MODELING A JUST TRANSITION IN VIRGINIA'S COALFIELDS:

ENGAGING COMMUNITY STAKEHOLDERS ON EMERGING ENERGY TECHNOLOGIES



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TABLE OF CONTENTS

About	1
About Appalachian Voices	1
About <mark>Em</mark> ory & Henry College	1
Special t <mark>han</mark> ks to funders	1
Common Definitions	2
Executive Summary	3
Introduction: Facilitating a Just Transition	5
Energy Technologies in SWVA Survey	7
Participants	7
Methodology	7
Survey Data Anal <mark>ys</mark> is	9
Wind	.10
Nuclear	.10
Solar	.11
Other	.12
Environmental and Public Health Concerns	.12
Beyond Surveys: Facilitating Stakeholder and Community Engagement	.14
Community En <mark>g</mark> agement Model	.14
Community B <mark>en</mark> efit Agreements	.16
The Solar Wo <mark>rk</mark> group of Southwest Virginia	.17
Conclusion	. 21
Appendix A	. 22



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About Appalachian Voices

Founded in 1997, Appalachian Voices has brought people together for more than a quarter century to protect the land, water, and air of Central and Southern Appalachia and to advance a just transition to a generative and equitable clean energy economy. Believing that change must begin at the community level, but cannot stop there, we combine effective grassroots campaigns with grasstops advocacy that leverages community organizing, technical assistance, and policy expertise to elevate local perspectives and improve decision-making at every level of government.

From our Southwest Virginia coalfields hub in Norton, Appalachian Voices' New Economy Program has worked since 2015 to build partnerships with local leaders and businesses, elected representatives, state and federal agencies, communities, grassroots groups, and others to help Southwest Virginia transition its economy, address environmental justice issues, and center the voices of local residents in redevelopment initiatives. These efforts have brought millions of dollars into the region, promoted development of solar energy and a trained solar workforce, and provided technical assistance to numerous groups and communities.



About Emory & Henry College

Located in Emory, Virginia, Emory & Henry College has been serving the region since 1836. Its Appalachian Center for Civic Life provides a variety of ways for Emory & Henry students to explore what it means to be a responsible citizen with obligations to your community. The center provides opportunities for students to be involved in a variety of civic engagement projects that connect with their academic journey while providing real, measurable outcomes for the community. The student participation on this project was led by Dr. Scott Sikes, director of the Appalachian Center for Civic Life and the Bonner Scholars Program.

Special Thanks

Bringing about a timely, effective, and politically durable energy transition hinges upon broad citizen and community engagement — none of which we would be able to achieve without committed philanthropic support. The authors would like to thank the foundation partners and other institutional donors whose funding has helped us advance this work at the scale of the tasks before us.

Common Definitions

- 1. **Grassroots:** the most directly impacted people, such as local residents and workers
- 2. **Grasstops:** anyone who has extra influence, directly or indirectly, on policy, public perception, etc., including organizational leaders, board members, and government officials
- 3. Environmental justice: the recognition that certain communities, often marginalized or economically disadvantaged, have experienced a disproportionate share of environmental pollution, hazards, and risks, including environmental racism, and therefore deserve access to recourse that improves the environment and the community's wellbeing
- 4. **Community-driven planning:** the process by which members of a community define for themselves the complex challenges they face and the solutions most relevant to their unique assets and needs
- 5. **Community benefits planning:** a process where a variety of stakeholders build trust and aim to increase the positive local impact of energy and economic development projects
- 6. **Community benefit agreements:** *legal agreements between developers, local groups, and stakeholders that lay out the bene-fits owed to the community that will host a project*
- 7. **Memorandum of Understanding:** a non-legal contract between two or more parties that details shared commitments and goals

EXECUTIVE SUMMARY

Across the country, communities that historically relied on the fossil fuel industry are contending with extended job and tax revenue loss as energy technologies shift. These changes are exacerbating existing economic and environmental hardships and are presenting questions about whether and how these communities will continue to produce energy, and the risks and benefits associated with various economic and energy options.

