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## Introduction And How To Use This Toolkit

This communications and messaging guide is a tool for advocates to make the case for clean energy in Appalachia. Clean energy is the rare industry that appeals to everyone if framed correctly. Broadly speaking, spotlighting economic benefit whenever possible makes the most persuasive case for clean energy in Appalachia.

The goal is to equip clean energy advocates with a resource to frame economic data so as to have maximum impact on the public, decision-makers and businesses leaders. We reviewed economic reports, messaging campaigns, surveys, polls, statistics, and experts' experiences to identify how Appalachians view clean energy and determine key themes that appeal and repel them. From that research we developed effective messaging strategies to inform clean energy advocacy in the region.

This guide is broken down into three broad sections. The first is "Key Insights." Here you'll find messaging analysis and strategies for making the most compelling case possible for clean energy in Appalachia. Second, "Main Message and Talking Points" spells out key phrases to use when discussing the economics of clean energy. It offers examples of supporting data for these key phrases and talking points to hammer home your message. Third is "Navigating Coal," a combination of key phrases and communications strategies to offer advocates a best-practices guide on addressing the elephant in the room.

Since this toolkit is designed to be a lasting guide, the statistics listed are meant to serve as a model and should be updated with new data as needed. Similarly, these talking points avoid evaluating specific policies due to the transitory nature of regulations. The recommendations are meant to serve as a best-practices guide for discussing any policy in place.

# **Key Insights**

Drawing from research, expert interviews and polling, this section lays out messaging insights and analysis to inform clean energy advocacy through an economic lens in Appalachia.

The most convincing argument in favor of clean energy in Appalachia is economic benefit for people, communities, and businesses.

Economic gain is universally desired and easily digestible. Appalachians generally identify more closely with their local communities and political ideologies than with their particular state. Framing clean energy in economic terms avoids partisan triggers like climate change and localizes the opportunity afforded to peoples' specific communities.

It is imperative to tell the full story of clean energy, not just the end product: Direct, indirect and multiplier effects come together to remake the economy.

## The environmental impact of clean energy is secondary to its economic impact.

At the end of the day, people want to know: What's in it for me? Why should I care? This question is most easily answered with economic data that can concretely be seen and experienced, as opposed to environmental benefits that are often more abstract.

#### Keep environmental benefits of clean energy local and specific.

Data shows that Appalachians place high value on the region's natural resources like forests and waters and could be persuaded by economically promising energy opportunities that protect these natural assets.

 A 2013 survey found that, if forced to choose, a majority of Appalachian voters favor land and wildlife conservation over energy development that could lower energy costs.

Using broad language about global warming or climate change can isolate some who would otherwise support clean energy initiatives. The vast majority of Americans, regardless of party, desire more protection for our air and water resources and support wind and solar power:

- 69 percent of U.S. adults say the government is doing too little to protect water quality in our lakes, rivers, and streams.
- 64 percent say too little is done to protect our air quality.
- More than 80 percent of Americans support the increased use of wind and solar power.

But when broad language is used to ask about reducing climate change to benefit the environment in general, support plummets along partisan lines:

- 72 percent of Republicans say these government policies either make no difference or do more harm than good.
- 66 percent of Democrats say these government policies do help the environment.

### Lead with the opportunity afforded by a program rather than the government mandates or policies behind it.

Put the spotlight on the clean energy initiative and opportunity, not the regulation or government involvement behind it. Research shows that while states in the upper part of Appalachia are receptive and supportive of government programs, the southern states are less accommodating. This is particularly true for policies and regulations which are viewed as requirements or dictates.

Regional development organizations should spotlight the opportunity afforded, not the government grant that makes it possible.

### Keep it simple.

Clean energy is not generally a high-visibility policy area for lawmakers, absent some triggering event. Most people have little understanding of how clean energy sources work or how much they cost. For example, solar panels are often viewed as the purview of the wealthy and assumed to be ineffective on cloudy or cold days.

Myths like this should be tackled in concise, simplistic language, avoiding industry terminology and minutiae and prioritizing the truth. This is yet another reason why spotlighting economic impact is vital: It gets people's' attention using parameters they already understand.

