City of Solana Beach

• In 2010: **139,216** metric tons of carbon dioxide equivalent (MTCO2e)

• **Five Sectors**
  1. Transportation (63%)
  2. Electricity (20%)
  3. Natural Gas (11%)
  4. Solid Waste (3%)
  5. Water Consumption (2%)
Solana Beach CAP Goals

• GHG reduction targets:

  ✓ 15% below 2010 by 2020

  ✓ 50% below 2010 by 2035
Four Strategies

• **Strategy 1: Transportation**
  - 11 different measures. Total estimated GHG reductions of 19,632 MTCO2e/year if all were implemented.

• **Strategy 2: Electricity and Natural Gas Measures**
  - 8 different measures. Total estimated GHG reductions of 21,214 MTCO2e/year if all were implemented.

• **Strategy 3: Waste and Water Measures**
  - 5 different measures. Total estimated GHG reductions of 4,184 MTCO2e/year if all were implemented.

• **Strategy 4: Carbon Sequestration (Urban Tree Planting)**
  - 1 measure. Total estimated GHG reductions of 986 MTCO2e/year if implemented.
Top 5 Measures

**Measure T-1**: Increasing electric vehicles and alternative fuel vehicles in the region (Reduction=17,495 MTCO2e)

**Measure E-1**: Implementing Community Choice Aggregation (Reduction=10,466 MTCO2e)

**Measure E-2**: Installing 10.8 megawatts of residential rooftop solar photovoltaic systems (Reduction=5,858 MTCO2e)

**Measure W-1**: Diverting 90 percent of solid waste from landfills, with an 85 percent capture rate (Reduction=3,389 MTCO2e)

**Measure E-4**: Installing solar hot water heaters at commercial spaces (Reduction=2,811 MTCO2e)
SANDAG SNAPSHOT & EPIC INVENTORY

Solana Beach GHG Emissions and CAP Targets

Metric Tons CO2e

- 160,000.00
- 140,000.00
- 120,000.00
- 100,000.00
- 80,000.00
- 60,000.00
- 40,000.00
- 20,000.00

2010 Emissions
2016 Emissions
2019 Estimate

2020 Target
2035 Target
CAP UPDATE 2022

Future measures likely to focus on:
- Increasing EV Infrastructure
- Grid resiliency
- Battery storage
- Increasing renewable energy sources
- Improving energy efficiency in existing and new buildings
- Electrifying buildings
City of Del Mar

- Adopted Climate Action Plan in June 2016
- 2012 baseline greenhouse gas (GHG) emissions inventory
  - 55,855 MTCO$_2$e
  1. Transportation (57%)
  2. Electricity (35%)
  3. Waste (5%)
  4. Water (2%)
  5. Wastewater (<1%)
City of Del Mar

- GHG reduction targets:
  - 15% below 2012 by 2020
  - 50% below 2012 by 2035

- Renewable energy goal:
  - 50% by 2020
  - 100% by 2035
City of Del Mar

- Current Progress

Del Mar GHG Emissions (MTCO$_2$e)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2035 Target</td>
<td>27,928</td>
</tr>
<tr>
<td>Current Emissions</td>
<td>43,500</td>
</tr>
<tr>
<td>2020 Target</td>
<td>47,477</td>
</tr>
<tr>
<td>2012 Baseline</td>
<td>55,855</td>
</tr>
</tbody>
</table>

2016 GHG Inventory Distribution (%)

- On-Road Transportation: 57%
- Electricity: 18%
- Natural Gas: 6%
- Solid Waste: 17%
- Water: <1%
- Wastewater: 1%
City of Del Mar

• 22 Goals in four (4) Sectors:
  1. Energy and Buildings (7 strategies; 5,859 MTCO₂e reduction potential)
  2. Water and Waste (5 strategies; 1,864 MTCO₂e reduction potential)
  3. Transportation (9 strategies; 8,893 MTCO₂e reduction potential)
  4. Urban Tree Planting (1 strategy; 234 MTCO₂e reduction potential)

• Plus eight (8) social equity strategies

• Remaining reductions achieved through climate action at the regional and state level
City of Del Mar

• Key GHG Reduction Measures with Nexus to CEA:
  • **Goal 7**: Renewable Energy Supply
    • 50% renewable electricity supply in 2020 and 100% by 2035
    • Strategy – Implement a Community Choice Aggregation Program (complete!)
  • **Goals 1 & 2**: Residential and Non-Residential Photovoltaics (PV)
    • Install 2MW PV by 2020 and 2.5 MW PV by 2035
  • **Goal 3**: Residential Energy Efficiency (EE) Retrofits
    • 20% energy reduction in 10% homes by 2020; 30% reduction in 20% by 2035
    • CAP also includes EE retrofit goals for multi-family properties and businesses
  • **Goal 16**: Increase Vehicle Miles Traveled (VMTs) by Electric Vehicles (EVs)
    • 15% total VMT driven by EVs by 2020; 30% by 2035
City of Carlsbad

• Adopted CAP in 2015 with General Plan update
  • Implementation includes building codes and electric vehicle charging infrastructure

• Updated CAP in 2020
  • 2012 GHG inventory baseline
  • State and regional guidance for GHG emission forecasts and reduction targets
  • Added Clean Electricity measure

• Comprehensive CAP update beginning 2021
Baseline GHG Inventory and Targets

• 2012 baseline inventory = 977,000 MTCO$_2$e
  • Transportation = 51.3%
  • Electricity/Natural Gas = 44.5%
  • Solid Waste = 2.5%
  • Water and Wastewater = 1.75

• GHG Reduction Targets
  • 4% below 2012 by 2020 = 939,000 MTCO$_2$e
  • 52% below 2012 by 2035 = 472,000 MTCO$_2$e
Current GHG Reduction Strategy Areas

- Electricity
- Natural gas
- Transportation
  - Vehicle emissions
  - Vehicle miles traveled
- Water conservation
- Public outreach and engagement
Community GHG Inventories

Community GHG Inventories
2012, 2014, 2016, 2018
(MTCO₂ₑ)

On-Road Transportation
Electricity
Natural Gas
Solid Waste
Water
Wastewater
Off-Road Transportation

9/9/21
Key Measures

- **Clean Electricity** - Increase the proportion of clean electricity in community energy consumption
  - 2035 reduction = 56,207 MTCO\(_2\)e

- **Zero-emissions Vehicle (ZEV) Travel** – Promote increase in ZEV travel through EV charging infrastructure and fleet conversion
  - 2035 reduction = 49,912 MTCO\(_2\)e

- **Energy Efficiency Retrofits** – Promote single and multifamily and commercial/industrial retrofits
  - 2035 reduction = 19,558 MTCO\(_2\)e