Virginia's coal-impacted counties, along with other coal, oil, and gas-producing counties in Appalachia and the nation, deserve a just transition — a phrase that refers to transitioning to cleaner energy in a way that centers community needs and benefits and ensures that communities are involved in decision-making processes.

Appalachian Voices is developing and implementing just-transition strategies in Virginia's historically coal-reliant counties. This report describes some of those strategies and models with the goal of contributing to the ongoing dialogue about how to advance an energy and economic transition that enables all stakeholders in a community to actively engage in decisions about the area's future.

Surveying a wide range of local leaders is the first strategy described. In fall 2022 and spring 2023, Appalachian Voices partnered with Dr. Scott Sikes of Emory & Henry College and the undergraduate students in his Civic Innovation course to survey a range of local government leaders — including school board members, county supervisors, mayors, town council members, and members of county industrial development authorities — about their views on different energy technologies and other concerns their communities face.

Survey results include that 56.4% of survey respondents support wind energy development in their community, 35.9% support nuclear energy development in their community, and 71.8% support solar arrays in their community. The survey results are not part of a peer-reviewed study; 45 responses were returned, and most of the data came from 39 respondents. Still, the results provide valuable insights for Appalachian Voices and for other state, regional, and federal entities involved in energy and economic development, and the survey demonstrates an accessible, feasible and low-cost method of collecting community feedback.

The second strategy is to deploy a ground-up, participatory planning process for any potential energy project. Appalachian Voices has adapted a participatory community engagement model that revolves around six key principles: inclusive planning and decision-making, community needs assessment, education and awareness, partnerships and collaboration, continuous dialogue and feedback mechanisms, and social and environmental justice.

Community benefit agreements are a third strategy. These legal agreements between energy project developers and local communities and stakeholders outline the benefits owed to the community hosting the project. These agreements can be used to build local wealth and to hold industry accountable to community goals and needs. The benefits in a CBA can include local hiring, local workforce training, and investment in community and economic initiatives. It's key that these benefits reflect the input of multiple community constituencies, not just economic and government professionals.

The Solar Workgroup of Southwest Virginia, a collaboration entering its eighth year, is an example of stakeholder engagement and a collaborative development process. The workgroup comprises nonprofit, education, government, and for-profit entities and has partnered with an extensive network of partners including community colleges and public school systems, county governments, federal agencies, and private solar developers. The Solar Workgroup maintains regular opportunities for public engagement and education in addition to project-specific outreach events, and it has helped to implement local solar ordinance changes, statewide solar policy changes, a local solar workforce apprenticeship program, and a community benefit agreement for the area's first utility-scale solar project.

As developers, elected leaders, and policymakers consider the region's energy transition, they should utilize these and similar strategies consistently by collecting community feedback, utilizing a participatory, ground-up community engagement model, and implementing community benefit agreements shaped by local stakeholders.

INTRODUCTION: FACILITATING A JUST TRANSITION

As Virginia, Appalachia, and the country as a whole rely less on fossil fuels, workers and communities historically reliant on fossil fuel production and infrastructure will continue to lose jobs and tax revenue from these industries, further exacerbating the economic and environmental hardships faced in these predominantly low-income communities.

Coalfield communities in Virginia have been experiencing the harsh reality of the declining coal industry for decades, and now these communities face questions about whether they can continue as energy providers and which emerging energy technologies would provide the most benefits and fewest risks for them. As the Virginia Clean Economy Act changes the way the state produces energy, there will be continued disruptions for workers and communities reliant on fossil fuel energy production. These communities deserve a just transition — a transition to clean energy production that centers their needs and benefits. State and federal policy and investments should ensure that vulnerable people and communities are not left behind during the transition or left out of the planning. A just transition to a climate-friendly economy should enable workers and frontline communities vulnerable to economic and environmental shifts caused by climate change to access decent work and sustainable livelihoods. As we outline in detail starting on page 14, these communities also deserve to have a meaningful role in deciding which new technologies and infrastructure they will host.

