



California Solar Initiative – Environmental Benefits

Solar energy produces power at peak times, when the dirtiest and most inefficient power plants are called online to serve California’s electricity demand. *The California Solar Initiative will dramatically improve air quality and reduce global warming emissions in the state.*

STOPPING GLOBAL WARMING

The impacts of global warming are being felt more each year. The disruptions to our climate’s natural systems are expected to cause more than \$300 billion in damage annually by 2050 in weather damage, pollution, industrial and agricultural losses. *Carbon Dioxide is the leading cause of global warming and the largest source of carbon dioxide emissions in the United States comes from power plants.* Every kilowatt-hour from solar is a kilowatt-hour that doesn’t need to be generated by burning fossil fuels at a power plant. Reducing carbon dioxide emissions in California will be one of the largest benefits of the California Solar Initiative. The reduction in carbon dioxide emissions from the California Solar Initiative is equivalent to removing 1.1 to 3.7 million cars from the road.

Carbon Dioxide Emissions Reductions	Tons Carbon Dioxide Avoided
Lifecycle benefits from solar installed during CSI (2006-2016)	52,766,066
Lifecycle benefits from solar installed as a result of CSI (2006-2026) (21 years of installations)	188,419,746

IMPROVING AIR QUALITY

Solar Energy also reduces air pollution from electricity production such as emissions of Nitrogen Oxides (NO_x). NO_x causes acid rain and smog, which damage trees and causes acidification of lakes and streams, killing fish. NO_x is also a precursor to ozone, the pollutant which causes extreme damage to vegetation, as ozone interferes with photosynthesis, which is how plants convert sunlight and water into food.

Reductions in Nitrogen Oxides Emissions	Tons NO _x Avoided
Lifecycle benefits from solar installed during CSI (2006-2016)	27,255
Lifecycle benefits from solar installed as a result of CSI (2006-2026) (21 years of installations)	97,324