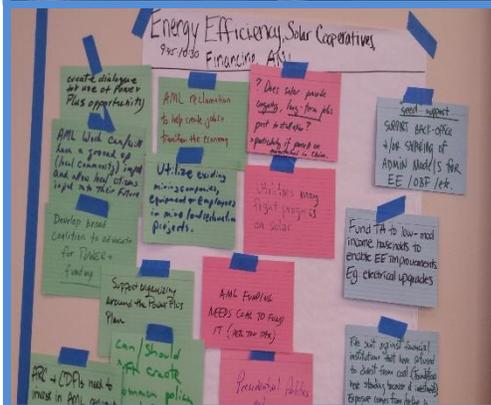


# Energy & Natural Resources in Central Appalachia: Opportunities & Challenges

Energy and Natural Resources Working Group  
2015 Learning Day Report  
Spring 2016



Appalachia Funders  
**NETWORK**  
learning · analysis · collaboration

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## Executive Summary

In the Central Appalachian region, energy and natural resources present a range of potential economic and community development opportunities, as well as complex challenges. The two sectors are inextricably linked. As the region faces continued decline of its traditional industries, communities are seeking strategies that will facilitate a just economic transition through responsibly managed natural resources, widespread deployment of energy efficiency and renewable energy, as well as an economic development strategy that attracts jobs, companies and technologies associated with the new energy economy.

The [Appalachian Funder's Network](#) (AFN) is a group of over 80 national, regional, and local funders. The purpose of the AFN is to align national, regional, and local funders toward a common vision for accelerating an equitable Appalachian transition. The Network's work is focused in Central Appalachia, which is defined as the Appalachian counties of Ohio, Kentucky, Tennessee, Virginia, West Virginia, and North Carolina (see Appendix B for more information about AFN).

In April 2015, members of the Appalachian Funder's Network came together to discuss the formation of a new working group focused on the opportunities and challenges related to energy and natural resources in Appalachia. AFN partners had previously identified energy as one of several promising sectors that could align with Appalachian communities' interest in economic diversification and just transition. However, AFN partners had not yet identified specific energy-related opportunities or strategies, nor had they fully assessed the intersection of energy interests with the natural resources sector.

In October of 2015, this group and other experts met in Charleston, WV to determine the shared interests and purpose of the emerging working group. Through consultation with community practitioners and engagement in the retreat's activities, funders identified several roles and initial steps that could assist in advancing the energy and natural resource sectors toward a just Appalachian transition (see below).

This report covers the retreat's findings by addressing energy and the natural resources sectors separately, although there are numerous intersections between the two sectors. The main areas of analysis include:

- A brief **Background** section provides context,
- For more detailed discussions of the key opportunities, challenges, and roles for funders, see the sections on **Energy** and **Natural Resources**,
- **Next Steps** recommends a pathway forward following the workshop,
- The **Appendices** provides details from the two days of retreat presentations (Appendix A) and related themes, and additional information about the AFN (Appendix B)
- The **Contact Information** section lists key sponsors and contact details (Appendix C).

Participants also identified several roles and initial steps to that could assist in advancing the energy and natural resource sectors toward a just transition in Central Appalachia. While more specific recommendations are included in the analysis below, a set of general recommendations for funders emerged and included the following:

- Increase strategic and collaborative approaches to grantmaking,

- Convene a range of stakeholders, including affected communities, in ongoing planning and decision-making efforts,
- Fill funding gaps and attract more social investors, to support innovative models and programs, and
- Help frame the energy and natural resources sector as valuable economic development opportunities.

The table below summarizes some of the key opportunities, barriers, and actions by sector that participants discussed at the meeting. The list is not meant to be comprehensive or final. For now, this report offers an initial framework for the group's shared analysis and vision moving forward.

At the end of the retreat, the group decided to formalize the Energy and Natural Resources Working Group (ENRWG). The ENRWG welcomes other regional and national funding partners interested in bringing greater focus and impact to future energy and natural resource investments and programs in the Central Appalachian region. The ENRWG will continue to incorporate practitioner and community insight into activities, investments, and ongoing dialogue about these sectors.

	<b>Renewable Energy/Energy Efficiency</b>	<b>Natural Resources</b>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>▪ Engage in strategic planning &amp; visioning opportunities in support of the economic transition</li> <li>▪ Identify effective renewable energy &amp; energy efficiency models and programs and support community driven Scale-up</li> <li>▪ Attract and leverage new investment into the region</li> <li>▪ Engage private sector partners</li> </ul>	<ul style="list-style-type: none"> <li>▪ Engage in strategic planning &amp; visioning opportunities in support of the economic transition</li> <li>▪ Invest in sound ecosystem-based, economic development programs and activities</li> <li>▪ Invest in the restoration (regenerative) economy- natural resources protected in order to provide ecosystem services (e.g. clean water, soil productivity, range of forest products, etc). in an authentically sustainable manner</li> </ul>
<b>Barriers &amp; Challenges</b>	<ul style="list-style-type: none"> <li>▪ Costs and timing impact the sector's growth- needs long term thinking.</li> <li>▪ Politics, policies, regulations</li> <li>▪ Inability/capacity to build on community assets- community input needs empowerment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Natural Resources are undervalued or ignored in short-term economic growth models</li> <li>▪ Inadequate community engagement</li> <li>▪ Limited pathways for creating living wage jobs</li> <li>▪ Insufficient funding &amp; capital</li> <li>▪ Lack of political will</li> </ul>
<b>What Funders Can Do</b>	<ul style="list-style-type: none"> <li>▪ Increase strategic, collaborative grantmaking</li> <li>▪ Support organizing, public engagement, and advocacy</li> <li>▪ Provide support for targeted technical assistance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Support stakeholder &amp; community engagement in natural resource planning decisions</li> <li>▪ Support creative reframing of the narrative around natural resources</li> <li>▪ Provide funding &amp; capital</li> </ul>

