

## Hydrokinetics

### Brigadier General Robert Crear, US Army Retired



Brigadier General Robert Crear retired on 1 May 2008. He has served worldwide, commanded and led soldiers and civilians at every level, while serving in high level leadership positions with the US Army Corps of Engineers (Corps). At the Pentagon he served as the military assistant to the Assistant Secretary of the Army for Civil Works; At the Corps Headquarters in Washington DC, he served as Assistant Director of Civil Works and as the Chief of Staff; In the field he commanded the Vicksburg District, the Southwest Division (SWD) and the Mississippi Valley Division (MVD); Additionally, he served as President of the Mississippi River Commission, having been appointed by the President and confirmed by the Senate.

In his last assignment as MVD Commander and President of the Mississippi River Commission, Crear was responsible for a \$7.5 billion civil works program. In addition, he played a vital role in managing the Corps water resources program in the entire Mississippi River Valley. The boundaries of the Mississippi Valley Division extend from Canada to the Gulf of Mexico, include portions of 12 states, and encompass 370,000 square miles. The programs and activities overseen by the MVD and MRC are conducted by 5700 employees in six district offices located in St. Paul, Minn., Rock Island, Ill., St. Louis, Mo., Memphis, Tenn., Vicksburg, Miss., and New Orleans, La.

General Crear holds the position of Distinguished Visiting Lecturer of Applied Engineering, National Security and Homeland Security at Jackson State University, Jackson, Ms. He is founder and CEO of The Crear Group consulting firm. He is Chairman of Free Flow Power Corporation's wholly owned subsidiary Free Flow Development LLC a hydropower developer based in Gloucester, Ma that is using proprietary technology to extract energy from moving water (Mississippi River) to produce electricity.

He is married to his high school sweetheart, the former Reatha Hall. They have four adult children.

## **Alternative Fuel Vehicles**

### **G. Marshall Molen**

G. Marshall Molen graduated from Texas Tech University with the BSEE, MSEE, and Ph.D. in electrical engineering in 1968, 1969, and 1974, respectively. After graduation he was employed at The Aerospace Corporation in El Segundo, California, where he worked in the area of radiation effects. He later was selected as Director of Research and Development for ESCO Manufacturing Company in Greenville, Texas, and in 1978 he began his academic career at Old Dominion University and was actively involved in research in the pulsed power area. After serving as associate dean for research and graduate studies, he continued his administrative pursuit in 1987 as chairman of the Department of Electrical Engineering at Tennessee Technological University. In July 1992 he accepted a position at Mississippi State University where he served as department head until 2002 and oversaw the development of a large departmental research program.



He is currently the principal investigator for a program in on-board vehicle power (OBVP) sponsored by the U.S Army TARDEC. In addition, he is principal investigator for another Army program in which silicon IGBT switches used in motor controllers are replaced with silicon carbide transistors so as to improve the efficiency and thermal issues for hybrid vehicles. As the Diversified Technology/Ergon Distinguished Professor at MSU, he is involved with unique power applications employing modern power electronics. His other recent experience has included serving as principal investigator for naval power systems development as part of the Electric Ship Consortium that is sponsored by the Office of Naval Research.

He is affiliated with the Center for Advanced Vehicular Systems at Mississippi State University where he is responsible for vehicular systems integration. He served as the faculty advisor for the MSU Challenge X competition that was a four-year student contest sponsored by General Motors and the Department of Energy. The MSU team was recently recognized as the national champion of the Challenge X competition. He is now serving as the faculty advisor for EcoCar that is the follow-on three year competition.

**Blossman Gas****Mark Denton, V.P. Business Development**

Mark Denton is the V.P. of Business Development for Blossman Gas. Denton has worked with Blossman Gas since 1985 and has been in the retail propane business since 1978.

Blossman Gas is the largest independent propane retailer in the U.S. It provides an integrated network of propane autogas vehicle conversion solutions, on-site vehicle refueling, technical expertise and ongoing partnership, training and technical support of our bi-fuel vehicle conversion systems. Through our partner we offer conversions, warranty, EPA certified systems, and ongoing safety and technical training for fleet operators.

## **Renewable Energy Financing**

### **Gary Jones**

Gary Jones, a native of Jackson, MS has been employed with USDA, Rural Development (formerly Farmers Home Administration) for over 18 years. Prior to being employed with Rural Development, he worked for over 8 years in the Banking and Mortgage Lending Industry.

Previous positions with Rural Development include Assistant County Supervisor in Yazoo County, Community Development Manager in Yazoo, Madison, Rankin and Hinds counties and currently serves as Rural Business Specialist for the Rural Business-Cooperative Service Division of USDA, Rural Development headquartered in Jackson, MS.

Mr. Jones has a BS degree in Business Finance from Jackson State University and also holds a Real Estate Brokers License for the State of Mississippi. He has also completed several certifications in Financial and Credit Analysis.

He is married and the proud father of two sons.

**Biomass****Sumesh Arora, Director, Mississippi Technology Alliance Strategic Biomass Initiative**

Sumesh Arora is the director of the Mississippi Technology Alliance Strategic Biomass Initiative. Commercial biomass conversion technologies may someday reduce our nation's dependence on foreign oil while creating value-added product opportunities for Mississippi farmers. He also served as a project development engineer for MTA's Mississippi Alternative Energy Enterprise and was responsible for connecting a home in North Mississippi powered by solar and wind energy to TVA's utility grid. This is the first such home in all of TVA's seven-state service area. Sumesh is a firm believer in the efficient use of energy, generated by both traditional and non-traditional means.

Sumesh was appointed in June 2006 by Governor Haley Barbour to represent Mississippi on the Governor's Ethanol Coalition. In 2005, Sumesh was named as one of "Top 40 Under 40" business leaders in Mississippi by the Mississippi Business Journal. He has secured state and federal grants amounting to \$1.1 million for renewable energy projects over the last two years. Sumesh has presented at numerous national and regional conferences and has several journal publications.

## **Solar**

### **Matt Brown, Project Manager, TVA**

Matt Brown currently serves as Project Manager for TVA End Use Generation in Nashville, TN. He works directly with Power Distributors and customers across the Valley on Generation Partners and Green Power Switch efforts. Mr. Brown played a key role in working with the Generation Partners Product Development team over the past year in developing a competitive offering that included expanding renewable project capacities to 1 MW from 50 kW previously. He received his M.S. in Agricultural Economics and Statistics from the University of Tennessee, Knoxville in August 2008, where his research and journal publications specialized in implementing solar photovoltaic (PV) technology into agricultural applications, such as poultry farms. Mr. Brown's work in economic modeling and price theory/incentive research have provided him experience to help develop competitive and leading renewable marketing products for TVA.