A just transition requires a holistic approach that examines how environmental justice, energy industries, a strong workforce, and the needs of communities intersect. As a grassroots organization that has close partnerships with folks at all levels of leadership in the coalfields, Appalachian Voices has been an advocate for making community engagement and collaboration the backbone of a just transition in Virginia's historically coal-reliant communities. Recognizing the barriers that too often stand between economic development and vulnerable, underserved communities, we seek to provide funding, technical assistance, and partnership to help support sustainable development.

A key part of creating an equitable regional transition to renewable energy is ensuring that energy projects are undertaken in true collaboration with the host localities and that the wealth and benefits of these projects are shared and reinvested equitably, as described in detail below. With that in mind, Appalachian Voices partnered with a Civic Innovation course at Emory & Henry College, taught by Dr. Scott Sikes, to survey coalfield leaders about their views on different energy technologies, as well as other concerns their communities face.

The results of this survey will not only help inform our own future economic and energy development strategies, but they also provide valuable insights for state, regional, and federal initiatives. The survey serves as a model for energy developers and economic

development agencies seeking community feedback. This report builds on that model, offers other best practices for participatory community engagement, and introduces community benefit agreements as an emerging tool for energy communities to utilize with project developers.

At the heart of a just energy transition are actions that enable all stakeholders in a community to actively engage in decisions that profoundly affect their lives.

The report concludes by using the Solar Workgroup of Southwest Virginia as an example of how a diverse group of stakeholders have successfully built community engagement, formed an action plan, and established innovative financing while keeping residents and workers at the core of building a new solar industry.

At the heart of a just energy transition are actions that enable all stakeholders in a community to actively engage in decisions that profoundly affect their lives. The rapid and extensive transformations occurring in the energy and mining sectors underscore the urgency to hold industry actors, developers, and policymakers accountable to practices that uphold the rights of communities.

ENERGY TECHNOLOGIES IN SOUTHWEST VIRGINIA SURVEY

Participants

This survey includes responses from leaders in all seven coalfield counties — Buchanan, Dickenson, Lee, Russell, Scott, Tazewell, and Wise — and the city of Norton (Figure 1). Our goal was to reach a wide range of leaders who oversee all aspects of government in a given locality. Respondents occupied a variety of leadership positions, including school board members, county supervisors, mayors, town council members, and members of county industrial development authorities. Only 24 respondents listed their location, so the localities of 15 participants are unknown.





Methodology

The collaboration between Appalachian Voices and the undergraduate students at Emory & Henry began during the fall semester of 2022. Students initially undertook a mapping exercise to create a regional grasstops chart which identified the leaders in each of the seven counties. Students were divided into groups and assigned to a county, with priority being given to students with ties to a specific county. The survey was then sent out to each official on the chart, and 45 responses were returned. Six of those left most of the survey blank, resulting in most of the data coming from 39 respondents.

Respondents were asked for their views on a variety of low-carbon energy technologies, including solar, nuclear, and wind energy. They were also asked about any concerns they had related to climate change, environmental pollution, and economic development. A full list of questions can be found in Appendix A. The survey did not include questions on methane gas or more experimental technologies such as hydrogen and carbon capture.

The survey included both open-ended qualitative and quantitative questions with ample opportunities for respondents to elaborate on their answers. Additionally, all questions were optional, and some were clearly marked as optional to allow for the comfort and anonymity of the respondents. Several questions were designed with ranked choice answers, allowing for respondents to answer as thoroughly as possible.

Given that this survey was designed and conducted in collaboration with undergraduate students, it is not a peer-reviewed study. Rather, it should be seen as a starting place for conversation around a just transition and as a model for community input for Virginia's coalfields.



SURVEY DATA ANALYSIS

Response themes were broadly focused on three dominant energy technologies, namely wind, nuclear, and solar, along with environmental and public health concerns.