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## Introduction

In April 2015, at its annual gathering, Appalachia Funders Network members discussed forming a new working group focused on the opportunities and challenges related to energy and natural resources in Appalachia. AFN partners had previously identified energy as one of several promising sectors that could align with Appalachian communities' interest in economic diversification and equitable transition. However, AFN partners had not yet identified specific energy-related opportunities or strategies, nor had they fully analyzed the intersection of energy interests with the natural resources sector. On October 8-9, 2015, several AFN members and other experts convened in Charleston, WV. The primary objectives of the retreat were to: a) learn about the energy and natural resources sectors in Central Appalachia, and b) determine if there was sufficient shared interest in formalizing an "Energy and Natural Resources Working Group" (ENRWG). This report summarizes the activities of the first day, when funders and practitioners met for a mutual "Learning Day" to discuss opportunities, challenges, and recommendations for further funder support. The group later refined its purpose statement to reflect its intent to work together in several key roles (see below).

## ENRWG Purpose Statement (draft)

1. **CONVENE: Convene stakeholders & build relationships**
2. **LEARN: Exchange information as a learning network of practitioners and funders**
3. **SUPPORT & FACILITATE: Provide leadership and serve as champions**
4. **LEVERAGE: Leverage additional private, public and philanthropic resources**
5. **COLLABORATE: Act together**

## Background - Energy & Natural Resources Sectors in Central Appalachia

Appalachia has been one of the country's primary coal-producing regions for over a century. Energy has been and will continue to be an important sector in the region, but the region's relationship to energy is rapidly changing. Several important factors that are influencing the energy transition in the region include: the decline in coal production; significant shifts in the global and domestic energy marketplace; and new government regulations, including the [EPA 111\(d\) rule](#) and the proposed [Clean Power Plan](#). Looking forward, the Clean Power Plan, for example, may require states to develop plans for compliance that may involve greater investments in energy efficiency and/or renewable energy as well. In Kentucky, policy-makers and other leaders have convened the [Saving Our Appalachian Region \(SOAR\)](#) initiative as a framework for economic transition in that state – with special emphasis on numerous promising sectors and asset-based economic development strategies. These are just two examples of many forces influencing and preparing for a rapidly changing energy economy.

Natural resources form the basis of many local and regional economies of Appalachia, and are key considerations in economic diversification efforts. Recent developments in industry and technology, the POWER Initiative, and other market trends have tremendous potential impact on natural resources in terms of: jobs, land ownership, water quality, wildlife, and forest health conditions.

Collaboration from public and private sectors will be critical in next phases of economic transition. Government policies and programs continue to drive investment in diversified energy and natural resources. For example, incentives such as state [Renewable Portfolio Standards](#) (which often include energy efficiency incentives) have helped develop new energy markets for renewable generation, and the [USDA's Energy Efficiency and Conservation Loan Program](#) and the [Rural Energy for America Program \(REAP\)](#) provide incentives for energy efficiency investments and renewable energy production. The private sector's role, however, in shaping and creating regional economies cannot be understated. Communities will be challenged to align their priorities with private sector interests while also engaging these partners in planning and implementing sustainable business practices, relevant workforce training, resource protections, and other strategies that leverage the region's many assets.

Enhanced coordination and engagement of funders with community practitioners and private sector partners will help position communities to take advantage of emerging opportunities and address potential challenges for further economic transition in these areas.

### Working Definitions

#### Energy

- Renewable energy - any energy source that is naturally replenished, like that derived from solar, wind, geothermal, hydroelectric, biomass, etc.
- Energy efficiency – any behavior, product, practice, or service that reduces the amount of energy used in a given structure or activity. “Using less energy to provide the same service”. This also includes repurposing waste streams.
- Includes the markets, infrastructure, financing, public engagement, research and policies that support the development of the above towards the purpose of creating real and sustainable economic opportunity

#### Natural Resources-Economics

- Activities that restore ecosystem health and/or sustainably utilize the region's natural resources (water, land, trees) for economic development purposes, including providing environmental services (e.g., C sequestration)
- Includes the markets, infrastructure, financing, public engagement, research and policies that support the development of the above towards the purpose of creating real and sustainable economic opportunity

## Energy - Opportunities

Activities that can support greater opportunity in the energy sector include more strategic and inclusive planning, scaling-up proven models, and creating conditions and partnerships that can attract new investment to the region. These activities can be mutually supportive. For example, strategic planning that incorporates proven models and programs with input from private sector partners could help attract and leverage new investment to the region.

