

Early Climate Action Recommendations

In the July 2020 meeting, the Board directed staff to identify early actions that can be taken in advance of adopting the 2030 Climate Action Plan. Staff have identified actions that can be implemented or initiated with relatively little resources and have a significant impact. Staff seek early direction from the Board before proceeding as each of these actions must be developed with internal and external stakeholders and require Board approval before being implemented.

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

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 jurisdictions have adopted all-electric or electric-preferred building codes. The eight cities, including the cities of Ojai, Santa Barbara and San Luis Obispo, have adopted bans on natural gas infrastructure in new buildings.

The State 2022 Building Code (in effect Jan 2023) will require residential buildings to be 'electric-ready' but still allow for natural gas infrastructure. The code does not yet require electric-ready for non-residential 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 which will be costlier to mitigate in the future. A ban would ensure that no new natural gas demand is created through new construction and that the ordinance would persist despite regular updates to the State Building Code. A ban on natural gas would generally benefit builders and occupants by reducing upfront costs associated with constructing dual-fuel homes, as represented by the negative values (cost savings) in Table 3 below.

Table 3. Incremental Costs – All-Electric Code Compliant Home Compared to a Mixed Fuel Code Compliant Home
(Source: 2019 Energy Efficiency Ordinance Cost-effectiveness Study)

Measure	Incremental Cost (2020 PV\$) Single Family ¹				Incremental Cost (2020 PV\$) Multifamily ¹ (Per Dwelling Unit)				
	Low	High	Typical (On-Bill)	Typical (TDV)	Low	High	Typical (On-Bill)	Typical (TDV)	
Heat Pump vs Gas Furnace/Split AC	(\$2,770)	\$620	(\$221)		Same as Single Family				
Heat Pump Water Heater vs Gas Tankless	(\$1,120)	\$1,120	\$0						
Electric vs Gas Clothes Dryer ²	(\$428)	\$820	\$0						
Electric vs Gas Cooking ²	\$0	\$1,800	\$0						
Electric Service Upgrade	\$200	\$800	\$600		\$150	\$600	\$600		
In-House Gas Infrastructure	(\$1,670)	(\$550)	(\$800)		(\$600)	(\$150)	(\$600)		
Site Gas Infrastructure	(\$25,000)	(\$900)	(\$5,750)	(\$11,836)	(\$16,250)	(\$310)	(\$3,140)	(\$6,463)	
Total First Cost	(\$30,788)	\$3,710	(\$6,171)	(\$12,257)	(\$20,918)	\$4,500	(\$3,361)	(\$6,684)	
Present Value of Equipment Replacement Cost				\$1,266	\$1,266				
Lifetime Cost Including Replacement & Financing of First Cost				(\$5,349)	(\$11,872)	(\$2,337) (\$5,899)			

¹Low and high costs represent the potential range of costs and typical represents the costs used in this analysis and determined to be most representative of the conditions described in this report. Two sets of typical costs are presented, one which is applied in the On-Bill cost effectiveness methodology and another applied in the TDV methodology.

²Typical costs assume electric resistance technology. The high range represents higher end induction cooktops and heat pump clothes dryers. Lower cost induction cooktops are available.

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.

Staff recommend that the Board direct staff to develop a natural gas ban and other beneficial local codes for electric vehicle charging, renewable energy, resilience, etc. during its local amendment and adoption process in advance of January 2023.

2. Assess the feasibility of updating the Zero Net Energy Resolution to Zero Carbon for County municipal 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, which 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.”

With Central Coast Community Energy and Santa Barbara Clean Energy supplying most County facilities with 100% carbon free electricity, 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 in its buildings and facilities, which is equivalent to roughly 575 passenger vehicles being driven for one year. 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 renewable electricity.

Staff recommend that the Board direct staff to develop criteria and assess the feasibility for adoption a Zero Carbon Resolution that requires all new Santa Barbara County owned facilities and major renovations be constructed as Zero Carbon and replace or retrofit space and water heating devices and equipment in existing buildings.

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% 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.

Staff recommend that the Board direct staff to prepare for adoption of a Zero Emission Vehicle Plan.