BLUEGREEN ALLIANCE POLICY BRIEF

21st Century Energy in America

America's energy future can be clean, safe, affordable and reliable. We can meet our growing energy demand and reduce the pollution that is altering our climate and harms our health and environment by changing how America will produce and use energy in the coming decades.

Making this transformation to cleaner sources of energy will ensure that we maintain our global leadership in clean energy innovation; create much-needed jobs in construction, manufacturing, maintenance, research and other industries; develop a clean, safe and secure energy supply right here in the U.S.; and protect the health of our communities and environment.

We have made substantial gains in building a robust clean energy economy across the country in the past few years, but more work must be done to ensure we lead the global clean energy race. From the dedicated and rapid ramp-up of renewable energy use to the rebuilding and retrofitting our nation's infrastructure to capture maximum efficiency gains, we need a concerted effort to continue to improve America's energy system for all types of energy throughout the extraction, production, and use process.

While fossil fuels will continue to be a part of our energy system for the coming years during the transition to cleaner energy, they must be developed and used in the safest, cleanest manner possible. The consequences of relying on fossil fuels for a vast majority of our nation's broad energy needs, however, are readily apparent, and they include escalating and rapid changes to our climate and environment, health risks due to pollution, economic instability, and vulnerability to unstable political regimes. Without swift action to transition to clean and renewable sources of energy along with efforts to use our energy more efficiently, we risk not only our competitiveness and security, but also the welfare of our people and environment.

Finally, America's energy economy should be a platform for high-quality job creation that benefits its workers and their communities, while also providing the necessary and affordable services to its consumers. Thousands of jobs — ranging from renewables to fossil fuels and from manufacturing to maintenance — have already been created throughout the energy economy, and many more are on the way as we transition to cleaner sources of energy and use energy more efficiently. These jobs must meet basic and vital labor standards.

Living wages, good benefits, and the security and protection provided by collective bargaining all contribute to a strong middle class. These attributes must be a cornerstone of all employment within and throughout America's energy economy.

JOBS21!

Encouraging the development of smart 21st century energy policies and targeted investments in clean energy and energy efficiency are major components of the BlueGreen Alliance's ***Jobs21!*** plan.

Jobs21! is a comprehensive plan that responds to the critical nationwide need for a job-creation strategy by focusing on the jobs and industries of the 21st century — renewable energy, energy efficiency, manufacturing, transportation infrastructure, recycling, green chemistry, broadband Internet, and smart grid technologies.

Learn more at www.bluegreenalliance.org/jobs21

Elements of the 21st Century Energy Policy

America needs an economy-wide program that significantly reduces carbon pollution and helps aid the transition to an American-made clean energy future. In the absence of a comprehensive program, we need a suite of policies that will drive us toward the safest, cleanest, and most prosperous energy production with the ultimate goal of reducing greenhouse gas emissions (GHGs) at least 83 percent below 1990 levels by 2050.

Renewables

Innovation creates new markets and new markets create jobs. The global market for renewable energy — offshore and onshore wind, solar and other renewable sources of power — is estimated to reach between $1.7 trillion and $2.3 trillion over the next decade.[1] The renewable energy industry is also adding jobs at a much faster pace than the overall economy. While America and its workforce have the potential to thrive in these growing markets, we will be left behind without a strong national commitment.

Deploying the Energy

The end result of energy produced from renewable sources is a significant reduction in greenhouse gasses and other harmful emissions. Next to energy efficiency, it is the least polluting, least impactful source of energy. Quickly deploying properly sited renewable generation at a major scale is imperative to not only build our competitiveness and create much-needed jobs, but also to meet the challenge of reducing the carbon pollution that harms our health and environment. Mandating increased production of renewable energy, removing barriers for renewable energy to penetrate the marketplace, and properly pricing carbon are just a few, but significant, ways to quickly improve nationwide deployment of renewable energy.

