

February 19, 2021

The Honorable Ms. Gina McCarthy
National Climate Advisor

The Honorable Mr. David J. Hayes
Special Assistant to the President for Climate Policy

The White House
Washington, DC 20500

Dear Ms. McCarthy and Mr. Hayes:

Thank you both for agreeing to receive this letter. The Architecture, Engineering and Construction (AEC) Leaders are an ad-hoc association of the nation's most respected design, engineering and construction firms. We look forward to bringing our collective expertise to bear on the cross-agency built environment challenges and transformations that are foundational to the Biden-Harris Build Back Better plan.

The signatories here comprise 130+ organizations from across the country who provide design, engineering and construction services throughout the country and around the world. We are heartened by the capable and principled team you have put in place to not only provide leadership on climate and environmental justice, but to once again put the Federal Government in the role of accelerating real progress. Thank you for the climate action you have taken on your first days in office! The building sector actions we suggest below are necessary to achieve President Biden's goal of net-zero greenhouse gas emissions by 2050.

Globally, nearly 30% of greenhouse gas emissions come from operating buildings while an additional 11% of emissions are embodied carbon from building products and construction. Our industry's work must move beyond simply net zero *energy* to net zero *carbon*, in order to deal with the full emissions picture. While combating climate change, we are also dedicated to transforming our communities for the better by addressing critical public health, water, material toxicity, and social equity challenges. We appreciate the Biden-Harris Administration's strong statements on climate and environmental justice. To put these principles into action, our letter below outlines steps we encourage the Administration to prioritize to begin seeing positive impacts in the built environment sector within your first 100 days.

We would also like to underscore the importance of publicly available scientific data and tools from departments such as the EPA, NOAA and DOE that are critical to our work. The databases and tools that these Agencies and Departments have developed over many years have been invaluable to our industry (and many others) and should be restored and even expanded for the important work that lies ahead in the coming decades.

We assure you that the AEC industry is ready for the Federal Government's leadership in this area. Your administration is in a unique position to accelerate market transformation and provide clear and consistent guidance and standards for a range of industries. Our group stands ready to be a resource for your team to help convey the positive impact that your sustainability and resilience policies can have on our industry and to promote their effective implementation. Thank you for your dedicated work and your consideration.

Our specific recommendations appear below, in these categories:

- 1 [**Enhance Federal Building Standards**](#)
- 2 [**Stimulate Building Reuse and Upgrades**](#)
- 3 [**Promote Healthy Housing And Resilient Communities**](#)
- 4 [**Electrify To Achieve A Carbon-Free Grid**](#)
- 5 [**Promote Material Health And Product Transparency**](#)
- 6 [**Promote Healthy Schools For All**](#)

Enhance Federal Building Standards

The executive branch has direct control over federal facilities, so those facilities represent a key opportunity to reduce the climate impacts of federal operations and to lead by example, demonstrating the potential of buildings and communities as a force for positive change.

Ensure that New Federal Buildings are Best-In-Class

- Revoke Executive Order 13967, which inhibits the flexibility of design teams to achieve humane, efficient buildings.
- Direct all agencies to develop and implement design excellence programs that emphasize place-based, outcome-based, climate-responsive design and that require sustainability/environmental peer review focused on whole-building design integration.
- Require all agencies and all projects to follow the "[Guiding Principles For Sustainable Federal Buildings.](#)"
- Direct GSA and DOD to study, coordinate and implement, across all domestic agencies, the use of [IGCC/ASHRAE 189.1](#) and/or the [Zero Code Renewable Energy Appendix](#) to the 2021 International Energy Conservation Code as the minimum energy and sustainability code for all projects (in addition to EISA requirements). Note: Federal projects are exempt from having to comply with state and local building codes.
- Direct GSA to study and implement policies and procedures to reduce the embodied carbon in building materials for federal building projects.
- Increase the diversity of consultants and teams contracting on federal building projects by studying the effectiveness of Minority, Women, and Emerging Small Business (MWESB) requirements and, where appropriate, expanding their use in federal AEC procurement rules.
- Direct GSA to evaluate and make recommendations for performance-based contracting methodologies to increase efficiency and encourage innovation.

