

working at the local level y change that reduces greenho has tangible positive benefits in other areas. Rick Cole, San Buenaventura, CA City Manager

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ties represent the most personally accessible level of government for affecting change, and also represent he greatest concentration of infrastructure available for affecting sustainable design changes and practices.

-Craig Whan, AECOM Senior Manager

Low Carbon Fuels

Cool Roofs

Community Greenhouse Gas Solutions: Prioritizing Emissions-Reducing Strategies

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Our project addresses climate change mitigation at the community level through our original software, SAFEGUARD. SAFEGUARD provides communities with a tailored combination of greenhouse gas reduction strategies, customized for cost-effectiveness, geographic constraints and political feasibility.



900000



2008 Population: **2007 GHG Emissions Inventory:** 750,305 metric tonnes of CO_2e

SAFEGUARD provides a profitable set of emissions-reducing strategies, which Ventura can apply to achieve the 2020 goal, returning to 1990 emissions.

With the current set of strategies and estimated implementation levels for Ventura, SAFEGUARD is unable to counteract the business as usual emissions growth and reach the 2050 reduction goal. However, with more strategies and increased implementation Ventura may be able to reduce to 80% below 1990 levels.

San Buenaventura



How SAFEGUARD Works

Theories, Methods & Policy Targets

Geographic feasibility is determined through physical attributes of a given city and is imperative for determining reduction strategy feasibility. Trees cannot be planted without space to plant them, buildings cannot be insulated if there is not a building to insulate and rainwater cannot be collected if there is no rain.

Economic feasibility is a representation of trade-offs establishing a powerful means of persuasion for decision-making. SAFEGUARD completes a cost-benefit analysis of each individual reduction strategy followed by a comparison of all reduction strategies through a cost-effective analysis to optimize strategies for a given community

Political feasibility is the likelihood of policy creation and a strong indicator of whether it is successfully implemented, yet quantifying this is a difficult and contentious undertaking. SAFEGUARD provides extensive customizable political features for use by city managers or similarly situated individuals who have sufficient understanding of the political will in a given community.

Each path toward a solution requires an end goal or target. While there is no current government mandate on cities, the entire state of California has established goals with AB-32 and Executive Order S-3-05. SAFEGUARD scales these goals to the community-level providing cities with targets of their own.

Executive Order S-3-05 80% below 1990 emissions levels by the year 2050

References

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