### Engage in Strategic Planning & Visioning Opportunities for the Energy Transition

Communities interested in diversifying their economy by adding energy consumption and generation options often begin with inclusive planning and visioning activities. Energy policies and new initiatives can provide openings for greater participation and engagement in planning for the energy transition and a more diversified energy portfolio in Appalachia. The [Clean Power Plan](#), [Power Initiative](#), Eastern Kentucky's [Shaping Our Appalachian Region \(SOAR\)](#) initiative, and efforts to further a restoration economy (i.e. reforestation, abandoned mine land restoration, etc.) offer opportunities for local communities, states, and regions to engage in strategic and inclusive planning activities that may further the energy transition. Strategic visioning for the productive re-use of abandoned mine lands could cross-cut both the energy and natural resource sectors to diversify local economies. Support to help make each state's plan for compliance with the Clean Power Plan more inclusive and innovative could extend the plan's ability to expand the energy mix in the region.

### Replicate or Expand Existing Programs & Share Promising Practices

Existing, effective programs could be scaled up or replicated in new areas to serve more communities or individuals. Examples include, but are not limited to: innovative energy financing models such as green bonds; on-bill/utility financing programs; region- and industry-specific workforce development training initiatives; commercial [Property Assessed Clean Energy \(PACE\)](#) program development; and further implementation of community-based renewable energy projects, such as solar cooperatives, local wood pellet industries, community wind, and co-generation projects. Promising practices can inform the content of the strategic plans and shape the vision for expanded programming or energy-related development efforts.

Implementing many of the energy projects that were discussed during the retreat and in this document will require alignment with states' and utilities' policies and regulations. Therefore, additional research may be needed to determine the feasibility of specific project options with individual state and community needs. For example, retreat participants learned that local wood pellet industries were successful in New England however, the current energy mix may be a barrier to implementation in Central Appalachia.

### Expanding Creative Finance Options

Across the country, public and private stakeholders are collaborating to find creative ways to finance and implement both small- and large-scale energy efficiency and renewable energy projects. Examples include green bonds, on bill financing (OBF) programs, and commercial Property Assessed Clean Energy (PACE) programs. Existing programs, such as MACED's [HowSmartKY's](#) On Bill Finance program in Kentucky, could be expanded or new OBF. Or, PACE programs could be replicated in Appalachia as a new tool to spur revitalization or greater returns for agriculture and manufacturing enterprises. Additionally, on-bill financing and debt restructuring could be scaled up via USDA's Rural Utility Services. These are a few of the many promising practices recommended by practitioners for further support during the ENRWG Learning Day.

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### **Attract and Leverage New Investment into the Region**

Sustainable, responsible impact investing continues to expand in the U.S. and in international markets. For example, 215 of the Fortune 500 companies have set targets for reducing greenhouse gas emissions, energy efficiency or renewable energy. Sixty percent of the Fortune 100 companies have set clean energy and greenhouse gas targets (Source: [Power Forward 2.0](#).) With strategic support and planning, Appalachia can attract socially-responsible investors and companies that are interested in shovel-ready opportunities, equitable ownership models, and investment matchmaking. The region's natural and other physical resources (scenic beauty, human capital, and strong community identity) have already attracted socially-responsible companies to invest in Appalachia over other competing regions. Several leading beverage manufacturers selected western NC to site their new distribution centers. Google selected a retired coal-fired power plant in rural Appalachian Alabama for a new data center. And, leading tech firms increasingly select investment sites that have renewable energy portfolio standards and/or a supply or potential for electricity generation sourced by renewable energy.

### **Involve Private Sector Partners**

Business leaders and private sector industry groups can help inform and even create pathways to future opportunities. Business representatives can advise ENRWG and other stakeholders about potential risks, market considerations, or emerging trends. Understanding the business needs and market conditions can help funders and other groups more effectively allocate resources that can support private sector growth. Including greater private sector perspective can facilitate openings for more impactful public-private partnerships as well. For example, Tennessee's Advanced Energy Business Council offers a model for supporting business development. The non-profit, membership organization analyzes market trends, conducts an economic impact analysis, and educates policy-makers on the potential for energy businesses and the energy sector in general. As a result, the state has increased the number of high-paying jobs and continues to attract investment in advanced energy.

## **Energy - Challenges**

Despite the opportunities noted above, retreat participants highlighted barriers and challenges that have hindered further development of energy-related projects and economic development in central Appalachia. These challenges include high project costs, long-term planning, and time limitations; political barriers, policies, and regulations; and the inability to build on community knowledge and assets.

### **Costs and Time Limitations Impede Energy Project Implementation**

Although renewable energy costs are declining, some innovative projects still involve high upfront expenses. Smaller, community-scale or demonstration energy projects often face limited financing options and may require subsidies for start-up expenses. Expanding small- and community-scale projects require time for education, outreach, and planning. Additionally, community-driven processes may involve longer timelines to allow of public input, collaboration, fundraising, and eventual implementation. Projects that seek to expand renewable energy generation options may be delayed or rejected as barriers arise during extended planning and long approval phases. Regional planning processes may require multiple layers of participation and may delay project implementation. The requirements of local, regional, and/or state planning processes may not align with the Clean Power Plan or other project timelines.

