

Bowles Rice

# VIEWS & VISIONS

BOWLESRICE.COM

SPRING/SUMMER 2023

# A New Economy: Appalachia and the Chemical Industry Rise Together



**Steven Hedrick**  
AVN Corporation

Steve Hedrick is Chairman, President, and Chief Executive Officer of AVN Corporation. He has more than three decades of broad-based leadership experience – with more than 20 years of experience in the petrochemical industry – leading businesses, chemical manufacturing, and health, safety, environment, and quality (HSEQ). Prior to AVN, Hedrick held numerous roles of increasing responsibility at Lyondell, Bayer Polymers, Bayer MaterialScience, and Bayer CropScience, and has led multiple regional and global teams to improve business results, reliability, and safety systems. His entry into the chemical industry followed service as an officer in the United States Army.

Most Americans rarely think about how the chemical industry has been fully integrated into our lives. The benefits of manipulating the molecules of nature's elements have created modern living. Daily access to your cleaning products; the packaging to deliver safe, unspoiled food; cars built of materials which protect in crashes while still lightweight by design; precise optics and eyeglass lenses; mobile computers; sanitized surgical instruments; delivery of clean water; replacement medical devices; and much of the entertainment environment. These are only some of the benefits of a robust industry which created the pathway towards a better life for every citizen. West Virginia's role in creating modern society through chemical innovation is distinguished and continuing.

Two areas of importance are now emerging: the electrification of the economy and the strategic reliability of access to necessary chemicals.



It is critical that we address electrification of our industrial processes in a safe and sustainable way, which hardens our grid system and strengthens the durability of our economy.

According to the International Energy Agency, the chemical industry is the world's largest industrial energy consumer and the third largest source of industrial emissions.<sup>2</sup> As society demands a continuing reduction in environmental footprint and the expanded generation of important and needed products, the chemical industry is responding.

One pathway to success is Small Modular Reactors (SMRs) and the deployment of safe nuclear technology to augment and further enhance the stability of power generation

---

**“West Virginia's role in creating modern society through chemical innovation is distinguished and continuing.”**

---

Electrification is viewed as necessary for any responsible global energy transition.<sup>1</sup> In the U.S., the electrical grid faces dramatically growing demand and requires shifting on how to maintain grid stability and economic electric production while using less fossil fuels. America cannot maintain its independence without a protected electrical grid which delivers to both consumers and industry at a fair price, using smart environmental practices.

currently deployed in America. SMRs offer many advantages and are a key part of the U.S. Department of Energy's goal to develop safe, clean, and affordable nuclear power options.<sup>3</sup> These advanced reactors can be used to generate power and process heat, among other industrial uses.

As industry leaders, we need to jointly support the development of SMRs and the safe,

efficient technology which will lead to steady flow electricity with suitable cost and environmental results. To be clear, though, it's not the responsibility of one company or one government agency. The input, effort and collaboration of many, and undertaking the right partnerships and processes is necessary to obtain the success we demand. Regulators need industry and community input to effectively balance a relatively rigid process by which SMRs are permitted



against the timely delivery of the benefits sought. Predictability and a smart timeline for these significant investments are critical to reach greater electrification with the goals of affordability, reliability, and sustainability.

Equally critical is the reliable access to those essential chemicals needed to produce the miracles of modern society we hourly take for granted. U.S. manufacturing is surprisingly reliable on foreign and not-always-friendly

countries and companies for many base, special, and precursor chemicals to make pharmaceuticals and national defense products, among other products.

A noted strength of the American chemical industry and its talented workforce is the ability to pivot and respond to the needs of our country. We (re)learned, through COVID, the need to reshore chemical process development, given its potential to expand technology innovation that addresses the economic, technical, and sustainability challenges presented by the global supply chain. By reshoring critical intermediates in the pharmaceutical supply chain, we can offer solutions to complex problems of society while reducing the carbon intensity of development and product manufacturing. By wise application of our infrastructure and subject matter expertise, we can enable faster response times and fewer supply chain disruptions within the U.S.