Wind

While there are no definitive plans to site wind farms in Southwest Virginia, wind energy was included in this survey because of its growing popularity. A third of respondents said that they thought wind energy offered potential for economic growth in Southwest Virginia, and 56.4% supported the development of wind energy within their communities. In comparison, only 10.3% of survey takers opposed wind energy in their localities, while 12.8% of respondents required more information, and 20.5% left this question blank.



Figure 3

Nuclear

In October 2022, Gov. Glenn Youngkin announced a goal of building a new nuclear reactor in Southwest Virginia within the next 10 years. Youngkin was not proposing to build another massive nuclear plant, like Dominion Energy's 1,800-megawatt North Anna plant in Louisa County, Virginia, but rather to seek development of a new generation of relatively small nuclear plants called small modular reactors, or SMRs. These reactors range from 25 to 300 megawatts in size (less than a third the size of a traditional nuclear reactor) and are modular, meaning they can be mostly assembled in a factory to reduce costs.

Little is actually known yet about the cost, performance, and safety of this new type of nuclear power generation because currently only six SMRs are operating or under construction worldwide, with another 65 in various stages of planning and design. SMR advocates claim that the technology will have major benefits over traditional nuclear



Figure 4

power plants by reducing the cost, time, and space needed for construction and that they will be safer than traditional plants. These claims are unproven, and a recent study (https://news.stanford.edu/2022/05/30/small-modular-reactors-produce-high-levels-nuclear-waste/) showed that "small modular reactor designs will actually increase the volume of nuclear waste in need of management and disposal."

While 43.6% of respondents feel that nuclear energy offers economic potential for the region, only 35.9% support nuclear energy projects in their communities, while 20.5% do not support siting nuclear technology in their localities. Eighteen percent required more information, and 25.6% did not answer this question.

Primary concerns about nuclear technology included waste storage, safety, expense, and the potential for better fusion technology development that would render other nuclear power obsolete. Current practice necessitates the storage of nuclear waste onsite, contributing to the relative reluctance of local leaders to site nuclear projects near their constituents.

Solar

A local solar industry has slowly been growing in the region since 2016. Policy changes at the state level allowed for schools and local governments to go solar, and state carbon-emission goals have increased the need for utility-scale solar. Across the region, solar is being built on former mine sites and deployed by local institutions for energy savings. Solar has gained popularity, with 55% of survey-takers believing that solar will benefit the economy in Southwest Virginia. Support among respondents for hosting solar technology in their communities far outranked both nuclear and wind energy, with



Figure 5

71.8% of responding community leaders supporting solar arrays in their own communities and only one respondent opposing solar technology. Additionally, 15.4% said that they would need more information, and 10.3% declined to answer.

While it is clear that solar is the most popular renewable technology among our leaders, respondents also expressed some concerns about solar impacts. These are common concerns including: the use of prime agricultural land, panel retirement and disposal, and displacing coal jobs. These concerns reflect similar concerns across technologies and prove that more education is needed to ensure local stakeholders understand how solar and agriculture can support each other, how solar panels are recycled and disposed of, or how solar installation and land restoration are compatible strategies for economic development and job creation.

The work of the Solar Workgroup of Southwest Virginia, described in more detail beginning on page 17, has contributed to the significant community support for solar technology across the region.

Other

Respondents were also asked about other types of energy technologies that they were interested in for Southwest Virginia. Answers included hydroelectric power, geothermal power, and bioenergy. Emerging projects in the region include plans for hydroelectric at the John W. Flannagan Dam and Reservoir in Dickenson County and a hydro pump storage project in Tazewell County. Additionally, the Virginia City Hybrid Energy Center near the Wise County/Russell County border currently uses biomass for energy. These technologies and projects deserve more attention.

