

California Greenin'

California takes its fight against climate change across the Pacific to the world's biggest polluter

Written by Alice Walton

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China is addicted to coal. Its burgeoning, coal-powered industrial sector is creating a country torn between two eras: The country's economy has made it a twenty-first century power, yet residents of its cities breathe toxins that polluted the air in developed nations decades ago. The industrial sector wastes huge amounts of energy because it lacks more efficient technology.

But Chinese leaders have begun looking across the Pacific to California, which uses one-third less energy per capita than the rest of the United States, and recently prohibited its utilities from investing in new coal sources. Only 20 percent of California's electricity comes from coal, compared to 80 percent of China's. One economy utterly dependent on coal and another actively weaning itself from the dirty energy source, China and California appear unlikely partners in the fight for clean energy. But a unique partnership between California and the Jiangsu province of China has shown that clean technology is inexpensive and presents a viable alternative to constructing new coal-fired power plants. Indeed, California might help to break China's addiction to coal.

A Special Partnership

This is not the first time China has glanced across the Pacific for a model for its energy policy. In the 1990s, China's energy supply was unable to keep up with growth. Intending to increase competition between utilities and create a stable, yet inexpensive, electricity grid, California decided to deregulate its utilities. China was ready to follow suit until the California Energy Crisis of 2000, which brought rolling blackouts and high energy prices to the state. "They suddenly froze any attempt to deregulate and went bust," said Barbara Finamore, president of the China-U.S. Energy Efficiency Alliance and director of the China Program at the Natural Resource Defense Council (NRDC), a New York-based environmental action group that recently opened its first international office in Beijing. "That's when they turned to us."

Despite its burgeoning economy, the coastal province Jiangsu was the NRDC's first target. Jiangsu is energy poor and receives 76 percent of its energy from coal. In order to maintain the province's growing industry, regulators originally tried to manage the immense energy load by staggering factories' operation hours and building more plants. But they soon ran out of quick fixes. "When they finally ran out of room to shift the clock, Jiangsu woke up," Finamore told the Globalist. "And we turned to California for something to share."

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In 2005, the Chinese government and the NRDC invited a delegation from California to visit Jiangsu to convince the provincial government that it would be more productive to invest in shrinking energy demand than in new coal-fired plants to fuel it.

The delegation included representatives from California's major utilities and the commissioners of the California Public Utilities

Commission (CPUC) and the California Energy Commission. During the discussions, the regulatory commissions and the Jiangsu Provincial Economic and Trade Commission drafted a Memorandum of Understanding detailing the areas of cooperation to reduce Jiangsu's dependency on coal-fired power plants through exchanging expertise in technology and energy regulatory mechanisms.

The effort is based on the philosophy that environmental progress does not require massive infusions of capital. "Most people don't realize that in the United States efficiency improvements in refrigerators are saving as much energy as all the nuclear power plants in United States put out," said Art Rosenfeld, a physicist who now serves as commissioner on the California Energy Commission and who traveled to China in 2005. "People tend to

believe that a problem takes money to solve. It is difficult to convince them that saving money and applying brain power is just as effective a solution to deal with climate change.”

California uses one-third less electricity per capita than the national average thanks to its unique building and appliance standards and regulatory mechanisms like decoupling, which ensures that utilities do not receive profits from greater electricity sales. Together the NRDC and California have promoted these policies in Jiangsu. Saving energy may not be as glamorous as building a new renewable power plant, but it can be just as effective, with a far smaller price tag. “In China there is a major gap between supply and demand of energy. Energy efficiency is the low hanging fruit. It allows a company to improve its productivity and competitiveness,” explained Bo Sheng, Energy Efficiency Expert at the NRDC’s Beijing branch.

The NRDC and commissioners from California and Jiangsu have now gone to work by consulting managers, auditing factories, training Chinese experts, and facilitating further exchanges between regulatory officials on both sides of the Pacific. The program is building Efficiency Power Plants (EPP) in Jiangsu to reduce the need for coal in the energy-poor province. The EPPs focus on conserving energy—an EPP burns no coal and costs a fraction of the price of a normal plant. If the industrial sector of Jiangsu adopted factory codes and standards analogous to those in California, Jiangsu could meet up to eight percent of its projected electricity growth, avoid building 24 large coal-fired power plants, and reduce China’s total coal consumption 167 million metric tons by 2015.

California’s influence in reducing energy usage in coal driven economies is expanding beyond Jiangsu. China’s central government recently adopted Jiangsu as the national model. The country’s National Development and Reform Commission is keenly interested in California’s activities and asked the Jiangsu team to organize a study tour for a few of its national regulators. Officials from 17 other provinces requested to join the group after witnessing the economic benefits energy efficiency produced in Jiangsu. This summer they traveled to California to see firsthand how efficiency can be incorporated into regulatory policy through mechanisms like building and appliance standards, decoupling, and applying small surcharges to utility bills to fund innovations in efficiency. According to Xinhua, China’s primary news agency, in 2007, EPPs allowed 553 small, dirty power plants to be shut down.

China might just be learning.

Coal and California

Although California has become a critical actor in the fight to reduce energy usage and coal dependence both domestically and internationally, it has faced criticism for its own coal policies. Not one coal-fired power plant exists within the borders of California, but 20 percent of its energy comes from five coal-fired plants located outside the state. Thus citizens in Utah, Nevada, Arizona, and New Mexico suffer the detrimental effects of the dirty plants without receiving all the benefits of the power produced. In 2007, the California Energy Commission and the Public Utilities Commission responded by banning utilities from investing in new coal-fired plants. “It was a very progressive decision,” said Tim Wagner, Director of the Utah Smart Energy Campaign with the Sierra Club. “The Intermountain Power Plant, in addition to another major coal fired plant, exports 75 percent of its power to California. They were hoping to build a third generating plant, but California’s decision shut the door on new power generation from coal.”

Utah, which receives 95 percent of its energy from coal-fired plants, did not look kindly on the decision that inadvertently affected its own coal plants. “Utah is the reddest of red states. There were a lot of aggravated feelings toward California. Political leaders condemned them as not knowing what they were doing, all tied around Al Gore and some liberal Hollywood conspiracy,” Wagner said. Still, stability and economic viability have carried California’s environmental pursuits to audiences once deaf to the abstract idea of a prosperous, green economy.

Going Global

California's influence is truly carrying around the world. In June of 2007, CPUC Commissioner Dian Grueneich traveled to Europe to meet with top energy officials in the EU, France, Belgium, and the UK and will accompany Rosenfeld on a trip to China in spring 2008.

California's hand is guiding energy policy in India as well. In December 2007, California drafted a partnership with Maharashtra, the largest industrial state of India, mirroring the agreement with Jiangsu. Soon California may reduce the need for coal in both of the world's largest and fastest growing economies.

While the United States lags behind the developed world in clean energy policies and greater international environmental efforts stagnate at large-scale conferences, the California-Jiangsu initiative demonstrates that a realistic sustainable future can flourish in regional partnerships. Said Rosenfeld: "I believe it's my duty to go around the national government. Bush has dragged his feet for eight years on global warming. California can be an effective diplomat for the cause of clean and efficient energy."

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