Clarify Existing Energy Performance Mandates

- Direct DOE to finalize a rule to implement EISA Section 433 clarifying intent and enforcement. The lack of clarity from DOE creates a loophole that allows for federal building project non-compliance.

- Direct Department of Commerce to clarify the Energy Policy Act (EPA) life cycle cost effectiveness calculation and to incorporate climate impacts into that calculation. Current EPA guidance calls for 30% better than current ASHRAE Standard 90.1 only "if life cycle cost effective." This guidance creates an undefined loophole allowing non compliance with EPA.

Improve Performance of Existing Buildings and Leases

- Re-impose requirements of the EPA to reduce federal building Energy Use Intensity (EUI) by 2.5% per year. The Federal government has historical successes of year-over-year improvements in this realm.
- Direct the GSA to develop and implement policies and procedures for the Federal government to disclose the actual energy use of as many Federal buildings as possible on an annual basis (allowing for security concerns). Such disclosure could become a model for public buildings and private building portfolios across the country, and would provide an invaluable dataset.
- Direct GSA to study and implement recommendations to increase emphasis on improving the efficiency of all existing federal buildings, including regular audit and recommissioning requirements, and moving to electrify and to remove fossil fuel systems from 80% of the existing federal building portfolio by 2025.
- Direct GSA to strengthen guidance for EISA Section 435: Energy Efficient Leases for Government Buildings. Revise the interpretation of Sec. 435(b)(2) Buildings without Energy Star Label to enforce greater energy efficiency in federal leases.

Stimulate Building Reuse And Upgrades

The total square footage of existing buildings in the United States—97 billion square feet of commercial space and 244 billion square feet of residential buildings—exceeds annual new construction by about 85:1. Commercial buildings are responsible for about 12% of U.S. greenhouse gas (GHG) emissions and residential buildings are responsible for about 15%. Existing building upgrades offer immediate opportunities to achieve rapid progress towards an environmentally responsible and socially equitable future.

A comprehensive program to address building reuse and upgrade will provide direct economic benefit to communities, improve the resiliency, health and efficiency of our existing building stock and significantly reduce U.S. carbon emissions. Building reuse and renovations will strengthen neighborhoods, spurring the growth of a local skilled workforce, creating career training programs, and providing much-needed revitalization to under-served communities. The following recommendations address energy, resilience, social equity, and human health.

Reform Tax Codes To Strengthen Neighborhoods & Incentivize Building Reuse and Upgrades

- Improve the 179D commercial buildings energy efficiency tax deduction to promote building reuse and energy efficiency upgrades.
- Expand the Federal Rehabilitation Tax Credit to apply to homeowners.

Create a Job Training Program for the Rehabilitation Trades

- Direct the Labor Department to develop and launch a job training program focused on renovating existing buildings.
- Expand the scope of the proposed Civilian Climate Corps or create a parallel program aimed at employing Americans in energy-efficiency retrofits of existing buildings.

Upgrade and Renovate to Enhance Resilience, Health and Energy Efficiency

- Host a summit where all federal programs that affect our historic and existing building stock develop practical strategies to promote building reuse.
- Develop an existing building upgrade program modeled after the Historic Tax Credit Program.
- Use stimulus funds and federal grants to support building upgrades prioritized locally for disadvantaged communities

Promote Building Performance Standards (BPS) for Existing Buildings

- Direct DOE to model the impacts of BPS adoption strategies to calibrate local policy and outcomes. Conduct analyses to set ambitious and achievable carbon targets and strategies.
- Enable accurate carbon modeling by directing the Environmental Protection Agency (EPA) to enhance ENERGY STAR Portfolio Manager.

