

CREATING GOOD JOBS, A CLEAN ENVIRONMENT, AND A FAIR AND THRIVING ECONOMY

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BlueGreen Alliance Response to the U.S. Environmental Protection Agency's (EPA) Request for Information - Environmental and Climate Justice Block Grants

The BlueGreen Alliance unites America's labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a stronger, fairer economy. Our partnership is firm in its belief that Americans don't have to choose between a good job and a clean environment—we can and must have both. We appreciate the opportunity to respond to the EPA's Request for Information on implementation of the Environmental and Climate Justice Block Grants.

Through this program, the EPA has a unique opportunity to deliver meaningful, lasting benefits in low income and disadvantaged communities. This new program should be designed to target disadvantaged communities and ensure that communities and workers directly benefit from these block grants. The EPA should prioritize projects that show evidence of early consultation with workers and disadvantaged communities to ensure that the projects benefiting from this program support their needs. Prioritizing public input and community participation must be key in determining which projects are chosen and how they are implemented.

Done right, the Environmental and Climate Justice Block Grants represent a critical pathway through which EPA can support clean energy deployment, pollution reduction, and climate goals. The block grants can achieve those goals while creating good union jobs, growing domestic manufacturing, and delivering public health and environmental benefits to the workers and communities that need it most.

Eligible Projects

- 1. What types of projects should EPA focus on and prioritize under the five eligible funding categories in CAA Section 138(b)(2) listed below? Please also describe how the projects you identify would benefit disadvantaged communities:
- a. Community-led air and other pollution monitoring, prevention, and remediation, and investments in low-and zero-emission and resilient technologies and related infrastructure and workforce development that help reduce greenhouse gas emissions and other air pollutants (greenhouse gas is defined as "air pollutants carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons, and sulfur hexafluoride")

There are numerous ways to utilize this grant funding to support community-led air and other pollution monitoring, prevention, and remediation; investments in low-and zero-emission and resilient technologies; and related infrastructure and workforce development. Below we highlight three types of projects that we encourage EPA to consider for prioritization. These efforts can also link with and support other EPA priorities as well as Justice40 and the Good Jobs Initiative.

Workforce Development

EPA should prioritize workforce development projects through this grant program that lead to good, quality jobs. In particular, workforce development that is specifically geared towards creating quality jobs and career pathways within disadvantaged communities can have a long-lasting impact when done with high-road labor standards. Workforce development is much more than outreach, recruitment, and training. These programs are most effective when training is bridged with employment, contractor engagement, and job-site field applications. Registered apprenticeships in particular act as a bridge between training programs, prospective participants/incumbent workers, and employers. Employer outreach within local communities is also an integral component of these programs.

Reduction of Methane Emissions and Toxic Pollution

This program could support community-led efforts to monitor methane emissions and toxic pollution. For example, this funding could be used to support the EPA's proposed Super Emitter Response Program by providing funds to those communities located near the small number of oil and natural gas sources that are responsible for as much as half of the industry's methane emissions, along with significant amounts of smog-forming VOCs and air toxics. Grant funding could be used for community-led air pollution monitoring utilizing EPA-approved remote methane detection technology. Utilizing some of the grant

funds for this targeted approach could yield outsized impact by strategically targeting methane emissions. Additionally, many environmental justice (EJ) communities are located on the fenceline of Risk Management Program (RMP) facilities emitting toxic pollution. Through the RMP proposed rule process, fenceline communities have expressed the need for fenceline monitoring with data that is shared with the community.

Modernizing School Facilities to Reduce GHG Footprint

Modernizing school facilities also provides an opportunity to reduce greenhouse gas emissions, while lowering energy costs and improving the quality of indoor learning environments. All told, school facilities emit 72 Million Metric Tons of CO2 annually, which is the equivalent of the CO2 emissions of 14 million homes' electricity for one year. Furthermore, according to the EPA, around a quarter of energy used in U.S. schools is wasted and facilities in low income areas are often the least efficient. Moreover, the second-highest operating expenditure for schools is energy, with schools spending more than \$8 billion on energy every year. Meanwhile, green schools, which achieve the maximum level of water and energy efficiency and are built with the health of occupants in mind, utilize an average of 33 percent less energy and 32 percent less water, lowering utility costs of a typical green school by around \$100,000 annually. Energy efficiency retrofits are an opportunity to reduce energy demand while addressing health hazards and improving the climate resilience of a school facility, particularly for those facilities serving a dual purpose of emergency shelter or resilience hub.

