VIEWS VISIONS

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Energized!

Energy Innovation and Leadership

Time-tested principles of strategic planning theory and practice encourage us to plan for our future by building on our strengths and opportunities, while being mindful of and managing weaknesses and threats. These principles remain valid to this day, and are as applicable to states and regions as they are to individuals and organizations.

What are our strengths and opportunities in the Appalachian region? They are many, but without a doubt our history of energy excellence is paramount. Our experience, skills, traditions, and knowledge embrace all aspects of energy, including production; generation; research and development; "wheeling" and transmission of power; safety; environmental knowledge, skills, and practices; innovation; and much more.

When commissioned years ago by a group of West Virginia leaders to assist and advise in the development of a state economic development plan, Dr. Richard Lester of the Massachusetts Institute of Technology reported back that our strengths and opportunities are obvious: energy. According to Dr. Lester, all the aspects of energy production and innovation noted above can and should be a cornerstone of West Virginia's economic development plan for years to come.

Never have we in Appalachia had a greater opportunity to position ourselves as an international center of energy excellence. Leaders across our region understand and are seizing this opportunity, as reflected in the articles which follow in this edition of Views & Visions.

I read a book years ago which deeply influenced my thinking about energy. The book is *Out* of Gas: The End of the Age of Oil by Dr. David Goodstein, a professor of physics at Cal Tech

who observes that virtually all forms of energy that we use on earth - whether for baseload power or for motive power - originate as photons emitted by the sun. Those photons are transformed through various means into usable human power, whether as fossil fuel, biomass, solar, wind or other (the notable exception being nuclear power).

Fossil fuels turn out to be among the most efficient ways of converting stored energy. Dr. Goodstein argues that we will necessarily continue to rely on fossil fuels for a long time if we are to meet our projected energy needs, while noting that the equation of efficiency is always changing as technology evolves. In all events, research and innovation are essential if we are to meet our future energy needs.

Thinking of different sources of energy, not as an "either/or" choice but as comprising a continuum of how we convert photons from the sun into useful power, helps me in my thinking about power generation. Such a framework refocuses the discussion of our energy future. In the articles that follow, leaders from across our region and nation share their insights, developments, and observations about this future, and how our region can continue to be a leader - and indeed expand our leadership - as a center of energy excellence in a world hungry for energy.

I thank all our authors for sharing their views and visions with us. I also thank our energy companies, organizations, institutions, and leaders for the many benefits you have bestowed upon us over the years as part of our Appalachian tradition of energy excellence, innovation, and operations. I cannot wait to see what comes next, and I am confident that we will always have the power to improve our lives thanks to our energy innovators and pioneers. Forward. V

From Our **Managing Partner**



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Tom Heywood is Managing Partner of Bowles Rice. He has significant experience in health care, corporate, finance and commercial law, and is an active member of the firm's Government Relations team.

Heywood serves on numerous charitable and non-profit boards, including the Claude Worthington Benedum Foundation, the West Virginia Roundtable and the Discover the Real West Virginia Foundation. He also participates actively in various business and trade associations.