Promote Healthy Housing and Resilient Communities

Federal funding of local housing and community development should be treated as part of a national interagency infrastructure strategy. Infrastructure planning should acknowledge the interconnection of investments for housing, transit, “carbon smart” construction, and resilience planning. Investment in housing and communities is critical to addressing all of today’s intersecting crises: climate change, COVID-19, racial injustice, and economic inequality.

Develop National Housing Guidelines for Resilience

Direct HUD to research, develop and promulgate national guidelines for resilient, carbon-smart, and healthy housing construction across all federal programs, building on the work of EPA’s Energy Star Homes and DOE’s Building America programs. Include readiness for efficient, all-electric systems and on-site renewable energy, electrical demand-response capability, limits on toxic chemicals, resilience assessment, and robust community engagement.

Expand and Focus Funding

- Apply the National Housing Guidelines proposed above to all funding programs as appropriate.
- Permanently authorize the [CDBG-DR Program](#) with strong building quality standards to ensure that federally funded and insured housing results in resilient, healthier homes.
- Expand Housing Credit and New Market Tax Credit allocations through the Community Development Block Grant (CDBG).
- Expand and add climate and resilience criteria to the HOME Investment Partnerships Program.
- Consistent with the Administration’s actions to prevent housing discrimination, develop guidelines to ensure that housing development programs are administered with full participation and leadership of local, frontline and vulnerable communities and workers.
- Direct Treasury to revise the Office of the Comptroller of the Currency’s proposed rule from November 2020 regarding discriminatory lending practices to ensure that it is effective at achieving the intended outcomes of the Community Reinvestment Act.

Improve Climate Resilience Planning for Communities

- Improve the quality and accessibility of flood maps and resilience assessment data. The National Flood Insurance Program (NFIP) loses an estimated

\$1.4 billion each year and directly counteracts the principles of resilient design.

- Update flood maps through agency rulemaking. Risk should take into account relevant factors like rapid rain accumulation, building codes, and population growth.
- Direct FEMA to include air and water quality hazards linked to wildfires in the Resilience Assessment And Planning Tool (RAPT).
- Develop comprehensive metrics and methodologies to specify building enclosure criteria to maintain habitable temperatures in buildings during extended power outages. Direct the national energy laboratories to develop model code language and proposed incentives for ensuring thermal habitability as a building performance attribute.

Assist in the Conversion Of Surplus Commercial Floor Space to Meet Housing Needs

- Provide funding to local agencies to assess current and future surplus commercial space due to the COVID-19 pandemic and shifting work patterns.
- Support the local development of programs, codes and zoning to allow surplus space to be used to meet housing needs.

Roadways For The Future

Direct Department of Transportation to develop guidelines and/or rules ensuring that whenever federal funds are spent on road projects (new or repaired) multimodal transportation options and green infrastructure opportunities are evaluated and integrated with a view to that location’s future climate and population needs.

Electrify To Support A Carbon-Free Grid

Buildings have an enormous role to play in accelerating the transition to a future without ubiquitous greenhouse gas emissions. After reducing their energy demand, the key steps are to eliminate fossil fuel use in buildings, switch to electricity as the sole source of energy, provide the infrastructure for electric vehicle charging, and enable demand-response technologies in a way that supports the decarbonization of the grid. The federal government has a critical role to play in supporting these strategies.

Accelerate Use of Electric Vehicles (EV) as Mobile Electricity Storage

- Provide R&D support and incentives for EV charger manufacturers to support bi-directional power flow.
- Direct DOE to develop model building codes for EV charging and electrical service sizing, including bi-directional charging capability.
- Direct EPA to phase-in requirement for EV Level 3 charging stations wherever gas is sold.

