



House Select Committee on the Climate Crisis
H2-359 Ford House Office Building
Washington, DC 20024

November 21, 2019

Dear Members of the House Select Committee on the Climate Crisis,

The American Institute of Architects (AIA) submits the following policy recommendations to the Select Committee on Climate Crisis for its review and consideration as it evaluates legislation, strategies and innovations to address climate change. The AIA is fully committed to urgent action in the face of the climate crisis and we thank you for the opportunity to contribute to the Select Committee's important work.

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As it has since its founding in 1857, the AIA exists to safeguard the health, safety, and welfare of the public and to support the advancement of the architecture profession. The challenge of climate change strikes at the core of both of these central missions. It is no longer possible to ignore the harm that climate change and its related events has had and will have on society. Further, this challenge requires the architecture profession to respond with bold, design-centered solutions. In the United States alone, nearly 40 percent of greenhouse gasses are attributed to carbon produced by buildings. This includes emissions generated during construction and in everyday operations.¹ It is clear that as buildings contribute to an oversized share of the emissions problem, they must also become an oversized share of the solution.

While the AIA and its members have been engaged in carbon reduction strategies for many years, in June 2019, the AIA took the formal step of ratifying a "Resolution for Urgent and Sustained Climate Action." It pledges the AIA to engage its 94,000+ members, their clients, policymakers and the public on climate action. It resolves "that commencing in 2019 and continuing until zero-net carbon practice is the accepted standard of its members, the AIA prioritize and support urgent climate action as a health, safety, and welfare issue, to exponentially accelerate the 'decarbonization' of buildings, the building sector, and the built environment."²

The AIA now seeks an expanded definition of health, safety, and welfare, which includes "resilience, equitable design, and advanced building performance."³ This more holistic definition is a recognition of both the physical threats of climate change and the disproportionate social impact climate change has on different communities.

¹ <https://www.aiacontracts.org/resources/77541-where-we-stand-climate-change>

² <https://network.aia.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=0e6ea336-5683-4c20-b85e-90571ce12108>

³ http://content.aia.org/sites/default/files/2019-06/ADV19_Disruption_Evolution_Change.pdf page 7.

Additionally, in 2018, the AIA updated its Code of Ethics and Standards to require members to instruct clients of the carbon impact of various design choices to better inform their decisions. Specifically, AIA members must “make reasonable efforts to advise their clients and employers of their obligations to the environment, including: access to clean air, water, sunlight and energy for all; sustainable production, extraction, transportation and consumption practices; a built environment that equitably supports human health and well-being and is resistant to climate change; and restoring degraded or depleted natural resources” (Ethical Standard 2.4).⁴

There is much we can and must do to continue advancements in the practice of architecture to meet these design needs. However, to address this global crisis at scale requires a collective response. To get from roughly 40 percent emissions down to zero, we need the support of government at all levels to incentivize best practices and address cost barriers. According to a report by C40 Cities, buildings are central to the fight against climate change.⁵ While cities, municipalities, and states have important contributions to make within their jurisdictions, and indeed have been taking action on many climate-related issues, the federal government must also use its authority to support and advance these efforts. The AIA respectfully submits the following policy recommendations with explicit mention of the necessary federal government role to ensure the success of these policies.

Building Codes:

Central to the work of the architecture profession are building codes and standards. Our nation’s model construction codes, the I-Codes, are published by the International Code Council (ICC) and updated every three years through a rigorous, consensus-based process involving all construction industry stakeholders. These model codes heavily influence the codes that are adopted and implemented at the state and municipal levels.

The AIA and its members actively participate in the ICC code development process. Every three years, the AIA proposes code changes, supports their approval through written and oral testimony, and advocates for their inclusion in the next edition of the I-Codes. The upcoming edition, the 2021 I-Codes, will be published in summer 2020 and available for adoption by states and municipalities.

Among the AIA’s highest priorities is the approval and future adoption of proposal CE264-19, the Zero Code Renewable Energy Appendix sponsored by the AIA and Architecture 2030.⁶ The proposal would add a voluntary net zero energy appendix to the 2021 International Energy Conservation Codes (IECC) that local jurisdictions could choose to adopt as their own minimum energy code.

The AIA believes this voluntary appendix to the commercial energy code provides local jurisdictions a credible, standardized, consensus-approved option for pursuing their own goals for decarbonization in their built environments. We believe it gives the design community, including the AIA’s 94,000+ members, a robust tool with multiple prescriptive-based and performance-based pathways to achieve compliance with the Appendix.

