

A Bright Economic Future for the Mountain State

*Economic diversification
in West Virginia*

Jeremy Richardson

November 2013



**Union of
Concerned Scientists**

The transition to a clean energy economy is a frightening prospect for states and communities firmly rooted in the fossil fuel economy. Partly as a result, debate about our nation’s energy policy has become toxic in West Virginia and the broader Appalachian region.

Discussions of environmental concerns—whether related to mountaintop removal, hydraulic fracturing, or climate change—tend to send people to opposing corners, with neither side willing to budge, or even to engage in civil discourse. And parties too often focus on the tension between job growth and environmental protection, assuming that the two are mutually exclusive.

As the son and brother of West Virginia coal miners, I see a desperate need and a timely opportunity for a more constructive conversation. This report summarizes a meeting that represents the culmination of a 21-month research project I completed for the Union of Concerned Scientists through its Kendall Science Fellowship. In my research, I studied the cultural and historical

importance of coal to West Virginia, and analyzed the economic importance of future coal production for the state and the potential to diversify its economy.

Even in the heart of coal country, people recognize that things are changing. I believe that by concentrating on the opportunities that lie ahead—and by directly addressing the challenges we face—we can ensure a vibrant future for generations of West Virginians to come.

Jeremy Richardson
Senior energy analyst
Union of Concerned Scientists

If coal is King, he hasn’t taken very good care of his subjects.
—Lieutenant Governor and Senate President Jeff Kessler

Context

Coal has been an important part of West Virginia’s economy almost since it achieved statehood in 1863. Talk of the future of coal evokes strong emotions: state residents identify with coal and take pride in its history. As West Virginia celebrates its 150th birthday, however, coal faces enormous challenges, and its importance in the state’s economy is on the decline.

Low natural gas prices and slow growth in demand for electricity have led to a drop in coal consumption nationally—with significant implications for West Virginia’s coal industry. Shrinking reserves are also making the coal in Central Appalachia more difficult to mine, and therefore more costly. Southern Company, which operates 46 gigawatts of generating capacity in four southeastern states, now sources about a fifth of its coal from Central Appalachia. Following electricity industry trends, however, it plans to all but remove the region’s coal from its fuel mix because it is too expensive. The coal industry has responded

to these changes by idling coal mines across the region and laying off mine workers.

To explore the potential to diversify the state’s economy—and celebrate local successes in pursuing new paths to economic development—the Union of Concerned Scientists (UCS) partnered with the West Virginia Center on Budget and Policy and the West Virginia Community Development Hub to convene “A Bright Economic Future for the Mountain State.” The forum took place on September 3 and 4, 2013, at the Clay Center for the Arts and Sciences in Charleston, West Virginia.

The forum posed a critical question: “What do we want West Virginia to be like in 30 years?” This focus allowed speakers and other participants to consider what the state could offer to ensure that their kids and grandkids can work and live in the places where they grow up. The question also allowed participants to break out of the tired jobs-versus-the-environment frame that dominates most conversations about the state’s future.



Stacy Jarrell

Attendees at the start of Wednesday morning's program.

Some 200 people—representing an unusually diverse mix of perspectives—attended the forum's keynote addresses, three panel discussions, and documentary screening. Speakers and other attendees included business owners, energy industry executives, state and local officials, members of faith communities, labor representatives, academics, environmentalists, and individuals from nonprofits spearheading local economic development. Reporters also attended, and media interest in the event was strong. (For the forum agenda, a list of participants, and speaker biographies, see Appendices A, B, and C, respectively. For excerpts from media coverage of the event, see Appendix D.)

This report highlights the main themes emerging from the Bright Future forum. These include:

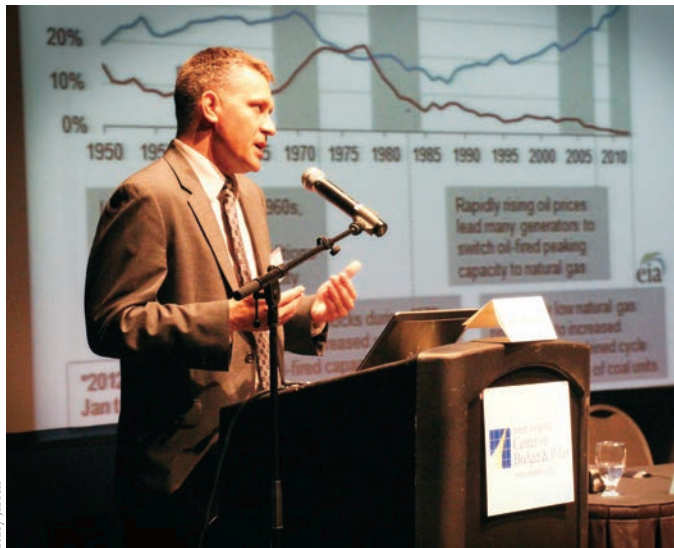
- West Virginia must have a vision to carry it through the challenge of fostering a future that will inevitably look different from the past.
- Regional and local leaders are beginning to spur and create new businesses and jobs, but they desperately need state leadership to ease the transition to a more diversified economy.
- West Virginia has tremendous assets that it can mobilize in building such an economy.

- The state also faces multiple challenges that it must address in a comprehensive way.

In opening the conference, Jeremy Richardson, now a UCS senior energy analyst, pointed out that the state's "current path is not sustainable," given the decline in coal production in southern West Virginia. Using projections from the federal Energy Information Administration, he showed that the coal industry is likely to continue to shrink as a share of the state's economy, underscoring the critical need for economic diversification.

However, most events designed to explore West Virginia's future are one-sided, attracting either environmental activists or coal supporters, but rarely both. The Bright Future forum sought to find common ground. Toward that end, organizers asked keynote speakers and panelists to cite model programs and specific solutions in West Virginia and elsewhere that suggest a path toward a sustainable economic future.

Addressing an evening reception, West Virginia Secretary of State Natalie Tennant noted the potential for renewable energy jobs in the state, and Lieutenant Governor and Senate President Jeff Kessler touted his bill for diversifying the state's economy. Unable to attend at the last minute, U.S. Senator Jay Rockefeller, in his prepared remarks (see Appendix E), stressed the importance of innovation as a driver of the West Virginia economy, and highlighted the role of the 2011 federal America COMPETES Act in strengthening education in science and math.



Stacy Jarrell

Jeremy Richardson of UCS explains the importance of diversifying West Virginia's economy.

Regional and local leaders are beginning to spur and create new businesses and jobs, but they desperately need state leadership to ease the transition to a more diversified economy.

We have to understand that the future will not look like the past.

—Matt Ballard, president, Charleston Area Alliance

Vision

In a keynote address, Tom Heywood—a prominent Charleston lawyer who serves as managing partner at Bowles Rice, a regional law firm—suggested that West Virginia “is entering its golden age.” Supporting his positive vision, Heywood cited the state’s lower-than-average unemployment rate (6.3 percent, versus 7.3 percent nationally, as of August 2013); large “rainy day” fund; recent efforts to strengthen education; infrastructure improvements such as the building of roads, bridges, and schools; growing philanthropic support; and extensive natural resources.

To fulfill his vision for West Virginia, Heywood urged forum participants to “imagine a future state and work backwards,” as opposed to asking, “What do we have and what can we do with it?” We must, he said, “create the future from the future.” Acknowledging West Virginia’s challenges, he nevertheless urged leaders not to accept being “second best,” but to project the idea that West Virginia is “the best state in the nation already.” This positive spirit resonated throughout the forum.

All four members of the first panel noted that visions for the future of West Virginia must chart a new course. For example, referring to the state’s coal industry, Matt Ballard, president and CEO of the Charleston Area Alliance—the largest chamber of commerce in the state—noted that some people want West Virginia to stay the same, and called that

attitude a “hurdle that needs to be overcome. . . . We have to understand that the future will not look the same as the past.”

Former Congressman Alan Mollohan stressed the need for economic diversification. Although “most politicians focus on extraction and policies that support them,” promoting other sectors of the economy is critical, he said. “West Virginia’s coal, timber, and gas resources aren’t going anywhere, but with diversification we can create a more flexible, resilient, and vibrant economy.” Public-private partnerships can help promote such diversification, according to Mollohan.

Ballard offered an example of such a partnership: the alliance between the state and landowners that created the Hatfield-McCoy Trail System for off-road vehicles. This 600-mile-plus system—one of the world’s largest—has inspired people who never thought they would own their own business to become entrepreneurs, noted Ballard. The result is numerous new outfitting shops, ATV rental and repair shops, and restaurants in southern West Virginia.

Stressing the importance of small businesses to the state’s economy, Ballard called for a cultural shift toward entrepreneurialism, noting that, “No one in my public education ever told me that I could run my own business; that needs to change.” Indeed, 94 percent of West Virginia businesses are already considered small, based on the federal government’s definition, said Commerce Secretary Keith Burdette during a later panel, and many of those businesses make components of everyday items many West Virginians use.



Beth Vorhees, host of West Virginia Morning on West Virginia Public Broadcasting, moderates the first panel discussion with (left to right) Alan Mollohan, Scott Rotruck, Anne Barth, and Matt Ballard.

Sally Jarrell

Panelist Scott Rotruck, a retired energy industry executive, affirmed that West Virginia is an energy state, but urged forum participants to “think about energy in new ways.” In response to a question from the audience, Rotruck affirmed that the state will be mining coal in 30 years “but to a lesser degree,” and highlighted the opportunity to encourage energy efficiency, calling it a “no regrets option.” Kent Spellman, executive director of the West Virginia Community Development Hub, also pointed to greater energy efficiency as a win-win, even for the energy sector, and emphasized the importance of diversifying the state’s energy mix.

The state needs a culture change regarding the value of energy efficiency, agreed Ballard. “Some people believe that leaving the lights on burns more coal and is therefore better for the economy. That, of course, is not the case,” he said, because making homes and businesses more energy-efficient creates new jobs that cannot be outsourced. At the same time, West Virginia must realize that “investment, innovation, and economic development are long-term propositions” requiring “discipline and patience.”