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### **Politics, Policies, and Regulations**

Political ideologies, the influence of industry groups, and state and federal policies are inextricable. Together they influence the local, regional, and state planning activities and often function as a *de facto* limitation on the expansion of energy resources and private investment. Regulations can help or hinder a region's business environment and its ability to attract advanced energy businesses.

Recent federal regulations and initiatives that are expected to significantly impact central Appalachia include the Clean Power Plan and the POWER Initiative. Within these initiatives lie both opportunities and challenges. The Clean Power Plan faces opposition by leaders in several states in the region (and beyond), and some states may seek to be exempted from it. Despite market data and trends showing increased natural gas production and declining fossil fuel extraction, the CPP is also perceived by industry groups and other stakeholders to be contributing to a politically-driven war on coal. This perception, like the regulations noted above, may also limit the region's ability to attract outside investors.

On the state level, state laws and utility commissions govern important state policy decisions and regulations related to deregulated markets, net metering, and power purchase agreements. These parameters determine how, where, and how much renewable energy or energy efficiency growth can occur within the state's regulatory and utility framework. Investor owned utilities (IOUs) might be reluctant to change or upgrade their grid or technology because of the large sunk costs in their existing infrastructure. In many states, systemic barriers are created by state laws that forbid third party ownership of distributed renewable energy resources, prevent community solar farms, cap the size of net-metered systems, deny state tax credits to renewable energy, and/or fail to require utilities to expand deployment of renewable energy or energy efficiency initiatives.

### **Inability to Build on Community Assets**

Local and state organizations and regional coalitions seek support to build capacity in general, and specifically, to assess and build upon existing community assets. Knowledge and insights from community members can help identify problems related to energy and natural resources, and then to create and implement locally-sourced solutions. The ability to harness this community capacity requires leaders who are willing to invest the time, funds, and energy to support participatory, systems-based processes and their implementation.

## **Energy – Possible Roles for Funders**

Retreat participants offered three main recommendations for ways that funders can better support energy-related projects and related activities. Greater coordination among funders could lead to more strategic and collaborative grantmaking. Funders can also support more public engagement, advocacy, capacity building activities, and funders can offer targeted technical assistance to specific, emerging opportunities or projects.

### **Strategic and Collaborative Grantmaking**

Funders can be more strategic, collaborative, and nimble in grantmaking activities. For example, in April of 2015, the Appalachia Funders Network collaborated with the Rockefeller Family Fund to create the [Just Transition Fund](#), (JTF). In a matter of weeks, the JTF pooled \$436,500 from national and regional funders. In June 2015, the JTF awarded grants with the funds raised to 19 organizations to help build their capacity to pursue federal funding made available through the Power Plus initiative. The Power Plus initiative targeted coalfield and power plant communities undergoing economic transition. The JTF grants then resulted in over \$2.3 million of successful POWER funding awarded to grantees in Appalachia. The JTF demonstrates a successful outcome of the Philanthropic

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Engagement Project - a collaboration between the Appalachian Regional Commission, the Mary Reynolds Babcock Foundation, and the Appalachia Funders Network to bring additional investment into the region.

Recommendations for other strategic interventions by funders include:

- Align funder resources to meet the scale and timing of a project when there are many moving pieces and unfunded, hard-to-fill gaps in a proposed project budget;
- Fund collaborative efforts with local governments and public-private partnerships to implement demonstration renewable energy projects;
- Capitalize innovative pilot projects and loan loss reserves to reduce the risks by lenders;
- Help practitioners by assessing how private philanthropy can address the need for soft matches for government grants.

### **Fund Organizing, Public Engagement, and Advocacy**

Intermediary groups, community leaders, and other stakeholders could benefit from greater funding support for organizing, public engagement, leadership, and advocacy activities. These groups can provide strategic planning, support, public engagement, or advocacy efforts when strategic or time-sensitive issues, programs, policies, or regulations arise. For example, practitioners at the retreat noted the recently launched Appalachian Transition Fellowship program mobilized young leaders to help expand, publicize, and organize communities on a local level. This work contributes to a broader movement emerging in Appalachia in which communities are envisioning and implementing strategies for realizing a just economic transition. These locally-driven organizing and advocacy efforts require continued financial support. Other similar organizing opportunities are emerging in response to the Clean Power Plan, POWER Initiative, and other regional and local initiatives. In the long-term, ongoing support to build the capacity of local leaders, intermediary organizations, and anchor institutions could be provided through the following actions:

- continuing and expanding the Appalachia Transition Fellowship program for young leaders;
- improving planning practices of intermediary organizations to develop projects scaled for application in rural areas;
- disseminating promising practices;
- building and maintaining a peer-practitioner-funder learning network; and
- funding operations expenses for new and existing intermediary organizations.

### **Provide Targeted Technical Assistance**

Targeted technical assistance could be beneficial to help communities better understand data, trends, and emerging opportunities. For example, funders could support the creation and publication of state energy asset or stakeholder maps, similar to the [Florida Energy Ecosystem project](#), along with support to link stakeholders and the private sector in collaborative initiatives. Other forms of technical assistance could include support for state energy policy offices to analyze and collect data to inform their state's Clean Power Plan, or to develop a data-driven, collaborative approach for local, regional, and other investment strategies; mapping a state's energy assets or an economic impact report like the [Tennessee Advanced Energy Economic Impact Report](#).

