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BioEngineering Group provides sustainable energy expertise for Department of Defense

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As federal agencies move toward sustainability, as mandated in the October 5, 2010 Executive Order 13514, the Department of Defense (DOD) faces some of the highest hurdles, as well as the greatest potential rewards, related to adopting substantial energy conservation and renewable energy generation, especially when coupled with water and waste management synergies. The single largest energy user in the US, the DOD has a large opportunity to save money, and also to serve as a full-scale proving ground for new technologies that combine building energy efficiency with energy recovery and renewable energy generation to improve energy independence and security.

The DOD has turned Bioengineering Group to provide expertise for energy management training. The new energy efficiency initiative requires that facilities become energy efficient by looking at various energy conservation measures, and energy auditors be familiar with the new technologies, experienced with government approved methodologies, and hold appropriate third-party certification. Much confusion exists about rapidly evolving mandates governing LEED green building standards, Guiding Principles for High Performance and Sustainable Buildings, net-zero energy usage for new or majorly renovated buildings, and other directives. The opportunity to save money, conserve resources, and improved energy independence and security exists, but the path forward has often been unclear.

At a recent US Army Corps of Engineers (USACE), North Atlantic Division (NAD) Sustainable Energy Conference, Al Hurt, Bioengineering Group's vice president of Sustainable Energy Innovation with national recognition, was a plenary speaker where he reviewed new technologies, case studies, and best practices. Farrell McMillan, chief, construction/operations division of the USACE New England District said "One of my goals for the conference was to initiate discussions to improve energy efficiency for NAD Operations, projects, facilities, and Military Construction customers. Hurt's facilitation and panel participation not only provided insight into integration of industry and government sustainable engineering knowledge, but generated thought-provoking discussions with our conference audience." The conference was designed to synthesize current topics in policy with concrete methods to implement sustainable practices. In addition to classroom sessions featuring an array of public and private sector experts, participants toured the project site of a LEED Silver public works facility (see photo) featuring sustainable water management through harvesting, reuse, and infiltration of rainfall, as well as highly efficient building energy consumption. McMillan said "Some of the people at the conference actually helped write the Executive Order. That's the level of expertise we had there!"

Bioengineering Group also directly supports the Naval Civil Engineer Corps Officers School's (CECOS) Environmental Education & Training Division. The web-based training program is

available to attendees at Naval centers across the world. The Sustainability Awareness Training program provided by the Bioengineering Group consists of two courses: Sustainability and You: Facilities and Installation - Policy to Practice and Sustainability and You: Leadership in Energy & Environmental Design (LEED) and High Performance Building - Policy to Practice.

A recent DOD press release said "The course presented by Bioengineering Group is an outstanding overview of LEED concepts, principles, and practices and how they can be applied within the Navy and DOD." The Program outlines an introduction to key concepts of sustainability by defining sustainability and its foundation principles, reviews what drives the need for sound practices grounded in resource conservation and life cycle assessment, shares strategies and successes at various installations, and identifies the components of a Sustainable Installation of the future.

Bioengineering Group's CEO, Wendi Goldsmith, said "We are firmly committed to capturing and disseminating information on the successes our firm and others have achieved for DOD in the realm of sustainable design. We want to continue helping our clients understand and strategize, then implement sound programs for integrating building-scale actions with infrastructure for water, energy, and waste management in order to achieve bold goals such as net-zero installations. Embracing sustainable practices will push any organization past their comfort zone since it requires rethinking many standard approaches to planning and design, and calls for greater sophistication and true interdisciplinary practice."

Bioengineering Group, a proponent of early adoption of sustainable technologies and well-known leader in ecologically sensitive development and public infrastructure work, applies a tailored interdisciplinary approach to solving engineering problems. The firm is leading a significant program to accelerate adoption of renewable energy generation and ultra-low energy consuming facilities within the Department of Defense. Believing that every project offers the next opportunity to transact sustainability, Bioengineering Group provides design, environmental consulting, and sustainable site planning for private corporations, institutions, and local governments on small- to large-scale projects.

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