Panelist Anne Barth, executive director of TechConnect WV—a coalition of industry, the public sector, and higher education that aims to foster economic development—also heralded the “innovation economy” as “the driving force of

new, high-quality jobs in West Virginia” over the next 30 years. “The enemy is the status quo,” she said. Efforts to turn innovation into new enterprises in four key industries—advanced energy, chemicals, biotechnology, and biometrics—have already sparked recent growth in the state economy and can drive further growth, she said.

Reverend Jeff Allen, head of the West Virginia Council of Churches and a panelist, asked, “Who gets to decide what kind of economy we are going to have in West Virginia?” and urged more inclusiveness. Dialogues in communities across the state are helping residents better understand the state’s economic challenges, and potential responses and next steps. However, we “must find a way to cross the boundary from the old to the new West Virginia so that no one is left behind,” Allen cautioned.

Toward that end, the Hub concentrates wealth creation, not just job creation, in rural communities, according to Spellman. He argued that businesses should think of themselves as a “social enterprise,” and that, “Their business needs to benefit the community and the community needs to benefit from that business, just as the business needs to do well.” Discussions of economic diversification, he argued, “need to be taken down to where the people are.”

We can’t change the past, but we can invest in the future.

—Ted Boettner, executive director, West Virginia Center on Budget and Policy

Communities Leading, State Absent

The Bright Future forum sought to highlight success stories from communities already working to diversify their economies beyond traditional extractive industries. Several speakers highlighted examples from the tourism sector. Spellman urged participants to see tourism not just as a way to bring people to the state to spend money, but rather as a pathway for attracting and supporting entrepreneurs: “Tourism is the best marketing and recruiting tool we have.”

Panelist Matt Wender, president of the Fayette County Commission in south-central West Virginia, described the county’s 40-year history of using land-use planning and zoning to foster economic growth. That planning process helped gain national park status for some 70,000 acres in the county, setting the stage for a booming tourism industry and the creation of a Boy Scouts retreat center.

Panelist Chris Yura, founder and president of SustainU Clothing, based in Morgantown, relied in part on a business incubator program at West Virginia University to develop his business, which makes clothing from 100 percent recycled plastics and cotton. The thriving company, now with 20 full-time employees, obtains its material and manufactures its products in the region.

Panelist Kristen Barker, president of the Cincinnati Union Co-op Initiative, described a job creation model now being tested in Cincinnati and 10 other cities across the United States. The approach is based on Spain’s Mondragon cooperative. Now that country’s seventh-largest corporation, Mondragon has built a globally competitive business based on workplace democracy, personal and professional development for employees, and efforts to strengthen communities and the environment.



Stacy Jarrell

Ted Boettner, executive director of the West Virginia Center on Budget and Policy, points out that several other states rich in natural resources have created policies similar to the proposed West Virginia Future Fund.

The Cincinnati initiative has drawn on that model to launch a worker-owned food hub that connects local farmers with local consumers. Spellman pointed out that if West Virginia increased production of the food consumed in the state by even a small fraction, the additional economic impact would be significant. In his research on alternatives for the state's economy, Richardson found strong job creation potential in both the agriculture and tourism industries.

Although local leaders are taking innovative paths to strengthen local and regional economies, the forum revealed a critical need for state leadership and policies to help diversify the economy. Kessler was the main sponsor of a bill in the last legislative session to create one such policy: the West Virginia Future Fund.

To supply the fund, the state would invest a fraction of taxes on the production of natural gas above a baseline level. After 20 years, the state would begin to use the returns to support infrastructure and education designed to diversify the West Virginia economy. Other resource-rich states such as Wyoming and North Dakota have used royalties on mineral lands, severance taxes on the production of coal and natural gas, or both to create such trust funds.

Ted Boettner, executive director of the West Virginia Center on Budget and Policy, noted that a trust fund would enable state government to turn finite natural resources into an infinite source of revenue. If West Virginia had established a future fund based on a 1 percent severance tax on coal starting in 1970, "we would have close to \$8 billion in a trust fund today," he pointed out. "We can't change the past, but we can invest in the future." However, the present proposal is too vague, he contends, and policy makers should begin to draw on the fund five years after its inception to support West Virginia's future.

A poll of likely West Virginia voters commissioned by Richardson showed that nearly 70 percent support the creation of such a fund. By a 50 percent margin, respondents also support increasing severance taxes on coal slightly and using the revenues for similar purposes. Several participants remarked that this finding was unsurprising: of course West Virginians believe that coal companies should invest in the communities where they operate. Kessler plans to reintroduce the bill in the upcoming legislative session.

There are none better than the workers in West Virginia.

—Kenny Perdue, president, West Virginia AFL-CIO

West Virginia's Assets

Forum speakers and panelists highlighted West Virginia's assets and how they might inform the vision of the state's future. Those assets tended to fall into three categories: natural resources, people, and place.

Speakers highlighted the state's extensive natural gas deposits, and enthusiastically embraced the recent boom in production of natural gas from Marcellus shale in the state and region. Natural gas is a "game changer" that will lead to a "gold rush that will build a completely new economy," Heywood contended. He noted that 10 hotels are rising in a rural county that had not seen construction in decades. Natural gas production could also spur job creation, he said; as energy costs decline, industries are bringing manufacturing jobs back to the United States because they are now cost-competitive. New companies can also use natural gas from the Marcellus shale to produce butane and propane, creating jobs in the process, agreed Burdette.

Environmental concerns linked to the use of hydraulic fracturing to produce natural gas were notably absent from the discussion. Although forum organizers had specified that environmental concerns were beyond the scope of the event, many attendees privately expressed great concern that speakers did not seem to recognize the potential dangers of hydraulic fracturing—particularly to local, state, and regional water systems. West Virginia's "water is an amazing resource, and we do a good job of protecting it," one speaker asserted—a view clearly disputed by many in attendance.

The state's environmental attributes relate directly to economic development. As noted, many speakers cited the potential for West Virginia's natural beauty to attract tourists, especially for outdoor recreation. In fact, out-of-staters often first learn about the state through tourism, Spellman pointed out. A tourist magnet can also be a magnet for businesses, observed Wender. Natural amenities can even induce out-of-state business owners to move their operations to the state. West Virginia's natural beauty also provides a foundation for a high quality of life, forum participants noted.

The state's proximity to major population centers is also an advantage, allowing for easy distribution of manufacturing products in a world where transportation costs are high. And that, in turn, makes the prices of goods more competitive, said Yura.



West Virginia Commerce Secretary Keith Burdette (center) responds to a question from an audience member. Also pictured are John Weete (left) and Kenny Perdue (right).

West Virginia's people rank as one of the state's greatest resources, forum participants agreed, citing their hardworking nature. West Virginians are "creative and resourceful and kind," and have a solid sense of place and community, Heywood maintained. "There are none better than the workers in West Virginia," concurred Kenny Perdue, president of the West Virginia AFL-CIO.

The state's strong universities and facilities are also key assets for economic development, according to the speakers. Research universities are the primary drivers of innovation, and state funding for research and development is critical, said panelist John Weete, executive director of Auburn University's Research and Technology Foundation. Panelist Jim Casto of the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) noted that it leases some \$6.5 million worth of equipment to enable entrepreneurs to make prototypes and test production runs.

Workforce development programs at community and technical colleges, and apprenticeship programs for skilled workers, enable state residents to qualify for well-paying jobs, speakers agreed. The RCBI's network of manufacturing centers has provided thousands of hours of training and assistance to manufacturers across West Virginia and the region.

Panelist David Satterfield, interim director of the West Virginia Manufacturing Extension Partnership—which also trains workers and provides technical assistance to businesses—underscored the importance of encouraging the next genera-

tion to seek and train for manufacturing jobs. “We’re going to take 160 fifth-graders into manufacturing facilities so they can have that inspirational moment.”

West Virginia’s Challenges

While the Bright Future forum focused on solutions, participants and speakers alike found it difficult to discuss visions for the future without confronting problems of the past and present. Those problems include prescription drug abuse, poor educational outcomes, declining population, lack of access to health care, persistent poverty, and environmental degradation. While companies praise the state’s workforce, they also express concern about “how deep the bench is,” and about ensuring not just a skilled workforce but one that is drug-free, Burdette noted. “We can’t make someone drug-free or force them to get an education, but we can offer opportunities,” he said.

The forum featured a screening of *Hollow*, a documentary featuring the stories of the people of McDowell County,

which exemplifies the problems facing West Virginia and other rural areas in the region. Elaine McMillion, the film’s director and producer, and a West Virginia native, spoke about her vision for the project, which includes short videos as well as interactive data—all available online. A panel discussion featuring two young McDowell residents accompanied the screening.

Many county residents—including several profiled in the film—made the two-hour drive to attend the screening. One McDowell church leader observed that residents had simply decided to stop waiting for help from the state and “do it ourselves.” Despite the enormous odds, they expressed optimism about a better future for the home they love, and continue to work toward it.



McDowell County residents Trey Lockhart and Erica Lucas (far table), along with filmmaker Elaine McMillion and Jeremy Richardson (near table), during the screening of Hollow.

Sacy Jarrell



Florida Power and Light's Mountaineer Wind Energy Center produces a maximum of 66 megawatts of electricity. Each turbine stands 228 feet above Backbone Mountain and has blades of 115 feet that weigh just over eight tons.

The power is already here.

—Kristen Barker, president, Cincinnati Union Co-op Initiative

What's Next

The Bright Future forum broke new ground in West Virginia. In so doing, it revealed core themes that resonate among a broad cross section of West Virginians. These include the importance of projecting a positive vision of the state's future, fostering economic development, creating new jobs, and protecting the place people call home so future generations can live, work, and thrive here. The fact that both speakers and attendees represented a wide range of fields and views prompted Spellman to emphasize inclusiveness in his closing remarks: "Cognitive diversity leads to better decisions. When we have people engaged from different perspectives, we are going to end up with a more sound decision-making process, resulting in better decisions for our future."

The three organizations that sponsored the forum have pledged to continue to advance the conversation about West

Virginia's economic future, possibly through joint reports or more public events. UCS, in particular, is talking with both sponsors and stakeholders about how it can help promote creative thinking about economic diversification in West Virginia and the broader Appalachian region.