⁴ <https://www.aia.org/press-releases/212521-aia-adopts-new-rules-and-ethical-standards->

⁵ [https://www.c40.org/programmes/building-energy-2020-programme\)](https://www.c40.org/programmes/building-energy-2020-programme)

⁶ <https://architecture2030.org/wp-content/uploads/ZERO-Code-RE-Appendix-Fact-Sheet.pdf>

Similar to many state and local elections, the options for ICC member participation have expanded in recent years. Voting in person at the Public Comment Hearings is no longer the only means through which ICC voting members can cast a ballot. Any ICC member who was validated as a Governmental Member Voting Representative (GMVR) will be allowed to cast a ballot online starting November 18. Any validated GMVR who voted in person at the Public Comment Hearings will also be allowed to change their original vote on a proposal, if they choose.

ICC will host its Online Governmental Consensus Vote (OGCV) at www.cdpass.com beginning Monday, November 18 and ending Thursday, December 5 at 11:59pm Pacific Time. Any ICC member validated as a GMVR can cast their ballot on CE264-19 and hundreds of other proposals during this 18-day voting period.

AIA members can assist AIA's outreach by reaching out to the code officials, plans examiners, fire marshals, and other municipal and state employees of departments and agencies involved in ensuring public health, safety, and welfare in the built environment. AIA has asked all its members to contact ICC voters to support the proposal.⁷

Many of the challenges in inefficient buildings could be addressed through compliance with the 2021 IECC code and would be even better addressed through adherence to the performance standards of the Zero Code. However, about half of the country is using 2009 code or earlier, meaning that they are building under codes that are at least a decade old. Of those, 11 states or territories currently have no statewide code at all or use a code that predates 2004. AIA believes:

- The federal government should help hasten the adoption of updated building codes and standards through significant monetary incentives, training, and technical assistance.
- The federal government should provide additional incentives for localities to adopt voluntary stretch codes related to energy efficiency, including the Zero Code Renewable Energy Appendix, if that is approved for the 2021 IECC later this year.

There is successful precedent for this approach. The 2009 American Recovery and Reinvestment Act (ARRA) provided free training and 2009 IECC code books, along with incentives to localities to adopt the 2009 IECC. This same approach should be replicated in any comprehensive climate action legislation or infrastructure package.

Additionally, current legislation from the 116th Congress provides a roadmap for how this federal support for code adoption could be structured. The Energy Savings and Industrial Competitiveness Act (ESIC) of 2019 (S. 2137/ H.R. 3962) includes a subtitle on Building Energy Codes which contains some important provisions that the AIA supports. For example, the Act:

- Amends Section 304 of Energy Conservation and Production Act (ECPA) to require that the Secretary of Energy encourage and support the adoption of building energy codes by States, local governments, or Indian tribes that meet or exceed voluntary model building energy codes.

⁷ <https://www.aiasmc.org/oct-30-vote-for-zero-code-renewable-energy-appendix/>

- Amends Section 307 of ECPA to require that the Secretary of Energy support the updating of voluntary model building energy codes.
- Authorizes \$200 million in funding to assist States to meet the goals of the bill through the use of voluntary model building energy codes.⁸

Energy:

To adequately address the current climate crisis, buildings' relationship to energy must change in fundamental ways. Energy efficiency continues to be key. Buildings must consume less energy in their everyday operations.⁹ This will advance our emissions reduction objectives, and can also help buildings be more resilient in the face of disasters, be they manmade or weather events. Buildings also must transition to be Net zero carbon: buildings that produce as much energy as they consume. Technology and design approaches exist now to make this a reality. But to bring it to scale, the federal government must take bold action. Tax incentives are outlined in the next section to address cost barriers facing building owners to pursue energy efficiency.

