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## Director's Note

By Bob Kavetsky

The most frequent questions I have been asked since taking over the helm of the ETC on 1 October are, "What is the ETC?", and "what are you folks up to?" Simply put, the ETC is an organization dedicated to making Southern Maryland and our strategic partner, NSWC Indian Head, world-renowned in the business of energetics. By doing so we feel that the DoD and the country are enriched by ensuring the viability and robustness of an enterprise critical to our nation's security. In addition, Southern Maryland will benefit from an infusion of very good jobs, in a wide variety of science and technology endeavors.

As for what ETC does on a day-to-day basis, we basically have three elements to our operation. First, we work on technical programs and projects, such as featured in our last newsletter's spotlight article on virtual reality. We have also launched several "seedling" projects at the University of Maryland, which we are optimistic will lead to larger projects in the near future.

Second, we work with our partners at the College of Southern Maryland, the University of Maryland, Charles County school system and NSWC Indian Head in the area of science and engineering workforce development. Many of you know that we are facing a looming national crisis in this area, and the ETC will help to forge a regional strategy addressing this important topic. Our spotlight article in this issue addresses this topic.

Third, we have a "think tank" that will publish seminal pieces on topics of interest to the DoD and Homeland Security, commenting on issues of national import such as the challenges facing organizations like NSWC Indian Head in forging a healthy future.

In closing, I am honored to have been selected as the first permanent Executive Director of the ETC and am looking forward to working with the Southern Maryland community to make this region THE go-to place for energetics in the country.

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## ETC Powers Up Workforce Development

A strategic objective of the ETC is to be a committed partner in growing a more skilled, diverse, and adaptable energetics workforce in the southern Maryland region. This is no small vision. The population of qualified scientists, engineers, and technicians who specialize in energetics research and development activities critical to our national security is declining. Turning this trend around requires a wide-angle effort that spans all the way from primary and secondary school to community college, undergraduate, and graduate-level educational initiatives and workplace training programs.

In fact, the achievement of another key ETC objective – transforming the region into a global center for energetics technology development – is "contingent on



Dr. Jim Short

### Where the Engineers Are

The Population Reference Bureau provides the most detailed snapshot of U.S. Engineers and Scientists. Here are a few interesting facts.

- In 2005 there were **7.4 million scientists and engineers** in the United States. About 35 percent of them were in engineering.
- **310,035** scientists and engineers are located around Washington, D.C.
- Science and engineering occupations make up **9 percent** of the District of Columbia workforce and **8 percent** in Maryland.
- The **highest median incomes** for scientists and engineers are in Maryland and New Jersey -- **\$70,000** compared with a national average of \$58,760.
- People identified with racial and ethnic minorities made up **26 percent** of the national science and engineering workforce. African-Americans were best represented in Georgia (19 percent) and Maryland (18 percent).

our ability to foster a highly skilled and educated energetics workforce in southern Maryland," according to ETC Executive Director Bob Kavetsky.

### The Energetics Community

Dr. Jim Short, a member of the ETC Board of Directors, has an intensely personal interest in workforce strategy. His familiarity with Indian Head goes back some 50 years when the family of childhood friends belonged to an enclave of explosives and propellant engineers and other intellectuals who fled Nazi Germany and settled at Indian Head after World War II.

Short later became a mechanical engineer specializing in combustion theory and reactive gas dynamics and worked at the NSWC Indian Head detachment as manager of the chemicals synthesis and formulations branch from 1986 to 1988. On his first day, two Naval Ordnance Laboratory chemists were injured in a fire, reawakening a boyhood memory of the accidental death of his friends' father fighting a brush fire near Indian Head. Compounding these experiences were Short's impressions about the community's nearly total economic dependence on the base and constant worry among employees and local officials that a "Base Relocation and Closure" (BRAC) would target NSWC Indian Head, then and still the largest employer in Charles County.

The specialized nature of military energetics R&D has had a particular impact on the technician workforce at NSWC Indian Head. This is an aging population not being replenished by younger workers, and their skills are so specific as to not be easily transferable to other jobs. "If these jobs were to disappear, it would be challenging for energetics technicians to find equivalent jobs in terms of pay and skill," notes Short.

Short left Indian Head in 1988 but returned in 1995 after the Navy closed the White Oak laboratory and consolidated the Navy's energetics work at NSWC Indian Head. "Partly as a result of my past experiences," recalls Short, "I was determined to find the positive and do what I could to help both the base and the Indian Head community thrive."

Short soon became involved in workforce revitalization efforts and collaborated with Bob Kavetsky on Workforce 2010, an NSWC Indian Head program aimed at reversing the alarming attrition of scientists, engineers, and qualified technical workers from the Navy's research team.

Now in his capacities as ETC Board member, Deputy Director of the Center for Energetic Concepts Development (CECD) at the University of Maryland College Park, and a visiting professor in the Department of Mechanical Engineering, Short continues to advocate workforce development, from mentoring and financial assistance for students seeking degrees in energetics-related fields, to upgrading technical workers' skills and convincing youngsters in K-12 to aspire to careers in the STEM disciplines (science, technology, engineering, mathematics).

### No Pink Slips

At the ETC ribbon-cutting in October 2006, Sen. Barbara Mikulski (D-MD) acknowledged the connection between a thriving energetics enterprise in southern Maryland and economic prosperity and job security. The senator said that, without targeted education and training initiatives, workers could be getting pink slips instead of medals.

To avoid this outcome, ETC's workforce strategy includes "job renovation". This involves working with NSWC Indian Head and the College of Southern Maryland to make certificate and associate degree programs available that give high school graduates and IH workers a path to upwardly mobile careers in energetics and related fields.

