



**BOARD OF SUPERVISORS
AGENDA LETTER**

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: Community Services
Department No.: 057
For Agenda Of: April 5, 2022
Placement: Departmental
Estimated Time: 1 hour

Continued Item: No
If Yes, date from: N/A
Vote Required: Majority

TO: Board of Supervisors
FROM: Department
Director George Chapjian, Community Services Director
(805) 568-2467

Contact Info: Ashley Watkins, Sustainability Division Chief
(805) 568-3514

SUBJECT: 2015 Energy & Climate Action Plan Final Report & Climate Action Program Updates

County Counsel Concurrence

As to form: Yes
Other Concurrence:

Auditor-Controller Concurrence

As to form: Yes

Recommended Actions:

- A. Receive and file the 2015 Energy and Climate Action Plan (ECAP) Final Report and 2018 Greenhouse Gas Inventory (Attachment A);
- B. Update the County’s carbon reduction goals by:
 - i. Adopting the goal of carbon neutrality by 2045 or sooner, as feasible; and
 - ii. Updating the interim 2030 goal from 50% reduction below 2007 levels to 50% net reduction from current (2018) levels;
- C. Provide direction to staff regarding implementation of early climate actions (Attachment B); and
- D. Determine that the recommended actions do not constitute a project and are exempt from the California Environmental Quality Act (CEQA) pursuant to the CEQA Guidelines Section 15378(b)(2), as they involve continuing administrative actions. When projects and programs proceed to implementation, they may be subject to environmental review under CEQA.

Summary Text

This item is on the agenda to request the Board receive and file the 2015 ECAP Final Report and provide direction regarding updating carbon reduction goals and early climate actions.

The ECAP Final Report evaluates the County's progress towards reaching its 2020 emissions reduction goal for the unincorporated county area. 41 out of 53 (77%) emission reduction measures were either initiated or completed by 2020, and 44% of the target emission reductions needed to meet the County's 2020 goal were achieved. 2018 GHG emissions in the unincorporated County are 11% above 2007 levels, trending down slightly from 2016 (3%).

Staff recommends that the Board adopt the goal of achieving carbon neutrality by 2045 or sooner, as feasible, and abandon the use of the 2007 baseline and update the interim 2030 goal from 50% reduction below 2007 levels to 50% net reduction from current (2018) levels. The use of a historical reference for target setting and process tracking is no longer relevant or useful in a forward-looking policy environment where carbon neutrality is the end goal.

Additionally, staff recommends that the Board provide direction to staff regarding early climate actions:

- Develop an ordinance to restrict natural gas infrastructure and increase energy efficiency performance and electric vehicle charging infrastructure for new construction and major renovations.
- Assess the feasibility of updating the Zero Net Energy Resolution to Zero Carbon for County buildings in order to design and build new buildings to be all-electric and replace or retrofit space and water heating devices and equipment in existing buildings.
- Develop a Zero Emission Vehicle Plan to strategically identify gaps, resources, projects and programs to advance use of zero emission vehicles in County operations and the community.

More information about the ECAP is available at <http://www.countyofsb.org/sustainability/ecap/>.

2015 Energy & Climate Action Plan Final Report

The ECAP identified 53 emission reduction measures (ERMs) and over 220 associated actions to be initiated or achieved by 2020 in order to meet the County's reduction goal. Examples of ERMs include promoting energy efficiency, installing charging stations to encourage electric vehicle use, and keeping trash out of the landfill through recycling and composting. The actions were broadly aimed at reducing local carbon emissions and better preparing the community for the impacts of climate change.

- 41 out of 53 (77%) measures were either initiated or completed by 2020.
 - 5 (9%) measures have not yet started.
 - 7 (13%) measures were discontinued.
- An estimated 100,754 metric tons of carbon dioxide equivalent (MT CO₂e) were avoided which equates to 44% of the ECAP target reductions needed to meet the County's 2020 goal. GHG missions are trending down slightly and are now 11% above 2007 levels, 3% lower than 2016.
- Evaluation of the ECAP was conducted through an Existing Conditions Emissions Reduction Evaluation (ECERE) tool, completed by various County departments and partner organizations.