## Natural Resources - Opportunities

Economic opportunities related to natural resources include: strategic planning and visioning with communities to prepare for economic transitions; investing in appropriate ecosystem-based, economic development, and investing in restoration and regenerative economies.

### Engage in Strategic Planning & Visioning Opportunities for the Energy Transition

Recommendations for natural resource-based economic opportunities are similar to the planning and visioning recommendations that were outlined above the energy discussion. The Clean Power Plan, POWER Initiative, SOAR, and the availability of abandoned mine lands are just a few examples for planning and visioning that include a more inclusive and diverse perspective about the region's natural resources roles in the ongoing economic transition.

### Invest in Appropriate Ecosystem-based Economic Development Programs and Activities

There are many evolving financial and legal tools available for investing in “resource –friendly” economic development and projects. This is an area in which the ENRWG would work with communities to link with financial and development experts. For example, regional land-ownership patterns are in transition, which can create de-stabilizing impacts in a community. However, communities can consider proactive land ownership options: increasing their capacity to organize for forest ownership and management (i.e. community forests), land trusts, land acquisition by public agencies, or the implementation of other best practices in land conservation and utilization.

Ecosystems, habitats and landscapes can be protected in order to yield multiple value streams including tourism, agroforestry and forest products, and ecosystem services. For this reason, communities may benefit from enhanced capacity to assess and implement resource planning from ‘ecosystem services valuation’ perspectives. Region-specific training and capacity building could help the existing and future workforce understand connections between land, economic development, and sustainable practices for using and conserving natural resources. A shift in how the region's assets are valued could redefine business practices and investment patterns, and ultimately promote more sustainable results instead of the mixed outcomes derived from the existing “business as usual” approach. Best practices from leading edge conservation research can be analyzed and deployed in pilot projects with scaling potential.

### Restoration and Regenerative Economies

**Restoration economy** refers to economic output and jobs created through environmental conservation, restoration, and mitigation actions, resulting in increased ecosystem functions and services. **Regenerative economy** refers to a system of economic activity that is structured to regenerate the capital assets, in this case, natural resources, traditionally undervalued or not included in the calculus of many financial tools.

### Invest in Restoration and Regenerative Economies

The restoration and reclamation of ecologically damaged landscapes, such as abandoned mine lands and waterscapes, can be economically beneficial at local, regional, and national scales. A robust restoration economy consists of the physical work undertaken in a particular project area to restore a resource, as well the benefits of the direct and indirect economic activities that result from the business contracts, payroll for workers, and indirect spending on local goods and services. Restoration activities can drive economic development and job creation, particularly in rural communities that have suffered from persistently high unemployment rates. Research into Regenerative economic development, in which the resources are more appropriately valued and the activities are geared to replenishing them as capital, could be an important financial investment arena to explore in more detail.

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In sum, there are many exciting opportunities to create and enhance strategies that can create jobs and investment while also supporting the region's capacity to regenerate the services that the community relies upon, such as clean air, water, and soil.

## Natural Resources – Challenges

Barriers to enlightened economic opportunities related to natural resources include the following challenges: a natural environment that is undervalued; inadequate community engagement; relatively smaller full-time job creation outcomes for natural resource related projects; and insufficient funding.

### **The Natural Environment is Undervalued**

Despite popular rhetoric and support for protecting the environment, prevailing practices devalue the region's natural resources in favor of traditional "limitless-growth" forms of economic development. Planning, policy-making, programs, and business practices frequently favor short-term results over longer-term benefits and are not accountable for externalities such as public health, air quality, and other environmental and economic impacts. The longer-term effects of these policies and practices are already becoming apparent, e.g. degraded status of air, water, and soil quality.

### **Inadequate Community Engagement**

Impacted communities are often not sufficiently engaged in the front end of land management or conservation decisions. Some landowners often do not have viable options on whether to sell or conserve. Absentee landowners also an important factor to address. There is a lack of transparency in some states regarding ownership, and the serious issues of sub-surface rights complicate matters throughout Central Appalachia.

Mitigation of negative impacts on resources often does not include solutions for entire communities (human and ecosystem). Local stakeholders often do not sustain any benefit, nor do they demand or expect accountability or action.

### **Limited Living Wage Job Creation**

The natural resource sector faces a major challenge of garnering support because historically there has been limited job creation associated with sustainable development of natural resources. Many activities are often small-scale community projects with small-scale job impacts. New jobs created are often seasonal jobs and they do not provide living wages for tradesmen. New ideas are needed in this arena.

### **Insufficient Funding & Capital**

In Central Appalachia there is a scarcity of start-up investments that connect isolated, small entrepreneurs in natural resources on an appropriate scale. There has also been massive disinvestment due to coal industry bankruptcies and this has reduced funds for programs funded by the industry such as abandoned mine lands.