### Avoid politicizing clean energy policy, but remember its universal appeal.

We live in a hyperpartisan time, and the Appalachian region is a case study in those political extremes, from the deep-red counties in the south to its blue counties in the north. Clean energy is the rare industry that appeals to everyone, if framed correctly.

Focusing on economic impact enables organizations to work together toward clean energy initiatives without upsetting funders and supporters.

For example, Trump-supporter, libertarian and clean energy advocate Debbie Dooley sees
clean energy as a means for individuals to become more self-reliant and "off the grid." Her
organization the Green Tea Coalition holds much different priorities than progressive environmental organizations hold, but the ground they hold in common is support for clean energy
innovation.

#### Repeat the fact, not the myth.

Myths about clean energy should never be repeated unrebutted in advertisements, literature, head-lines, or digital platforms, even in a joking manner to elicit attention.

Studies show that people are much more likely to believe a falsehood if it feels true. This phenomenon is added in part by repetition: The more often a myth is repeated, the more familiar people become with it. As the myth becomes easier for the mind to recall, the more difficult it becomes to discern it from the truth. Always prioritize the fact, not the myth, in speech and writing, even when rebutting false claims.

- For example, a common refrain of clean energy opponents is that solar panels are useless on cloudy or rainy days. These myths should be disproven without relying on the falsehood as a prompt.
  - SAY THIS: Did you know solar panels continue to harness energy even on cloudy or rainy days? Solar panels generate the most electricity on clear days with abundant sun, but they continue to produce up to 25% of capacity even in rain or overcast skies.
  - NOT THIS: Do clouds or rain block solar panels from generating energy? The answer might surprise you!

# **Main Messages & Talking Points**

Themes and key phrases to emphasize, with illustrative talking points on data to back them up.

### **Jobs, Economic Development, Wages and Taxes**

Clean energy investment can spark a domino effect of economic benefits.

It's a lucrative and growing sector of our national economy, and Appalachia is poised to tap into this and provide jobs and new economic/business opportunities for our state/local communities. Beyond direct jobs created, there are vendors and an entire supply-chain generated. The added income then boosts local economies as it's spent, lifting businesses as well.

### **Local examples or statistics are best:**

- Ripple effect on job creation and community enrichment: Advanced energy created and supports nearly 360,000 jobs in Tennessee, and contributed approximately \$39.7 billion to state GDP in 2016.<sup>1</sup>
- Ripple effect on business investment: Amazon ranks its commitment to "sustainability and environment" as one of the top four facts about the company on its HQ2 FAQ page, noting its support for wind and solar power and commitment to deploying clean energy technologies at its facilities. When Amazon decides on a location for its second headquarters, that city and state will be rewarded with a \$5 billion construction project, as many as 50,000 high-paying jobs, and billions in additional investment in the surrounding region.<sup>2</sup>

Renewable energy is a rapidly growing sector of the energy employment industry. No one wants to bet on a losing horse – it's vital to emphasize in short, easily digestible declarations how clean energy is taking off all around us, making it a smart bet for investors and public officials.

- For the first time, the number of people employed in the renewable energy sector topped 10 million last year.<sup>3</sup>
- Total renewable energy jobs now outnumber coal and gas jobs by nearly 1.5 to 1, as of 2018.<sup>4</sup>
- Renewables were the most-added source of new energy generation in 2017, surpassing even natural gas for the fourth year in a row.<sup>5</sup>
- Investment in renewable energy exceeded \$40 billion in 2017 and is on track for the same in 2018. Between 2018 and 2030, cumulative private investment in renewable energy is predicted to reach up to \$1 trillion.<sup>6</sup>
- The solar workforce increased by 168% in the past seven years, from about 93,000 jobs in 2010 to over 250,000 jobs in 2017.<sup>7</sup> At the same time, coal industry employment fell from 84,000 jobs in 2010 to approximately 51,800 jobs in 2017.<sup>8</sup>

### Clean energy offers high-quality jobs and skilled labor for Appalachia. Clean

- 1 TAEBC, Tennessee Advanced Energy Economic Impact Report, 2018
- 2 Amazon H2
- 3 Forbes, 5/8/18
- 4 EDF, "In Demand: Clean Energy, Sustainability and the New American Workforce"
- 5 <u>EIA 5/7/18</u>
- 6 Bloomberg NEF, 2018 Sustainable Energy in America Factbook, 2018
- 7 Solar Foundation, National Solar Jobs Census
- 8 U.S. Dept. of Labor, BLS Beta Labs Data Viewer

energy has the potential to reshape economic and educational opportunity in Appalachia, specifically.

