

# PROJECT facts

U.S. DEPARTMENT OF ENERGY  
OFFICE OF FOSSIL ENERGY  
NATIONAL ENERGY TECHNOLOGY LABORATORY

Sequestration

07/2005



## WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP

### Background

The U.S. Department of Energy has designated seven partnerships of state agencies, universities, and private companies that will form the core of a nationwide network that will help determine the best approaches for capturing and permanently storing gases that can contribute to global climate change. All together, the partnerships include more than 244 organizations, spanning 40 states, three Indian nations, and four Canadian provinces.

The seven partnerships will develop the framework needed to validate and potentially deploy carbon sequestration technologies. They will evaluate and determine which of the numerous sequestration approaches that have emerged in the last few years are best suited for their specific regions of the country. They will also begin studying possible regulations and infrastructure requirements that would be needed should climate science indicate that sequestration be deployed on a wide scale in the future.

### CONTACTS

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### CUSTOMER SERVICE

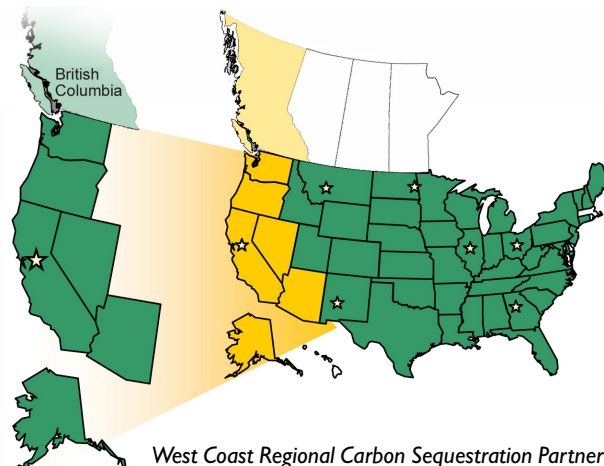
1-800-553-7681

### WEBSITE

[www.netl.doe.gov](http://www.netl.doe.gov)

### Description

The West Coast Regional Carbon Sequestration Partnership (WestCarb), led by the California Energy Commission, Sacramento, CA, plans to identify, characterize, and locate CO<sub>2</sub> emission sources in the region and determine capture and long-term sequestration methods by enlisting the help of numerous federal, state, and local government agencies and industry sources. WestCarb is comprised of representatives from universities, national labs, nonprofit organizations, technology vendors, oil and gas companies, and policy oriented organizations from Alaska, Arizona, California, Nevada, Oregon, Washington and the Canadian Province of British Columbia.



West Coast Regional Carbon Sequestration Partnership - (Region 5)



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## COST

**Length of Contract**  
24 Months

**Total Project Value**  
\$3,550,912

**DOE/Non-DOE Share**  
\$1,600,000/1,950,912

The West Coast Region accounts for more than 11% of the nation's CO<sub>2</sub> emissions, with the bulk of these being from California. Total CO<sub>2</sub> emissions from the industrial and utility sectors, which have point sources that are most amenable to capture, are about 56 million tons of carbon equivalent per year. The region offers significant potential for sequestration in porous sediments, especially the brine formations of the Central Valley. Of particular interest is the use of CO<sub>2</sub> for enhanced oil recovery. The West Coast Region has a wealth of forest and agricultural lands, where improved management practices could also sequester substantial quantities of carbon. Technology discussions, regional meetings and joint research will be used to maintain an open dialogue with stakeholders so that a regional strategy for terrestrial and geologic carbon sequestration projects that meet the area's near- and long-term needs can be developed. Demonstration projects will be identified, and plans for their effective implementation will be developed.

## Primary Project Goal

The overall goal of this project is to identify the most cost effective, technically feasible, and publicly acceptable options for terrestrial and geologic carbon sequestration in the region.

## Objectives

- To develop a geographic information system (GIS) database for characterizing the sources, the potential sinks, and the transportation infrastructure for CO<sub>2</sub> in the region.
- To evaluate region-specific issues affecting technology deployment.
- To implement local and regional public outreach programs.
- To identify optimal demonstration opportunities for geologic and terrestrial sequestration in the region.

## Benefits

This project will benefit the U.S. by providing a comprehensive assessment of the sources and potential sinks for CO<sub>2</sub> in the West Coast Region. This data can be integrated with the data from other partnerships to provide a data base covering the entire nation. This effort will also provide information to evaluate potential pilot sequestration projects in the West Coast Region. The project will promote cooperation among stakeholders and ensure public acceptance of CO<sub>2</sub> sequestration, should that become necessary.

## PARTNERS

**Advanced Resources International**

**Aera**

**American Petroleum Institute**

**Automated Geographic Reference Center**

**B C Ministry of Energy and Mines**

**BKI**

**British Petroleum**

**California Climate Registry**

**California Department of Forestry and Fire Protection**

**California Department of Oil Gas and Geothermal Resources**

**California Energy Commission**

**California Geologic Survey**

**California Polytechnic Institute**

**California State University at Bakersfield**

**Cement Industry Environmental Consortium**

**ChevronTexaco**

**Clean Energy Systems, Inc.**

**ConocoPhillips**

**CSU, School of Natural Sciences & Mathematics**

**Dept. Env., City and County of San Francisco**

**Electric Innovation Institute**

**EPA-California**

**Golder Associates**

**Greenwood Enterprises**

**Kinder Morgan CO<sub>2</sub>**

**Lawrence Berkeley National Laboratory**

**Lawrence Livermore National Laboratory**

**M.Theo Kearney Foundation of Soil Science**

**Massachusetts Institute of Technology (MIT)**

**National Council for Air and Stream Improvement**

**Nevada Bureau of Mines and Geology**

**Nexant Inc.**

**Ocidental Petroleum**

**Oregon Department of Forestry**

**Pacific Forest Trust**

**PacifiCorp**

**Region 9 EPA**

**Salt River Project**

**San Francisco Department of the Environment**

**Science Strategies**

**SFA Pacific**

**Shell**

**Sierra Pacific Resources**

**Stanford Global Climate Energy Project**

**Terralog Technologies**

**TransAlta**

**University of Alaska Fairbanks**

**Washington State Department of Natural Resources**

**Western Interstate Energy Board**

**Western States Petroleum Association (WSPA)**

**Winrock International**