"One of our goals is for southern Maryland's young people to have the option of staying in the communities where they grew up because they can find jobs in energetics that are not only interesting and well-paying, but also portable," says Short.

ETC's toolbox is loaded with a variety of other resources and initiatives to build a vibrant energetics workforce — all ultimately aimed, says Short, to strengthening our national security and "bringing joy, happiness, and economic prosperity to southern Maryland." Look for a follow-up article on ETC's workforce tools in the next edition of this newsletter.

## Board Member Focus – Michael Middleton

Michael Middleton has a vested interest in the health and prosperity of Southern Maryland. He is not only a native of Charles County but he is also President and Chairman of the Board for one of the region's largest non-military employers, Community Bank of Tri-County.

Mr. Middleton joined Community Bank of Tri-County in 1973, which at the time was a small savings and loan known as Tri-County Federal Savings & Loan. In 1979 he was appointed President and Chief Executive Officer and has shown unwavering commitment to serving the people of Southern Maryland with exceptional customer service in banking. Under his leadership, Community Bank of Tri-County has grown to the seventh largest bank headquartered in Maryland.

"There is an important synergy between the ETC and NSWC- Indian Head that, when leveraged, will make Southern Maryland 'the place' for energetics R&D. Through this important partnership, the ETC will not only work with local business, but will also bring more high-tech businesses to this region. The success of ETC in these endeavors correlates directly to increased jobs, stability of current jobs, and economic prosperity. It also dramatically reduces the worry that Indian Head will be targeted for closure in future BRAC," says Mr. Middleton. "This is one of the primary reasons why I am so devoted to the ETC and honored to be the Chairman of the Board. The resources, personnel, and visibility that the ETC brings to this region should not be underestimated."

In addition to serving on the Board of Directors for the ETC, Mr. Middleton is current board member for the Federal Reserve Bank of Richmond, Baltimore Branch and the former Chairman of the Federal Home Loan Bank of Atlanta. He is also currently a member of The American Bankers Association, the Maryland Bankers Association, and the National Association of Corporate Directors.



*Michael L. Middleton,  
Chairman, ETC Board of Directors*

## ETC Meets with North Point Students

More than 40 North Point High School engineering students participated in a holiday meet and greet session with members of the Energetics Technology Center of Southern Maryland (ETC) Dec. 20 at the school.

Students participated in two discussion sessions with invited guests to learn about different career opportunities available in the field of engineering. Bob Kavetsky, ETC's executive director, opened the session by discussing different engineering aspects and career opportunities available, ranging from aerospace and chemical engineering to land surveying and development.

Guests who also participated in the discussion session included Dr. Jerry Forbes, an engineering professor at the University of Maryland, Amy O'Donnell, an engineer with the Naval Surface Warfare Center (NSWC) Indian Head division, and Gore Bolton, the CEO and president of Bolton & Associates, a civil engineering firm located in La Plata.

During the session, the ETC also donated \$200 to the North Point engineering club and \$100 to the North Point culinary program.



*North Point Principal, Kim Hill accepts a check from Bob Kavetsky, Executive Director, and Michael Middleton, Chairman of the Board.*

## Firebaugh Team Initiates NSWC Indian Head Business Case Analysis

A team led by Dr. Millard Firebaugh (Rear Adm., ret.) is conducting a study aimed at supporting and promoting the value of the Naval Surface Warfare Center Indian Head Division as a critical resource to the DoD and the nation's defense. The study will be conducted in two phases and will yield:

1. A baseline assessment of the business health of the organization as of today in terms of capabilities, competence, reputation, efficiency, financial soundness, and infrastructure.
2. A long-term business strategy that will enable IHDIV to cement its role as the DoD Center for Energetics, providing needed and valued energetics services, products, and technology in an efficient operation.

Phase One, the initial assessment, will collect and organize relevant business data, analyze information about the current and potential future mission, and develop findings and recommendations. Phase Two will use those findings and recommendations and apply additional data collection and analysis to develop a strategic plan supporting IHDIV's emergence as the DoD's preeminent source for energetics expertise and technology.

The next edition of the ETC newsletter will include more details and a status report.



*(Pictured in front left to right) Adam Nave, Lois Bohne, Abe Zwany, and Dave Anand. (In back, left to right) Bob Lawrence, Mike Hagee, Millard Firebaugh, Bob Kavetsky, Jim Short, Bob Kaczmarek, Joe Shannon, and Tom Pelsoci.*

## Staff Announcements

The ETC is pleased to announce the following staff additions.

**Kevin Grote** joins the ETC as Program Manager. Prior to joining the ETC, Mr. Grote served as the Deputy Business Executive for Information Technology Integration at Naval Surface Warfare Center Headquarters in Washington, D.C. In this capacity, Mr. Grote was responsible for developing planning systems and leading the Integration Team for both corporate data and collaborative environments. Mr. Grote holds a Bachelor of Science from the United States Coast Guard Academy. He is a recipient of the Navy's Meritorious Civilian Award (2003 and 2007), the National Defense Medal, the Humanitarian Service Medal, and many other outstanding military and civilian citations. He holds one patent and has applied for others. Mr. Grote is the author of 15 technical papers on software engineering, product data models, and electronic design process standardization.



*Kevin Grote*

**Bill Hinckley** also joins the ETC as Program Manager. Prior to joining the ETC, Mr. Hinckley served as a Program Manager for the Naval Surface Warfare Center - Indian Head Division, where he worked primarily in the field of energetics research and development. Mr. Hinckley has extensive experience developing and managing complex energetic systems. Mr. Hinckley holds a Bachelor of Science in Mechanical Engineering and a Master of Science, Mechanical Engineering, both from the University of Maryland. He is a recipient of the Navy's Meritorious Civilian Award and the NDIA Bronze Medal.



*Bill Hinckley*