Environmental and Public Health Concerns

Environmental sustainability, conservation, and public safety are some of the most important aspects to consider when thinking about developing energy projects. Especially in light of Southwest Virginia's recent flooding, ongoing abundance of polluted and unstable mined sites, and high proportion of absentee- and corporate-owned lands, considerable thought must be given to how energy technologies will affect the places where they are sited.

Notably, 61.5% of survey takers expressed concern about environmental issues stemming from energy production, with 5% saying they had no concerns and 31% leaving the question blank. These levels were fairly consistent with the answers about flooding and public health concerns in the region. Polluted waters, a lack of federal support for both emergency response and climate and disaster resilience planning, blocked waterways, a



lack of local capacity for resiliency planning and infrastructure, and a scarcity of available land for relocation following a disaster were among the listed concerns.







BEYOND SURVEYS: FACILITATING STAKEHOLDER AND COMMUNITY ENGAGEMENT

Community Engagement Model

Before launching a new economic initiative or even building on an existing one, it is important to have a plan for community engagement and assessment. Collecting broad input from a diverse range of stakeholders is a key early step for any economic development initiative, but it is especially important for energy projects, since buy-in for these projects can address concerns and mitigate risks early in the development process. Project developers need to build trust and credibility with the communities where they hope to deploy technology.

By getting a social license to operate, developers win community acceptance, lessen resistance and opposition, and even avoid legal challenges. When residents actively participate in the decision-making and planning phases, the resulting projects are more likely to align with local needs and priorities. Moreover, local engagement enhances long-term sustainability by creating a supportive environment that encourages ongoing collaboration and innovation. As a result, the positive outcomes extend beyond the immediate economic gains, creating a ripple effect of social and environmental advantages for the community.

Community engagement is a spectrum. Some developers view interaction with locally elected boards as the only necessary level of engagement. Especially for coal communities and other historically marginalized communities, more is needed. When developers only interact with the political bodies on the engagement spectrum, they ignore the voices of residents and other stakeholders, often making communities feel alienated and hostile to projects. For a step up from this, developers can provide information to the community to satisfy requests. However, the role of the community is limited to receiving information without any real opportunity to shift the project.

Another step up the engagement spectrum is involvement. At this level, communities and other stakeholders have multiple avenues to learn about a project, provide feedback, and have their interests included. At the very least, communities deserve to be involved.

The final step on the spectrum is collaboration. True collaboration calls for an investment on the part of a project developer to co-develop the project with an informed base of residents and community stakeholders. Collaboration requires and makes possible more trusting relationships and reduces feelings of an extractive or lopsided relationship. At this level of engagement, a developer is not simply responsive to community needs; they are willing to invest in the capacity, processes, and outcomes for community participation.



Figure 8

Appalachian Voices has adapted a ground-up participatory planning process that can be used by a wide variety of economic development, environmental justice, and community-centered groups as well as energy developers to ensure robust community education and collaboration. This process goes beyond simply asking for feedback on a project but seeks true collaboration. Survey-based feedback is only a single step in developing a community project that is truly shaped by community voices at all stages.

Community engagement is not simply about prioritizing equity but invites local voices to be experts about their communities and their futures. As a community-based organization, we know that genuine and lasting community support requires more than a letter of approval from us or other organizations; it is based on regular collaborative partnership.

This comprehensive and inclusive approach integrates key steps for achieving a just energy transition through effective community engagement and promotes the following key principles:

Inclusive Planning and Decision-Making:

Involve a diverse range of community members — not just locally elected officials or economic development professionals — in the planning and decision-making processes of a project, ensuring representation from various demographics. A developer should use a variety of public forums held at accessible times and venues —such as community workshops, town hall meetings, and online platforms — to hear from stakeholders.

Community Needs Assessment:

Conduct a thorough needs assessment to understand the unique priorities and concerns of the community. This can involve surveys, interviews, and focus group discussions to identify challenges, concerns, and community considerations. From this assessment, identify actionable project outcomes that address these needs and incorporate them into the project design.