Bringing New, Innovative Technologies to Market

Deploying the clean energy solutions currently ready for market goes hand in hand with developing and commercializing the next generation of innovative clean energy technologies. The amount of federal investment in research, development and demonstration (RD&D) steered towards renewables and other clean energy technologies, such as building efficiency and advanced manufacturing, has been increased in the last few years, but is still inadequate for the challenges ahead.

To ensure that we can continue to compete in the global clean energy race, and not lose to our foreign competitors like China and Germany, we need to provide a long-term, sustained increase in federal funding for RD&D activities and successful programs (such as ARPA-E) that support a diverse portfolio of clean energy technologies; continue to efficiently use federal agencies as early adopters of new technologies (for example the Department of Defense and biofuels and the U.S. General Services Administration and energy efficiency); and strengthen and expand financing tools that facilitate entrepreneurs and new companies to access capital. Finally, we need to pursue these tactics through a strategic, quantifiable, and feedback-driven approach. One way to ensure that kind of approach is used is by institutionalizing the Quadrennial Technology Review and launching a multi-agency Quadrennial Energy Review to provide a regular assessment of federal investments and programs that support energy innovation.

Developing the Domestic Industries

Developing a strong renewable energy industry in America will require more than just improving the percentage of energy produced from renewable sources such as solar and wind. Renewables must be part of a broader national strategy to develop domestic supply chains, a manufacturing base dedicated to innovative new technologies, and a skilled workforce. We must also focus on developing a domestic renewable energy industry that supports workers and communities, including proper siting of renewable energy projects, ensuring quality safety standards for workers, and improving the union density in these industries so that they are comparable to — and even surpass — the union density in the fossil fuels industry.

EPA Climate Pollution Limits

The Environmental Protection Agency's (EPA) authority to set standards that limit carbon pollution under the Clean Air Act is critical for protecting public health and the environment and moving America to a prosperous low-carbon economy. The proposed Carbon Pollution Standard for New Power Plants is a first step toward addressing climate change and making sure power companies that build new power generation meet climate and health safeguards. There is more that needs to be done, however, including direct investments, research and development, infrastructure planning and policies that address competitiveness and transition.

Efficiency

Our nation's residential, commercial and industrial buildings – and the appliances within them — account for 40 percent of the energy we consume.[2] Improving the performance and energy use of our homes, businesses, and factories will lower electricity bills, protect our health and environment, create jobs – directly and indirectly as consumers spend money that they save – and improve U.S. competitiveness. In order to fully realize these benefits, we must capture all cost-effective energy efficiency opportunities by developing a suite of policies across the residential, public, commercial, and industrial sectors.

A High-Road Industry

The energy efficiency industry requires well-trained construction, operation, and maintenance personnel with many different skills and expertise. It is very important that the purchasers of these services receive quality work that produces the savings anticipated and ensures performance. To reach that level of competence, and to ensure decent working conditions, workers must be well trained and paid prevailing wages.

Natural Gas

The expansion of natural gas production through unconventional technologies has dramatically affected the American energy landscape. Hydraulic fracturing has made oil and gas resources accessible that were previously considered uneconomical. These discoveries have sparked an increase in drilling and a large drop in the price of natural gas, affecting everything from electricity markets to manufacturing competitiveness.

While natural gas burns cleaner than other fossil fuels, the hydraulic fracturing process raises several concerns over water contamination of groundwater resources, the management of wastewater produced from the process, the exacerbation of fugitive emissions, the site-related air pollution, and the safety of workers and communities.

It is critical any utilization of this resource take into account the risks of its development. An approach responsible to the impact of natural gas on the environment, its labor force and local communities must be the first and foremost priority for the industry as it moves forward.

Homes and Buildings

For every dollar we spend making our buildings more energy efficient, we get two dollars in savings.[3] Consider what that means for all of our schools, grocery stores, hospitals, government buildings, high-rise offices, homes and apartments. Requiring new buildings to meet the highest efficiency standards and retrofitting our existing building stock to be more energy efficient could achieve upwards of $1.2 trillion in cost savings for homeowners and businesses, create jobs, and reduce pollution by 2020. While equipment upgrades and deep retrofits represent a large portion of potential energy savings, improvements to the operation and maintenance of these buildings can also reduce building energy use by 10 percent or more with modest up-front costs.

A robust building efficiency industry will mean job creation in construction, operations, maintenance, and manufacturing and new jobs will be induced in the broader economy as energy bill savings are spent on other goods and services. Ensuring that efficient building component parts and appliances are domestically manufactured in the U.S. will maximize job creation and further embed the energy efficiency industry into our nation's economy.

Factories

Improving the energy use of our manufacturing sector will make America more competitive, help businesses to reduce their energy costs, and reduce pollution significantly. Incentivizing large-scale efficiency projects, such as Combined Heat and Power (CHP) and Waste Heat Recovery (WHR), should be at the forefront of our nation's energy policy. In addition, small improvements in efficiency can yield large benefits cumulatively, which is why improvements in technology, processes, and behavior and consistent energy audits must go hand in hand with efforts to advance CHP and WHR.

Appliances and Equipment

American workers manufacture many of the appliances and equipment in the U.S., from light bulbs to washing machines to air conditioning units. Our appliance and equipment industry faces fierce global competition, which is why it is more important than ever that we develop energy efficiency policies and standards that encourage our appliance and equipment manufacturing base to remain here in the United States. Energy efficiency standards for appliances and equipment provide significant consumer and environmental benefits, and, if done correctly, can also create much-needed jobs.

According to the American Council for an Energy-Efficient Economy (ACEEE), appliance standards already in place

have resulted in the creation of roughly 340,000 jobs nationwide.[4] Since their inception, federal standards for appliances and equipment reduced electricity use by seven percent in 2010 and this number will grow to 14 percent by 2035. The net present value of cost and savings from *existing standards* between now and 2035 is $1.1 trillion. Upcoming standards have the potential to reduce electricity use in 2035 by an additional seven percent and save consumers an additional $165 billion net present value. It is critical that, as new appliance standards are put forward, we ensure that they are done in a way that encourages, not only energy efficiency, but also U.S. manufacturing. In addition to this, the U.S. must ensure that foreign manufacturers meet the same efficiency requirements as domestic manufacturers.

Transmission and Distribution

Interstate Transmission

America needs an expanded and modern interstate power grid that will facilitate moving thousands of megawatts of clean energy to markets. We need coordinated, long-term planning across regions to ensure that we meet demand needs as efficiently as possible, while maximizing clean energy integration.

Smart Grid

Enhancing our electric power transmission system has the potential to revolutionize energy management, communications, and economic development. Finding ways to implement the many aspects of the smart grid — such as integrated communication systems and smart meters — while addressing concerns regarding consumer protection and the impacts on workers are essential elements to our 21st century energy infrastructure.

Transportation

While this document focuses on stationary energy sources, the BlueGreen Alliance has a comprehensive portfolio addressing transportation (mobile) sources that includes:

- **Infrastructure –** Investing strategically in transit, rail, freight systems and port facilities to reduce congestion and pollution and maximize efficiency in moving people and goods;
- **Vehicles –** Making the U.S. the global leader in building cleaner, more efficient conventional, hybrid and advanced technologies (i.e. electronic, fuel cell), supported by strong federal fuel efficiency and pollution standards for passenger and commercial vehicles;
- **Fuels –** Supporting the development and deployment of sustainable lower carbon fuels across transportation modes.

Implemented properly, smart grid computer-based technologies and devices can efficiently deliver clean energy throughout the country, yet are protective of the privacy of consumers and safety of communities. Smart grid technologies can improve the management and distribution of energy in a strategic, efficient, and reliable manner and reduce energy consumption at homes and offices.

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The BlueGreen Alliance is a national, strategic partnership between labor unions and environmental organizations dedicated to expanding the number and quality of jobs in the green economy.

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