

# Can the world be powered mainly by solar and wind energy?

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Wind and solar power could become the world's main sources of energy, a Nobel-prize winning scientist suggests. Credit: Stephen Strathdee

Continuous research and development of alternative energy could soon lead to a new era in human history in which two renewable sources -- solar and wind -- will become Earth's dominant contributor of energy, a Nobel laureate said here today at a special symposium at the American Chemical Society's 240th National Meeting.

Walter Kohn, Ph.D., who shared the 1998 Nobel Prize in Chemistry, noted that total oil and natural gas production, which today provides about 60 percent of global [energy](#) consumption, is expected to peak about 10 to 30 years from now, followed by a rapid decline. He is with the University of California, Santa Barbara.

"These trends have created two unprecedented global challenges", Kohn

said. "One is the threatened global shortage of acceptable energy. The other is the unacceptable, imminent danger of global warming and its consequences."

Kohn noted that these challenges require a variety of responses. "The most obvious is continuing scientific and technical progress providing abundant and affordable alternative energies, safe, clean and carbon-free," he said.

Because the challenges are global in nature, the scientific and technical work should enjoy a maximum of international cooperation, which fortunately is beginning to evolve, he said.

The global photovoltaic energy production increased by a factor of about 90 and wind energy by a factor of about 10 over the last decade. He expects vigorous growth of these two effectively inexhaustible energies to continue during the next decade and beyond, thereby leading to a new era, the SOL/WIND era, in human history, in which solar and [wind energy](#) have become the earth's dominant energy sources.

Another important issue, incumbent primarily on developed countries, whose population has pretty much leveled off, is reduction in per capita energy consumption, Kohn said.

"A striking example is the U.S. per capita consumption of gasoline, approximately 5 times higher than the global average," he said. "The less developed world, understandably, aims to bring their standard of living to a level similar to that of the highly developed countries; in return they should stabilize their growing populations."

Kohn noted that he is impressed by students on his campus who spent their own collective funds to fully solarize an athletic building. "When it comes to providing leadership by young people in the area of energy

conservation and energy efficiency and global warming — they are fantastic," he said. "It is a major social commitment for our times."

Provided by American Chemical Society

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