- Workers employed in clean energy jobs are paid more on average than the national median.
   For example, average wages for energy-efficiency jobs are almost \$5,000 above the national median, while wages for solar workers are above the national median of \$17.04 per hour.<sup>9</sup>
- Due to the on-site nature of many clean energy jobs, they cannot be outsourced.
- A good portion of clean energy jobs are in installation, maintenance, and construction, making these jobs inherently local and contributing to the growth of local economies.
- Universities and community colleges in Appalachia are increasingly offering technical training, programs, and degrees in green skills and sustainability, many of which are available to nontraditional students. These programs invigorate and diversify local economies and contribute to a more skilled workforce.<sup>10</sup>

Clean energy contributes significantly to federal, state, and local taxes. This revenue to state and local governments is reinvested in schools and communities to provide a range of essential services and foster economic growth.

- Clean energy utilizes fixed, local energy sources (like solar power and wind), thus tax revenue from labor, investment, and operations stays largely within the local community.
- Clean energy contributes millions to state and local taxes in Appalachian states.
  - In Tennessee in fiscal year 2016, advanced energy contributed \$823 million to state sales tax revenue and approximately \$289 million in local sales tax revenue.<sup>11</sup>
  - In North Carolina in fiscal year 2016, clean energy contributed \$1.03 billion to state and local tax revenue.<sup>12</sup>
- When state laws allow for revenue from clean energy initiatives and transmission infrastructure
  to be invested in local counties, rural communities flourish. This revenue can be reinvested in
  community operations like education and first-responders or enable officials to lower the overall tax burden on residents, such as property tax rates.<sup>13</sup>
- The U.S. advanced energy industry generates \$200 billion in revenue, nearly double beer sales, equal to pharmaceutical manufacturing, and approaching consumer electronics.
- Advanced energy is a \$1.4 trillion global industry.

<sup>9</sup> EDF & Climate Corp, Now Hiring: The Growth of America's Clean Energy Jobs

<sup>10</sup> ARC, Green Schools and Sustainability in Appalachia, 2011

<sup>11</sup> TAEBC, Tennessee Advanced Energy Economic Impact Report, 2018

<sup>12</sup> NCSEA, Economic Impact Analysis of Clean Energy Development in North Carolina, 2017

<sup>13</sup> Center for Rural Affairs, "Generation and Delivery," October 2017

<sup>14</sup> Advanced Energy Economy, Advanced Energy Now 2017 Market Report

Clean energy is particularly suited to reinvigorate rural Appalachia. Appalachians are ready to work. They simply need the training and skills opportunities to tackle new industries, that in turn grow the economy and attract new investment.

These economic opportunities are not only *unique* to the region, but can *uniquely benefit* the region:

- Appalachian counties are suffering from "brain drain," as locals leave their birthplace for school and/or educational opportunities elsewhere and never return. There's been a substantial drop in the working-age population of mining counties in particular, coupled with notable increases in the percentage of residents of retirement age.
- Clean energy initiatives offer new opportunities for the local workforce to stay in the region and embark on lucrative, long-term careers.
- Millions in federal funding are exclusively offered to economically depressed coal communities, including funds reserved specifically for Appalachia.
  - For example, through the federal POWER Initiative aimed specifically at communities affected by the decline of coal, ARC has invested nearly \$100 million in Appalachian counties to diversify the economy and create jobs. That funding leveraged an additional \$210 million in investment and equipped thousands of local workers and students with new skills. Almost 8,800 jobs in 250 Appalachian counties have been created or retained by these investments. 15
- Regional development organizations and community groups in coordination with federal programs offer millions in funding for local projects and partnerships that diversify Appalachia's economy and contribute to economic growth.