At AVN Corporation, we are proud to collaborate with AIChE, RAPID Manufacturing Institute, Teich Process



Development and Procurement via a grant from the U.S. Department of Commerce's Rapid Assistance for Coronavirus Response (RACER) to establish a national Center of Excellence for intermediate chemical process design in South Charleston. Taking the

CONTINUED ON PAGE 44



<sup>1</sup> *Opportunities from industrial electrification*, McKinsey, <https://www.mckinsey.com/industries/industrials-and-electronics/our-insights/unlocking-opportunities-from-industrial-electrification>

<sup>2</sup> *To decarbonize the chemical industry, electrify it*, MIT Energy Initiative, <https://energy.mit.edu/news/to-decarbonize-the-chemical-industry-electrify-it/>

<sup>3</sup> *Office of Nuclear Energy, Advanced Small Modular Reactors (SMRs)*, Department of Energy, <https://www.energy.gov/ne/advanced-small-modular-reactors-smrs>



CONTINUED FROM PAGE 5


**Mitch Carmichael**

## Exciting, Unprecedented Times in West Virginia Economic Development

the specific framework for the progression of this project. Regardless of external circumstances or macroeconomic developments, West Virginia and Form Energy will adhere to the governing principals and tenants of our deal. We look forward to a long and fruitful business relationship.

West Virginia is winning the future with intelligent leadership willing to see new horizons. We are strengthening our traditional industries while rapidly embracing exciting new opportunities. To paraphrase the ancient philosopher Socrates, “the secret of change is to focus all our energy not on tearing down the old, but on building the new.” The many new, innovative industries flocking to West Virginia have realized that our state has struck the perfect balance of building upon our historical strengths while making room for a modern, innovative, and new economy.

It is important that we pause to give thanks for the wonderful blessings and opportunities that we have received with these many economic development announcements. Families and future generations will look back on these years and know that West Virginia reached for her best and began a revolution of renewed prosperity. In the words of John F. Kennedy, “change is the law of life, and those who look only to the past and present are certain to miss the future.”

The future for West Virginia workers, families, and our economic prosperity is bright and full of sunshine! 



CONTINUED FROM PAGE 13

**Steven Hedrick**


## A New Economy: Appalachia and the Chemical Industry Rise Together

opportunity to reshore this needed chemical production, we will also improve the safety and efficiencies of these processes as we return this work to America. AVN, along with these partners, has commenced creating new standardized methodologies

and developmental frameworks to safely streamline chemical manufacturing processes from laboratory bench through commercial production.

Electrification of the economy and reliability of access to necessary chemicals both move towards carbon neutrality and continue to take Appalachia’s old economy and make it new again, and much better. Welcoming new forms of energy generation, as well as supporting other industries such as robotics, information technology services, fintech, and flourishing tourism will allow for a renewed momentum to ensure viability and future success for our state and its communities.

Our ability to effectively adapt and embrace change relies on clear vision, contributions from all sectors, and continued dedication to supporting, researching, and driving solutions that enable this new economy to further develop in West Virginia. The chemical industry is a critical component of these solutions and for modern life. The business of a well-run chemical industry is good for America in that it enables substantially all elements of our way of life. And, importantly, inherent to the business of chemistry are sustainability and a promise to humanity. We have an obligation to continuous improvement of our own operations and our impact on the world around us.

AVN Corporation is uniquely positioned to serve as an integral part in sustainable chemical manufacturing for America and drive innovation for the benefit of the world. AVN is committed to achieving these goals safely and in a manner which protects against the creation of secondary environmental problems. Together, with private and public partners, key decision-makers, and other stakeholders, AVN seeks to responsibly chart a course for even safer and more sustainable chemical manufacturing, greater strength in the stability of our electrical grid system, and a chemical industry that is better able to respond to society’s needs. Innovation has long been our mission and, as Appalachians, we possess the conviction to see it through. 



CONTINUED FROM PAGE 33

**Johnathan Holifield**

## Bitwise Industries: West Virginia Pathways to Equity in Tech

employment programs, 60 percent are Black or Brown, 60 percent are women, 40 percent are first-generation immigrants, and 40 percent are LGBTQIA+.