These are several examples of projects that would support and create good jobs while reducing emissions and pollution; communities should have the final say on which projects best suit their needs.

b. Mitigating climate and health risks from urban heat islands, extreme heat, wood heater emissions, and wildfire events

EPA should support projects that mitigate the impacts of heat, save energy, and reduce pollution. Extreme heat does not threaten all communities equally. Urban environments can be on average 5 to 10 degrees Fahrenheit hotter than neighboring suburban communities. These heat islands carry an array of additional challenges that are disproportionately borne by disadvantaged communities and communities of color. When temperatures increase, heat-related illnesses like heatstroke as well as illnesses made worse by heat such as asthma, hypertension, and diabetes lead to an increase in hospitalizations and healthcare costs. Moreover, higher temperatures can lead to an increase in ground-level ozone, also known as smog, which can compound environmental and health issues faced by these communities.

Certain types of natural infrastructure, such as green roofs, cool/permeable pavements, parks, rain barrels, rain gardens, and an urban tree canopy can provide remarkable benefits against extreme heat. According to the EPA, the installation of green roofs can not only effectively manage storm water, but can abate enough heat to lower the energy demand of the floors below by 50%. This investment can provide a two-pronged benefit to communities: it alleviates the impacts of extreme heat on those occupying the building, and it can relieve stress placed on electrical grids during times of extreme heat. These positive impacts can be compounded by installing green streets and alleys, which refer to streets completed with reflective surfaces and paired with surface vegetation to create permeability, which can reduce heat on the street level as well as control runoff.

Reducing heat can also improve air quality and green surfaces can help sequester carbon. One study estimated that if the Detroit metropolitan area greened all of its commercial and industrial rooftops, the carbon reduction over two years would be the equivalent to taking 10,000 midsize SUVs off the road for a whole year. Another study by the Abell Foundation found that even a more modest smart surface conversion plan in the city of Baltimore would mitigate 17 million tons of carbon and decrease the city's overall unemployment rate by 2%.

c. Climate Resiliency and Adaptation

Resilience and green infrastructure projects can fortify communities against the effects of climate change. Nature-based solutions, such as green roofs and permeable surfaces, not only mitigate heat but also help stop runoff pollution by capturing rainwater and storing it, or letting it filter back into the ground to replenish vegetation and groundwater supplies. An estimated 10 trillion gallons a year of untreated storm water runs off roofs, roads, parking lots, and other paved surfaces, often passing through sewage systems before spilling into rivers and streams that serve as drinking water supplies and sites for recreation.xi As development covers land with impermeable surfaces, the volume of storm water running off buildings, streets, and parking lots into nearby waterways increases.

These investments are also supporting local economies by creating jobs. Skilled workers are needed to ensure the installation and construction of natural infrastructure projects are effective and maintain water quality standards. Additionally, natural infrastructure, just like traditional water systems, also requires routine maintenance and upkeep to function optimally, thus sustaining job creation and employment opportunities. These investments can also reduce air and water pollution—including the emissions driving climate change—and make our communities more resilient to the impacts of climate change.

Investing in natural infrastructure, both in the form of nature-based storm water solutions and smart surfaces, can have the potential to dramatically expand the impact of the EPA's block grants. These solutions not only mitigate the threat of flooding but have the added benefits of increasing biodiversity, improving outdoor recreation in urban neighborhoods, reducing urban heat island effects, heat-related illnesses and asthma, lowering heating and cooling energy costs, stimulating local investment, and supporting American jobs.

In addition to nature-based solutions and green infrastructure, investing in community capacity building and planning can help ensure communities are better prepared to adapt to climate change. Communities need resources to holistically fortify themselves against the worst effects of the climate crisis. Resilience hubs, which can be existing community institutions or stand-alone buildings, offer comprehensive resources for communities facing climate-related disasters.