Through evaluating the ECAP’s progress, we have learned some valuable lessons that will be carried forth into the County’s 2030 Climate Action Plan.

Table 1. 2018 Unincorporated County Greenhouse Gas Inventory Summary

Sector	Emissions (MT CO₂e)	Percent of Total Emissions
Energy	390,105	27%
Electricity	90,843	6%
Natural Gas	294,859	21%
Electricity Transmission and Distribution Losses	4,403	<1%
Transportation	776,168	54%
On-road Transportation	700,706	49%
Off-road Equipment	75,463	5%
Water/Wastewater	14,184	1%
Water conveyance, distribution, and treatment	9,286	1%
Wastewater collection and treatment	327	<1%
Wastewater Fugitive and Process Emissions	4,572	<1%
Solid Waste	52,168	4%
Waste Sent to Landfills	50,590	4%
Process Emissions	1,577	<1%
Agriculture	195,140	14%
N ₂ O Applied as Fertilizer	32,380	2%
Enteric Fermentation	124,033	9%
Manure Management	38,727	3%
Total	1,427,766	100%

Notes: Emissions have been rounded and therefore sums may not match
MT CO₂e: Metric tons of Carbon Dioxide Equivalent

- Some implementation highlights include:
 - In 2019, the County joined with Central Coast Community Energy (CCCE) to implement community choice energy. In 2021, CCCE launched its service to residential and commercial customers in the entire unincorporated area and cities, with the exception of Santa Barbara and Lompoc. CCCE’s default energy product increases customers’ use of renewable energy to 31% and puts the County on the path to achieve 100% renewable energy by 2030.
 - In collaboration with Ventura and San Luis Obispo Counties, the County launched the Tri-County Regional Energy Network (3C-REN) to provide tailored programs and services to increase energy efficiency in new and existing buildings through customer programs, workforce development, and training. In 2020 alone, 3C-REN held over 50 educational and professional development events engaging over 900 attendees in architecture, building trades, construction, and code compliance industries.
 - In 2021, the County completed the construction of the ReSource Center (formerly known as the Tajiguas Resource Recovery Project). This facility serves the County’s unincorporated communities of the South Coast, Santa Ynez Valley, and Cuyama Valley as well as the cities of Santa Barbara, Goleta, Buellton, and Solvang. This facility is one of the largest greenhouse gas reduction initiatives for the County to date. Total reductions

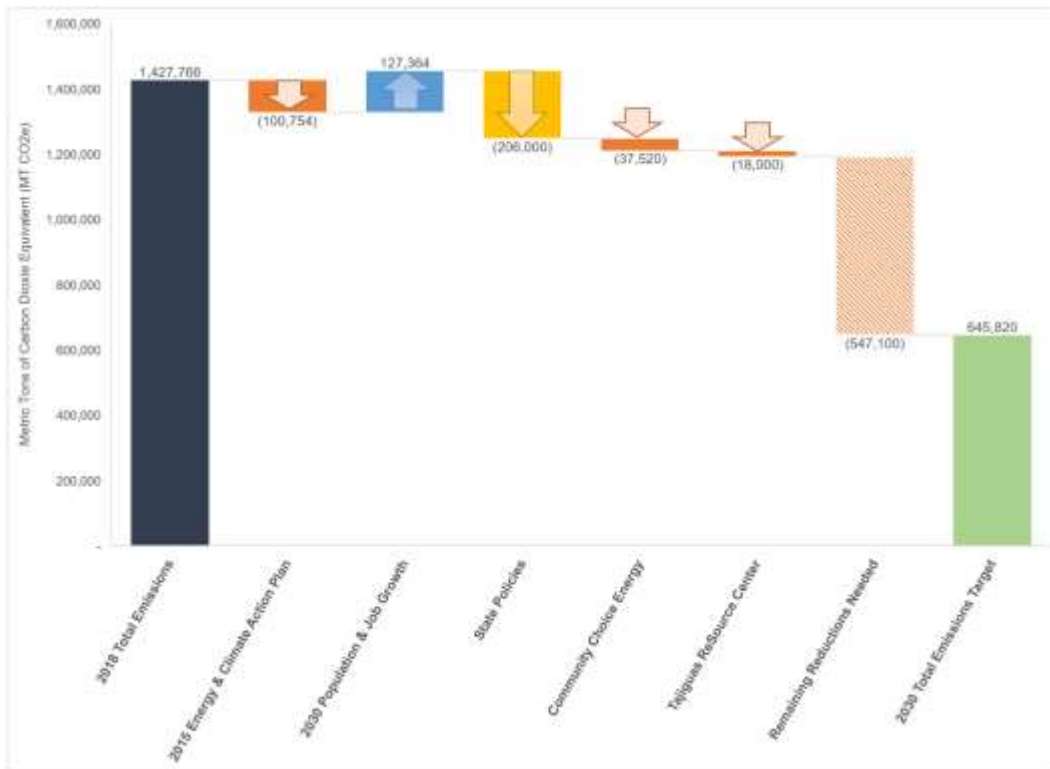
from green energy, increased recycling, and avoidance of future landfill methane emissions is equivalent to over 28,000 vehicles on the road per year¹. This facility will also increase the total waste diversion rate for affected communities above 85%.

