



[Home](#) » [News](#) » US: Solar better investment than stocks, study finds

US: Solar better investment than stocks, study finds

14. JANUARY 2015 | [GLOBAL PV MARKETS, FROM THE EDITOR, APPLICATIONS & INSTALLATIONS, MARKETS & TRENDS, TOP NEWS](#) | BY: IAN CLOVER

A typical solar PV system represents a better investment than the stock market in 46 of America's largest 50 cities, according to a report from NC Clean Energy Technology Center.

DON'T WASTE YOUR ENERGY

ADVERTISEMENT



For most Americans living in the largest U.S. cities, solar is increasingly the cheapest, most reliable energy option.
 David Parsons/NREL

A study by the NC Clean Energy Technology Center has found that the majority of U.S. homeowners who invest in a typical 5 kW solar PV system will be making a better investment than if they put their money into the stock market.

According to the report, titled [Going Solar in America: Ranking Solar's Value to Consumers in America's Largest Cities](#) (PDF) and which was

funded by the Department of Energy (DOE), citizens in 46 of America's 50 largest cities will enjoy greater returns from a fully financed solar PV installation, while residents of 42 of these cities already enjoy solar energy costs that are lower than those of the local utility.

Further, the report also estimates that some 9.1 million Americans live in a city where solar costs less than current utility rates even when a PV system is bought outright – dispelling the notion that solar energy is either for the rich or only viable on a lease or loan basis. Additionally, low-cost financing models make solar the [cheapest energy option for nearly 21 million Americans](#), found the study.

The report's authors point to a "clear information gap" between the realities of solar's affordability and its perceived costs. Its conclusion that solar is a "real opportunity for anyone looking to take greater control over their monthly utility bills and make a long-term, relatively low-risk investment" is championed by the Solar Energy Industries Association (SEIA).

"This study proves once again that solar makes great financial sense for a large number of Americans," said SEIA CEO and president, Rhone Resch. "Every three minutes of every single day, the U.S. solar industry is flipping the switch on another completed solar project, [benefiting homeowners](#) and businesses nationwide."

Solar vs. stocks and utilities

The NC Clean Energy Technology Center study ranked the relative value of investing in solar against a long-term investment indexed to the Standard and Poor's 500 stock index, giving a Net Present Value (NPV) for investment in each of America's 50 largest cities. It found that for solar customers in 20 of these cities, paying cash upfront for a solar PV system is a better investment than the stock market over the 25-year life cycle of a typical installation. San Jose, San Francisco and Oakland led the way on this metric.



Financed solar models, meanwhile, proved a better investment than stocks in 46 of those cities, thanks largely to these models' spreading of costs that allow the consumer to benefit from the existing federal tax credit.

When levelized cost of electricity (LCOE) is examined, solar once again comes up trumps, with residents in Washington D.C., Miami, New York, Colorado Springs, Raleigh, Albuquerque, Boston, Philadelphia and San Antonio enjoying favorable rates whether investing in a fully financed or a 0% financed PV system.

To calculate this rate of return, the study divided the cost of a typical PV system by the total estimated output of its lifecycle, adjusted for inflation, and then examined the rate at which typical utility bills are expected to rise during that period. Across the U.S., the study estimates that utility rates will rise between 33%-83% over the 25-year typical life of a solar system.

Addressing soft costs and other challenges

The study placed particular emphasis on the reduction of soft costs, stressing that bringing down the cost of installation, labor, fees and other processes involved with solar was key if the [industry hoped to compete in a nationwide](#), incentive-free environment. According to the National Renewable Energy Laboratory (NREL), in 2012 soft costs were responsible for 64% of the total cost of a U.S. residential PV system. Today, both hard and soft costs have come down, but the percentage of soft costs remains one of the highest in the world.

The DOE's SunShot initiative has placed emphasis on bringing soft costs down further, particularly in terms of installation, customer acquisition, financing and permitting/inspections, but the study urges local governments and municipal utilities to do more to bring costs down further, including streamlining permitting processes, leading by example (in fitting solar PV systems atop schools and government buildings) and offering community solar options.

The SEIA stresses that solar's impressive growth in recent years must be maintained, particularly now it is largely provable that PV systems are one of the most affordable energy sources. Recent SEIA/GTM Research findings state that the national blended average system prices for solar PV have fallen 53% since 2010.



Furthermore, the industry employs 143,000 Americans, pumps more than \$15 billion a year into the U.S. economy and boasts more than 20 GW of capacity – enough to power four million U.S. households.

Resch attributes this remarkable growth to smart and effective public policies such as net metering, renewable portfolio standards and the solar investment tax credit. "By any measurement, these policies are paying huge dividends for both the economy and our environment," Resch said.

With 50% growth in each of the past three years, and the average price to install residential solar falling to \$3.92/watt, the industry is entering uncharted territory where it is now a seriously viable energy option for all Americans – not just wealthy homeowners or zealous environmentalists.