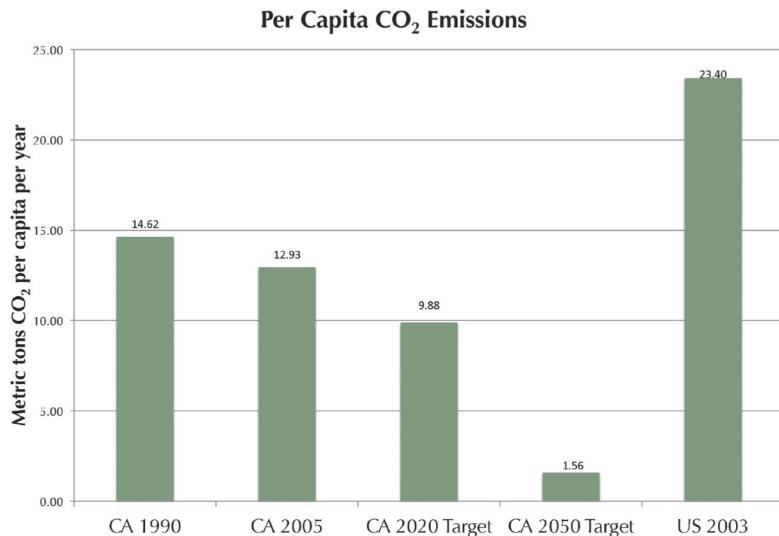




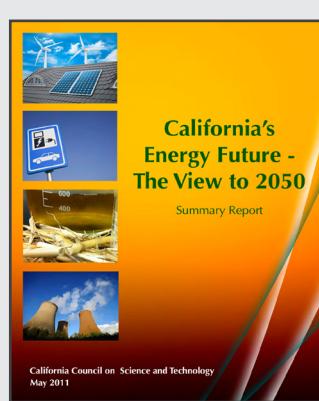
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Per capita emissions, in California and the US. From Figure 1.



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SUMMARY

This summary report synthesizes the results of a two-year study of **California's energy future (CEF)** sponsored by the California Council on Science and Technology (CCST). The study was funded by the **California Energy Commission** and the **S.D. Bechtel Foundation**, and was completed by a committee of experts from major research institutions in California.

This report assesses technology requirements for reducing greenhouse gas (GHG) emissions in California to 80% below 1990 levels as required by Executive Order S-3-05 (2005). Details of this analysis, assumptions, and data are in the subsequent reports published as part of this study from 2011-2013. This document synthesizes the results and presents the major findings.

BACKGROUND

California's GHG emissions reduction targets are ambitious, and will be challenging to achieve. By 2050, the state's population is expected to grow to 55 million people; even with efficiency gains, we will need roughly twice as much energy in 2050 as we use today. The state's GHG emissions will need to fall from about 13 tons of CO₂ equivalent per capita to 1.6 tons.

The goal of the CEF project is to help California develop sound and realistic strategies for meeting its emissions reduction goals, by providing an authoritative, non-partisan analysis of the potential of energy

efficiency, electrification of transportation and heat, low-carbon electricity generation and fuel. The analysis is designed to identify potential energy systems that would meet both California's requirements for energy and the emission reduction targets.

This study includes a series of energy system "portraits" which are descriptions of the set of energy demands, the portfolio of energy supply to meet these demands, and the associated emissions for each supply. Each portrait focuses on a different combination of energy strategies, identifying possibilities and trade-offs of each strategy.

For the findings, conclusions and recommendations, see the **FULL REPORT** on our website: ccst.us/publications-projects

This report is part of the **California's Energy Future** project.

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