- The Final Report (Attachment A) includes a detailed implementation table that evaluates the progress of each ERM.

Looking Ahead

Achieving 100% renewable and carbon free energy through Community Choice Energy would achieve an additional reduction of 37,520 MT CO₂e by 2030. Additionally, full operation of the Tajiguas Landfill ReSource Center would result in an annual reduction of 18,000 MT CO₂e. Combined with the ECAP progress, these additional reductions would achieve an estimated reduction of 156,768 MT CO₂e. Assuming an estimated increase of emissions from population and economic growth and reductions from Statewide policies, a gap of well over 500,000 MT CO₂e remains in order to meet the 50% reduction target by 2030 (below 2007 levels), as shown in Figure 1.

Figure 1. Emissions Waterfall Trend Graph



The scale and scope of the 2030 Climate Action Plan must not be understated. The County needs to achieve an annual emission reduction rate of approximately 4-6% in order to meet its goal. Community acceptance and adoption of sustainable technologies and behaviors are critical to achieving the communitywide goals.

¹ Estimated using the EPA Greenhouse Gas Equivalencies Calculator; Assumes an average 11,556 miles driven in one year

Leadership from local cities is also needed to ensure the entire region supports and facilitates denser transit-oriented development, clean energy, zero emission vehicles, and sustainable mobility options. However, when it comes to personal lifestyles and decisions regarding business operations, the County has limited ability and influence. The County's strengths lie in its authority over land use and permitting, infrastructure, business regulations, basic services, and convening capacity. Limited staff and financial resources mean the County must rely on external funding sources for voluntary programs and incentives. In order to meet the County's goals, the next climate action plan must:

- Be developed in concert with the responsible departments or agencies in order to ensure robustness and feasibility;
- Include regulatory or administrative mechanisms to assure a target is achieved by a time certain;
- Integrate into existing plans, programs, projects, and departmental work plans and budgets, and identify staffing and resource needs;
- Utilize focus areas over sectors and structure actions to ensure the greatest amount of impact that can be feasibly achieved; and
- Leverage partnerships and collaboration to address gaps in policy, programs, and projects, rather than try to lead on all fronts.

Carbon Reduction Goals

Staff recommends that the Board update the County's carbon reduction goals by adopting the goal of achieving carbon neutrality by 2045 or sooner, as feasible, and updating the interim 2030 goal from 50% reduction below 2007 levels, to 50% net reduction from current (2018) levels.

In 2018, Governor Brown signed Executive Order B-55-18 which calls for California to achieve carbon neutrality as soon as possible, and no later than 2045. A forward-looking target (carbon neutrality by 2045) would align the County with the State's target, allow staff to spend more time on monitoring key performance indicators, and reduce the amount of time and resources spent on greenhouse gas analysis.

The County has relied on a historical baseline year of 2007 to establish its future emissions reduction targets (for example, 15% below 2007 levels by 2020). While this was the accepted practice at the time, it is no longer relevant in a forward-looking policy environment where carbon neutrality is the end goal (see discussion below). Conducting emissions inventories and attempting to compare them to historical ones has proven to be more challenging and costlier than anticipated, exceeding the utility gained by doing so.