Resilience hubs offer a community-driven approach by providing physical space for community members to access resilience-building social services, and to coordinate disaster response and recovery efforts in times of emergency. These institutions are a proactive investment in a community's ability to withstand natural disasters while maintaining their physical, economic, and social assets. Successful models of resilience hubs, like the RYSE Center in San Francisco, have the capacity to provide emergency supplies during crisis, provide preparedness training to residents, and integrate with the public sector to coordinate disaster response. Providing these multifaceted resources not only better prepare communities for disaster, but create an opportunity to support good-paying jobs, often in the public sector. Whether through the construction or conversion of the physical space, or in the support or development of resilience-building social services, resilience hubs can and should be opportunities to create good-paying, family-sustaining jobs within communities.

d. Reducing indoor toxics and indoor air pollution

School Indoor Air Quality

According to the EPA, Americans spend 90% of their time indoors. For the 1 in 6 people in the U.S. that work or attend K-12 schools, much of that time is spent in school buildings with indoor toxics and indoor air pollution. Yiv This may include legacy toxics such as lead, asbestos, and polychlorinated biphenyls (PCBs), which are found in older buildings; mold; poor ventilation or filtration; or toxic cleaning supplies or building materials. School facilities, in disadvantaged communities in particular, face disproportionate health, learning, and environmental problems. Research shows that as the percentage of students who qualify for reduced-cost lunch increases, the quality of the school building

decreases.*V School districts with higher enrollments of students from low-income families are more likely to report their buildings in "fair" or "poor" condition.*VI Furthermore, school districts with higher enrollments of students from low-income and minority families spend thousands of dollars less per student in facilities capital improvements than districts in high-wealth communities.*VII Many studies show that after controlling for income, students in poor quality school buildings score between 5 to 11 percentile points lower on standardized tests than students in modernized buildings.*VIII

Block grants utilized for school retrofits are an opportunity to remediate legacy toxics, improve indoor air quality with updated HVAC systems, and utilize green cleaning products (such as EPA Safer Choice) and healthier building materials, thereby minimizing indoor toxics and air pollution.

BuildingClean.org is a database to help identify healthier building materials and minimize exposure of harmful chemicals to both installers and occupants. **Elow are Building Clean criteria that can be used to guide the procurement of healthy building materials by EPA applicants. **EPA can promote the use of healthier building materials for construction projects used with federal funding by incentivizing applications that minimize exposure to harmful building materials by:

- Providing guidance on minimizing exposure to harmful chemicals by using the following Building Clean criteria:
 - Good: Interior building products with the potential to emit volatile organic compounds should have a low-VOC emissions certification
 - Better: Utilize third-party product certifications and labels to select products that limit some of the most hazardous content
 - Best: Utilize third-party product certifications and labels to select products that are free of the most hazardous content
- Including Best Practices in Program Guidance:
 - Discourage the use of insulation materials containing respiratory sensitizers, specifically two-part spray polyurethane foam insulation which is linked to debilitating respiratory diseases,^{xxi}
 - Discourage the use of funds for recycled vinyl flooring or wall-coverings which may contain a number of legacy toxics, including lead.^{xxii}

e. Facilitating engagement of disadvantaged communities in State and Federal advisory groups, workshops, rulemakings, and other public processes.

Community-based groups in disadvantaged communities have particular on-the-ground expertise in the types of investments that would address community needs. Furthermore,

disadvantaged communities should be recognized as agents of economic transformation, not passive recipients of funding, in order for funding flows to honor democratic decision-making and advance economic, racial, and environmental justice. To that end, community-based groups in disadvantaged communities should be equipped to play a leading role in shaping how the Inflation Reduction Act, Bipartisan Infrastructure Law (BIL), and other public investment programs are designed and how the funds are spent.

For groups to take advantage of these opportunities, significant staff time and technical expertise will be required. Federal funding, including through this program, can help groups representing disadvantaged communities to meet these needs. EPA should consider using Environmental and Climate Justice Block Grants to help such groups fill capacity gaps so as to participate in public processes. Additional inputs that foster community participation include language accessibility, convenient meeting locations near public transit, offering childcare as well as compensation for participation.

Furthermore, as we describe in more detail below, EPA and grant applicants should meaningfully engage with—and incorporate input from— Tribes, communities of color, low-income communities, labor unions, and communities that have suffered from climate impacts and environmental injustice. EPA should require that applicants develop a Community Benefit Plan to describe their proposed actions.

2. With respect to the workforce development activities under category 1 (a) above b. What types of jobs and career pathways should EPA prioritize to support environmental justice and climate priorities?

EPA should ensure that its investments through this grant support and create good union jobs and equitable pathways into these careers. Unionization is a key pathway to quality jobs and family sustaining wages. Union jobs on the whole pay better, have better benefits, and are safer than non-union jobs. Across all relevant industries and occupations, workers who are members of, or are represented by, a union earn significantly more than those who are not. This especially benefits lower-paid workers and is most pronounced for workers of color and women:xxiiii

- White male union members earn 17% more in wages on average compared to white male non-union workers;
- Female union members earn 28% more in wages on average compared to non-union female workers;
- Black union members earn 28% more in wages on average compared to non-union Black workers; and

• Latinx union members earn 40% more in wages on average compared to non-union Latinx workers.

