

## **UC Berkeley study: State climate programs injected \$13 billion into Valley's economy**

By Rory Appleton

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California climate and clean air initiatives have led to more than \$13 billion in net economic benefits for the San Joaquin Valley, a study conducted by University of California at Berkeley researchers has found.

The university's Center for Law, Energy & the Environment and Donald Vial Center on Employment in the Green Economy authored the study, which was commissioned by the nonprofit organization Next 10.

The research looked at three specific impacts – cap and trade, California's Renewables Portfolio Standard and energy efficiency programs under the California Public Utilities Commission – in Fresno, Madera, Merced, Kern, Kings, San Joaquin, Stanislaus and Tulare counties.

“Given the positive impacts, (renewable energy) is a tremendous opportunity for the Valley in terms of job creation and continued economic growth,” Next 10 founder F. Noel Perry said.

Perry said most of the economic stimulation came from construction jobs related to affordable housing, solar and wind power facilities, high-speed rail and increased public transportation options. He believes this is the first academic study of the economic effects of California's climate policies in the San Joaquin Valley.

It was important to focus on the Valley, the study says, because it is highly susceptible to air pollution problems and has a higher concentration of poverty than most areas of the state.

### **Renewables Portfolio Standard**

Most of the economic gains came through compliance with California's Renewables Portfolio Standard, which requires the state to get 33 percent of its energy from renewable sources by 2020 and 50 percent by 2030. The study found that construction on renewable energy products contributed \$11.6 billion to the Valley economy.

The San Joaquin Valley is now home to 24 percent of the state's solar generation and 54 percent of its wind generation, despite accounting for only about 11 percent of California's population.

From 2002-15, about 31,000 direct jobs in renewable energy were created through actions like hiring construction crews to build new solar or wind-power facilities and maintenance teams to keep them running. Another 57,000 jobs were created in related fields – including suppliers, support businesses and contract work.

Betony Jones, associate chair of the Vial Center, said most of these jobs were local and high-paying with benefits.

The study notes that businesses feared having to lay off workers in order to comply with state emissions standards, but Jones said her research did not find any actual employment loss.

Jones said the low cost of crude petroleum offset the costs incurred by high-emitting industries – oil and gas extraction, transportation, fuel refining and so on. These companies were able to purchase allowances through the state's cap-and-trade program, in which the state auctions off emissions exemptions. Industries that are unable to meet emissions limits can purchase excess capacity from lower-emitting industries or through the auctions.

### **Cap and trade**

The report noted a direct economic benefit of \$119 million due to the state's cap-and-trade program. Money gained by the state through the allowance auctions is then dished out to renewable energy products throughout the state. Standards require that 25 percent of all cap-and-trade dollars go to areas of poverty, and most of the Valley qualifies as impoverished.

If you count money that has been allocated but not yet disbursed to Valley projects, the study said, that number rises to \$1 billion.

Researchers found a potential negative impact of 400 jobs lost due to compliance with cap-and-trade laws, but they believe more than 700 direct jobs and 1,600 support jobs were created.

Ethan Elkind, the climate director for Berkeley's Center for Law, Energy & the Environment, said the Valley right now has priority access to cap-and-trade funds, but that could be in jeopardy.

A lawsuit brought against the state claims the cap-and-trade program is actually a tax – one that would require a public vote. If the lawsuit succeeds, most of these benefits would likely be wiped out in the near future.

### **Energy efficiency programs**

The study found the energy efficiency programs administered by the California Public Utilities Commission created 6,700 direct and more than 10,000 indirect jobs from 2006-15. In all, the programs injected \$248 million into the economy since 2010.

Jones, with the Vial Center, said the Valley's programs are the most cost-efficient in the state.

"The return of benefits is 1.5 times their cost," Jones said. "This is the highest measure of any region in the state."

Like the Renewables Portfolio Standard, the utilities commission's programs will be in place for at least several years more. The researchers believe both will continue to bring economic gains to the Valley, and they recommend that the state work to resolve the cap-and-trade lawsuit in order to keep that cash flow intact as well.