Solar's Role in Combating Global Warming:
Ready today to deploy carbon-free energy

Overview

Solar technologies will need to generate massive amounts of carbon-free energy in the decades to come if our country hopes to combat the crisis of global warming. Any carbon cap-and-trade system, or other carbon constraint, must be optimized to deploy solar technology in the early years of the policy or the country will fail to meet its climate protection goals.

Problem

The Reality of US Climate Change Policy

- For the U.S. to sustainably reduce its carbon pollution, there must be a significant contribution of carbon-free energy from solar technology.
- Climate policy must be optimized to deploy solar and other off-the-shelf renewables in the early years of a carbon program in order to account for a sufficiently large "wedge" in the later years (post-2025).
- Solar technology is ready **today**. In contrast, there will be no expansive nuclear plant construction in the near term. Carbon capture and sequestration (CCS) technology will remain in the "R&D phase" for years to come, and we will still be faced with the need to construct a carbon pipeline infrastructure. In the next 10-15 years, the only feasible and scalable options for carbon-free energy generation are solar and other ready-to-deploy renewable technologies.

Proposed Solution

Mechanisms to Deploy Solar Must Be Included in Each Element of the Cap-and-Trade System

- Allowances. Solar should be allocated allowances in parity with other generating technologies. Allowances should be allocated on the basis of energy output, rather than carbon intensity "input" of the fuel source. Both solar thermal and solar electric resources should qualify.
- New entrant set-asides. Solar and other off-the-shelf renewables should receive allowance allocations based on the output of energy.
- Auction revenues. A pool of auction revenues should be dedicated to the expanded deployment of solar technology and disbursements should be front-loaded to robustly deploy solar generation in the first 10-15 years of the program. Commonly used solar support mechanisms that could benefit from solar auction revenues include:
  - A rebate program for solar electric and solar thermal installations, akin to that found in California and other states;
  - A feed-in tariff program, akin to that found in Germany and Spain; and
  - A revolving loan fund to finance enhanced deployment and new transmission infrastructure.
- Allowances and auction proceeds that go to utilities and states should be conditioned on adoption of solar best practices, including:
  - Interconnection and net-metering standards
  - Removal of market barriers (e.g., restrictive covenants)
  - Elimination of discriminatory pricing structures designed to thwart access

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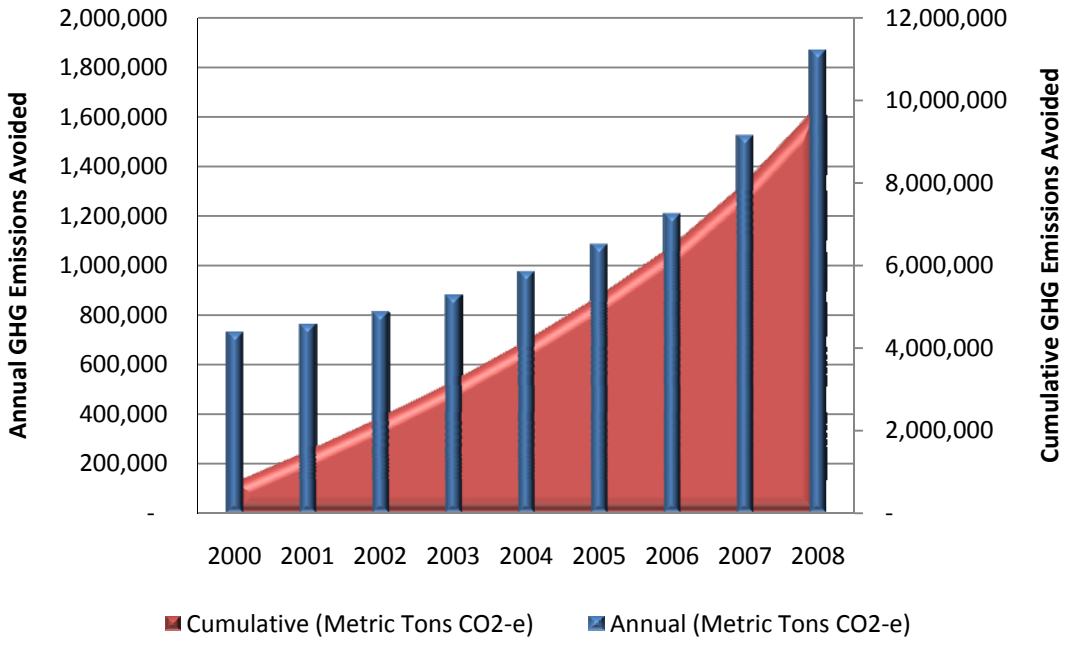
Solar Climate Facts

- Every megawatt of solar installed displaces 1,000 metric tons of carbon dioxide per year, equivalent to the average annual emissions of 50 Americans or removing 180 cars from the road.
- PV and many CSP plants use no water in generating electricity. Other CSP plants have minimal water use, less than electricity generated from conventional sources.
- The solar industry is growing jobs while producing carbon-free energy. Every megawatt of solar manufactured in the U.S. employs 14 people for a year. Every megawatt of solar installed in the U.S. employs 10 people for a year. Every 10 megawatts of solar kept in service employs 3 people for a year.

Greenhouse Gas Emissions Avoided By Solar



About the Solar Industry

- SEIA is the national trade association of the solar energy industry. SEIA represents 900 members and, as the voice of the industry, SEIA works to make solar a mainstream and significant energy source by expanding markets, removing market barriers, strengthening the industry, and educating the public on the benefits of solar energy.
- Solar energy will create more than 60,000 jobs, install a gigawatt of solar power and avoid more than 1 million tons of carbon emissions in 2009 alone. These figures will more than double in 2010.
- There are more than 500,000 solar water heating installations in the U.S., each with no risk of rising fuel costs and zero greenhouse gas emissions.
- The U.S. has 11 concentrating solar power plants operating today, with a total installed capacity of 419 megawatts. In addition, 62,000 PV systems have been installed on rooftops, parking structures, and military bases since 2003.
- In the next five minutes, enough sunlight will shine upon the U.S. to satisfy America's energy demands for an entire month. The solar industry is working to harness all of that carbon-free energy and create domestic jobs to move our country to a new, clean energy future.