



Environmental & Energy Management Newsletter



The George Washington University
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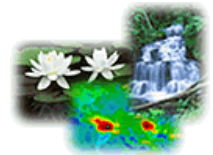
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E&EM Program Wins Two Renewable Energy Research Grants

Their Environmental and Energy Management program won two research awards for renewable energy research in November 2008. These were among the first research awards announced by the new Institute for the Analysis of Solar Energy.

One of the awards was provided in response to a proposal authored by E&EM doctoral student Steven Burns and E&EM Lead Professor Jonathan Deason. The project, entitled "A Linear Programming Model to Support Development and Maintenance of a Solar Grand Plan Deployment Schedule," involves the development of a decision-aiding model to assist in translating the "Solar Grand Plan" for the United States that was described in the January 2008 issue of the Scientific American magazine from a conceptual vision into a full implementation plan. The project envisions the development of a linear programming model that outputs a development timeline along with expected energy costs, solar and wind power capacity installed and expected markets to be served on an annual basis.

The model will enable planners to develop a realistic deployment schedule that balances power price and construction timeframes with growth in installed solar capacity, with such capacity being limited based on projected available equipment production capacity to support the Solar Grand Plan. The model will generate outputs for two cases: a power generation only, and a power generation plus transportation case. Additionally, an ancillary output will be available for both cases that will allow for users to determine if and when, based on carbon constraints or market forces, wind and solar power will be able to economically compete with fossil fuel based power, allowing for the discontinuation of current solar and wind power incentives.



Above Left: Steven Burns



Above Right: Ariel Castillo

The other award was won by a proposal authored by E&EM doctoral student Ariel Castillo and E&EM Lead Professor Jonathan Deason. The project, entitled "Determination of Solar Energy Transition Potential of Department of Defense Facilities

and Non-Tactical Vehicles,” is intended to assist in solving climate and energy issues by determining energy demands of Department of Defense (DOD) facilities and non-tactical vehicles that could be met by solar generation. In addition, the proposed research includes the development of recommendations for a major transition by the DOD to solar energy technologies for its current operations.



[Jonathan P. Deason, Ph.D., Lead Professor](#)