547f459fba27a6853327e1a2
SUMMARY OF STATE ACTIONS

The Climate Change Action Plan incorporates State reduction strategies that have been approved, programmed and/or adopted and will reduce local community emissions from 2016 levels. These programs require no local actions. As such, the State actions are first quantified and deducted from projected community emissions in order to provide a better picture of what still needs to be reduced at the local level to get to the overall reduction targets. State actions and emissions reductions are shown in Table 1 and detailed in the appendix.

TABLE 1: EMISSIONS REDUCTIONS FROM STATE ACTIONS

<table>
<thead>
<tr>
<th>State Action</th>
<th>Emissions Reductions by 2030 (MTO\textsubscript{2}e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light and Heavy-Duty Vehicle Regulations</td>
<td>56,700</td>
</tr>
<tr>
<td>Renewable Portfolio Standard</td>
<td>5,415</td>
</tr>
<tr>
<td>Title 24 Energy Efficiency Standards</td>
<td>2,690</td>
</tr>
<tr>
<td>Lighting Efficiency</td>
<td>980</td>
</tr>
<tr>
<td>Residential Solar Water Heaters</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65,810</strong></td>
</tr>
</tbody>
</table>

*Note: Numbers may not total due to rounding.*
**SUMMARY OF LOCAL STRATEGIES**

The local mitigation measures presented in the following sections, and as summarized in Table 2 below, achieve greenhouse gas emissions reductions in the community of approximately 28,105 MTCO$_2$e in 2020 and 98,510 MTCO$_2$e in 2030.

**TABLE 2: LOCAL EMISSIONS REDUCTION STRATEGIES**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>GHG Reductions by 2030 (MTCO$_2$e)</th>
<th>Percent of Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Carbon Transportation</td>
<td>37,615</td>
<td>38%</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>18,055</td>
<td>18%</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>31,985</td>
<td>32%</td>
</tr>
<tr>
<td>Waste Reduction</td>
<td>10,025</td>
<td>10%</td>
</tr>
<tr>
<td>Water Conservation</td>
<td>830</td>
<td>1%</td>
</tr>
<tr>
<td>Sequestration and Adaptation</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Community Engagement</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Implementation and Monitoring</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98,510</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

These local strategies will be detailed in the following sections. Together, the projected reductions from State and local actions total 164,315 MTCO$_2$e by 2030, which exceeds the 40% reduction target set by the State.
Greenhouse Gas Status

- 2016, emissions reduced 18%
- 2009 CCAP: goal to reduce emissions 25% by 2020
- 2030 target: 40% reduction
- 2050 target: 80% reduction