CCST ARCHIVES

California's Energy Future: Powering California with Nuclear Energy

Report Published **JULY 2011**

One Pager

DOWNLOAD FULL REPORT

See the Full Report for more details.

Image: Nuclear power could be an important component in strategies for meeting California's emissions goals by 2050.

SUMMARY

This report is part of the **California's Energy Future** (**CEF**) project conducted by the California Council on Science and Technology. 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. The CEF assessed technology requirements for reducing greenhouse gas (GHG) emissions in California to 80% below 1990 levels as required by Executive Order S-3-05 (2005).

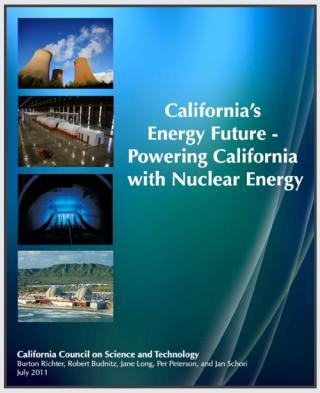
This report is a summary of the potential of nuclear power for California and presents an analysis of technological readiness, safety, fuel supply, costs, and siting.

BACKGROUND

The goal of the CEF project was to help California develop sound and realistic strategies for meeting its GHG 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 was designed to identify potential energy systems that would meet both California's requirements for energy and the emission targets specified by executive order.

This report focuses on the potential of nuclear energy to meet California's electricity demand in the year 2050. It analyses a variety of scenarios in which the state expands its nuclear power infrastructure, looking at costs, fuel availability, site issues, the problems of spent fuel, and weapons proliferation. It also provides a broader narrative context for what would need to happen at the state and federal level in order for nuclear expansion to become possible.

The report points out that there are no technical barriers to large-scale deployment of nuclear power in California. There are, however, legislative and public acceptance barriers that have to be overcome to implement a scenario that includes new nuclear reactors.



Report Published **JULY 2011**
Report Updated **FEBRUARY 2015**

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.

AUTHORS:

Burton Richter, PhD
SLAC Linear Accelerator

Robert Budnitz, PhD
Lawrence Berkeley National Laboratory

Jane C.S. Long, PhD
Lawrence Livermore National Laboratory

Per Peterson, PhD
UC Berkeley

Jan Schori
Sacramento Municipal Utilities District

CONTACT CCST:

Sarah Brady, PhD
Deputy Director, CCST
sarah.brady@ccst.us