## Natural Resources – Possible Roles for Funders

### **Support Stakeholder and Community Engagement in Natural Resource Management**

Funders can use their influence to convene key stakeholders and address natural resource issues, using long-term time scales in charrettes and planning processes, e.g., a 100-yr visioning project for Central

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Appalachia's forestry goals. Funders can also support the on-going engagement of citizens, especially marginalized populations, in visioning multi-generational management decisions, applying long-term views that are required for sustaining the natural resources.

#### **Help Reframe Perceptions & Messaging Related to Natural Resources**

Funders can support articulation of a truly comprehensive business case for investing in sustaining Appalachia's natural resources. This includes helping to support the research and application of innovative models and programs to help build that case. This goes hand-in-hand with long-term innovative place-based environmental education, especially the human-nature connection in terms of public health and improved living standards.

#### **Provide Funding & Capital for New Developments, Land Acquisitions, and Capacity Building**

Funders can provide set-up costs for new developments such as small businesses and public-private partnerships. Capital could be used to acquire community forests and fund capacity building efforts.

### **Next Steps**

The Learning Day provided funders and practitioners with a basis for forming a common analysis and learning network. The group also gained a better understanding of the opportunities and challenges in the energy and natural resource sectors. The members will continue to review the outcomes of the workshop, clarifying the group's purpose and identifying the major activities of the working group. Over the next few months the working group will also discuss group membership, structure, funding and financial support.

The ENRWG members found tremendous value in learning together with practitioners, and plans to continue working with them. The group will also reach out to other stakeholders interested in collaboration possibilities in this exciting transition work that is underway in Central Appalachia.

Session/ Presenters	Opportunities	Challenges/Barriers	What Can Funders Do?
<p><b>Accelerating Appalachia’s Economy by Restoring Land and Water Resources</b></p> <ul style="list-style-type: none"> <li>▪ Bob Fala (WV DNR)</li> <li>▪ <a href="#">Chris Woolery</a> (MACED)</li> <li>▪ <a href="#">Rob Riley</a> (Northern Forest Center)</li> </ul>	<ul style="list-style-type: none"> <li>• Community collaboration for shared benefit</li> <li>• Invest in and promote sustainable forestry</li> <li>• Leverage investments</li> <li>• Engage in strategic, integrated, planning around Abandoned Mine Lands</li> <li>• Promote hunting tourism on abandoned mine lands</li> <li>• Elk restoration on private lands</li> <li>• Use public lands for regenerative or restoration – valued demonstration projects</li> <li>• Integrate forest product development with expanded wildlife management</li> </ul>	<ul style="list-style-type: none"> <li>• Research pros and cons of sustainability of scaling up forestry for biomass/wood products for private vs industrial consumption (i.e. EU industrial Market is deforesting SE USA)</li> <li>• Lack clarity on ownership of sub-surface and surface resources</li> <li>• Lack of financial incentives for investing in energy efficiency</li> <li>• Lack of market demand</li> <li>• Depopulation and out-migration</li> <li>• States need to change funding streams</li> </ul>	<ul style="list-style-type: none"> <li>• Support community engagement in comprehensive economic development strategies</li> <li>• Fund initial start-up expenses for related activities</li> <li>• Partner with natural resource agencies to buy abandoned mine lands</li> <li>• Promote elk restoration</li> </ul>
<p><b>Energy Efficiency, Solar Cooperatives, Financing, Abandoned Mine Lands</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">Rory McIlmoil</a> (Appalachian Voices)</li> <li>▪ <a href="#">Anya Schoolman</a> (Community Power Network)</li> <li>▪ <a href="#">Fern Jones</a> (Croatan Institute)</li> <li>▪ <a href="#">Eric Dixon</a> (Appalachian Citizen Law Center)</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage public and private investment and community involvement in Abandoned Mine Land reclamation projects</li> <li>• Organize and advocate for support for the POWER Initiative</li> <li>• Build a climate conducive to the green bond market</li> <li>• Energy efficiency/renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>• Political barriers to accessing Federal funds</li> <li>• Supportive policies and common metrics to support Green Bonds</li> <li>• Push-back on solar</li> <li>• Emphasis on residential and commercial energy codes</li> <li>• Abandoned Mine Land funding is dependent on coal</li> <li>• Renewable energy/energy efficiency is not framed as business/economic development</li> <li>• Lending and financing models need to balance reality of actual returns</li> </ul>	<ul style="list-style-type: none"> <li>• Support advocacy work in POWER Initiative and rooftop/community-based solar</li> <li>• Create a common policy agenda for the Funder’s Network</li> <li>• Engage communities as Appalachian Transition advocates using Clean Power Plan or POWER Initiative as catalysts</li> <li>• Increase divestiture efforts and use of green bonds</li> <li>• Fund technical assistance to enable energy efficiency improvements</li> <li>• Fund “seed support” for energy efficiency/on-bill financing</li> </ul>