Like West Virginia, other states in the region depend heavily on coal—through the mining industry and the electricity sector—and face many of the same challenges. UCS hopes not only that the Bright Future forum can catalyze changes in West Virginia, but also that ideas from the forum can inform similar events throughout the region. West Virginians can serve as leaders in advancing these ideas.

Despite the forum's success, online evaluations and conversations with participants revealed significant disappointment that it avoided a frank discussion of the environmental impact of extractive industries and their contribution to climate change. Many participants expected these topics

to receive greater attention, given UCS's long-standing efforts to raise awareness of climate change and the potential for renewable energy and energy efficiency to mitigate it. UCS hopes the event has helped make room for state leaders to begin to consider these concerns, rather than avoiding the implications of climate science for the state's coal industry.

The Bright Future forum is only one first step in building West Virginia's future. Creating trust and forging consensus among citizens and decision makers about how best to move forward will take time. However, the positive spirit embodied by speakers and participants was palpable. Barker summed it up well: "West Virginia has everything it needs. There is remarkable creativity here already, and you just need to tap into it. The power is already here."

Jeremy Richardson is a senior energy analyst in the UCS Climate and Energy Program. He comes from a coal-mining family in West Virginia and is conducting research into economic diversification in the state.

CONFERENCE ORGANIZERS

The **Union of Concerned Scientists** puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

The **West Virginia Center on Budget and Policy** is a policy research organization that is nonpartisan, nonprofit, and statewide. The Center's research and analysis is designed to support informed public dialog and policy in West Virginia. The Center consults and collaborates with other organizations to ensure that its analyses are relevant and timely and strives to be a knowledgeable and respected source of credible information on public budget and fiscal issues for policy makers, advocates, media, and the public.

The **West Virginia Community Development Hub** is a statewide nonprofit organization that works to engage communities and organizations in a system of community development that is locally determined and directed, continuous, intentional, and aligned across all three sectors of society (public, private, and civil).

ACKNOWLEDGMENTS

The "Bright Economic Future for the Mountain State" forum was made possible by the support and partnership of several organizations: the West Virginia Center on Budget and Policy and its staff, Ted Boettner and Alyson Clements, and the West Virginia Community Development Hub and its executive director, Kent Spellman. The event received early and valuable guidance from James Van Nostrand, director of the Center for Energy and Sustainable Development at the West Virginia University College of Law. Principal funding for the event came from the Union of Concerned Scientists' Kendall Fellowship program.

Several UCS staff made important contributions to this event and report, including Angela Ledford Anderson, Kate Cell, Michelle Davis, and Jeff Deyette. I thank my Kendall Fellowship committee: Rachel Cleetus, Steve Clemmer, Jeff Deyette, and Peter Frumhoff.



The National Oceanic and Atmospheric Administration's Environmental Security Computing Center in Fairmont, WV, will develop and improve the accuracy of global and regional climate and weather model predictions.

Forum Agenda

Tuesday, September 3, 2013

6:00 PM–8:00 PM

Evening Reception (*Grand Foyer*)

Keynote Address

Jeff Kessler, President, West Virginia Senate

Natalie Tennant, West Virginia Secretary of State

Wednesday, September 4, 2013

7:30 AM–8:30 AM

Registration and Breakfast (*Grand Foyer*)

8:30 AM–8:35 AM

Welcome and Introductory Remarks (*Walker Theater*)

Jeremy Richardson, Union of Concerned Scientists

8:35 AM–9:00 AM

Keynote Address (*30 min*)

Tom Heywood, Managing Partner, Bowles Rice

9:00 AM–10:30 AM

Visions: West Virginia in 30 Years (*90 min*)

Moderator: Beth Vorhees, West Virginia Public Broadcasting

The Honorable Alan B. Mollohan

Scott Rotruck, President, Scott Rotruck & Associates

Anne Barth, Executive Director, TechConnectWV

Matt Ballard, President/CEO, Charleston Area Alliance

10:30 AM–11:00 AM

Break

11:00 AM–11:20 AM

Surprising Support for Economic Diversification (*20 min*)

Daniel Gotoff, Partner, Lake Research Partners

11:20 AM–11:40 AM

The Proposed West Virginia Future Fund (*20 min*)

Ted Boettner, Executive Director, West Virginia Center on Budget and Policy

11:40 AM–12:00 PM

A Roadmap for Sustainable Economic Development in West Virginia (*20 min*)

Jeremy Richardson, Union of Concerned Scientists

12:00 PM–1:15 PM

Lunch (*Grand Foyer*)

Special Guest: The Honorable Jay Rockefeller, U.S. Senator

1:15 PM–2:45 PM

Pathways: Economic Development and Workforce Training (*Walker Theater*)

Moderator: Beth Vorhees, West Virginia Public Broadcasting

John Weete, Executive Director, Auburn Research and Technology Foundation

Keith Burdette, West Virginia Secretary of Commerce

Kenny Perdue, President, WV AFL-CIO

David Satterfield, Interim Director, WV Manufacturing Extension Partnership, West Virginia University

James Casto, Associate Director of Public Information, Robert C. Byrd Institute

James Skidmore, Chancellor, WV Council for Community and Technical College Education

2:45 PM–3:15 PM

Break

3:15 PM–4:45 PM

Action: The Sky is the Limit

Moderator: Kent Spellman, Executive Director, WV Community Development Hub

Chris Yura, Founder, SustainU Clothing

Jeff Allen, Executive Director, West Virginia Council of Churches

Rebecca Randolph, President, Vision Shared

Matt Wender, President, Fayette County Commission

Kristen Barker, President, Cincinnati Union Co-op Initiative

4:45 PM–5:00 PM

Concluding Remarks: What Did We Learn?

Kent Spellman, Executive Director, WV Community Development Hub

5:30 PM–7:00 PM

Dinner (*Grand Foyer*)

7:30 PM–9:00 PM

Evening Public Screening: *Hollow* (*Walker Theater*)

Elaine McMillion, Director and Producer

Trey Lockhart, Student Representative, Reconnecting McDowell

Patrick Corcoran, Assistant to the Director, McDowell Public Library

Erica Lucas, McDowell County resident

Participants

Peni Adams, executive director, McDowell County Economic Development Authority
Peni works to create and retain jobs in McDowell County.

Angela Ledford Anderson, director, Climate and Energy Program, Union of Concerned Scientists

Angela is the director of the Climate and Energy Program at the Union of Concerned Scientists (UCS). She is leading UCS's efforts to persuade government officials to enact policies that encourage clean energy and result in global warming emissions reductions.

Rob Anderson, executive vice chancellor for administration, West Virginia Higher Education Policy Commission

Rob directs the internal administration for the two- and four-year public college systems in West Virginia.

Teddy Armbrecht, owner, The Wine Shop @ Cap Mrkt.
Teddy is interested in organic commodities. He is also an avid mountain and road biker.

Linda Arnold, chairman and CEO, The Arnold Agency

Linda is the chairman and CEO of The Arnold Agency, a marketing communications firm with offices in West Virginia, Montana, and Washington, DC. She also writes a regular column for the Sunday *Gazette-Mail* entitled, "Live Life Fully."

Amy Atkins, director, Division of Local Health, WV Bureau for Public Health

Amy manages a unit of professionals in the WVBPH who work with local health departments.

Dianne Bady, project coordinator, Ohio Valley Environmental Coalition

Dianne's organization is working toward a community wind farm and solar panels at a coalfield health clinic.

Christy Bailey, executive director, National Coal Heritage Area Authority

We work to help diversify the economy in southern West Virginia by developing heritage tourism sites related to coal history and culture.

Kevin Baker, counsel, West Virginia Senate Judiciary Committee

Sandra Steiner Ball, bishop of the WV Conference United Methodist Church

Sandra leads the UMC as their bishop in the West Virginia and Garrett County, MD, area.

Neela Banerjee, energy and environment reporter, Los Angeles Times

Joe Barker, director, Office of Community Health Systems and Health Promotion, WV Bureau for Public Health

Joe manages an office of 65 staff working on various programs designed to improve the health of West Virginia citizens.

Kristen Barker, president, Cincinnati Union Co-op Initiative
Kristen helps build Mondragon union co-ops, with six initiatives under way in Cincinnati. Kristen helps support efforts across the country as well.

Rob Bastress, attorney, DiTrapano, Barrett, DiPiero, McGinley, and Simmons

Rob is a plaintiff's lawyer in Charleston.

Andrew Beckner, communications, Office of Senator Jay Rockefeller
Andrew coordinates Senator Rockefeller's relationship with the news media in West Virginia.

Jim Berner, treasurer, United Methodist Church

Jim is the treasurer for the United Methodist Church.

Belinda Biafore, economic development and grant coordinator, Marion County Economic and Community Development
Belinda works with the Marion County Economic and Community Development Office.

Gerald Biser, assistant director, industrial extension, West Virginia University

Jerry works within the Industrial Extension service and the West Virginia MEP program, providing manufacturing consulting and business management services to small to mid-size West Virginia companies.

Susan Blackwell

Ruth Blevins, executive director, West Virginia Nurses Association
Ruth is the executive director of the West Virginia Nurses Association, the membership organization for nurses in West Virginia.

Patrick Bond, general partner, Mountaineer Capital LP
Patrick is a venture capitalist.

Laura Bozzi, program manager, Appalachian Mountain Advocates
Laura works to protect the environment and surrounding communities from mountaintop removal. She also works to support sustainable economic transition efforts. She has recently initiated a local farms program to support sustainable agriculture in the Greenbrier Valley.

Kelly Bragg, energy development specialist, WV Division of Energy
Kelly provides information and technical assistance to West Virginia residents relating to energy efficiency, renewable energy, and alternative fuels.

Barbara Braun, senior vice president and founder, Composite Transport Technologies
Barbara is senior vice president of administration and marketing.

Bob Brown, project manager, Reconnecting McDowell/AFT
Bob manages a multi-faceted project in McDowell County that seeks to reform the education system by addressing all of the issues that impact students.