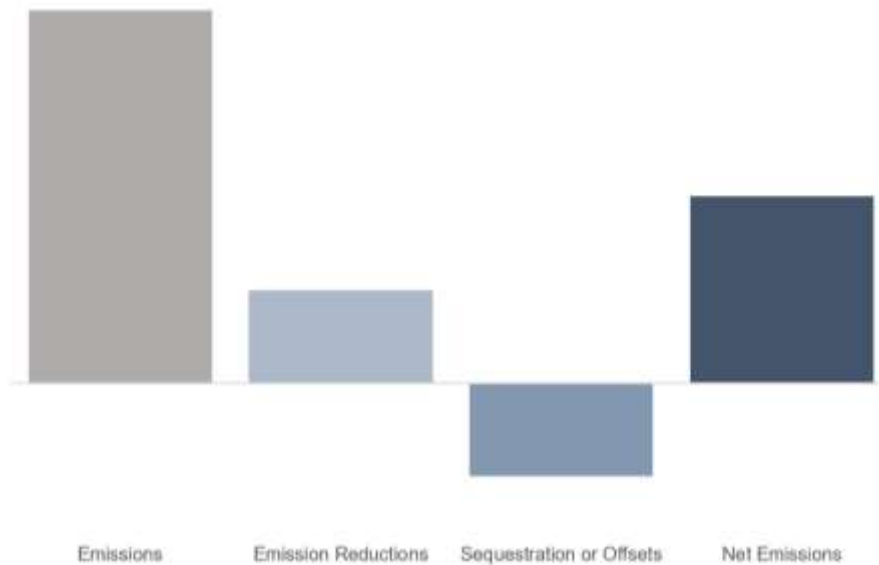
Looking ahead to carbon neutrality, it makes sense to update the interim 2030 goal from 50% reduction below 2007 levels, to 50% net reduction from current (2018) levels. The change in baseline and terminology would not significantly impact the County's reduction pathway or the measures necessary to meet the goals under either scenario, as shown in Table 2.

Table 2. Comparison of Emission Baselines and Targets

Baseline Year	Annual Emissions	2030 Emissions Target	Target Emissions	Volume of Emission Reductions Needed to Meet Goal (from 2018/current levels)	Equivalent to # of Cars Driven for One Year
2007	1,291,628	50% below 2007	645,814	781,952	170,059
2018	1,427,766	50% net reduction from 2018	713,883	713,883	155,255

The term ‘net reduction’ expands the focus from purely mitigating or reducing carbon emissions, to also include sequestering carbon, or removing carbon, from the atmosphere. This means that carbon sequestration and offsets can be implemented and procured, respectively, to complement efforts to reduce the consumption of fossil fuels, as show conceptually in Figure 2. Net emissions would account for the creation or expansion of carbon sinks, like trees, rangelands and carbon storage systems.

Figure 2. Net Emission Reduction Conceptual Chart



Early Climate Actions

Staff anticipate bringing the draft 2030 Climate Action Plan (CAP) to the Board by Summer 2022. Once the draft CAP is approved, staff and consultants will prepare the Environmental Impact Report and finalize the CEQA Greenhouse Gas Emissions Threshold Guidance for Project Review. Staff anticipate bringing these deliverables and the final CAP for Board adoption in approximately 18 months.

In June 2020, the Board directed staff to propose early actions for which the Board can give direction in advance of adopting the final 2030 CAP. Staff have identified several actions that are time-sensitive and would lay the groundwork for future emission reductions. As each of these actions must be developed with internal and external stakeholders and require Board approval before being implemented, staff seek early direction from the Board before proceeding. The three recommended early actions are:

- 1. Develop an ordinance to restrict natural gas infrastructure and increase energy efficiency performance and electric vehicle charging infrastructure for new residential construction and major renovations.*

Building energy use accounts for 27% of the County's carbon emissions. The County's decision to join Central Coast Community Energy puts the community on the path to 100% carbon free electricity by 2030. As the electric grid supply is decarbonized, or no longer powered by fossil fuels, natural gas use will be the last source of carbon emissions in buildings.