Session/ Presenters	Opportunities	Challenges/Barriers	What Can Funders Do?
<p><b>Leveraging New Federal Policies for the Appalachian Transition</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">Janet Keating</a> (OVEC)</li> <li>▪ Ted Boettner (WV Policy)</li> </ul>	<ul style="list-style-type: none"> <li>• Educate and mobilize the public to advocate to legislators on the benefits of Power Plus and Clean Power Plans</li> <li>• Engage communities to develop and implement community-based strategies to implement the POWER Initiative/Clean Power Plans</li> <li>• Create a state-level alliance and develop technical support partnerships</li> <li>• Invest in/develop/support energy efficiency/renewable energy to help comply with CPP</li> </ul>	<ul style="list-style-type: none"> <li>• Failure to prioritize Power Plan</li> <li>• Political barriers to accessing federal funds</li> <li>• Voice with Pension Benefit Guaranty Corporation</li> </ul>	<ul style="list-style-type: none"> <li>• Support a diverse network of partners to provide strategic support, capacity building, and advocacy in response to Just Transition needs and the Clean Power Plan and POWER</li> <li>• Support grassroots education and advocacy efforts around state/federal policy</li> <li>• Include women’s voices for solutions to problems concerning coal transition</li> <li>• Fund Clean Power Plan technical assistance to state agencies</li> <li>• Support litigation when entities ignore clean water/carbon rules</li> <li>• Focus on scalable solutions</li> </ul>
<p><b>Sustainable Forestry &amp; Clean Water</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">Rob Riley</a> (Northern Forest Center)</li> <li>▪ <a href="#">Janet Keating</a> (OVEC)</li> </ul>	<ul style="list-style-type: none"> <li>• Engage communities in organizing for forest ownership and management (e.g. community forest models)</li> <li>• Take advantage of new market tax credits</li> <li>• Lobby forestry industry and legislators</li> </ul>	<ul style="list-style-type: none"> <li>• Absentee land ownership</li> <li>• Lack of value-added strategies</li> <li>• Disinvestment from coal industry bankruptcies</li> <li>• Lack of community trust to collaborate on developing forest resources</li> <li>• Politicians listen to the industry, not to their constituents</li> <li>• Engage WVU division of forestry to survey for/initiate community managed sustainable forests</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage community engagement/ownership in sustainable forestry</li> <li>• Support research on water</li> <li>• Support education on new forestry models</li> </ul>

Session/ Presenters	Opportunities	Challenges/Barriers	What Can Funders Do?
<p><b>Scaling Up Energy Efficiency and On-Bill Financing in Appalachia</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">Rory McIlmoil (Appalachian Voices)</a> and <a href="#">Chris Wollery (MACED)</a> – combined presentation</li> <li>▪ Lisa Abbott (KFTC)</li> </ul> <p><b>Realizing Renewable Energy’s Potential in Appalachia</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">Evan Hansen</a> (Downstream Strategies)</li> <li>▪ Fern Jones (Croatan Institute)</li> <li>▪ <a href="#">Tony Logan</a> (USDA/OH)</li> </ul> <p><b>State Policy Role in Energy</b></p> <ul style="list-style-type: none"> <li>▪ Jeff Herholdt (WV Div. of Energy) – West Virginia</li> <li>▪ <a href="#">Tom Peterson</a> (Center for Climate Strategies)</li> <li>▪ <a href="#">Cortney Piper</a> (TN Advanced Energy Business Council)</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen federal/state and public/nonprofit partnerships</li> <li>• Increase understanding of investing</li> <li>• Create incentives under the Clean Power Plan</li> <li>• Conduct best practice research on policies beneficial to the triple bottom line</li> </ul>	<ul style="list-style-type: none"> <li>• Too small/not attractive to capital investment</li> <li>• Political barriers in energy policy</li> <li>• Lack of community voice in policy work</li> </ul>	<ul style="list-style-type: none"> <li>• Fund research and analysis to aggregate projects to attract capital</li> <li>• Invest in on-bill financing projects and learning/advocacy networks</li> <li>• Fund intermediary NGOs to better plan and develop local scale projects</li> <li>• Fund collaborative efforts with local governments in renewable energy projects</li> <li>• Support moving coal divestment funds to re-service regional Rural Utilities Service debt</li> </ul>

Session/ Presenters	Opportunities	Challenges/Barriers	What Can Funders Do?
<p><b>Natural Resource-Driven Community Development</b></p> <ul style="list-style-type: none"> <li>▪ Kent Spellman (WV Community Development Hub)</li> <li>▪ <a href="#">Todd Christensen</a> (Clinch River Valley Initiative)</li> <li>▪ <a href="#">Hannah Vargason</a> (NCIF)</li> </ul>	<ul style="list-style-type: none"> <li>• Improve messaging that tourism is a means to a better place to live</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of and/or insufficient jobs in natural resources</li> <li>• Lack of technical assistance and funding for small entrepreneurs in natural resources</li> </ul>	<ul style="list-style-type: none"> <li>• Support for high risk capital and loan loss reserves</li> <li>• Support small business development</li> <li>• Support intermediary coalitions</li> <li>• Promote “strategic tourism” for community development</li> <li>• Find &amp; fund creative, successful, leading edge best practices (including in private sector) as tools for communities</li> </ul>
<p><b>Sustainable Watershed Management in a Changing Climate</b></p> <ul style="list-style-type: none"> <li>▪ Ann League (Statewide Organizing for Community Empowerment/TN)</li> <li>▪ <a href="#">Thomas Minney</a> (The Nature Conservancy/WV)</li> </ul>	<ul style="list-style-type: none"> <li>• Connect community planning to available resources (e.g., Just Transition Fund)</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of community engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Create workforce development opportunities to restore lands</li> <li>• Develop restoration economy strategies</li> <li>• Connect to universities for capacity-building tools</li> </ul>
<p><b>State Policy Role in Advancing the Natural Resource Sector</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">Michelle Decker</a> (Rural Action)</li> <li>▪ Bob Fala (WV DRN)</li> <li>▪ <a href="#">Rob Riley</a> (Northern Forest Center)</li> </ul>	<ul style="list-style-type: none"> <li>• Connect state governments to work collectively on the Natural Resources sector</li> <li>• Need for a new position - an Appalachian Forestry Innovation Coordinator</li> </ul>		<ul style="list-style-type: none"> <li>• Support domestic markets for wood pellets</li> <li>• Fund regional networking around share state/federal policy priorities</li> <li>• Fund a 100-year visioning project for Central Appalachia around forestry</li> </ul>