John Catselis, investor, self-employed

John manages commercial and residential real estate in Charleston, and is on the board of The Arnold Agency, a marketing communications firm.

Kate Cell, outreach coordinator, Union of Concerned Scientists
Kate is project manager of the coastal impacts group at the Union of Concerned Scientists.

Becky Ceperley, president and CEO, The Greater Kanawha Valley Foundation

Becky runs a community foundation seeking to provide local wealth in six counties in West Virginia.

Lori Chaffins, membership coordinator, West Virginia Nurses Association

Lori works for the West Virginia Nurses Association, an affiliate of the American Nurses Association.

Daniel Chiotos, organizer for energy efficiency, Sierra Club
Daniel brings West Virginia residents and organizations together to push for the job creation and lower utility bills that would come from expanded energy efficiency programs.

Holly Clark, director, Telework West Virginia

Holly seeks to place more West Virginians in work-from-home jobs.

Alyson Clements, outreach coordinator, WV Center on Budget and Policy

Alyson works to bridge West Virginia Center on Budget and Policy research reports with low- and moderate-income families, legislators, press, and public.

Dan Conant, principal, Solar Holler, LLC

Dan works with small towns and communities across West Virginia to organize and invest in clean energy projects that will sustain our towns and the environment.

Ellis Conley, MonValley District superintendent, West Virginia Annual Conference

Ellis is one of nine district superintendents in the West Virginia Annual Conference United Methodist, overseeing 70 pastors and 163 congregations in north-central West Virginia.

Patrick Corcoran, assistant to the director, McDowell Public Library

Patrick assists the general public in gaining and utilizing information. Most recently, his library has been able to assist Elaine McMillion and her Hollow crew in the empowerment of community members.

Patrick Crane, director of policy and strategy, WV Higher Education Policy Commission

Patrick works for the state agency overseeing all public colleges and universities in the state. His job includes research, advocacy, policy making, and grant writing to benefit West Virginia students.

Pam Curry, executive director, Center for Economic Options

Ginger Danz, distance learning coordinator, Bridgmont Community and Technical College

Ginger works to bring telework jobs to West Virginia in order to diversify the economy and strengthen communities.

Michelle Davis, energy-water program assistant, Union of Concerned Scientists

Michelle Davis is the energy-water research assistant for the UCS Climate and Energy Program, where she does research and outreach for the Energy and Water in a Warming World Initiative.

Bill Denham, Spanish teacher, Riverside High School

Bill is a high school Spanish teacher at Riverside High School and believes in providing students with authentic learning experiences and language immersion.

John Deskins, director, Bureau of Business & Economic Research, West Virginia University

John's bureau's mission is to provide the West Virginia community of business and public-sector decision makers with economic analysis and forecasts, applied business and economic research, and information on economic, demographic, and business trends in the state and its regional economies.

Jeff Deyette, assistant director, energy research, Union of Concerned Scientists

Jeff is the assistant director of energy research and a senior energy analyst in the Climate and Energy Program at the Union of Concerned Scientists. He conducts analysis on the economic and environmental costs and benefits of renewable energy and energy efficiency policies.

Robert Diznoff

Robert works on federal policy related to energy, environment, energy efficiency, and advanced manufacturing.

Rose Edington, minister and Echo Justice advocate, change agent, UUC

Rose is a native West Virginian, OVEC board member, Energy Efficiency Committee, Green Sanctuary Program.

Chris Espinosa, legislative representative, Earthjustice

Chris is the legislative representative engaging government on clean water issues on behalf of Earthjustice.

Sandra Fallon, education and training, National Environmental Services Center

Sandra develops training, education, and informational programs/materials on water issues (protection, sustainability, integrated management).

Frank Fineis, intern, Sustainable Williamson

Frank is an intern with Sustainable Williamson, a campaign to redefine the economic landscape of coal country.

V. Diane Freeman, CEO, Ferguson Manning Associates

Diane owns a consulting firm working in the oil and natural gas industry. She works with corporations, community leaders, and government officials to identify business opportunities for minorities, women, veterans, and small businesses in West Virginia and the surrounding area.

Carol Fulks, executive director, WV Hospitality & Travel Association

Carol represents the private tourism industry in West Virginia through day-to-day operations consulting and governmental relations.

Tricia Fulks, associate producer, Hollow Interactive

Tricia is an associate producer for *Hollow: An Interactive Documentary*, an online documentary about McDowell County, WV, through the eyes of its residents.

Jake Glance, communications and media, West Virginia Secretary of State's Office

Jake handles all communications and media for the West Virginia Secretary of State's Office.

Stacy Gloss, project manager, Energy Efficient West Virginia

Stacy is a project manager for Energy Efficient West Virginia, which works to advance energy efficiency in the Mountain State.

Crystal Good, development, West Virginia State University

Crystal works in marketing and development at West Virginia State University.

Brenda Grant, strategic planning, CAMC

Brenda does strategic planning for the Charleston Area Medical Center Health System.

Ed Grant, district superintendent, The United Methodist Church

Ed works with pastors in his district.

Marley Green, organizer, Sierra Club

Marley works on water quality and economic transition issues in the southwest Virginia coalfields.

Victor Grigoraci, accountant, Hayflich Grigoraci PLLC

Vincent has over 40 years of public accounting experience and over four years as an internal revenue agent. He is also a Personal Financial Specialist (PFS) and a Certified Financial Planner (CFP).

Sarah Halstead, community and economic development, WV State University
Sarah does program development to support innovation economy growth.

Evan Hansen, president, Downstream Strategies
Evan performs science and policy research related to resource environmental and economic issues facing West Virginia. Downstream Strategies offers environmental consulting services that combine sound interdisciplinary skills with a core belief in the importance of protecting the environment and linking economic development with natural resource stewardship.

Zack Harold, reporter, Charleston Daily Mail

Bradley Harris, executive assistant, West Virginia Secretary of State's Office
Bradley is the executive assistant to the West Virginia secretary of state.

Elaine Harris, international representative, Communication Workers of America

Wess Harris, educator, organizer, Appalachian Community Services, Inc.
Wess's focus is to teach union history while exposing efforts to sanitize our heritage. He uses factual depictions of our past to motivate young folks to take action to allow us to have a future.

Gregory Hayes, superintendent, Western District, United Methodist Church
Gregory is the superintendent of the Western District of the United Methodist Church. The district is comprised of more than 100 United Methodist churches in Mason, Lincoln, Cabell, Wayne, and Mingo counties.

Paul Hill, chancellor and CEO, WV Higher Education Policy Commission
Paul is chancellor and CEO of the WV Higher Education Policy Commission.

Mel Hoover, minister and Echo Justice advocate, change agent, UUC & Tuesday Morning Group & WV UU Advocacy Network
Mel is a longtime change agent in justice work and environmental issues. Mel is also a coordinator of Sustainable Kanawha Valley Initiative, and a speaker and workshop leader on Echo Justice.

Aaron Huertas, press secretary, Union of Concerned Scientists
Aaron works with the media to promote the work of the Climate and Energy Program and Center for Science and Democracy. During his time at UCS, he has conducted more than a dozen communications workshops for scientists, co-written several UCS reports, and helped design the UCS climate education card game, *Cool It!*

Rachel Huff, education and outreach director, WV FREE
Rachel spearheads advocacy education and social media work around young people, health care, and reproductive justice at WV FREE. As a 25-year-old female she has a sincere interest in ensuring our state's future has youth voices and input.

Mark Imbrogno, attorney, Jackson Kelly PLLC
Mark specializes in public finance and economic development.

Lloyd Jackson, businessman, natural gas industry
Lloyd is a businessman in the natural gas industry. He is a member of the State Board of Education and a trustee of the Benedum Foundation.

Josh Jarrell, general counsel, WV Department of Commerce
Josh is the general counsel of the WV Department of Commerce, which houses the WV Division of Energy.

Courtney Jesser, vice chair, Generation Greenbrier Valley
Courtney is a substitute teacher with Greenbrier County Schools. She also serves as vice chair of Generation Greenbrier Valley.

Lou Ann Johnson, policy director, West Virginia Secretary of State's Office
Lou Ann is the policy director in the West Virginia Secretary of State's Office.

Rebecca Kimmons, director, Create WV Conference on The Future, Create West Virginia
Rebecca is an economic development strategist using innovation economy principles.

Carrie Kline, owner of folklife preservation organization, oral historian and musician, Talking Across the Lines
Carrie preserves knowledge of the local arts of daily living, music, and narrative arts, and records and shares oral testimonials interweaving viewpoints on a variety of community issues.

Michael Kline, oral historian and musician
Michael preserves knowledge of the local arts of daily living, music, and narrative arts by recording and sharing oral testimonials interweaving viewpoints on a variety of community issues.

Betty Knighton, director, WV Center for Civic Life
Betty is the executive director of the WV Center for Civic Life, a nonpartisan, nonprofit organization that promotes civic engagement throughout the state. A primary focus of her work is in helping communities develop ways to talk and work together on issues that affect the quality of life in West Virginia.

Jill Kriesky, associate director, SWPA Environmental Health Project
The SWPA Environmental Health Project responds to individuals' and communities' need for access to accurate, timely, and trusted public health information and health services associated with natural gas extraction.

Ken Krimmel, dean of the cabinet, WV Conference, The United Methodist Church
Ken works with the bishop of the West Virginia Conference of the United Methodist Church.

Catherine Kunkel, consultant, Kunkel Energy Research
Catherine primarily works with Energy Efficient West Virginia to strengthen utility-funded energy efficiency programs in West Virginia.

JF Lalaria, director, The United Methodist Church WV Conference
JF is the assistant to the bishop and director of program ministries for the WV Conference of the UMC.

Lin Lalaria, pre-school director, Cross Lanes UMC
Lin directs and teaches in the pre-school program at Cross Lanes UMC, Cross Lanes WV.

Katey Lauer, coalition coordinator, The Alliance for Appalachia
Katey's work has traditionally focused on impacts to health and water quality from strip-mining and other coal industry practices.

Colt Legg, doctor, CAMC
Colt is a medical resident at the Charleston Area Medical Center.