### **Utilities**

**Consumers want clean energy.** People are increasingly demanding their utilities take action by increasing renewable energy sources into their distribution portfolios. As a result, utilities are now being called on, more than ever, to build and nurture relationships with their customers and meet their expectations.

- Consumers, particularly millennials, are willing to pay a premium to access renewable energy from their electricity providers.
- Studies show that adding clean energy to the utility portfolio has a negligible effect on electricity rates for consumers.<sup>16</sup>
- Renewable energy is on track to become a consistently cheaper source of energy than fossil fuels by 2020.<sup>17</sup>
- Pew Research found that more than 80 percent of Americans support the increased use of wind and solar power.<sup>18</sup>

**Clean energy commitments are a smart investment for utilities in Appala- chia.** The world's largest corporations are increasingly making public commitments to renewable energy. That means that when scouting locations to build new data centers and plants, these corporations must select a site that can guarantee a power supply from renewable energy. Utilities that offer this renewable energy can score a significant new customer, and the local community earns a new employer.

- For example, Facebook listed "good access to renewable energy" as the number one reason it chose Newton County, Georgia, to build a new data center on 100% renewable energy, because of its proximity to Walton EMC's robust clean energy program.<sup>19</sup>
- Here's how Appalachian Power president Chris Beam put it: "At the end of the day, West Virginia may not require us to be clean, but our customers are. So if we want to bring in those jobs, and those are good jobs, those are good-paying jobs that support our universities because they hire our engineers, they have requirements now, and we have to be mindful of what our customers want."<sup>20</sup>
- The cost of renewable energy is now falling so fast that it should be a consistently cheaper source of electricity generation than traditional fossil fuels within just a few years.<sup>21</sup>
- The cost of generating power from onshore wind has fallen by around 23% since 2010, while the cost of solar photovoltaic (PV) electricity has fallen by 73% in that time.<sup>22</sup>

<sup>16</sup> Energy News Network, "Are Renewables Driving Up Utility Rates?" 5/17/11

<sup>17</sup> IRENA, Renewable Power Generation Costs in 2017

<sup>18</sup> Pew Research Center, "Majorities See Government Efforts to Protect the Environment as Insufficient," 5/14/18

<sup>19</sup> Hello, Georgia! Facebook Press Release

<sup>20</sup> GreenTech Media, "Appalachian Power CEO: 'West Virginia May Not Require Us to Be Clean, But Our Customers Are," 4/25/17

<sup>21</sup> IRENA, Renewable Power Generation Costs in 2017

<sup>22</sup> Ibid.

### Clean energy investments serve as economic incentives for businesses to locate or expand in a utility's given jurisdiction.

- Utilities make a significant amount of revenue when large companies choose to relocate to their region. The utilities who do not or are unwilling to provide the renewable energy that companies want will lose that revenue.
  - More and more companies are asking for clean energy.
    - Fortune 100 and Fortune 500 companies are increasingly demanding cleaner, more efficient sources of energy.
    - 63 percent of Fortune 100 companies have adopted or retained renewable energy goals.<sup>23</sup>
    - 48 percent of Fortune 500 companies have set targets to reduce greenhouse gases, improve energy efficiency and/or increase renewable energy sourcing.<sup>24</sup>
- Utilities are important players in the rapid scale up of renewable energy to serve corporate buyers in the U.S.
  - In markets where renewables have become cost competitive, utilities have more economic incentives to add renewable energy. Renewable resources offer low prices for years without the risks of fossil fuel price spikes.
- Utilities and states with renewable energy options are more competitive when attracting highgrowth corporate business.
  - Companies with renewable energy commitments can only go so far with on-site renewables. To meet the most ambitious targets, like a 100% renewable energy goal, companies have to tap into the grid and are turning to their utility to provide solutions.

Clean energy can help modernize and stabilize the grid. As a whole, the nation's utilities and power grids are in desperate need of modernizing, as most rely on outdated technology and are increasingly susceptible to hacking. This modernization is increasingly necessary regardless of energy source. When utilities invest in upgrades, however, a focus on clean energy is the smartest choice.

- Renewable energy is not subject to price volatility like fossil fuels.
- Power outages cost customers and utilities billions each year. By investing in clean energy and updating our century-old power grids to facilitate that clean energy, we reduce the likelihood of power outages, as the modernized grid is more efficient and less susceptible to inclimate weather.<sup>25</sup>
- Installing large-scale storage on the grid or long distance transmission of renewable electricity
  can enable access to larger pools of resources when demand spikes, creating balance and
  grid stability. As renewable penetration grows, storage and transmission will likely become
  more cost effective and necessary.
- Renewable energy encourages modernization, as accommodating more than approximately 30% electricity generation from renewable sources necessitates updated approaches to extending and operating the grid.<sup>26</sup>

<sup>23</sup> Ceres Power Forward 3.0: <u>How the largest U.S. companies are capturing business value while addressing climate change</u> 24 lbid.

<sup>25</sup> Environmental Defense Fund, "A modern power grid can deliver clean energy"

<sup>26</sup> APS Panel on Public Affairs, "Integrating Renewable Electricity on the Grid"

**Clean energy brings utilities into the future.** Renewables are the future of energy. A short-term investment in clean energy prepares utilities for long-term operations.

- Embracing cleaner technologies can be an additional source of revenue for utilities, during a time when increasing energy efficiency installations are leading to a declining demand for energy.
- Modernized grids for clean energy allow for increased automation, so sensors can track energy usage and detect and resolve problems rather than utility employees physically checking meters and handing outages. This automation extends to customer control as well, as consumers can control energy use in their homes and businesses through smartphones with a modernized grid.<sup>27</sup>
- Rapid cost declines in renewable energy technologies have made them the cheapest available sources of new electricity, even without subsidies.<sup>28</sup>

Fossil fuels, nuclear energy, and coal come with risks and burdens not present with clean energy. Be wary of utilities publicly championing modernization and clean energy investment absent concrete action on their part, instead holding up the proactive clean energy steps of customers and individuals as their own improvements. Real, concrete investment in clean energy is necessary to make utilities safer, more reliable, more resilient, and more efficient.

- Climate change is responsible for increasingly severe and unpredictable weather events. Grid
  modernization to accommodate clean energy helps ensure the power that underpins our daily
  lives and economy is protected from disruptive events: It improves resiliency, reduces operational costs and increases efficiency, as well as empowers capabilities foundational to making
  progress on protecting the climate.<sup>29</sup>
- Since traditional energy resources are more combustible, extensive insurance coverage is necessary to protect an energy company's assets if disaster were to strike. Renewables do not present this level of risk.
- Workers must be paid to continually extract coal and fossil fuel. In contrast, wind and solar rays are free and only require initial installation. Operation and maintenance costs are also lower compared to that of traditional fuel resources.

<sup>27</sup> Environmental Defense Fund, "A modern power grid can deliver clean energy"

<sup>28</sup> Energy Innovation, "Renewable Electricity Levelized Cost of Energy Already Cheaper Than Fossil Fuels, and Prices Keep Plunging," 1/22/18

<sup>29</sup> Environmental Defense Fund, Grid Modernization, 2017

### **Energy Efficiency and Energy Savings**

Appalachians are uniquely situated to benefit from energy efficiency. According to the Appalachian Regional Commission, 42 percent of Appalachia's population is rural, compared with 20 percent of the national population.<sup>30</sup>

- Americans living in rural areas spend a disproportionate share of their income on energy bills about 40 percent more than Americans in metropolitan areas – and the problem is most glaring in the East and Southeast.<sup>31</sup>
  - o Rural areas also have lower housing quality and lower energy efficiency on average.
- Rural low-income households are even worse off, paying a median energy burden almost three times higher than their higher-income counterparts.<sup>32</sup>
  - The burden of high energy costs reduces the ability of low-income families to pay for food, housing, education, health care and other essential needs. Much of this burden is because many homes lack proper insulation, are poorly weatherized and use old, inefficient appliances, resulting in significant energy waste.
- Energy efficiency upgrades to housing stock in rural areas could lower household energy burdens by 25 percent.<sup>33</sup>
- Financing for energy efficiency improvements by electric utilities could give families immediate relief on their electric bills and foster local businesses.
  - By utilities providing cost-effective and comprehensive home energy efficiency programs known as 'on-bill financing' loan programs, homeowners can repay the loan over time with each electric bill, while also saving money immediately as a result of using less electricity.