EPA should prioritize equitable workforce development programs that build pathways into these good, middle-class careers—particularly for low-income communities, communities of color, and other underrepresented groups. The following high-road labor standards can help ensure that funded projects create high quality jobs and equitable pathways into those jobs in disadvantaged communities:

- Davis-Bacon Prevailing Wage. Any construction funded through this program must adhere to section 314 of the Clean Air Act. High-road wages can attract highroad contractors employing skilled professionals who perform high quality work, helping projects meet construction milestones on-time and safely, without increasing total construction costs. High-road wages can have long-term economic benefits to a community and create a long-standing professional workforce for future projects. At the same time, Davis-Bacon should be considered the floor of what the EPA can do to ensure job quality through this program.
- Project Labor Agreements (PLAs). A Project Labor Agreement (PLA) is an instrument to predict and control project timelines and labor costs for construction projects. A PLA establishes the terms and conditions of employment of workers on specific construction projects, including wages, hours, working conditions, and dispute resolution methods. These agreements can be utilized at the state and local level to ensure high-road labor standards and timely project completion. PLAs promote safe, quality, cost-effective project delivery by providing project owners with unique access to the safest, most productive, best-trained skilled craft labor available in any given market. Large construction projects, not subject to Executive Order 14063 requiring use of Project Labor Agreements (PLA) for Federal Construction Projects over \$35 million, can still benefit from a PLA.¹
- Community Benefits Agreements (CBAs) and Community Workforce
 Agreements (CWAs). A CWA or CBA is an enforceable contract, supplemental to a
 PLA or collective bargaining agreement that reflects community input and outlines

¹ EO 14063 applies to U.S. federal construction projects with a total estimated cost of \$35 million or more procured by the U.S. Army Corp of Engineers, General Services Administration, Naval Facilities Engineering Systems Command, and other federal agencies that directly procure federal construction contracts. "Agencies shall require every contractor or subcontractor engaged in construction on the project to agree, for that project, to negotiate or become a party to a project labor agreement with one or more appropriate labor organizations." (Section 3). This order does not apply to federally assisted construction contracts procured by state, local, and private stakeholders although other Biden administration policies promote the use of PLAs on certain federally assisted construction projects.

benefits for the community where the project is happening. CWAs and CBAs are beneficial tools for communities, as they can be more expansive in scope and are sometimes negotiated with both union and community partners.

CWAs frequently include local hire provisions, targeted hire of low-income or disadvantaged workers, and the creation of pre-apprenticeship pathways for careers on the project. EPA should consider conditions on block grant investments supporting the use of CBAs/CWAs and community engagement processes—in addition to PLAs and union neutrality—to ensure recipients are employing workers from local communities, and encouraging broader pathways into good, family-supporting jobs.

- Targeted Hire. Targeted hire benchmarks—often a key feature of CWAs—mandate or incentivize the hiring of workers on a project from certain communities, which may include women; people of color; veterans; the formerly incarcerated; Indigenous people; economically disadvantaged communities; communities heavily impacted by climate change or climate change policies; workers dislocated by the energy transition; and more. These communities may be targeted through contracting requirements, hiring requirements, or the use or establishment of preapprenticeship programs. Ideally, these provisions establish long-lasting pipelines for members of disadvantaged communities to access good jobs and careers in the clean economy.
- Local Hire. Local hire benchmarks mandate or incentivize the hiring of workers from within the state or local community. Without this provision, work crews from out of state can be brought in, minimizing the job creation benefits for the local community. Local hire provisions may mandate a certain percentage of local workers be used, they may offer incentives to hire local workers, or they may simply require that local employment impacts are considered alongside other benefits of projects being evaluated. Entities receiving funds should work to identify existing community networks for recruitment of disadvantaged workers.
- Registered Apprenticeship, Pre-Apprenticeship, and Labor Management
 Partnerships. One of the main mechanisms for building career pathways is through
 registered apprenticeship, pre-apprenticeship, and other union-affiliated training
 programs. Pre-apprentice programs aim to ensure that workers can qualify for
 entry into an apprenticeship program and have the skills and support they need to
 succeed. These programs are generally designed to target certain populations or
 demographics such as low-income workers, workers of color, women, and other

marginalized communities. Additionally, many unions offer training throughout a member's career to enable them to stay up to date with changes in technology. The most successful pre-apprenticeship programs are those affiliated with registered apprenticeships or other contractually agreed on-the-job training programs. EPA should require or incentivize pre-apprenticeship opportunities targeting disadvantaged communities that are linked to registered apprenticeship programs. EPA should also award funding to entities that integrate pre-apprenticeships with community-based "wrap around" services such as transportation and childcare to maximize retention of disadvantaged and underrepresented workers as they enter careers.