Leadership Programs to Transform the Market

- Direct the White House Climate Office to coordinate the development of best practice outcomes for “model climate cities.” This could include EV codes, NZE (Net Zero Energy) codes, [RE100](#) goals, mandatory benchmarking, and building performance ordinances.
- Direct DOE to establish model electricity and gas rate designs that would make electrification accessible and equitable. Electricity rates should be based on location and time of use (TOU) to incentivize efficiency, demand-response, and battery storage. Energy efficiency riders should be applied so that the cost of energy efficiency programs is shared and fuel neutral. These rates should be discounted for heat pump applications to encourage alternatives to fossil-fuel combustion for heating and hot water.
- Direct DOE to create a standard definition and model building codes for Carbon-Smart and Net-Zero Carbon buildings, creating a standardized approach to efficiency, electrification, energy storage, demand-response, EV-integration, renewable installation, and embodied carbon accounting.
- Direct all agencies that develop and manage federal buildings to incorporate electric HVAC, induction cooking, EV charging, and grid-interactive load management capabilities (BAS) in all new facilities and renovations, including lease requirements for leased space.

Expand Education and Data Transparency

- Direct EPA to require grid transparency programs mandating that all utilities disclose real time emissions at 15 minute or hourly intervals, and include EPA-reviewed forecasts of emission profiles over time.
- Direct DOE to fund professional education on grid decarbonization and the benefits of electrification.
- Provide funding for DOE’s Energy Information Administration to improve timely availability of information on building energy and carbon consumption through the Commercial Building Energy Consumption Survey (CBECS) and Residential Energy Consumption Survey (RECS).

Provide Incentives to Shape the Market

- DOE and IRS to expand the 179D tax credit or create similar tax credits for EV charging, heat pumps (in addition to solar, batteries), and building envelope performance (U-value and SHGC based, per climate zone).
- Direct DOE to develop and fund demonstration programs supporting the use of microgrids that enhance resiliency and decarbonization, especially in areas prone to power outages.
- Consider implementing a carbon tax or tax credit for carbon savings, designed along the lines of the [Carbon Fee and Dividend](#) proposal to ensure that it does not adversely affect low-income Americans.
- Direct DOE to fund R&D and explore potential tax incentives for new low carbon and carbon sequestering building systems.

Encourage Renewable Energy Regulation

Encourage the Federal Energy Regulatory Commission (FERC) to establish a national renewable choice program ensuring that all utility customers, regardless of regulatory status, can participate in local renewable programs that include customer credits, and drive new renewable investment.

Promote Materials Health and Product Transparency

The materials used in our buildings have broad climate, health, and equity implications -- from determining if emissions goals will be met, to ensuring Americans are not exposed to harmful chemicals of concern. The recommendations below include bolstering existing agencies and laws as well as developing clear and consistent transparency criteria for the materials industry all based on science.

Materials Transparency and Embodied Carbon Reporting

- Develop a national standard for ingredients and environmental impact transparency of consumer and building products to prioritize the protection of people.
- For Federally funded projects, building products with documented data in compliance with nationally and internationally recognized standards such as Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs) will be prioritized over products without data.

Embodied Carbon Reduction

- Adopt the [Carbon Leadership Forum average embodied carbon baseline](#) as the minimum standard for building products.
- Direct the Department of Agriculture to assess and select the most rigorous, science-based, 3rd-party-certified sustainable forestry standard (e.g. [Forest Stewardship Council](#)) which would then become a requirement for forest products used on federally funded projects.
- Direct EPA to update and expand the Comprehensive Procurement Guidelines program to include screening for embodied carbon and hazardous substances.
- Direct EPA to work with USDA to update the BioPreferred program to include screening for embodied carbon and hazardous substances.
- Direct DOE to fund R&D and explore potential tax incentives for new low carbon and carbon sequestering building systems.