**Energy efficiency helps the local economy.** Elected officials and taxpayers can spark tangible benefits in their communities with investment in energy efficiency.

- Instead of importing natural gas and electricity from outside the community, local companies provide energy efficiency services and equipment.
- When consumers save on electricity through energy efficiency, additional income is freed up
  to re-enter the local economy. By targeting low-income households, states can take steps to
  ensure that these benefits are maximized for those already facing the greatest energy burden.
- Investing in energy efficiency helps local governments achieve energy savings in operations and facilities, particularly water and wastewater treatment plants, which are typically the largest consumers of electricity in municipal operations.<sup>34</sup>
- These local cost savings for consumers and municipalities is particularly beneficial to Appalachian communities, which in general suffer from lower tax revenue than other regions due to poverty rates and a culture distrustful of taxation.

<sup>30</sup> Appalachian Regional Commission

<sup>31</sup> ACEEE, "The High Cost of Energy in Rural America," 2018

<sup>32</sup> Ibid.

<sup>33</sup> Ibid

<sup>34</sup> EPA, Local Energy Efficiency Opportunities

**Energy efficiency lowers electricity bills.** Energy efficiency makes electricity usage more predictable, reliable, and affordable.

- Energy efficiency suppresses wholesale electricity and capacity prices by minimizing total energy demand during peak times (e.g., a hot summer afternoon). This reduces the need to dispatch generators with the highest operating costs, lowering the market price of electricity for all customers.35
- Residents who participate in energy efficiency initiatives experience reduced maintenance costs, improved appliance and equipment performance and lifespan, greater property value, increased building durability, and increased comfort, health, and safety.
- Residents who have lower, more predictable monthly utility bills are less likely to get behind on payments. A single retrofit to a household can positively affect their accounts, leading to fewer shutoffs, reconnects, customer calls, and debt collection actions.

**Energy efficiency benefits a company's bottom line.** With mounting pressure coming from investors, employees, and customers to operate in a more sustainable and transparent fashion, corporations have significant incentive to act.

- Businesses who align their company's values with their consumers as it relates to the environment, will not only better connect with that consumer but will also sell more products.
  - 64 percent of Americans say a company's environmental reputation impacts their purchase decisions.36
  - 60 percent of Americans say corporate social responsibility activities positively impact their purchase intent. 37
- Businesses who choose to invest in energy efficiency and clean energy initiatives are viewed as more competitive than those who do not.
  - For example, organizations that are actively managing and planning for climate change see 18 percent higher return on equity than peers, as well as 67 percent higher than companies that do not disclose on climate action.38
- The primary drivers for why businesses choose to implement energy efficiency and sustainability initiatives are:
  - Cost savings incentives
  - Meeting internal and external goals
  - Improving company brand
  - Mitigating environmental risks
- Fortune 100 and Fortune 500 companies are increasingly demanding cleaner, more efficient sources of energy. The states that provide these options will be rewarded with jobs and capital investments.
  - 63 percent of Fortune 100 companies have adopted or retained renewable energy goals.39
  - 48 percent of Fortune 500 companies have set targets to reduce greenhouse gases, improve energy efficiency and/or increase renewable energy sourcing.40

<sup>35</sup> ACEEE, "Estimating the Value of Energy Efficiency to Reduce Wholesale Energy Price Volatility," April 2018

<sup>36</sup> Shelton Group, Think. Feel. Do. How to win consumer loyalty through sustainability

<sup>37</sup> Ibid.

<sup>38</sup> The State of Corporate Energy & Sustainability Programs 2018

<sup>39</sup> Ceres, Power Forward 3.0

<sup>40</sup> Ibid.

# **Navigating Coal**

With clean energy in Appalachia, the elephant in the room is coal.

### Clean energy is a value-add rather than a replacement for coal power.

- Clean energy offers Appalachia the opportunity to diversify its employment sectors and economy.
  - Diversifying industries and opportunities can revive local towns and economies with an influx of innovation and investment.
    - Nearly two-thirds of coal-state residents say they support the diversification of their state's economy and job opportunities in new industries over efforts to deregulate the coal industry and bring more mining jobs back.<sup>41</sup>
- Clean energy is one economic facet out of many that can help move Appalachia away from the instability of an entire economy built around coal.
  - Funding projects is only the beginning. Coal communities need technical assistance, loan capital, and a trained labor force to handle new industries and technologies.

### Existing components within the coal industry have potential to win and thrive in the clean energy economy.

- By breaking the interdependence between coal mining, its supply chain linkages and infrastructure, transportation services, coal-fired power plants, and human capital resources, we can begin to recognize these individual sectors all as potential revenue-generating assets.
  - Coal miners want to go back to work and make a decent wage. Clean energy can provide this by providing job security, and in several cases, the training needed to perform engineering and installation work, as an example.
    - Companies willing to invest in these workers could partner with local colleges and universities to provide them the education needed for clean energy jobs.
  - Existing supply chain linkages and infrastructure can be used to haul clean energy components, (like panels, wind turbines blades, rotors, inverters and meters), to Appalachia's mountainous regions.
    - The transportation services that haul coal could instead be used to haul renewable energy components, building into the supply chain.
  - Retired coal-fired power plants can be converted into various revenue-generating assets, including in some cases solar farms.
  - By converting retired or existing facilities into revenue-generating assets, this can improve human capital resources. The tax revenues brought in will create funding streams that will increase the quality of the workforce of the future through the support for K-12 education and beyond.<sup>42</sup>

## By transitioning to a clean energy economy, Appalachia can keep jobs and revenue in local communities, where it belongs.

- Appalachian communities can look towards locally-owned, renewable energy projects to build community energy resilience and source clean energy.
  - All the revenue and jobs generated will stay within the local communities because clean energy is a local energy source.
    - You can't run out of wind and the sun's rays, unlike coal mines that can be mined until empty and oil wells that can run dry.
    - Due to the on-site nature of many clean energy jobs, they cannot be outsourced.
    - A good portion of clean energy jobs are in installation, maintenance, and construction, making these jobs inherently local and contributing to the growth of local economies.

## **Cheat Sheet**

### Key Insights

The most convincing argument in favor of clean energy in Appalachia is economic benefit for people, communities, and businesses.

The environmental impact of clean energy is secondary to its economic impact.

#### DOs & DON'TS

DO: Keep environmental benefits of clean energy local and specific.

DO: Lead with the opportunity afforded by a program rather than the government mandates or policies behind it.

DO: Keep it simple.

DON'T: Don't frame clean energy in political, partisan terms.

DON'T: Don't repeat falsehoods, even in an effort to rebut them.

### Main Messages & Talking Points

Clean energy investment can spark a domino effect of economic benefits.

Clean energy:

- is a rapidly growing sector of the energy employment industry.
- offers high-quality jobs and skilled labor for Appalachia.
- contributes significantly to federal, state, and local taxes.

Clean energy is particularly suited to reinvigorate rural Appalachia.

Clean energy makes a smart investment for utilities in Appalachia.

Consumers want clean energy.

Clean energy investments:

- serve as economic incentives for businesses to locate or expand in a utility's given jurisdiction.
- modernize and stabilize the grid.

Fossil fuels, nuclear energy, and coal come with risks and burdens not present with clean energy.

Appalachians are uniquely suited to benefit from energy efficiency.

#### Energy efficiency:

- boosts local economies and communities.
- makes electricity bills more affordable.
- benefits a company's bottom line.

#### How to Talk About Coal

Clean energy is a value-add rather than a replacement for coal power.

Existing components within the coal industry have potential to win and thrive in the clean energy economy.

By transitioning to a clean energy economy, Appalachia can keep jobs and revenue in local communities, where it belongs.