More should be done to accelerate the transition past net zero carbon to net positive. Buildings can contribute energy into the grid, act as energy storage, and respond to the needs of the energy grid throughout the day. AIA believes that:

- The federal government should increase investment in research and development along with training and technical assistance into emerging technology in renewable energy generation and energy storage. This should include increased appropriations for the Office of Energy Efficiency and Renewable Energy (EERE) grants.
- The federal government should increase appropriations to the Building Technologies Office within the Department of Energy to advance research in grid responsive buildings.
- Any federal legislation on climate crisis or infrastructure should incorporate Sec. 33201, the "Smart Buildings Acceleration Act" of H.R. 2741, also known as the Leading Infrastructure for Tomorrow's America Act. This would expand the federal government's role in evaluating, accelerating, and showcasing "smart" building technologies.¹⁰

As buildings use less energy in the future, it is still critically important where that energy comes from. The AIA strongly opposes any attempt to weaken or repeal Sec. 433 of the Energy Independence and Security Act of 2007. This required the GSA to phase out the use of fossil fuel sourcing in federally owned buildings on a declining scale, ultimately eliminating their use in 2030. As the largest landowner in the United States, it is of paramount importance that federal buildings end their reliance on fossil fuels. The federal government must also meet its responsibility to lead in this area, as it is uniquely positioned to hold up best practices and accelerate market change.

Building construction also must advance to use less energy and to offset energy used within the operations of the building within a reasonable timeframe. This includes careful consideration of materials, weighing the carbon-intensity of the

⁸ <https://www.portman.senate.gov/sites/default/files/2019-07/energy%20efficiency%20leg%20text.pdf>

⁹ <https://finance.yahoo.com/news/thornton-tomasetti-shares-results-comprehensive-133800381.html>

¹⁰ <https://www.congress.gov/bill/116th-congress/house-bill/2741/text?q=%7B%22search%22%3A%5B%22%5C%22building+codes%5C%22%22%5D%7D&r=7&s=2#toc-H5A64A4625ED14B569B942F73540DC4A6>

creation of some materials against the needs of the particular building and possible offsets. For more than a decade, the AIA has supported the 2030 Commitments that calls for all new construction to be carbon-neutral by 2030.¹¹ AIA and other industry partners are already taking steps to provide architects with more tools to evaluate the carbon intensity of their buildings and of different building materials. AIA believes that:

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- The federal government should help by reforming and standardizing the Environmental Products Declaration so that this information is consistent and more readily available.
- Federal Research & Development funding should be increased to study building materials.
- The federal government should increase incentives for building owners to consider vegetated roofs or walls.
- As with the retrofit of the Cannon House Office Building, the federal government should use every practicable opportunity to model the successful incorporation of “green” roofs to further mainstream the concept with private building owners.

Finally, the federal response to climate change must consider the greenhouse gas emissions already expended in the creation of existing materials and construction of existing building stock, referred to as “embodied carbon.”¹² Most of the buildings that will be standing in 2030 and 2050 have already been built. The next section will outline tax incentives to hasten the retrofit of existing building stock to meet our carbon objectives. In addition, there are other steps the federal government can take to advance the progress in this area. AIA believes that:

- The federal government should provide incentives for carbon utilization in building materials. Some materials are already available in the market, such as carbon sequestering cement and mycelium insulation.
- Research & development funding should be increased for creation and adoption of carbon sequestering building materials and processes.
- Congress should create new incentives for reusing buildings and materials to support the circular economy increasing building and material reuse.

Economy:

As architects pledge to discuss climate impacts with their clients, client decisions are still often predicated on cost concerns and budget constraints. While the evidence is clear that energy efficiency will pay for itself in the outyears, that is often insufficient to persuade clients now. This is especially true when the building owner will not pay the energy bills themselves, when they expect to resell the building before the payback is complete, or where immediate budget concerns are simply too high. We also must do more to bring existing building owners to the table to consider a deep energy retrofit in the first place. Through the following tax incentives, the federal government can help us make significant headway in making the best climate decisions also the best financial decision for clients.

- 179D:
 - The AIA strongly supports the continuation of the Energy Efficient Commercial Buildings Deduction, often referred to as 179D. We urge Congress to retroactively extend the deduction through 2018 and

¹¹ <https://www.aiacontracts.org/resources/6676-aia-2030-commitment-by-the-numbers>

¹² <https://architecture2030.org/new-buildings-embodied/>

make the deduction permanent starting in 2019. The AIA also supports the modernization of the tax benefit to increase the deduction to \$3 per square foot over the current \$1.80 to create a more powerful client incentive. (citation for internal purposes—from our letter to W&M in June)