Apprenticeships may be registered through a state apprenticeship agency or through the Federal Department of Labor. Labor-supported training programs are generally paid positions that combine on-the-job training with classroom instruction in a trade. Construction unions operate registered apprenticeship programs while industrial unions work with employers on joint labor management training programs that also provide a combination of classroom and on-the job skills training.

EPA should consider additional high-road labor standards, such as: ensuring workers can form and join unions; occupational health and safety standards and programs; avoidance of misclassification and excess use of contracted or temporary employees; and omitting or limiting drug testing or background checks. In addition, EPA should engage with the U.S. Department of Labor (DOL), including the Employment and Training Administration (ETA) and Good Jobs Initiative in particular, to establish these standards and determine what information and tools DOL can provide to support the identification and categorization of job opportunities for local workers.

Eligible Recipients

3. What criteria or requirements do you think are important to ensure that projects—particularly projects of partnerships between community-based nonprofit organizations and other eligible entities—are community-driven and result in benefits flowing to the community while avoiding consequences such as community displacement and/or gentrification?

It is imperative that the EPA and grant applicants meaningfully engage with—and incorporate input from— Tribes, communities of color, low-income communities, labor unions, and communities that have suffered from climate impacts and environmental injustice. EPA should require that applicants develop a Community Benefit Plan to

describe their proposed actions for 1) community and labor engagement; 2) investing in the American workforce; 3) advancing diversity, equity, inclusion, and accessibility (DEIA); and 4) contributing to the Justice40 Initiative.

Additionally, EPA may expand the benefits of this program by incorporating reporting and audit metrics to ensure that low income and disadvantaged communities are truly seeing the benefits of this funding and to ensure workforce outcomes and benefits are met and delivered. For example, EPA should collect information on the number of local workers that contractors employ in order to assess the success of this aspect of the program. This could include tracking anonymized disadvantaged worker participation (recruitment, retention and advancement), in coordination with the DOL. Additionally, applicants should demonstrate that they will enter into or have entered into a formal CBA for relevant projects.

4. What are your thoughts on EPA sponsoring on-line forums or webinars to facilitate potential applicants' ability to develop partnerships with other organizations and communities to submit applications for ECJ Program grants? How else can EPA be helpful in facilitating these partnerships?

While online forums and webinars are helpful, EPA should also conduct in-person community engagement in disadvantaged communities to boost awareness of this EPA program, collect community input on how the grants should be administered, and respond to questions about grant applications. Such in-person engagement could take the form of open community town halls, in-person meetings with organizations representing disadvantaged and/or worker communities, and tours of disadvantaged communities guided by community leaders. Such in-person proximity also would afford EPA greater opportunities to facilitate partnerships between like-minded groups for grant applications.

EPA could also leverage in-person community visits to not only shape and discuss the ECJ Program, but also other EPA programs intended to benefit disadvantaged communities, such as the Greenhouse Gas Reduction Fund. A number of community groups are likely to have questions and input on multiple EPA programs, and to have funding needs that could be met by various EPA programs with overlapping purposes. To efficiently use the time of community members and EPA staff alike, EPA could use the same community visit to solicit input and address questions on multiple programs focused on disadvantaged communities.

Reporting and Oversight

1. What types of governance structures, reporting requirements, and audit requirements (consistent with applicable Federal regulations) should EPA consider requiring of EPA grantees of the ECJ Program grants to ensure responsible and efficient implementation and oversight of grantee/sub recipient operations and financial assistance activities?

As we noted in our response to Eligible Recipients/Question #3 above, EPA should incorporate reporting and audit metrics to ensure that low income and disadvantaged communities are truly seeing the benefits of this funding and to ensure workforce outcomes and benefits are met and delivered. For example, EPA should collect information on the number of local workers that contractors employ in order to assess the success of this aspect of the program. This could include tracking anonymized disadvantaged worker participation (recruitment, retention and advancement) in coordination with the DOL.