Bobby Lewis, state director, USDA Rural Development
Bobby serves as the state director for USDA Rural Development. This federal agency invested approximately \$387 million in rural West Virginia in FY 2012.

Conni Gratop Lewis, *American Friends Service Committee*
Conni volunteers with the AFSC Economic Justice Project, focusing on minorities' and women's needs in economic development work.

Trey Lockhart, *student*
Trey is a graduate of McDowell County, and a student representative for AFT Reconnect McDowell.

John Maher, *vice president for research, Marshall University*
John is the vice president for research at Marshall University and the executive director of the Marshall University Research Corporation. He is also currently serving as interim director of the Marshall Institute for Interdisciplinary Research.

Kenisha Manning, *president, KJM Custom Designs*
Kenisha creates and designs custom jewelry.

Tara Martinez, *executive director, Women's Commission*
Tara's commission conducts advocacy, education, and research on women's issues in the state.

Lynette Maselli, *media specialist, WV Senate*
Lynette is the media specialist for Senate President/Lt. Governor Jeff Kessler.

Joseph Mathis, *commissioner, The City of Williamson*
Joseph also works with Sustainable Williamson to redefine the economic landscape of coal country.

Nate May
Nate is a musician and composer from Huntington, WV.

Tim McClung
Tim is interested in Future Fund and establishing a public bank in West Virginia.

Karen McElhinny, *lawyer, Shuman, McCuskey & Slicer*
Karen is a lawyer in Charleston.

Jim McGoldrick, *executive director, Pleasants County Development Authority*
Jim is executive director of Pleasants County Development Authority and is seeking to improve quality of life for this rural county by adding jobs, tax base, services to businesses and industry, and infrastructure.

Rory McIlmoil, *director of energy policy, Appalachian Voices*
Rory brings people together to protect the land, air, and water of central and southern Appalachia.

Morgan McKinney, *registered nurse*
Morgan is an RN, currently practicing in urgent care and community nursing settings. From Wyoming County, Morgan is passionate about West Virginia and dedicated to working toward sustainable development in all sectors of society for our state.

Elaine McMillion, *director and producer, Hollow documentary*
Elaine is the director and producer of *Hollow*, the interactive documentary film that will be shown as part of this forum.

Justin McMillion

Rita McMillion

Rebecca McPhail-Randolph, *president/CEO, Vision Shared*
Rebecca is the president of a statewide nonprofit economic development organization.

Joe Mearman, *president, Energy Efficient Technologies*

Brandy Messer, *director of economic development, Office of Senator Jay Rockefeller*
Brandy is on the staff of Senator Rockefeller.

Sandra Mikush, *deputy director, Mary Reynolds Babcock Foundation*
The Babcock Foundation supports efforts to move people and places out of poverty, and is particularly interested in community development and policy efforts that advance a just and sustainable economic transition in Appalachia.

Dave Mistich, *reporter, West Virginia Public Broadcasting*
Dave is a reporter in Charleston who focuses on stories happening in the capital city and surrounding areas.

Ann Murray, *radio reporter/producer*
Anne produces environmental news for various public radio venues including NPR News, Living On Earth, and Voice of America.

Jane Nalle
Jane is attending to hear one of the speakers, Jeremy Richardson.

Cullen Naumoff, *Vision 2030 project director, Charleston Area Alliance*
Cullen works on long-term strategic economic development founded in the triple bottom line using the economic gardening approach.

Brandon Nida, *organizer, Blair Mountain Heritage Alliance*
Brandon works to build a sustainable economy through self-initiative and pragmatic step-up strategies.

Brian O'Donnell, *director, social ministries, Diocese of Wheeling Charleston*
Brian works for social justice concerns for the Catholic Diocese.

Martha Ogniben, *district superintendent, United Methodist Church*
Martha is a clergy person supervising a district of clergy in the northern panhandle of West Virginia for the United Methodist Church.

Stephanie Ojeda, *assistant general counsel, Patriot Coal Services*
Stephanie serves as in-house counsel for Patriot Coal Services in Charleston.

Sean O'Leary, *columnist and blogger, The State of My State*
Sean writes a bi-weekly column on West Virginia economics and policy for the *Martinsburg Journal* and other newspapers.

Asley Orr, *director of outreach and events, Office of Senator Jay Rockefeller*
Asley is the director of outreach and events for the Office of Senator Jay Rockefeller.

Kate Ortenzi, *intern, Sierra Club Beyond Coal Campaign*
Kate is a master's student at the University of Maryland in conservation biology and public policy. She is currently interning at the Sierra Club, focusing on the economic transition of Appalachia with the elimination of MTR.

Misty Peal, *GR specialist, WVEA*
Misty is a lobbyist for an educational employment professional organization.

Guy Peduto, *director, INNOVA Commercialization Group*
The INNOVA Commercialization Group, an initiative of the West Virginia High Technology Consortium Foundation, is a business-support services and seed and early-stage investment capital program dedicated to creating successful entrepreneurs and new ventures. INNOVA specializes in bringing vital knowledge and resources to seed and early-stage companies in support of product commercialization efforts.

Sam Petsonk, *mining health and safety advocate*
Sam is an advocate for coal miners' health and safety, and is involved in community economic development programming in the greater Beckley area.

Carson Pfeifer, intern, Sierra Club
Carson works for the Beyond Coal campaign for the Sierra Club.

Mimi Pickering, director,
Community Media Initiative,
Appalshop

Margaret Chapman Pomponio, executive director, WV FREE
Margaret works on women, youth, and families advocacy and on reproductive health education.

Jessica Pressman, benefits administrator, Veterans Administration
Jessica is a veterans' benefits administrator and community volunteer with Create Huntington.

Bill Price, organizing representative, Sierra Club
Bill works on energy efficiency as part of a campaign to move to cleaner energy generation.

James Probst, owner, Probst Furniture Makers
James owns and operates a furniture manufacturing business in Lincoln County that builds high-end furniture to James's design. Work is shipped all over the United States.

Calantha Quesenberry, executive director, Historic Fayetteville Convention & Visitors Bureau

Regan Quinn, musician, legal researcher, WV Symphony Orchestra
Regan researches medical issues and recruits experts for law firms. She is also a musician with the West Virginia Symphony Orchestra.

JW Randolph, energy savings associate, Appalachian Voices
JW has worked to protect citizens from mountaintop removal at the local, state, and federal level, and now works on implementing energy efficiency in the rural southeast.

Phoebe Randolph, architect, Edward Tucker Architects Inc.
Phoebe is an architect and a community volunteer with Create Huntington.

Steven Richards, university professor, West Virginia State University
Steven is the program director for Parks, Recreation & Tourism Studies at WVSU. He teaches an undergraduate course in sustainable development and introduces sustainability issues into core curriculum.

Rosella Richardson

Warren Richardson

Charlie Rittenhouse, president, UWUA Local 69 AFL-CIO
Charlie represents gas workers of Dominion in six states.

Betty Rivard, photographer, West Virginia Homeplace
Betty is a fine art landscape photographer, an editor of a book of historic photographs, and a producer of art fairs.

Rebecca Roth
Rebecca consults with area nonprofits on grant writing and strategy.

Tom Saladyga, assistant professor of geography, Concord University
Tom teaches courses within the broad fields of physical geography, sustainability studies, and geographic information systems (GIS). His research focuses on forest ecosystem stability and resilience in the context of changing climate, land use, and/or management strategies.

Danny Scalise, chief executive officer, EnAct

Jim Sconyers, chair, WV Sierra Club
Jim works for an end to coal-fired power and for renewable/sustainable energy, clean air, and clean water.

Janet Scott
Janet lives in Wyoming County.

Amy Shanholtzer, director of evangelism and congregational development, WV United Methodist Church
Amy works with United Methodist churches across West Virginia on issues of vitality and community engagement.

Lisa Sharp, director of Rural Business-Cooperative Service, USDA Rural Development
Lisa manages the business programs division within USDA Rural Development in West Virginia. She also serves as the rural development coordinator, a liaison between the agency's programs and communities, organizations, and individuals across the state.

Kerrin Sheldon
Kerrin creates marketing videos for brands and tourism agencies, helping to create excitement around messages, events, and promotions.

Sally Shepherd, farmer
Sally is a small farm owner/operator and a clean energy advocate.

Walton Shepherd
Walton was a law student at WVU College of Law's Center for Energy and Sustainable Development, and is now looking to continue working in sustainable development as a way to address West Virginia's long-term structural challenges.

Stephen Smith, director, WV Healthy Kids and Families Coalition
Stephen works to fight poverty in West Virginia.

Beth Spence, American Friends Service Committee
Beth works to advance economic and social justice in West Virginia.

Robert Stonestreet, attorney, Dinsmore

Margaret Stout, assistant professor, West Virginia University
Margaret is a public administration scholar with a focus on local governance and community development.

Carolyn Stuart, executive director of Herbert Henderson Office of Minority Affairs, Office of the Governor
Dr. Stuart is responsible for conducting forums to allow minority citizens the opportunity to voice their issues and collaboratively work together to develop strategies to effectively deal with the issues.

John Suggs, managing director, SWPA Environmental Health Project
The SWPA Environmental Health Project responds to individuals' and communities' need for access to accurate, timely, and trusted public health information and health services associated with natural gas extraction.

Aaron Sutch, energy program manager, The Mountain Institute
Aaron implements solar and energy efficiency projects that empower communities to utilize renewable energy and efficiency to create economic opportunity and mitigate rising energy costs.

Dan Taylor, project coordinator, Ohio Valley Environmental Coalition
Dan is a project coordinator for the Ohio Valley Environmental Coalition, working on projects involving energy efficiency, renewable energy, economic transition, and clean elections.

Jan Taylor, director, Division of Science and Research, Higher Education Policy Commission
Jan works with faculty to help them be more competitive for federal grants, and supports economic development from intellectual property created at our colleges and universities.

Rachel Terman, student,
Penn State University

Rachel is a PhD student in rural sociology and women's studies at Penn State. Her dissertation work is on the social factors that affect young college-educated people in West Virginia.

Tom Torres

Tom works on community economic development in Tennessee and Alabama.

Kristin Tracz, program officer,
Blue Moon Fund

Kristin manages Blue Moon's investments in the United States, which includes West Virginia and Kentucky.

Sarah Tucker, vice chancellor
for community and technical
college education, WV Council
for Community and Technical
College Education

Sarah is responsible for working with education policy information professionals to conduct research in support of state-level master planning, legislative accountability, student access and success, retention and persistence, and enhanced policy analysis for decision making.

Allan Tweddle, CEO and founder,

Composite Transport Technologies
Allan's company is an SME that will manufacture unique aircraft parts. These parts will reduce the carbon footprint of every Boeing and Airbus aircraft that uses them. Allan's company is also committed to achieving a zero-carbon footprint in all operations.

Stephanie Tyree, director
of community engagement and
policy, WV Community
Development Hub

Stephanie works with communities in southern West Virginia and throughout the state to create pathways for stakeholders to engage with their decision makers at the local and state level, and relating to regulatory and legislative policy.

Ken Ward, staff writer,
Charleston Gazette

Ken is a staff writer for the *Charleston Gazette*. He is also creator and author of the *Coal Tattoo* blog.

Matthew Wasson, director

of programs, Appalachian Voices
Matt is director of programs at Appalachian Voices, an organization that empowers people to defend our region's rich natural and cultural heritage by providing them with tools and strategies for successful grassroots campaigns.

Beth Wheatley, director of
external affairs, The Nature
Conservancy

Beth works in partnership with government, industry, landowners, and others to conserve and restore important lands and waters in West Virginia, with a specific focus on energy development.

Ken White, vice president of
resident services, NHP Foundation

Elizabeth Wiles, executive
director, Friends of Deckers Creek
Elizabeth works to improve the water quality in north-central West Virginia and prevent future pollution. She believes a healthy environment is the foundation for a healthy and diversified economy.

Robin Wilson, organizer, WV

350 Reversing Climate Change
Robin has worked on peace, justice, and community development most of her adult life. Now at 71 she's working on reversing climate change and resource depletion.

John Wirts, Watershed

Assessment, WVDEP-DWWM
John is with WVDEP's DWWM, managing the Watershed Assessment Branch, which monitors and assesses the chemical, physical, and biological integrity of the state's waters.

Gary Zuckett, executive director,
WV Citizen Action Group

Gary works on issues of economic, social, and environmental justice in West Virginia.

Speaker Biographies

REV. JEFFREY ALLEN

Jeffrey S. Allen is a United Methodist pastor currently appointed to the West Virginia Council of Churches as the executive director. He holds a bachelor of arts degree in biology and a bachelor of arts degree in religious studies from West Virginia University and a master of divinity degree from Emory University. He previously served as project director for the West Virginia Healthy Kids and Families Coalition, as the community and families development director at Community Development Outreach Ministries (CDOM) for 13 years, and has also served as pastor at the Keystone and Northfork United Methodist Churches in McDowell County, WV, and the College Hill United Methodist Church in Waco, KY.

MATT BALLARD

Matthew Ballard is the president/CEO of the Charleston Area Alliance and its affiliate, the Charleston Regional Chamber of Commerce. Ballard and the Alliance have played an integral role in the recruitment of new jobs, the development of our urban areas as well as leading several regional projects that have led to new economic opportunities. In public policy, Ballard has been a voice for innovative job creation policies that would position West Virginia to excel in coming decades, including economic development initiatives and utilizing incentives that address the crisis of student loan debt as a population and workforce attraction tool for the state. Ballard is a West Virginia native, originally from Shinnston, WV. He holds an undergraduate degree from Alderson Broaddus College in nursing and a master's degree in public administration from West Virginia University. Ballard lives in Elkview with his wife Staci and daughters Sylvia and Stella.

KRISTEN BARKER

Kristen Barker is the president of the Cincinnati Union Co-op Initiative (CUCI), which is based on the Mondragon-USW union co-op model. CUCI has launched one co-op and has five projects in various stages of feasibility/business planning. As a community organizer for the past 12 years, she fosters faith, labor, and community partnerships. She is the mother of a resilient daughter with special needs. Apart from two years in El Salvador, she is a lifelong resident of Cincinnati.

ANNE BARTH

Anne Barth is the executive director of TechConnect West Virginia, where she directs a variety of programs designed to diversify the economy by turning innovation into enterprise. In 2011 she was appointed by Governor Earl Ray Tomblin to the Southern Technology Council of the Southern Growth Policies Board. She serves on the NASA West Virginia Space Grant Consortium, the board of directors of the WV Biosciences Association, the board of Teaming to Win, the Charleston Area Alliance Vision 2030 innovation/R&D committee, the advisory board of the West Virginia Small Business Development Center, and was co-chair of the Environmental Issues Team for Power of 32, a 32-county, four-state regional visioning project. She was awarded the U.S. Small Business Administration District Director's Award in 2012. Ms. Barth holds a bachelor's degree in journalism and a master's degree in corporate and organizational communications from West Virginia University.

TED BOETTNER

As the co-founding executive director of the West Virginia Center on Budget and Policy, Ted brings a wealth of experience and understanding of state fiscal issues. In addition to running the Center, Ted is the author of numerous reports on state tax and budget issues, economic development, and family economic security, including the annual *State of Working West Virginia*. Ted frequently presents analyses of policy proposals to the West Virginia legislature and testifies before committees. He also regularly addresses statewide civic groups on state tax, budget, and economic policies and is frequently quoted in news stories on those topics. In 2013, Ted was appointed to a three-year term as a primary member of the U.S. Extractive Industries Transparency Initiative (USEITI), an advisory committee within the Department of the Interior. In 2011, the *State Journal* named Ted "one of the most influential business leaders" in West Virginia. Ted also serves on the board of directors of Cabin Creek Health Systems and Mountain State Justice and he is an adjunct instructor at West Virginia University Institute of Technology. Ted holds a BS in journalism from West Virginia University and an MA in political science from the University of New Hampshire.

KEITH BURDETTE

In December 2010, Keith Burdette was appointed by Governor Earl Ray Tomblin as cabinet secretary for the West Virginia Department of Commerce and executive director of the West Virginia Development Office. Keith Burdette began his public service when he was elected to the first of two terms in the West Virginia House of Delegates. In 1982 he was elected to the West Virginia state senate. In 1989 Keith was elected the forty-second president of the state senate at the age of 34—the youngest senate president in the state's history. Keith is actively involved in the Parkersburg community where he resides. He is married to the former Pat Haught Huffman and has two sons and two stepsons.

JAMES E. CASTO

Jim retired in 2004 from the *Herald-Dispatch*, where he was a reporter and editor for more than 40 years. He is now senior public information specialist at the Robert C. Byrd Institute for Advanced Flexible Manufacturing. Active in community affairs, he's a board member with the United Way of the River Cities, Goodwill Industries, the Huntington Area Food Bank, the Tri-State Area Boy Scout Council, the Friends of the Cabell County Public Library, the Marshall University Library Associates, and the West Virginia Faculty Merit Foundation. A native of Huntington, he attended Bethany College at Bethany, WV, and is a graduate of Marshall University, where he earned a bachelor's degree in journalism and a master's degree in English.

PATRICK CORCORAN

Patrick is assistant to the director of the McDowell Public Library. He assists the general public in gaining and utilizing information. Most recently, his library has been able to assist Elaine McMillion and her *Hollow* crew in the empowerment of community members.

DANIEL GOTOFF

Daniel Gotoff heads Lake Research Partners' New York office. Since joining the firm in 1996, Daniel has worked for candidates at all levels of the electoral process as well as on a wide range of issues, including the economy, national security, and government accountability. Daniel's tenure at LRP has included extensive research for clients, including presidential, senatorial, congressional, gubernatorial, and mayoral candidates, as well as the DNC, DCCC, and the NAACP National Voter Fund. He has also led the firm's overseas consulting on campaigns in Mexico and the Caribbean. Daniel's analyses of the American political landscape are regularly published and he is a contributor on *The Leon Charney Report* and other political and public affairs news shows. Gotoff holds a BA in history and Italian from the University of Michigan in Ann Arbor.

TOM HEYWOOD

Tom Heywood is the managing partner of Bowles Rice, a regional business law firm with seven offices in West Virginia, Kentucky, and Virginia. His practice areas are corporate, commercial, and finance law, government relations, and health care law. Upon graduation from law school, Tom clerked for the Honorable John A. Field, Jr., senior judge for the U.S. Court of Appeals for the Fourth Circuit. He joined Bowles Rice in 1983. From 1989 to 1990, Tom served as counsel to West Virginia Governor Gaston Caperton, and from 1990 to 1993 he served as Caperton's chief of staff. Tom returned to Bowles Rice in 1993. Tom remains active as a leader in many civic activities, and has led the following initiatives in recent years: chairman, Affordable Insurance Workgroup; co-chairman, Finance & Benefits Committee, Health Advisory Council; chairman, Results-Based Government Task Force, Vision Shared; chairman, TANF Advisory Council; chairman, Community and Technical College Implementation Board; co-chairman, Celebration 2000; co-chairman, Yes on 1 Committee (Stock Investment Amendment to West Virginia Constitution); chairman, Transition Committee on Medicaid; chairman, Medicaid Crisis Panel. Tom has also served as chairman or co-chairman of several Kanawha County school bond and levy advocacy groups in recent years. Tom earned his bachelor of arts degree from Stanford University in 1978 and his law degree in 1982 from Harvard Law School.

JEFF KESSLER

Senator Jeffrey V. Kessler was appointed to the West Virginia State Senate in November 1997 to fill a vacancy created by the death of Senator Larry Wiedebusch. He was then elected to the senate in 1998 where he served during the 75th Legislature as vice chairman of the Committee on Banking and Insurance and the Select Committee on Economic Development. Senator Kessler was re-elected in 2000, 2004, and 2008. During the 76th, 77th, 78th, and 79th Legislatures Senator Kessler served as chairman of the Committee on the Judiciary. Senator Kessler was elected senate president on November 14, 2011, following a one-year term as West Virginia's first and only acting senate president. Kessler received a BA from West Liberty State College and his JD from West Virginia University College of Law. Senator Kessler is married to Gretchen Kessler and has four children: Jacob, Lauren, Jackson, and Hastings.