Local jurisdictions have the authority to adopt more aggressive building codes (reach codes) or health and safety codes that can affect energy performance or energy sources in new construction and major renovation projects as long as they meet certain requirements such as being cost effective. Over 50 California jurisdictions have adopted all-electric or electric-preferred building codes. Eight cities, including Ojai, Santa Barbara and San Luis Obispo, have adopted bans on natural gas infrastructure in new buildings.

While usually affecting a relatively small percentage of the building stock, local codes are an important and necessary step for jurisdictions seeking to avoid locking in unnecessary emissions growth which will be costlier to mitigate in the future. A ban on natural gas would generally benefit builders and occupants by reducing upfront costs associated with constructing dual-fuel homes. By avoiding gas infrastructure, cost effectiveness studies prepared for the State's utilities have found that construction costs can be reduced \$900-\$25,000 in a single-family home and \$300-\$16,250 per unit in a multifamily dwelling.

By restricting new natural gas infrastructure in residential buildings, staff estimate that the County would avoid over 10,000 MT of carbon emissions, or roughly 8% of forecasted natural gas emissions.

- 2. Assess the feasibility of updating the Zero Net Energy Resolution to Zero Carbon for County buildings in order to design and build new buildings to be all-electric and replace or retrofit space and water heating devices and equipment in existing buildings.*

In 2014, the Board adopted the Zero Net Energy Resolution to reduce carbon emissions and boost Santa Barbara's economy by investing in green technology and green jobs. Specifically, the resolution required that: "All new Santa Barbara County owned facilities and major renovations beginning design after 2025 be constructed as Zero Net Energy Facilities with an interim target for 50% of new facilities beginning design after 2020 to be Zero Net Energy. Santa Barbara County Departments shall also take measures toward achieving ZNE for 50% of the square footage of existing Santa Barbara County owned facilities by 2025 and the remaining 50% by 2035."

For the same reasons stated above, the County should focus its attention on reducing carbon emissions from its natural gas use. County facilities consume on average 500,000 therms of natural gas each year, which is equivalent to roughly 575 passenger vehicles being driven for one year². Advancements in technologies and incentives have made all-electric heat pump water and space heaters more efficient, accessible, and affordable. All-electric facilities would essentially be carbon free given the source of electricity.

The Sustainability Division will work with General Services to develop size- and cost-based criteria for replacing natural gas equipment with all-electric. This process could take place through the annual Capital Improvement Program and would initially address smaller projects and gradually capture larger projects over time.

- 3. Develop a Zero Emission Vehicle Plan to strategically identify gaps, resources, projects and programs to advance the use of zero emission vehicles in County operations and the community.*

Transportation accounts for nearly 50% of the County's carbon emissions. Currently, zero emission vehicles (ZEV) account for less than 2% of all vehicles on the road in Santa Barbara County. In order to meet the County's goal of reducing communitywide emissions 50% by 2030, transportation emissions must be addressed in a concerted effort.

ZEV planning and implementation transects nearly all County operations and community functions, from fleet vehicles, workplace charging, building owner/tenant relations, and parking management. Both the Federal and State governments have committed billions of dollars to be invested in ZEV infrastructure and vehicles in the coming years.

A ZEV Plan would identify the gaps in planning, infrastructure, resources, and access for internal operations and community needs, and develop strategies to address them. Community Services has submitted an expansion request as part of the FY22-23 Budget development process for an FTE staff person to develop and implement the ZEV Plan.

² Estimated using the EPA Greenhouse Gas Equivalencies Calculator; Assumes an average 11,556 miles driven in one year

Performance Measure:

Unincorporated County community emissions: 11% above 2007 baseline levels

Fiscal and Facilities Impacts:

N/A

Staffing Impacts: None

Special Instructions: Please send one copy of the minute order to Ashley Watkins

Attachments:

- A. 2015 Energy & Climate Action Plan Final Report (including Implementation Table and 2018 Greenhouse Gas Inventory)
- B. Early Climate Action Recommendations

Authored by:

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cc: