

SOLAR ELECTRICITY FROM ORBIT

SPEAKER MARTIN HOFFERT

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Department of Applied Science
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WEDNESDAY, NOVEMBER 4, 3:00 – 4:30 P.M.
NJIT CAMPUS CENTER BALLROOM

Beaming electric power from space could be a viable solar energy option for the near future in the estimation of engineer and researcher Martin Hoffert. Tapping the continuous sunlight in space would avoid the costly challenges of massive terrestrial storage and the transmission of intermittent solar and wind power to match electric-demand curves.

Practical application of this concept, Hoffert maintains, could be markedly accelerated by experiments feasible now — some employing the International Space Station and including orbital mirrors and microwave and laser beaming in space. Economies of scale from commercialization would also help to make solar electricity from orbit a feasible addition to our mix of renewable energy alternatives.

Hoffert has a BS in aeronautical engineering from the University of Michigan, and MS and PhD degrees in astronautics from the Polytechnic Institute of Brooklyn (now the Polytechnic Institute of New York). He also has an MA in liberal studies from the New School for Social Research, where he did graduate work in sociology and economics. His research in alternate energy conversion encompasses wind-tunnel and full-scale experimentation with wind turbines and photovoltaic generation of hydrogen, as well as wireless power transmission applicable to solar-power satellites.

Hoffert has been on the research staff of the Curtiss-Wright Corporation, General Applied Science Laboratories, Advanced Technology Laboratories and Riverside Research Institute. He has been a National Academy of Sciences Senior Resident Research Associate at the NASA/Goddard Institute for Space Studies. Widely published, he has written on fluid mechanics, plasma physics, atmospheric science, oceanography, planetary atmospheres, environmental science, and solar and wind energy conversion. His work in geophysics focused on developing theoretical models of atmospheres and oceans to address environmental issues, including the ocean/climate model first employed by the UN Intergovernmental Panel on Climate Change to assess how the use of fossil fuels contributes to global warming.

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