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Subject: FW: Solar Article

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From: Gutierrez, Barbara L CIV USAF USAFA USAFA/CMA
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Subject: Solar Article

Article/picture from our Public Affairs office are attached.

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Pushinggreen.com
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Solar: United States Air Force Academy Goes Green
Recipe for a greener military academy

Take the American Recovery and Reinvestment Act (ARRA) of 2009, throw in a heavy dose of stimulus money for the Department of Defense, then add an executive order dictating that federal buildings and military facilities reduce their "energy intensity" 30% by the year 2015, while producing their own renewable energy whenever possible. What happens? The United States Air Force Academy breaks ground on what will be the largest photovoltaic solar array in Colorado.

Covering 30 acres on the Academy's eastern edge, right along Interstate 25, the array will generate 6 megawatts of electricity. That's enough to replace an estimated 12% of the military installation's annual energy consumption, and save them half a million dollars per year. It should be operable by summer 2011.

Member of the Team

Russell Hume, a mechanical engineer who designs and oversees construction projects at the USAFA, has worked for the Air Force for 13 years. As the former Energy Program Manager, Hume helped write the strategic energy plan for the Academy in 2009, and serves as part of the team that selected the solar array as one component of their "Falcon Green" program (see the video for more details).

At a cost of \$18.3 million dollars (all from ARRA), Hume says the array is a responsible use of tax-payer money. "Renewable energy is generally not as cost-effective as energy from a typical coal-fired power plant, but because of the Reinvestment Act and tax incentives, this array is very cost-effective." In addition to the \$500,000 annual savings on energy costs, Hume says, the Academy expects to earn up to \$775,000 per year from Renewable Energy Certificates.

Benefits

According to the EPA, these Certificates “represent the property rights to the environmental, social, and other non-power qualities of renewable electricity generation,” qualities like avoided fossil fuel emissions and stabilized energy costs. For instance, a manufacturing plant could purchase the certificates from the Air Force Academy, and by doing so have the right to claim the solar energy benefits as their own, offsetting the amount of carbon dioxide and other airborne pollutants they produce.

There are other benefits as well. Construction and maintenance of the solar array creates jobs, reduces the amount of fossil fuels burned in Colorado Springs, where blue skies frame natural tourist attractions like the Garden of the Gods and Pikes Peak, creates learning opportunities for cadets studying engineering, physics, and mathematics, and helps the USAFA to set an example of environmental stewardship in the community.

Critics

Nevertheless, critics claim the solar array will be ugly, and the cost of building it outweighs the money saved on energy. To the latter criticism, Hume says people just don’t know the facts. “We know that [at current non-renewable energy prices] we will be saving \$500,000 per year. If gas and coal prices continue to rise, we’ll be saving even more. And with the Renewable Energy Certificates, we’ll save over a million dollars a year.”

The facts break down like this: the photovoltaic panels have a 25-year life span. The Academy saves half a million per year while earning another three quarters of a million per year selling Energy Certificates. After the government spends the \$18.3 million dollars to get the array up and running, if estimates are correct, it will save a combined \$1.275 million dollars per year. The array will have paid for itself in a little over 14 years, making over a decade of pure, sweet, unpolluted profit likely. “Few stimulus projects see such a tangible return on investment,” Hume says.

Space-Age Technology

As for the criticism that the array is an eyesore? Hume shrugs it off. “I don’t know how to respond to that. When the Academy was built in the 1950’s, it had a modernist architectural style. It was supposed to have a space-age look. It seems strange that people are criticizing the array for looking too modern now.” Indeed. Few structures look more modern (or space-age) than a field of glistening solar panels.