Empower Agencies to Act on Hazardous Substances in Building Materials and Products

- Direct EPA to continue to invest in and expand the Safer Choice program for cleaning and maintenance products, and make those products preferred in all federal facilities.
- Direct and empower the EPA to enforce and expand the Toxic Substances & Control Act (TSCA).
- Expand the power of TSCA by adding new chemicals each year and enforcing testing and restrictions of chemicals before they are sold for commercial use. Address large classes of chemicals of concern, such as PFAS, as a single class instead of regulating them one chemical at a time.
- Empower agencies (EPA, FDA, CPSC, OSHA, DOD, etc.) to more quickly reduce harm to human health and the environment from chemicals, and prioritize the protection of vulnerable populations, including factory and construction workers, the elderly, children, pregnant women, people with chronic diseases, and fenceline communities.
- Direct GSA, with assistance from the EPA, to create guidelines that prohibit the purchase of chemical classes of concern in government purchasing.
- Direct the State Department to work with other agencies on a method and process for sharing chemical data between countries to ensure pollution burdens are not shifted among nations.

Promote Healthy Schools for All

Every weekday, there are more people—over 56 million—in America’s schools than in any other workplace. Approximately half of these schools, especially those in urban and rural areas, are in disrepair.

Improving the quality of these learning environments will contribute to significantly improved educational outcomes. We have a tremendous opportunity to renovate existing schools and build new ones to meet standards that will enhance the lives of students, teachers, and staff while also reducing greenhouse gas emissions and providing opportunities for enhancing our society’s environmental literacy.

Improve Organizational Excellence

- Establish an Office of “Healthy, High Performance and Resilient Facilities” within the Department of Education to ensure health and resource efficiency priorities are integrated in all initiatives and funding distribution decisions.
- Update the “Condition of America’s Schools” report, noting progress against the same metrics on health and wellness measured in 1995 and 2019, and identify any critical new metrics relevant to 21st-century indoor and outdoor learning environments.
- Update the 2012 K-12 and university CBECS benchmarks for energy use and renewable energy generation with more detailed reference data for program types.

Improve School Facilities Today

- Develop a grant program and identify appropriate resources and funding mechanisms to ensure the immediate remediation of schools with inadequate indoor air quality.
- Develop a grant program that enables all existing schools, including public, independent and DoDEA (Department of Defense Education Activity), to complete a wellness, Carbon Smart, and resiliency assessment by FY 2022.
- Support the passing of the House Bill “Reopen and Rebuild America’s Schools,” which is on the Union Calendar and identifies needs and funding for schools.
- To improve environmental literacy, require that all climate bills include funding for science-based climate literacy programs in K-12 schools and higher education.
- Increase federal funding for the renovation of K-12 schools that have developed a facility improvement plan that addresses long term wellness, decarbonization, and resiliency.

Improve School Facilities of Tomorrow

- Provide federal funding through 2035 for maintenance programs to support sustained good indoor air quality, leveraging the EPA’s Tools for Schools for every K-12 school, including public, independent and DoDEA.
- Fund solar master plans by 2023 for installation of photovoltaics on every K-12 and higher education campus (to support decarbonization and environmental literacy) so that students of today don’t know a world without renewable energy powering the grid.
- Develop a plan and funding mechanisms for every school, college, and university in America to be Carbon Smart by 2035.
- Establish a resiliency scorecard by FY 2022, including associated readiness and recovery strategies, to assist local school divisions across the country to prepare for natural disasters and other disruptions. Include in this assessment a way to identify schools that can serve as resilience hubs for their communities and a strategy for resourcing them to do so.

Recognize and Celebrate Excellence

Building on the existing Green Ribbon Schools program success, require each state to update their metrics for the Green Ribbon Schools program to include industry-leading energy, water, well-being, carbon, and material targets. This rubric should be used by the Department of Education as they assess school funding for programs tied to wellness, decarbonization, and resiliency.

Our firms are eager to engage in the transformation and decarbonization of the built environment, and look forward to potential opportunities to help further inform your policies, by providing input from leading practitioners in the Architecture, Engineering and Construction fields. We want to work with you to move America further than ever to protect our future generations.

Please don't hesitate to reach out to us for any assistance or questions, and you may contact our group through any of our co-chairs listed below. Thank you for your attention.

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Signatory Organizations

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