TREY LOCKHART

Trey Lockhart is a graduate of McDowell County, and a student representative for AFT Reconnect McDowell.

ERICA LUCAS

Erica Lucas lives in Welch, WV. At times, she has lived outside the state before coming back to McDowell County and is now determined to make a positive change in her community. She is now a student at Bluefield State College where she can learn to better serve her community. She has high hopes for McDowell County's future.

ELAINE McMILLION

Elaine McMillion is an award-winning documentary storyteller based in Boston, MA. Her work explores how digital platforms and participatory media can empower local communities. Her current project, *Hollow*, strives to communicate the issues of rural America through the eyes, voices, and ideas of southern West Virginia. *Hollow* is funded by Kickstarter, Tribeca Film Institute's New Media Grant, and the West Virginia Humanities Council. It is supported by Documentary Educational Resources and the West Virginia Filmmakers Guild. Her op-doc "West Virginia, Still Home" was featured on the *New York Times* website on June 20, 2013. In the summer of 2013, *Filmmaker Magazine* named McMillion one of the "New Faces of Independent Film."

ALAN B. MOLLOHAN

Alan B. Mollohan is of counsel to Nelson Mullins Riley & Scarborough LLP in West Virginia. A former member of the United States House of Representatives, Mr. Mollohan served 14 terms, having been first elected in 1982 to represent West Virginia's 1st Congressional District. In the House, Mr. Mollohan held a number of committee assignments including serving as chairman of the Commerce, Justice, Science Appropriations Subcommittee. Prior to his election to Congress, Mr. Mollohan practiced law in West Virginia and Washington, DC. His practice included civil litigation, administrative law, and serving as counsel to trade associations in the areas of health and safety, the environment, and the manufacture and transport of explosive products.

KENNETH M. PERDUE

Kenny has been active in the AFL-CIO and central labor councils since 1977, and an active member of the Sheet Metal Workers International Association for over 30 years. He was elected to the West Virginia AFL-CIO's executive board following the retirement of his father from the board in 1989. A second-generation union sheet metal worker, with three brothers also working in the trade, he was elected as a business representative for his local union. He served as secretary-treasurer of the West Virginia AFL-CIO from 1997 until August 16, 2004, when he became president upon the retirement of the former president.

REBECCA RANDOLPH

Rebecca McPhail Randolph is the president/CEO of Vision Shared. Prior to Vision Shared, Randolph served as the assistant vice president for development at Marshall University, located in Huntington, WV. Prior to working for Marshall, Randolph was director of development at the University of Charleston in Charleston, WV. Before returning to West Virginia in 2003, Randolph served as grant development and research manager and interim director of development for the YMCA of Greater Cleveland in Cleveland, OH. She has also worked for nonprofit health care organizations in both West Virginia and Ohio and as a development consultant in northeast Ohio. Randolph earned her bachelor's degree from the West Virginia Institute of Technology. She and her family reside in Huntington.

L. JEREMY RICHARDSON

Jeremy is a senior energy analyst at the Union of Concerned Scientists. At UCS, he has explored the fundamental cultural and economic drivers of coal production in West Virginia and identified ways of creating diverse economic opportunities. His work seeks to understand the deep connection people have with coal, to quantify the changing economic importance of coal to local populations, and to develop actionable paths to build local support for a more economically and environmentally sustainable future. He seeks to bridge the gap between the national and regional/state-level policy discussions about our energy future. In addition to coming from a coal mining family in West Virginia, Jeremy is a physicist who is passionate about the urgent need to address climate change. He received his PhD and MS in physics from the University of Colorado at Boulder and has a BS in physics from West Virginia University.

SENATOR JAY ROCKEFELLER

Senator Jay Rockefeller has proudly served the people of West Virginia for nearly 50 years. Rockefeller first came to West Virginia in 1964 as a 27-year-old VISTA volunteer serving in the small mining community of Emmons. Many of the lessons that Rockefeller learned in Emmons have shaped his public service career and led to his lifelong commitment to improving the lives of West Virginians and all Americans. Senator Rockefeller is the chairman of the Senate Committee on Commerce, Science, and Transportation. He is also the chairman of the Health Care Subcommittee on the Senate Finance Committee, and a member of the Senate Select Committee on Intelligence. He also serves on the Senate Committee on Veterans' Affairs.

Rockefeller was born on June 18, 1937. He graduated from Harvard University in 1961 with a BA in Far Eastern languages and history. In 1964, he came to Emmons, WV, where he began his public service career serving the people of West Virginia. In 1966, he was elected to the West Virginia House of Delegates and to the office of West Virginia secretary of state in 1968. He served as president of West Virginia Wesleyan College from 1973 to 1976. In 1976, Rockefeller was elected governor of West Virginia, and was re-elected in 1980. In 1984, he was elected to the United States Senate, and re-elected in 1990, 1996, 2002, and 2008. Since 1967, Rockefeller has been married to Sharon Percy Rockefeller with whom he has four children: John, Valerie, Charles, and Justin. Jay and Sharon are also the proud grandparents of four granddaughters and two grandsons.

SCOTT ROTRUCK

Scott Rotruck recently retired as vice president of corporate development and state government relations for Chesapeake Energy Corporation. He spent 10 years in the railroad industry with CSX Corporation and Norfolk Southern Corporation. He spent 15 years in the energy sector with Anker Energy and CONSOL. He served as the economic development director and senior adviser to the president at WVU and worked for the WVU Extension Service. He served a term as chairman of the WVU Extension Service Visiting Committee. Scott was chairman and CEO of the Morgantown Area Chamber of Commerce. He is the past chairman of Vision Shared, West Virginia Tourism Commission, the West Virginia Council for Community and Economic Development, WVJIT, and the Interstate Commission on the Potomac River Basin in 2000. Scott served on task forces for the Cheat River and the North Branch of the Potomac River, which runs through his hometown of Keyser, WV. He served on the University of Charleston's board of trustees and is a board member of Imagine Greater Pittsburgh. He is a 1977 West Virginia University graduate and holds an MBA from Frostburg State University. Scott and his wife Carol, who is from New Martinsville, WV, have three adult children: Sarah, Jill, and Ethan.

DAVID SATTERFIELD

David Satterfield is currently the director of asset development for the Office of Research and Economic Development at West Virginia University and a tenured associate professor in the School of Music. Mr. Satterfield also serves as the interim president of the WVMEP as well as the associate director of the Center for Excellence in Disabilities. David Satterfield served as the executive director of the West Virginia Development Office from October 2001 through January 2005. Prior to joining the Development Office Mr. Satterfield served as the chief of staff and vice president for institutional advancement at West Virginia University. Satterfield is a native of Pittsburgh, PA. He earned two music degrees (BM and MM) from WVU and has been a faculty member in the College of Creative Arts at WVU since 1983. Satterfield and his wife, Beth, a faculty member in the College of Human Resources and Education at WVU, have two children: Keith and Allie.

JAMES SKIDMORE

James L. Skidmore became the first chancellor for the Community and Technical College System of West Virginia. Prior to that, he served as vice chancellor for community and technical college education with the Higher Education Policy Commission. Mr. Skidmore, a West Virginia native, has served higher education in West Virginia for over 20 years, with positions at WVU Institute of Technology, West Virginia State University, and the Higher Education Central Office. He serves on numerous state-level workforce development committees and has led initiatives that have positively impacted the delivery of workforce development programs in West Virginia. As chancellor, he serves as chief executive officer of the WV Council for Community and Technical College Education, the state-level coordinating body for community and technical college education.

KENT SPELLMAN

Kent R. Spellman brings a diverse background to his work as executive director of the West Virginia Community Development Hub. For 20 years, he owned and was president of Rooftree, Inc., a design/build construction company based in Harrisville, WV, specializing in high-end residential and light commercial projects. In 1996, he became editor, publisher, and part owner of the *Ritchie Gazette*, a weekly county newspaper serving Ritchie County. While at the *Gazette*, Kent won 31 WV Press Association individual awards for reporting, editorials, photography, and advertising design; the *Gazette* was repeatedly named the best newspaper in the state in its division. Kent has been recognized as a Distinguished West Virginian by Governor Cecil Underwood, and as an Honorary WV State Trooper—at the time only the fourth person in State Police history to receive such recognition. He lives in Clarksburg with his wife Betsy.

NATALIE E. TENNANT

Natalie E. Tennant is West Virginia's twenty-ninth secretary of state. Throughout her administration, she has been a leader in promoting open and engaging government and business-friendly initiatives. Tennant has streamlined the Secretary of State's Office to make it more efficient and cost-effective while improving services for voters, candidates, business owners, and citizens. Most recently, Secretary Tennant spearheaded legislation to allow for online voter registration in West Virginia. West Virginia has also emerged as a leader on the national stage when it comes to making it easier for deployed military to vote using a safe and secure Internet connection. Along with her duties as secretary of state, Tennant was the first West Virginian chosen for the Aspen Institute's Rodel Fellowship program. In 2012, Secretary Tennant was elected to another four-year term. Secretary Tennant currently resides in Charleston with her husband, State Senator Erik Wells, and daughter, Delaney.

BETH VORHEES

You hear Beth Vorhees on the radio every morning and during the legislative session, you see her on TV every evening. Beth is the producer and host of *West Virginia Morning*, heard every weekday morning at 7:30 on West Virginia Public Radio. You also hear her deliver the news throughout the morning on *Morning Edition*. When the state legislature is in its 60-day regular session, Beth is the producer and host of *The Legislature Today* on West Virginia PBS. Beth is the director of news and public affairs at West Virginia Public Broadcasting, leading an eight-person news team with bureaus across the state. Beth lives in Charleston and has been married to Rick Vorhees for 31 years. They have one daughter, Diana, of Nashville, TN.

