

The background of the entire image is a deep blue space filled with numerous small white stars. A curved horizon of the Earth is visible on the left side, showing the blue atmosphere and dark landmasses. The main title 'VIEWS & VISIONS' is centered horizontally. 'VIEWS' and 'VISIONS' are in a large, white, serif font. The ampersand '&' is in a smaller, red, cursive font. Above the right side of the title, the words 'Bowles Rice' are written in a smaller, white, serif font.

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VIEWS & VISIONS

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Renewing Renewable Energy



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David Friend has been developing wind farms since 2001 when he co-founded U.S. Wind Force and served as its Vice President of Sales and Marketing, and later as its Chairman and Chief Executive Officer. In 2013, Friend and his business partner, Jim Cookman, formed Laurel Renewable Partners (LRP) and developed a number of wind farms in West Virginia, including Pinnacle Wind Farm in Mineral County. LRP is currently developing wind, solar and energy storage facilities in Maryland, Pennsylvania, West Virginia and Virginia.

Sure, we all think of wind energy as renewable, but have you ever thought about *renewing* renewable energy projects?

It's happening here in West Virginia – right now. The Pinnacle Wind Farm near Keyser, in Mineral County, is in the final stages of a \$128 million upgrade, not because the turbines are broken or have failed to meet expectations, but because the replacement turbines are simply better. Called a “repowering” in the industry, upgrades like the one underway at Pinnacle can happen in several ways: Replacing existing turbines with newer, more efficient ones with roughly the same size generators, or replacing the existing turbines with fewer, but bigger, turbines (5 MW vs. 2 MW, for instance). The first option allows for the reuse of underground electrical cables, and

sometimes even the turbine foundations, so it's a simpler process. The second option is more complex but may make sense, particularly when the original technology is significantly outdated. It usually requires respacing the turbines, and therefore the installation of new foundations, electrical infrastructure and often some modest project road improvements to accommodate the delivery of longer blades.

When technology is advancing quickly, project repowerings offer productivity increases but require new investment. We are all used to seeing upgrades happen with equipment like cellphones and cars. The same is true for energy production. The productivity gains increase the quantity of production and simultaneously lower the unit cost of production. This benefits the buyer of the



Upgrades to the Pinnacle Wind Farm near Keyser in West Virginia's Mineral County.



electricity through the receipt of additional energy and/or lower unit pricing, the host landowners through increased rent revenue, the owner/operator of the wind farm through its return on investment, and the communities in which they are based and taxed – all without increasing emissions.

Occupation (B&O) taxes since capital costs tend to be high. A repowering also extends the life of the project, meaning that it will contribute to the local economy for a longer time, too.

Over the years, there has been a lot of discussion about decommissioning wind energy projects at the end of their useful life. Understandably, the worry has always been that the owner/operator of a wind farm might simply walk away if the project becomes uneconomical, leaving the tall, potentially inoperable turbines in place to become a legacy of “rusting hulks” and maybe even a safety hazard. The wind industry responded early on by putting decommissioning agreements and bonding in place to protect the landowners as well as the local and state governments.

The legislature recently codified the requirement for decommissioning agreements, adding yet another layer of protection. Interestingly, the eventual repowering of West Virginia’s wind farms will likely at least delay the need to worry about decommissioning at all.

At Laurel, we handle the development of renewable energy projects (land rights, wind and wildlife studies, permitting, etc.) and then turn those projects over to other, larger, organizations who are in the business of constructing, owning and operating them long term. Collectively, the future is looking bright for our industry because many corporations, utilities and other energy buyers are demanding that at least a portion of the electricity they use for production and operations comes from renewable sources. Some won’t even locate new facilities in an area where they can’t procure energy from renewable sources. In addition to all the jobs and taxes that wind projects offer directly, renewable energy is effectively a recruitment tool for other industries, underscoring the need to continue the development

“...renewable energy is effectively a recruitment tool for other industries, underscoring the need to continue the development of new renewable sources to attract new industries and jobs.”

Wind farms are usually located in rural communities and are often among the largest taxpayers in the counties in which they operate. In general, property taxes are based on the capital cost of the project and decline over time with depreciation. A key benefit to repowering renewable energy facilities in West Virginia is the potential increases in property and Business and

of new renewable sources to attract new industries and jobs. In the meantime, market forces are motivating the owner/operator companies to take a hard look at repowering existing projects to help meet the strong demand. They are essentially making renewable energy projects renewable. **W**