# **Acknowledgements and Methodology**

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Piper Communications is a strategic communications firm specializing in clean energy and technology. TAEBC is a 501(c)(3) partnership of corporations and individuals that champions advanced energy as a job creation and economic development strategy. It educates public officials and business leaders about Tennessee's advanced energy assets, establishes strategic partnerships to connect assets with opportunities, and informs policy that expands and strengthens the industry. TAEBC commissioned and released the first comprehensive study of advanced energy's economic impact in Tennessee in 2015, and updated and expanded upon this analysis in the 2018 Tennessee Advanced Energy Economic Impact Report.

## Resources

ACEEE, "The High Cost of Energy in Rural America," July 2018

ACEEE, "Estimating the Value of Energy Efficiency to Reduce Wholesale Energy Price Volatility," April 2018

Advanced Energy Now, Market Report, 2017

Appalachian Voices: Poverty and Electricity Costs in the Southeast

APS Panel on Public Affairs: Integrating Renewable Electricity on the Grid

ARC, "Energy Efficiency and Renewable Energy in Appalachia: Policy and Potential," 2006

ARC, "Energy Efficiency in Appalachia," 2009

ARC, Green Schools and Sustainability in Appalachia, 2011

ARC, "An Economic Analysis of the Appalachian Coal Industry Ecosystem," 2018

Interview with the Appalachian Regional Commission: Wendy Wasserman, director of communications and media relations

Bloomberg NEF, 2018 Sustainable Energy in America Factbook, 2018

BP, Technology Outlook, 2018

Brookings Institution, "Sizing the Clean Economy: A National and Regional Green Jobs Assessment," 2016

Center for Rural Affairs, "Generation and Delivery," October 2017

Ceres, Power Forward 3.0

Interview with Coalfield Development: Marilyn Wrenn, chief development officer

Environmental Defense Fund, "A modern power grid can deliver clean energy"

Environmental Defense Fund, Grid Modernization, 2017

EDF & Climate Corps, "Now Hiring "The Growth of America's Clean Energy & Sustainability Jobs"

EDF, "In Demand: Clean Energy, Sustainability and the New American Workforce

EESI, Can Coal Country thrive in a Clean Energy Economy? Webinar

EESI, "Helping Coal Country Thrive in a Clean Energy Economy," 4/14/16

EIA: Average Price of Electricity to Ultimate Consumers by End-Use Sector

Energy Innovation, "Renewable Electricity Levelized Cost of Energy Already Cheaper Than Fossil Fuels, and Prices Keep Plunging," 1/22/18

EPA, Local Energy Efficiency Opportunities

Facebook press release

Georgia Institute of Technology, The Clean Power Plan and Beyond

Interview with Gilbert Michaud, Ph.D, Associate Professor in Voinovich School of Leadership and Public Affairs at Ohio University

GreenTechMedia, "Appalachian Power CEO: 'West Virginia May Not Require Us to Be Clean, but Our Customers Are,' 4/25/17

IEA, press release, 3/17/17

IEEFA, "Survey Finds Most Residents of Coal Country Favor Diversifying Their Economies," 10/3/16

IRENA, Renewable Power Generation Costs in 2017

IRENA, Renewable Energy Benefits, Measuring the Economics, 2016

The Nature Conservatory, "Results of a Survey on Appalachian Voter Attitudes toward Forest Health and Natural Gas Development," 12/2/13

NCSEA, Economic Impact Analysis of Clean Energy Development in North Carolina, 2017

The New York Times, "A Gun-Owning Trump Fan's New Crusade: Clean Energy," 2/28/18

NRDC, Clean Energy and Efficiency Can Replace Coal for a Reliable, Modern Electricity Grid

NREL, Dollars from Sense "The Economic Benefits of Renewable Energy"

Pew Research Center, "Majorities See Government Efforts to Protect the Environment as Insufficient," 5/14/18

Power Forward 3.0, "How the largest U.S. companies are capturing business value while addressing climate change"

RealClearPolitics, "Rise of the Rest in Appalachia," 5/22/18

Shelton Group, "Think. Feel. Do. How to win consumer loyalty through sustainability," 2018

SOAR, Impact Report 2017

Solar Foundation, National Solar Jobs Census

The State of Corporate Energy & Sustainability Programs 2018

TAEBC, Tennessee Advanced Energy Economic Impact Report, 2018

U.S. Dept. of Labor, BLS Beta Labs Data