5. How should EPA manage statutory requirements that apply to construction projects such as Davis-Bacon prevailing wages, Build America Buy America domestic preferences, and the National Environmental Policy Act in a way that minimizes burdens on funding recipients?

Davis-Bacon Prevailing Wage

Construction projects, including retrofits that are federally funded are required to adhere to Davis-Bacon prevailing wage provisions. Prevailing wage rates, which reflect local area standards, help attract skilled workers and benefit local communities through quality job creation. EPA can ensure prevailing wage requirements are met through program guidance, grant application and reporting requirements. Recent examples of prevailing wage determinations can be found by applicants at the following website: https://sam.gov/content/wage-determinations.

Build America Buy America

The Build America Buy America Act (BABA), passed as part of the BIL on November 15, 2021, was enacted to improve our domestic supply chains and establish robust, comprehensive domestic content preferences across all federal aid infrastructure spending.**

These provisions also apply to the EPA funding from the Inflation Reduction Act that will go towards construction projects such as green and resilient school retrofits for the "construction, alteration, maintenance, or repair of infrastructure in the United States." This covers items traditionally included along with buildings and real property. For example, 100% of iron, steel, and construction materials should be produced in the United States. Additionally, 55% of available manufactured products should be made in the U.S. In order to comply with BABA and create unique economic opportunities, it is imperative that EPA continue to successfully foster and enable BABA uptake and implementation.

There are several resources available to EPA and contractors to help navigate the BABA requirement—including the Made in America Office at OMB—which has developed robust resources and technical expertise to help federal contractors with BABA compliance. Additionally, the BlueGreen Alliance Foundation's (BGAF) Building Clean database identifies domestic manufacturers of products for energy efficiency retrofits and healthier building materials. This database, BuildingClean.org, lists roughly 4,500 domestic manufacturing facilities in nearly every state across the country and also identifies facilities with union workers.

BGAF also recently commissioned a report that found that many of the building materials needed for energy efficient retrofits are made in America. For example, more than 90% of air sealing, wall and attic insulation, and windows and doors are made domestically. In addition, almost 75% of heat pumps are also made in the United States. Appendix A below provides a summary table of the findings, which show the percent of energy efficiency products made domestically.

The benefits of Buy America laws are maximized when strong standards are set for determining a product's origin. When these laws apply to upstream inputs, they ensure that the economic benefits of government spending are accrued by an entire supply chain, not merely at the final stage of manufacturing. Weakened Buy America origin standards, on the other hand, eviscerate the multiplier effect of taxpayer-financed spending. This results in lost opportunity and forsaken economic return and fewer jobs for American workers.

Finally, for legitimate instances of availability for domestic goods and materials—or cost concerns—both non-availability and unreasonable cost waivers are available. BGA believes these are adequate to address potential issues with Buy America compliance and therefore diminishes claims of the need for a general application waiver.

Appendix A

% of Energy Efficiency Products Made in America

		% Domestic	
Remodel Category	Subcategory	2010	2022
		Report	Report
Air Sealing	Caulk/Adhesives	95.7%	94.39%
	Spray Foam	90.4%	97.21%
Attic Insulation	Fiberglass and Mineral Wool	93.7%	91.37%
Duct Sealing and	Caulk/Adhesives	95.7%	94.39%
Replacement	Duct Sheet Metal	99.4%	99.63%
Wall Insulation	Fiberglass and Mineral Wool	93.4%	91.37%
	Spray Foam	90.4%	97.21%
	Rigid Foam (Polystyrene)	95.9%	88.91%
Crawl Space	Fiberglass and Mineral Wool	93.4%	91.37%
Insulation	Spray Foam	90.4%	97.21%
	Rigid Foam (Polystyrene)	95.9%	88.91%
Fenestration	Vinyl Window & Door Frames	98.4%	93.49%
	Wood Windows & Doors	N/A	94.47%
Heating, Ventilation,	Fossil Fuel Furnace	94.2%	74.03%*
and Air Conditioning	Air/Ground Source AC and Heat	82.3%	74.03%*
	Pump		
	Compressors	N/A	59.42%
	Water Heaters, Non-Air Heating	77.9%	77.73%
	Thermostats	N/A	64.79%
Household	Household refrigerators and parts	62.3%	53.46%*
Appliances	Household clothes washers and	76.8%	53.46%*
	parts		
Lighting	Light Fixtures	N/A	44.69%

Endnotes

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