JOHN WEETE

Dr. Weete joined the Auburn Research and Technology Foundation (ARTF) as its executive director on September 1, 2007. The ARTF is responsible for the overall development and operation of the Auburn Research Park located on the Auburn University campus. Previously, Dr. Weete served as the vice president for research and economic development at West Virginia University and president of the West Virginia University Research Corporation. He received his BS and MS degrees at Stephen F. Austin State College in Nacogdoches, TX, and PhD at the University of Houston. He was a post-doctoral fellow at the Baylor College of Medicine and visiting scientist at the Lunar Science Institute in Houston, TX, prior to joining the faculty at Auburn University.

MATT WENDER

Commissioner Wender is the public sector representative for Fayette County. He is a CPA who holds a bachelor's degree in business administration and an MBA from West Virginia University. Matt recently retired from West Virginia Jobs Investment Trust, where he served as investment manager since 1998. WVJIT manages the state's Venture Capital Fund with a portfolio of investments and funds in excess of \$26 million. WVJIT has a statewide presence, with a current portfolio of 21 companies in a wide range of industries including manufacturing, software development, biomedical, and insurance. He represented WVJIT on several boards of directors. Before joining WVJIT, he was employed by a privately held venture capital firm for two years.

CHRIS YURA

Chris Yura is founder and chief executive officer of SustainU. As CEO, Chris is responsible for leading the company and overseeing all aspects of its business development initiatives designed to achieve long-term growth. Prior to launching SustainU, he gathered and developed his experience in the fashion and entertainment industry while based in New York City, while maintaining his interest and involvement in social and environmental-related issues. Previously, he served in managerial roles within the customer service field, developing marketing strategies and strategic business initiatives to attract prospective clients. Chris attended the University of Notre Dame where he was a four-year letterman and standout fullback for the Fighting Irish football team, and received a bachelor of arts degree in sociology and computer applications.

Excerpts of Selected Media Coverage of the Forum

INNOVATORS, ENTREPRENEURS, POLICY EXPERTS MEET AT ECONOMIC ...

West Virginia Public Broadcasting-September 5, 2013

While the Union of Concerned Scientists usually focuses on issues related to climate change and renewable energy, West Virginia native and UCS Fellow ...

<http://www.wvpubcast.org/newsarticle.aspx?id=31510>

MCDOWELL RESIDENTS TELL STORIES OF STRUGGLES, SUCCESSES

Charleston Gazette-September 4, 2013

Forum organizer Jeremy Richardson of the Union of Concerned Scientists said that “Hollow” fit in perfectly with the event, which partly aimed at trying to . . .

<http://www.wvgazette.com/News/201309040304>

BUSINESS LEADERS: W.VA. MUST EMBRACE ECONOMIC CHANGE

Charleston Gazette-September 4, 2013

The event, sponsored by the West Virginia Center on Budget and Policy, the Union of Concerned Scientists and the West Virginia Community Development Hub, . . .

(Note: this article appeared on the front page of the print edition.)

<http://www.wvgazette.com/News/201309040053>

“FUTURE FUND” PUSHED TO DIVERSIFY ECONOMY

Charleston Gazette-September 4, 2013

The event is sponsored by the Union of Concerned Scientists and the West Virginia Center on Budget and Policy and aims to highlight and foster discussions of . . .

<http://www.wvgazette.com/News/201309030156>

NOT YOUR GRANDFATHER’S ECONOMY ANYMORE (EDITORIAL)

Daily Mail Charleston-September 6, 2013

Sounds like there was a lot of good discussion by intelligent people at the forum. Thanks to the sponsoring organizations, which also included the Union of Concerned Scientists and the West Virginia Community Development Hub, for pushing the economic diversity discussion in West Virginia.

<http://www.dailymail.com/Opinion/Editorials/201309060046>

FORUM FOCUSES ON POSSIBLE FUTURE OF W.VA. ECONOMY (AP ARTICLE THAT APPEARED IN DOZENS OF STATE NEWSPAPERS)

Businessweek-September 3, 2013

The Union of Concerned Scientists is teaming up with the West Virginia Center on Budget & Policy and others to present panels on several topics.

<http://www.businessweek.com/ap/2013-09-03/forum-focuses-on-possible-future-of-w-dot-va-dot-economy>

ORGANIZER OF ECONOMIC DISCUSSION HOPES EVENT SPARKS DIALOGUE

Daily Mail Charleston-September 2, 2013

Jeremy Richardson, a fellow at the Union of Concerned Scientists in Washington, D.C., hopes to change that with his event “A Bright Economic Future for the . . .

<http://www.dailymail.com/News/statenews/201309010110>

MEETING TO FOCUS ON W.VA. ECONOMIC DIVERSITY

Charleston Gazette-August 28, 2013

Promotional materials for the forum, called “A Bright Economic Future for the Mountain State,” don’t mention climate change or the coal industry’s ongoing decline. But those issues and their impact on coalfield communities are really the backdrop for the event, sponsored by the Union of Concerned Scientists . . .

<http://www.wvgazette.com/News/201308280149?page=1>

Senator Jay Rockefeller's Prepared Remarks

SEPTEMBER 4, 2013

Today is an exciting gathering of brilliant minds and energetic spirits who are bound by the belief and knowledge that the sky is the limit for our state.

West Virginia is poised to do great things and our conversations today will help us expand our dreams and visions for tomorrow.

I have always believed that our actions must be guided by the larger impact they'll yield in the future. We must be working, planning, and acting now for the West Virginia we want in 10 years, 50 years, and even her next 150 years. And we can.

America is innovation. It's the very essence of our country—to invent, to solve big problems, to take things to the next level.

We've been the first to do everything from inventing flight to putting a man on the moon, from developing computers to creating endless possibilities with the Internet.

And here in West Virginia we are champions of innovations. Golden Horseshoe winners can tell you about James Rumsey, who built the first steamship and piloted it down the Potomac River in Shepherdstown.

More recently, researchers at the Green Bank Observatory have stretched the very boundaries of our universe, pioneering new techniques that allow astronomers to listen deeper and deeper into space.

And NOAA (the National Oceanic and Atmospheric Administration) is building a remarkable system that supports the nation's next generation of geostationary weather satellites, helping us better predict severe weather and creating highly skilled jobs here in West Virginia.

North-central West Virginia's economy is booming, with a high-tech economy powered by innovation, and just down the road here, our cutting-edge technological advances in chemicals and polymers are second to none.

Paired with our American spirit of innovation, our unmatched West Virginia work ethic creates an enormously powerful combination. So what other ingredients do we need to launch into a bright future? One is investment in key education and training efforts.

That was the goal of the original AMERICA COMPETES Act in 2007, and its reauthorization in 2010. As chairman of



Official Photo

the Senate Commerce Committee, I have been able to steer this important law through Congress.

America COMPETES was born at a time when there were warning signs that America's position as a global leader in science and technology was at risk. From the outside, it looked as if our country was beginning to lose its way in encouraging innovation at all levels.

We were not doing enough to educate and train our youngest generations for the new global economy. We worried that our students were falling behind.

The idea to put our country back on the right track was simple: increase science and research investments.

Strengthen education in the STEM disciplines: science, technology, engineering, and mathematics. Develop an innovation infrastructure. Give our children and grandchildren the tools and resources they will need to compete in the global economy.

But those are big picture ideas. How do they translate in real terms to West Virginia?

We all know West Virginians are the hardest working people in the country. We are ready for opportunity. And that's

what COMPETES provides. It lays a foundation for new, high-tech economic opportunities.

High-tech jobs, like those flourishing in north-central West Virginia and nearby at the South Charleston Tech Park, pay significantly more than the average private sector job.

These desirable and highly sought-after jobs lead to successful careers, and they produce the solutions of the future that meet big challenges. These important jobs require advanced training, and we need to be sure that workforce is readily available in all of our communities.

Just look at the numbers. Between 1995 and 2007, high-tech jobs in STEM fields accounted for nearly 40 percent of U.S. GDP and 30 percent of the world's GDP in 2007. As a result, the number of STEM jobs has grown three times faster than non-STEM jobs over the past decade.

Projections for the next decade indicate that STEM occupations will grow by 17 percent, compared to 9.8 percent for other occupations. STEM workers earn 26 percent more on average and are also less likely to be unemployed.

This is where COMPETES comes in. With the resources and opportunities that COMPETES provides, workers can get the retraining and education necessary to fill these high-tech jobs because many here know sometimes difficult and time-consuming process to find or retrain skilled workers.

And it funds science and research programs that create even more high-tech jobs in the long term.

At the same time, we need to take the lessons learned from COMPETES and apply them to how we are educating our young students so they can realize the full potential of their bright futures.

Science, technology, engineering, and math experience will be vital to the next generation's success. COMPETES gives students a fighting chance. It gives them the resources and tools today for the jobs of tomorrow.

COMPETES secures our state's future. It gives us the opportunity to make sure that the high-tech jobs that are multiplying in West Virginia continue to spread to every part of our state.

So as the Commerce Committee begins the process of reauthorizing the America COMPETES Act this fall, I look to each of you for support.

Be champions of innovation in your community. Support entrepreneurs who understand the realities of our new economy. Challenge your school systems and administrators and teachers to ask more of their students. Encourage your children to take their place in our exciting, high-tech world.

It seems obvious to most in this room that securing our future would be a simple choice. That educating our children so they can grow up in the global economy with a fighting chance would make sense.

But I assure you that not everyone sees it this way. That's why all of you are so important.

We also need your help more practically. We are currently preparing to introduce a COMPETES reauthorization bill, but Congress is deeply, terribly divided. And we're dealing with the sequester, and some lawmakers who don't recognize the value of strategic, targeted investment.

So this fall, when we introduce the bill, each of you needs to call your elected officials—especially those in the House—and tell them how important these investments are.

You are the ambassadors, and it's your voice we need to hear as, in the next few months, we will need to increase the investments in science and research so more high-tech jobs are created.

We need to increase investments in training so these jobs can be filled by high-skilled workers. We need to educate more of our students in STEM fields so they have the backgrounds to thrive in the global economy.

And we will need to spur innovation in this country so the leaps and bounds that America has created are just the beginning of what's to come.

Union of Concerned Scientists

FIND THIS DOCUMENT ONLINE: www.ucsusa.org/WVbrightfuture

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

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