

CALIFORNIA

Given up for dead by some, the Golden State is still a mirror of the nation's future politics, economics and demographics. While the rest of the nation catches up to life on the coast, California is home to industries, laboratories and technologies that will go a long way toward determining how we live in the 21st century



SOLAR POWER

The sun-drenched state boasts 38% of the nation's solar-energy patent registrations, mirroring fast-growing local demand for clean energy; rooftop solar installations in California have doubled two years in a row.

Big player: SunPower Corp., headquartered in San Jose



HIGH TECH

Firms that made their mark in microchips, software and the Web are now pouring resources into green ventures like the digitized energy grid, ultra-high-def video-conferencing that shrinks the carbon footprint of business travel and advanced code that perfectly positions solar mirrors.

Big players: San Jose's Cisco Systems and Pasadena's eSolar

40% of all U.S. solar installations are in the 70,000-sq.-mi. (181,000 sq km) service area of Northern and Central California utility PG&E

43% of all U.S. venture capital in 2008 went to the San Francisco Bay Area



GREEN VEHICLES

California leads the nation in fuel-economy standards and registered hybrid, electric and natural-gas-fueled cars. Los Angeles and San Francisco are the top U.S. hybrid markets.

Big players: Tesla Motors, based in San Carlos, and Fisker Automotive, based in Irvine

\$1.1 billion in venture capital was recently raised by clean-energy investor Vinod Khosla, a co-founder of Sun Microsystems

\$600 million is the value of a joint venture between ExxonMobil and La Jolla-based Synthetic Genomics to develop fuel from algae



BIOTECH

The state remains the player to watch in such fields as genomic medicine and photosynthetic-algae technology, which experts say could produce far more fuel than corn, soy or sugarcane can in the same space.

Big players: San Diego's Scripps Research Institute and the Salk Institute

500+ biotech firms are located in San Diego, making it one of the largest biotech clusters in the U.S.

Illustration for TIME by Dugald Stermer