Education and Awareness:

Provide accessible and clear information about the project, its goals, costs, and potential environmental and social impacts. By promoting awareness within the community, developers empower individuals to actively participate in discussions and decision-making and can address any misconceptions or concerns early on.

Partnerships and Collaboration:

Foster partnerships between community members, local organizations, government agencies, and other stakeholders. Collaborative efforts can enhance the ability of stakeholders to share resources and address concerns. Inclusivity should be a priority in all efforts, even when it might seem like different stakeholders have competing views or priorities.

Continuous Dialogue and Feedback Mechanisms:

Establish mechanisms for ongoing communication and feedback. Regularly update the community on progress, constantly address concerns, and incorporate feedback into decision-making processes. This two-way communication ensures that the community remains engaged and informed throughout the project.

Social and Environmental Justice:

Prioritize social and environmental justice considerations throughout the planning and implementation of an energy project. This will help developers mitigate any potential adverse impacts on vulnerable communities and ensure that the energy transition contributes positively to the overall well-being of the community.

Adopting a participatory model that encompasses these principles allows energy and economic development to become a collaborative and empowering process, ultimately leading to a more equitable and sustainable future.

Community Benefit Agreements

An important and emerging aspect of energy development is the inclusion of community benefit agreements within the development process. Community benefit agreements are legal agreements between developers, local groups, and stakeholders that lay out the benefits owed to the community hosting a project. Benefits can include commitments to hire locally, contributions to economic funds, local workforce training guarantees, investment in other community initiatives, and more. These agreements offer a way to ensure that the wealth and resources generated by energy projects are being put back into the local land, people, and institutions instead of simply being extracted. Developers must involve multiple constituencies. Like good stakeholder engagement practices, a good CBA will ensure that benefits are defined by engagement with community members who have perspectives outside those of just local government officials and economic development professionals. A just transition for energy communities also means that CBAs need to be much more than simple job creation and tax revenue generation.

CBAs are also a powerful tool energy communities can use to hold developers accountable. Here are ways communities can use CBAs to build local wealth and accountability:

- 1. Require developers to procure resources and services locally
- 2. Prioritize hiring local and developing training programs
- 3. Create a community fund with a percentage of the annual revenue administered by a community-led organization
- 4. Commit to implementing environmentally sustainable practices during construction, operation, and decommissioning
- 5. Support educational initiatives related to renewable energy and sustainability within local schools
- 6. Agree to establish an ongoing and transparent communication process with the community
- 7. Outline emergency response plans in collaboration with local emergency services to address any unforeseen incidents
- 8. Protect cultural heritage sites if any are in the project area, and commit to uphold traditional cultural practices
- 9. Create an agreement for site restoration, removal of technology or infrastructure, and potential repurposing of the land

CBAs are more important than ever, with new federal funding becoming available through the Bipartisan Infrastructure Law and the Inflation Reduction Act. The Department of Energy has made a commitment to include community benefits plans and CBAs as part of their rubric for awarding funding. This commitment by the Biden administration means that energy developers need to start early in their community engagement efforts if they hope to be able to competitively describe how these tools will be included in their applications and to ensure there is real buy-in from community stakeholders.

The Solar Workgroup of Southwest Virginia

The Solar Workgroup of Southwest Virginia is a successful example of stakeholder engagement and a collaborative development process. Formed in 2016, the workgroup has been convened by Appalachian Voices and People Incorporated, a community action agency. Other members of the workgroup's steering committee include The Nature Conservancy, the Virginia Department of Energy, Secure Solar Futures, and the Southern Environmental Law Center, with Dialogue + Design providing third-party facilitation.

The workgroup invites the public to each of its monthly meetings, has a robust website designed to update and educate stakeholders on different scales of solar deployment

in the region, and publishes a monthly e-newsletter. Additionally, the workgroup holds quarterly "all come" meetings where residents, developers, economic development leaders, and others are welcome to learn and influence how solar projects are taking shape.