- Historic Preservation Tax Credit:
 - The AIA strongly supports the bipartisan Historic Tax Growth and Opportunity Act of 2019 (H.R. 2825) to make key improvements to the existing historic preservation tax credit. Most notably, the bill increases the rate of the credit to 30% for smaller projects (rehabilitation expenditures not exceeding \$3.75 million), which would help incentivize more projects in more communities.¹³
 - AIA also urges Congress to appropriate additional funding for worker training for retrofitting historic buildings. The materials and techniques used in some older buildings require different energy saving approaches than mid-century and modern buildings. Without proper training, attempts to improve the energy efficiency could seal older buildings too tightly, causing them to “choke” and create new issues around ventilation, mold, indoor air quality, condensation, and other problems. Older buildings can and should be retrofitted to reduce their carbon footprint, but must be done using the appropriate strategies relative to that particular building.
- 25C and 45L:
 - The AIA stands with the Alliance to Save Energy to support modernizing the Nonbusiness Energy Property Tax Credit, often referred to as 25C, and the New Energy Efficient Home Credit, often referred to as 45L.
 - Specifically, we urge Congress to include in your comprehensive climate response two bipartisan bills that would reinstate and update these credits, the Home Energy Savings Act (H.R. 4506/ S. 2588) and the New Home Energy Efficiency Act (H.R. 4646/ S. 2595).
- SHELTER Act:
 - The AIA strongly supports the bipartisan SHELTER Act (H.R. 3462/ S. 1958), which would create a new tax incentive for homeowners and business owners to claim a credit for disaster mitigation expenses of up to 25% of their cost, up to \$5,000 in a year.¹⁴
 - In 2019, the CBO estimated, “For most types of losses to the U.S. economy caused by hurricane winds and storm-related flooding, expected annual costs total \$54 billion, equivalent to 0.3 percent of the nation’s current gross domestic product. That total consists of \$34 billion in expected annual economic losses to the residential sector, \$9 billion to commercial businesses, and \$12 billion to the public sector.”¹⁵
 - This bill would leverage additional private investment in disaster mitigation that is desperately needed at a much larger scale.
- EEQuIP:
 - The federal government should also consider additional new incentives that are specifically targeted at retrofitting existing building stock. A concept first developed by the Real Estate Roundtable, the Energy Efficiency Qualified Improvement Property (EEQuIP) would expand on

¹³ <https://www.congress.gov/bill/116th-congress/house-bill/2825>

¹⁴ <https://www.congress.gov/bill/116th-congress/house-bill/3462?r=3&s=1>

¹⁵ <https://www.cbo.gov/system/files/2019-04/55019-ExpectedCostsFromWindStorm.pdf>

the existing QIP provisions in the tax code, which allow for accelerated deduction of retrofit expenses. EEquIP would include new provisions specifically for energy efficiency improvements to the building envelope. We believe this will help more building owners consider these types of building improvements.

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The AIA also continues to support ENERGY Star. We urge Congress not to change this successful program into a fee-based system. The AIA would like to work with Congress and the Department of Energy on a new concept for CARBON Star, modelled after this program and specifically designed to promote carbon reductions.

Equitable Communities:

While no communities are immune to the climate crisis, we must recognize that some communities will bear the brunt of the impact. Low-income Americans, disproportionately people of color, will also have a more difficult time affording the mitigation strategies in advance of severe weather events as well as the repair after disasters occurs. Outside of climate-related events, low-income Americans living in energy inefficient homes also miss out on the benefits of better performing buildings, including improved indoor air quality and lower energy bills.

It is sometimes argued that improved energy efficiency will make housing unaffordable. The AIA urges you to reject this argument as a false choice. It is possible to provide energy efficient upgrades at an affordable rate, especially if the tax incentives outlined in the previous section are strengthened and continued. Furthermore, besides losing employment, a key reason Americans face foreclosure is due to the cost of their energy bills. Housing affordability and climate change are interrelated problems with some overlapping solutions.

- The AIA urges Congress to consider building on the Low Income Housing Tax Credit to provide an additional tax incentive for energy efficiency, while maintaining the current credit as a baseline.
- Congress should work with the Department of Housing and Urban Development to systematically complete deep energy retrofits in public housing by 2050.
- The Weatherization Assistance Program is an important federal program that is grossly underfunded to meet the current demand. According to recent testimony to this Select Committee by the Natural Resources Defense Council, if continued at the current rate, the Weatherization Assistance Program would not meet the needs of just current Ohio residents for roughly 150 more years. We urge you to double existing funding as a start towards addressing this gap.

Conclusion:

We thank you for your consideration of these policy proposals and for your work to take meaningful climate action. The AIA is well equipped to serve as a resource to you on any policies related to the built environment. We look forward to continued work with you on this important effort.