## Overview of Appalachia Funders Network

### Who we are

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The Appalachia Funders Network (AFN) is a group of over 80 national, regional, and local Philanthropies and Funders building relationships, engaging in learning and analysis, and developing partnerships to maximize resources towards more diverse and resilient local economies. We envision a healthy, equitable, and vibrant region that preserves our unique assets and provides prosperity for all, achieved, through strong partnerships, civic engagement, and leadership. We focus our work in Central Appalachia, defined as the Appalachian counties of Ohio, Kentucky, Tennessee, Virginia, West Virginia, and North Carolina.

### Appalachian Transition

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Central Appalachia is at an economic crossroads and our actions in the next several years will shape what happens across the region for decades to come. The rapid decline in coal production has led to a shift in public dialogue around the region's economic future, presenting an urgent opportunity to align the political will and investment aimed at advancing the economic transition envisioned by Network members. As a Network, grantmakers have an unprecedented opportunity to accelerate the development of local economies based on promising sectors such as clean energy, sustainable natural resources, local food systems, and health, among others. Our aim is to ensure these opportunities elevate the ingenuity and promise of local solutions.

### Network Purpose

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The purpose of the Network is to align national, regional, and local funders toward a common vision to accelerate an equitable Appalachian transition. Funders in the Network work together to leverage our combined resources and develop shared strategies for accelerating the Appalachian transition, while understanding and addressing the systemic issues that hold the region back from broader prosperity. We carry out this bold agenda by organizing grantmakers around the following strategies:

- Build trust and relationships among Appalachian funders
- Foster common understanding, analysis, and vision, among Appalachian funders to accelerate the region's transition.
- Create opportunities for Network members to collaborate across shared interests and across sectors.
- Leverage and attract new resources into the region that help accelerate the Appalachian transition.

### Collaborate and Learn with Us

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- **Food Systems:** Learn and partner with food systems funders and practitioners in four sub-regions across Central Appalachia.
- **Health:** Develop strategies that address the systemic issues that undermine a culture of health in the region.
- **Strengthening Community Capacity:** Focus on strategies to build capacity in our communities and community foundations.
- **Energy & Natural Resources:** Develop strategies for funders to support energy sector transition efforts in Central Appalachia.

Appendix C: Participant List

<b>Name</b>	<b>Organization</b>
Lisa Abbott	Kentuckians for the Commonwealth
Ted Boettner	WV Center on Budget and Policy
Nelle Chilton	Dickinson Fuel Company
Todd Christensen	SW VA Cultural Heritage Foundation
Dee Davis	Mary Reynolds Babcock Foundation
Michelle Decker	Rural Action
Eric Dixon	Appalachian Citizens' Law Center
Robert Fala	West Virginia Dept. Natural Resources
Arturo Garcia-Costas	New York Community Trust
Evan Hansen	Downstream Strategies
Jeff Herholdt	WV Division of Energy
Cuong P. Hoang	Chorus Foundation
Fern Jones	Croatian Institute
Paul Kaboth	Federal Reserve Bank of Cleveland
Janet Keating	OHVEC
Christine Laporte	Sacharuna Foundation
Julie Lawhorn	Appalachian Regional Commission
Ann League	The Alliance for Appalachia/SOCM
Tony Logan	USDA/Rural Development
Rory McIlmoil	Appalachian Voices
Sandra Mikush	Mary Reynolds Babcock Foundation
Thomas Minney	The Nature Conservancy in WV
Tom Peterson	Center for Climate Strategies
Cortney Piper	TN Advanced Energy Business Council
Stephanie Randolph	blue moon fund
Rob Riley	Northern Forest Center
Mikki Sager	The Conservation Fund, Resourceful Communities
Anya Schoolman	Community Power Network
Lora Smith	Mary Reynolds Babcock Foundation
Kent Spellman	WV Community Development Hub
Hannah Vargason	Natural Capital Investment Fund
Chris Woolery	MACED
Thomas Watson	Rural Support Partners
Tom Dierolf	Rural Support Partners

## Contact Information

Send an [email](#) to the Energy and Natural Resources Working Group

The Energy and Natural Resource Working Group is part of the [Appalachian Funder's Network](#)

*Appalachia Funders*  
**NETWORK**  
learning · analysis · collaboration

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MANAGEMENT, STRATEGY, AND EVALUATION.

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