Early in its formation, the Solar Workgroup created the Solar Roadmap for Southwest Virginia, which laid out four goals, including local education and outreach. A primary goal of the workgroup is to ensure that residents and leaders are informed about the technology with the hope of gaining acceptance for deployment. Early on, this was mostly a cultural and economic issue in a region once dominated by coal. In order to make solar information accessible, the Solar Workgroup hosted several community events like its 2017 Solar Fair, offered mini-grants to local high schools for solar projects, and created a website to host information and provide transparency around its efforts.

The four main goals of the Solar Workgroup are:

- Identifying and developing sites that are ideal for solar development, making SWVA a hub for solar energy development. The workgroup has overseen solar installations at Lee and Wise county schools with 15 paid high school solar apprentices. Wise Primary School's installation of 170.2 kilowatts will produce enough electricity to offset approximately 45% of the school's energy needs. The workgroup also played a major role in creating the Appalachian Solar Finance Fund, which utilizes Appalachian Regional Commission POWER support among other private and public funding sources to create a catalytic fund of \$4.1 million for commercial- and institutional-scale solar development across Central Appalachia.
- 2. Growing workforce development and entrepreneurship opportunities to advance solar projects and maximize local benefits. This can be seen in the workgroup's "Securing Solar" co-development model for community anchor buildings in partnership with Secure Solar Futures, Mountain Empire Community College, and Lonesome Pine Solar. It also includes implementation of the Energy Storage and Electrification Manufacturing Jobs Project, helping local manufacturers expand into new markets.
- 3. Expanding education and outreach in communities and with local leaders around solar benefits and opportunities. workgroup members have assisted Southwest Virginia local governments with achieving the U.S. Department of Energy SolSmart designation, helping smooth the path for new solar projects.
- 4. Promoting policy changes that will help grow the solar and energy storage industries in Southwest Virginia. The workgroup has led the way to legislative victories that expand access to power-purchase agreements and net metering, opening up greater access to solar for nonprofit entities. Workgroup members also were instrumental in the establishment of the Virginia Brightfields program that incentivizes solar development on former mine land and brownfields.



Ribbon cutting for the installation of 170.2 kW of solar on Wise Primary School. The panels will produce enough electricity to offset approximately 45% of the school's energy needs. Photo: Jimmy Davidson/Appalachian Voices

The workgroup also initiated the Solarize Wise initiative to significantly increase awareness and familiarity in Wise County around solar technology. This effort grew to include seven other communities that were able to achieve designation under the national SolSmart program for encouraging the growth of local solar energy markets. These municipalities were each awarded the SolSmart designation for taking local action to reduce the time and

expense required to install solar energy systems. For example, Wise County updated its zoning ordinance so that solar installations don't require special permits or hearings. These successes have made it easier for solar projects to get off the ground in the area, addressed misconceptions about solar energy, and spurred changes with zoning and other ordinances. The success of the workgroup is reflected in the energy survey, with a

large majority of local leaders reporting enthusiasm for solar development.

The workgroup put out a solicitation seeking to build a relationship with a solar developer to advance development at community anchor buildings in a way that is equitable and contributed to the goals of the workgroup. This led to a formal partnership with Secure Solar Futures, which made a commitment to invest in a number of priorities, including local hiring and workforce training. Together with funding from the Virginia Coalfield Economic **Development Authority**,



Participants in the local solar workforce apprenticeship program in Southwest Virginia are paid while learning how to install solar power systems. Photo: Ben Bolling/Appalachian Voices

the workgroup initiated the Solar Workforce Accelerator program with local community colleges. In the first two years of the program, 15 paid apprentices received real-world experience working to install solar. Several of the apprentices were hired to continue working in the region.

The Solar Workgroup will be an important vector for engagement and innovation as more federal funding becomes available. The workgroup has received two U.S. Department of Energy grants, including Energizing Rural Communities Prize and Renewables Advancing Community Energy Resilience. These grants will support the workgroup's efforts to elevate community benefit planning as the first utility-scale solar project takes shape and to work with communities to deploy solar plus battery storage to ensure reliable energy during natural disasters or other blackouts.

CONCLUSION

Virginia's coal communities are faced with many emerging opportunities to continue to host energy production and infrastructure. Historically, these communities did not have much input when it came to the impacts of the energy industry and have been left with legacy social, environmental, and economic liabilities. These communities deserve a just transition to a renewable energy future that takes seriously community engagement and access to equitable benefits.

According to Appalachian Voices' and Emory & Henry's energy survey, community leaders still have a lot of concerns about emerging technologies and how projects are being developed in the region. As developers, locally elected leaders, and other policymakers consider which projects and technologies are right for the coalfields, they should utilize a participatory, ground-up community engagement model to ensure a robust effort is made to educate and involve communities and adjust their plans based on input from residents and other stakeholders.

Additionally, a just transition requires that local workers and communities receive their fair share of the benefits from the energy economy, so energy projects should include community benefit agreements shaped by local stakeholders. The energy transition is already underway, but a just transition will only happen if residents and workers are welcome at the table and are actively able to help build their futures. This report serves as a starting point for anyone who seeks to ensure a just transition is possible for energy communities.



APPENDIX A

Survey Questions

- How long have you served as an appointed or elected official?
- Please rate your support for the development of solar energy production in Southwest Virginia.
- Please rate your support for the development of solar energy production in your county or town.
- What concerns or reservations, if any, do you have about the development of solar energy production in the region of Southwest Virginia?
- Are you interested in locating solar energy production projects on community anchor institutions such as schools, community centers, or municipal buildings?
- If you are interested in locating solar energy production projects on community anchor institutions, please list any specific locations that you have in mind.
- Please rate your support for the development of wind energy production in Southwest Virginia.
- Please rate your support for the development of wind energy production in your county or town.
- What concerns or reservations, if any, do you have about the development of wind energy production in the region of Southwest Virginia?
- Please rate your support for the development of nuclear energy production in Southwest Virginia.
- Please rate your support for the development of nuclear energy production in your county or town.
- What concerns or reservations, if any, do you have about the development of nuclear energy production in the region of Southwest Virginia?
- Please rate your support for the development of other types of energy production in Southwest Virginia.

- Please rate your support for the development of other types of energy production in your county or town.
- What other forms of energy production in the region do you support, if any?
- What forms of energy production do you want to learn more about? (select all that apply)
- In your opinion, what forms of energy production offer potential for contributing to the economy of Southwest Virginia? (select all that apply)
- Are you involved with or do you belong to any groups or organizations that advocate for the development and use of renewable energy sources?
- If you answered yes, with what groups or organizations are you connected or do you belong to?
- If you answered no, are you interested in connecting with any groups or organizations that advocate for the development and use of renewable energy sources?
- Are you aware of properties or lands in your county or town that might be suitable for the potential development of projects related to energy production?
- If you answered yes, is there specific information you can share about properties or lands in your county or town that might be suitable for the potential development of projects related to energy production?
- Are you open to being involved in policymaking or planning decisions related to new forms of energy production in Southwest Virginia?
- Are you open to being involved in policymaking or planning decisions related to new forms of energy production in your county or town?
- Please rate your level of concern regarding environmental issues related to energy production in Southwest Virginia.
- Please rate your level of concern regarding the impacts of flooding in Southwest Virginia.
- If you have concerns about the impacts of flooding in Southwest Virginia, please share specific concerns below.
- Please list specific communities, if any, in Southwest Virginia that you know of that have been impacted by flood damage.
- Please rate your level of concern regarding public health issues related to energy production in Southwest Virginia.

- In addition to energy production, what other issues or topics related to economic development in Southwest Virginia do you have interest in? (select all that apply)
- In which county or town do you live?
- Are you interested in learning about new federal programs for energy production in rural communities?

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Report prepared by: