



# NYS CLIMATE ACTION COUNCIL DRAFT SCOPING PLAN

Testimony submitted by AIA New York State

The American Institute of Architects

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## **I. Introduction**

AIA New York State (AIANYS) is a state component of the American Institute of Architects, a storied organization founded by New York architect Richard Upjohn in 1857 with the goal to promote the scientific and practical perfection of its members and elevate the standing of the profession. Today, our mission here in New York and across the country continues the commitment to advancing excellence in all facets of the architecture profession and to be the voice of the architectural community and a resource for its members in service to society.

## **II. Architecture and the Environment**

AIANYS acknowledges the immense impact of the buildings sector on global greenhouse gas (GHG) emissions and the investment of earth's resources in the creation and operation of the built environment. Moreover, our members understand that many current planning, design, construction, and real estate practices contribute to an imbalance that can have disastrous long term planetary effects on the health of human and natural systems and that architects must work to assist in the transformation toward a sustainable, healthy, safe, equitable, and resilient built environment.

In 2019, the AIA adopted a resolution titled the "Big Move Toward Environmental Stewardship," aimed at positioning architects to be leaders for climate action. This resolution set forth three key areas of focus: (1) declare an urgent climate imperative for carbon reduction; (2) transform the day-to-day practice of architects to achieve a zero-carbon, equitable, resilient, and healthy built environment; and (3) leverage the support of peers, clients, policy makers, and the public at large. This major policy move led to the development of the 2020 AIA Climate Action Plan, outlining a path to mitigate the sources of climate change, adapt to the impacts, and catalyze architects to act. Further, the AIA has set its own climate goals, with the drive to train and provide resources to members to achieve zero CO<sub>2</sub> emissions in the building sector by 2040.

Architects are natural system thinkers and leaders in the design of the built environment, well-positioned to use their expertise to design healthy, carbon neutral, and adaptive buildings and communities. Architects hold the steadfast conviction that the power of design has the capacity to solve the greatest challenges facing humanity. Yet, the challenges posed by the global climate crisis eclipse the individual expertise of architects and other licensed design professionals and demands a unified and coordinated response to the crisis.

## **III. Essential Elements**

### Partnership

One major theme woven into the fabric of the Draft Scoping Plan and highlighted as an "essential element" in Chapter 22, is the need for increased partnership and collaboration among public policy makers, experts, communities, stakeholders, and the public at large. AIANYS wholeheartedly supports the level of significance assigned to partnerships, outreach and education, and workforce development in the Plan. We are encouraged by the

inclusion of architects on the CAC Advisory Panels, the Climate Impact Assessment Technical and Advisory Working Groups, and in the development of NYSERDA's NYStretch Energy Code 2020, among other public-private collaborative initiatives.

Beyond the public comment period and finalization of the Scoping Plan, it will be imperative for policymakers at all levels of government to engage and include architects in the public policy making process to help supply technical guidance and solutions. The formation of commissions and task forces to study and make recommendations on the development of sustainable and resilient design best practices, advanced building codes, land use policies, low embodied carbon building materials, building electrification, and other tactics comprising climate mitigation strategies, must include architects possessing expertise in a variety of topical areas. AIANYS can tap into its vast network to help its partners in government identify subject matter experts and facilitate their participation in the development of design standards to help the state meet its climate goals.

### Preparing the Workforce for Deep Carbonization

The tight timeframe to mitigate the worst effects of climate change and move away from a carbon-based economy will require public-private partnerships to identify expectations for the education, training, carbon literacy and upskilling of architects and others in the buildings sector. Forming these partnerships should be an immediate priority of the state, academia, and the private sector.

As noted in the Draft Plan, a holistic transformation across every sector of the economy will be needed to meet the GHG reduction targets within the next decade and beyond. Ambitious goals will require ambitious investments in capital and human assets. This transformation will also necessitate the need to plan for a climate forward workforce, armed with the education and training to rise to the challenge. Convening a work group which includes the Deans of the Schools of Architecture, SUNY/CUNY leadership, the Board of Regents, the States' design regulatory boards under the State Education Department, the other licensed design professions, and the relevant professional trade associations, would be a prudent first step on the path toward partnership. This group's mission would be to develop a plan and issue recommendations on ways to position the state to advance decarbonization literacy through STEAM curriculum at all levels of education and identify the levels of outreach needed to cultivate interest in STEAM careers.

At this moment, the National Council of Architectural Registration Boards (NCARB) is undertaking a major decadal survey of individuals from across the architectural career spectrum to analyze the future of the architecture profession and guide the development of an accessible path to earn a license. This Analysis of Practice survey will explore everything from technology shifts to cross-professional collaboration and specialization. The results will influence and guide updates to the Architectural Experience Program (AXP), the Architect Registration Exam (ARE), and continuing education requirements. Collecting the data, analyzing it, and integrating it into a comprehensive actionable plan will take a few years to complete, but once completed, will set the stage for the next ten years.

The data from the Analysis of Practice survey will inform recommendations to shape the development of new model laws and recommendations from NCARB and influence updates and potential innovation in the state's regulatory framework. Ultimately, it will be at the discretion of the state to determine if the changes are in the best interests of the state, the consumers of architectural services, and whether the standards put the profession on a path to not only complying with the state's climate goals but exceeding and leading the necessary transformation of the built environment.

### Resources

Deep reductions in operational and embodied carbon in buildings will initiate a paradigm shift in how buildings are designed, built, financed, operated, and maintained. The Draft Plan acknowledges the cost of decarbonization through its estimation that building upgrades will reach \$5 billion by 2030 and \$30 billion by 2050. Educating and training architects and future architects to design sustainable and resilient buildings is achievable, however, one of the variables an architect has no control over are consumer habits and a client's ability to finance a net-zero building.

The AIA offers resources and guidance documents on how architects may approach the process of advising clients on the importance of healthy, sustainable, and resilient buildings. Outreach and consumer education will require financial resources and high-level visibility to help influence habits and prioritize upfront investments in a building. State agencies should partner with the design and construction industry, and influencers to promote the long-term returns in health, safety, energy savings, insurance costs, and marketability of a building's positive impact on its occupants and surrounding environment. Architects and others in the A/E/C industry should also have ready access to a comprehensive public database of the state's incentive programs, to enable professionals to provide clients with the best available information on financing options for their home or business.

Financial resources for residential and commercial building owners and renters, especially among Low-to-Moderate Income households (LMI) and Disadvantaged Communities (DACs), should be developed and in place well before a move to prohibit fossil fuels in new construction and a ban on fossil fuel equipment replacement in existing buildings. When designing these financial incentives, policy makers should commit to the inclusion of costs for design and planning, which will enhance affordability, transparency and aid the decision-making process. The Retrofit and Electrification Readiness Fund proposed in the Draft Plan would be a good place to start and should be combined with a suite of other current and proposed programs to maintain affordability and facilitate an inclusive approach to energy efficient, healthy, sustainable, and resilient building upgrades.

## **IV. Buildings Sector Recommendations**

### Electrification

Building electrification is supported by AIANYS as one of many opportunities to reduce operational carbon. Similar to the constraints posed by project financing, the adoption of largescale electrification of the buildings sector is largely dependent on the availability of clean renewable energy. Utility companies such as National Grid have questioned the

feasibility of being able to meet the energy needs demanded by an exponential increase in electrification. The uncertainty surrounding the provision of an adequate supply of clean renewable energy is disconcerting and some members have expressed concerns that if the demand for electricity outpaces supply it will depress the construction market and hinder the approval of building permits.

The Draft Plan acknowledges the immense challenge posed by the electrification of the built environment, projecting New York's energy transition to achieve winter-peaking system status by 2035 and alluding to the tenuous nature of solar and air source heat pumps (ASHP) during the winter months. The goal to electrify 250,000 homes per year by 2030 is certainly ambitious and underlines the need to get the resources in place now to adequately plan for phased electrification retrofits. New York is home to some of the oldest building stock in the country, so much of the investment should be directed toward existing buildings if we are going to meet these goals, especially if the current fossil-fuel phaseout timeline is adopted as proposed.

Redundant and adaptable building systems are essential components to the function of resilient buildings and infrastructure. In the development of all-electric or electric-ready laws, regulations, and codes, it will be essential for policymakers to create flexible standards that acknowledge the need for access to emergency standby power. An architect's paramount concern in all matters is to design buildings that protect the health, safety, and welfare of its occupants. As a state and as a profession, we must ensure that buildings are safe, healthy, sustainable, and able to adapt to emergency situations and a changing climate.

#### Advanced Building and Energy Codes and Energy Benchmarking

AIANYS supports regulation by a single set of comprehensive, coordinated, and contemporary building codes and standards that establish sound threshold values of health, safety, and the protection of public welfare. To that end, AIANYS supports the development and adoption of model building codes that: (1) include participation by architects and the public in a consensus process; (2) the product of informed education and research; (3) include provisions for a prompt appeals procedure for all that might be aggrieved; (4) are cost-effective in relation to public benefit and life-cycle costs; and (5) promote building code provisions that set performance rather than prescriptive criteria.

The AIA is directly engaged in the development and promotion of Zero Carbon Codes and is actively pursuing the adoption of model net-zero codes across the country. Architects were actively involved in the development of NYSERDA's NYStretch Energy Code and the state should encourage the local adoption of the code. The rapid adoption of new building and energy codes will necessitate the training of local code enforcement officials and licensed design professionals. AIANYS routinely offers building and energy code continuing education seminars and would be interested in working with state agencies and other stakeholders to add qualified trainers and expand the reach of these programs.

Prior to the state moving to adopt the Advanced Building Codes, Appliance and Equipment Efficiency Standards Act, it should make sure that the changes will not have unintended consequences for historic buildings. Jeopardizing the ability to secure federal and state

historic tax credits would stymie a proven economic development tool to revitalize our main streets and preserve and retrofit our historic assets for housing and commercial purposes. The restoration and reuse of our current building stock will help curtail embodied carbon, preserve our history for future generations, enhance the local tax base, create affordable housing, and create good paying jobs.

AIANYS also supports the Draft Plan's recommendation for the building code to account for sea-level rise and riverine flooding. The universal application of resilient building standards will aid architects in the design of environments that reduce harm and property damage, adapt to evolving conditions, and more readily, effectively, and efficiently recover from adverse events. A bill requiring the State Building Code Council to examine, evaluate and make recommendations on how the building code may address flood mitigation recently passed both houses of the Legislature (S.7582-B/A.9216-B) and should be signed into law.

Building energy benchmarking is another helpful tool to assist design professionals during energy modeling and the establishment of energy use predictions. In concert with the U.S. Department of Energy, the U.S. Environmental Protection Agency, and Architecture 2030, the AIA created the 2030 Design Data Exchange (DDx) to make it easier and faster for architects to record project data and get actionable information to advance a building's energy and carbon performance. The concept of crowdsourcing building energy usage to help inform best practices is an area worthy of the state's attention and investment. In addition to building benchmarking, state agencies and authorities operating in collaboration through the State Procurement Council, should consider the adoption of universal contract provisions to promote and authorize supplemental design services related to post-occupancy evaluations to ensure the building is performing as intended.

### Funding Building Decarbonization

As stated previously, we must be cautious of frontloading new construction and retrofit mandates with major cost implications without a diverse menu of financing options. The Draft Plan offers several ideas such as direct cash incentives for residential and commercial buildings and the creation of the Retrofit and Electrification Readiness Fund for LMI households, affordable housing, rent regulated housing, public housing, and residential buildings, with a focus on DACs. The identification of funding streams for these programs should be prioritized and then adopted as part of the State budget process.

Architects possess the advantage of direct contact with the client, so it will be important for the State to produce a database of financial and other incentives to defray the cost of energy-efficient improvements, specification of low-embodied and healthy building materials, and measures to improve resiliency and adaptability. The recommendation to create a low-carbon products portal and the formation of a task force to identify the most carbon intense building materials and determine a Global Warming Potential (GWP) for each product, will help guide architects in their conversations with clients.

### Public Buildings and Procurement

Leveraging the state's procurement power and management of millions of square feet to reduce operational and embodied carbon in public buildings should be encouraged and

supported. New York State can start by finally approving a new five-year capital plan for SUNY and CUNY schools. SUNY alone accounts for 40% of all state-owned assets and should be a prime target to lead decarbonization in public buildings to improve the health and safety of students, staff, and visitors.

AIANYS agrees with the Draft Plan recommendation to convene a working group comprised of design professionals and contractors to recommend policies and procedures addressing future climate conditions for state-owned assets. In 2021, the design and construction industry advocated for the inclusion of a stakeholder advisory group in the Low-Embodied Carbon Concrete Leadership Act, to ensure the industry was represented in the formulation of standards for the procurement of low-embodied carbon concrete for State projects. This model of inclusion should be replicated for other work groups and task forces formed to address decarbonization in public buildings.

There are a couple of recommendations in the Draft Plan's section on public buildings and procurement which raise concern. First, there is a recommendation to encourage the utilization of ESCOs to reduce emissions at state, municipal, P-12 schools, and other public facilities. Architecture and engineering firms owned and operated by licensed design professionals are equipped to provide these services on behalf of public facilities and the CAC should not be encouraging a preference for a particular source of these services.

Second, there is a recommendation to allow design-build and integrated project delivery methods for public sector buildings that achieve deep decarbonization performance. Alternative project delivery methods should not be used as an incentive to achieve deep decarbonization as there is no proven correlation that one method is more effective in reducing carbon emissions than the other. Unfortunately, this recommendation represents a continued misunderstanding of project delivery methods pervasive among policymakers, in that it assumes that design-build is advantageous and applicable to all projects. The State should certainly consider expanding the scope of delivery methods available to State agencies, such as authorizing construction manager-at-risk project delivery, but the particular use of one method over another should be at the discretion of the public owner, and it most certainly shouldn't be used as an inducement to achieve sustainability goals.

### Embodied Carbon

As stated in the Draft Plan, approximately 28% of annual emissions associated with buildings can be attributed to the use and production of construction materials. With the proper tools and information at their disposal, architects can lead the way in the specification of low-embodied carbon building materials. This will require a leveraging of support of all potential partners, including clients, policymakers, and the public. The Draft Plan recommends the allocation of funding to help train designers and local permitting entities in the review and approval of carbon budgets, the creation of a low-carbon products portal for producers and buyers, and the inclusion of embodied carbon specifications as part of energy efficiency incentive programs—all of which should be included as part of the Final Scoping Plan.

In partnership with the Carbon Leadership Forum, the AIA helped develop the Embodied Carbon Toolkit to help architects integrate and practice low-embodied carbon design. This resource is divided into three parts and aims to empower architects by: (1) introducing

embodied carbon and discussing its significance in furthering architects' influence in decarbonizing the building industry; (2) providing an understanding of measuring embodied carbon through the methodology of a life cycle assessment; (3) equipping them with strategies to reduce embodied carbon in their own projects; and (4) incorporating additional resources for implemented strategies and tools that the resource examines. AIANYS would like to share this resource with the CAC and partner with the lead agencies to expand education and training on the topic.

The Draft Plan also mentions the creation of incentives to reuse buildings. As mentioned earlier, federal and state investment in historic preservation is one of the most successful programs in terms of community benefit and ROI. Further, building retrofits eliminate or reduce the need for demolition, reduce the introduction of new embodied carbon emissions, and requires the expertise and skills of multiple trades on a job site, which increases economic opportunity. We should be encouraging a comprehensive incentive framework to encourage and facilitate the reuse of materials and buildings.

### Adaptation, Resilience and Disaster Response

If there is one component of the Draft Scoping Plan that all New Yorkers should rally around, it is the need to fortify current and future buildings and infrastructure against the evolving threat of climate change and other disruptive events. Beyond the integration and standardization of resiliency measures in the building code, the Draft Plan offers actionable recommendations which warrant the immediate attention of policymakers.

As part of a comprehensive legislative, regulatory, and incentive framework to enhance resiliency in the built environment, the Final Scoping Plan should continue to support the creation of a Resilient Infrastructure Fund and explore ways to pay for it. Additionally, the CAC should support the adoption of initiatives in-line with the Resilient NY Revolving Loan Program (S.8853/A.10325) and an expansion of the Property Assessed Clean Energy (PACE) program to include resiliency upgrades in the definition of eligible expenses. A resilient infrastructure incentive package should incorporate and encourage the use of green infrastructure, biophilic design, and include plans to aid communities in the creation of resilience hubs.

Appointing a Chief State Resilience Officer to coordinate the State's adaptation and resilience activities, and to develop a climate change adaptation and resilience plan, would elevate the level of focus and urgency needed to meet present and future challenges. AIANYS recommends expanding this recommendation to include an appointment of a Chief State Architect, or a high-level deputy position in the executive branch to help coordinate the various decarbonization and resiliency goals for State-financed projects and public housing. The states of Colorado, California, and New Mexico all have a State Architect charged with the responsibility to oversee major public projects.

One of the Draft Plan's recommendations calls for the creation of post-disaster strike teams to assist municipalities with post-disaster recovery. The State should look to expand current opportunities, such as the Department of State's Code Enforcement Disaster Assistance Response (CEDAR) program. This well-established program trains registered design professionals, certified code enforcement officials and certified building safety inspectors in Rapid Evaluation Safety Assessments. Once trained and certified, these volunteers may be



deployed to communities requesting timely and appropriate post-disaster assistance. Since 2020, AIANYS has trained over four-hundred architects through California's Office of Emergency Services (CalOES) Safety Assessment Program (SAP) which provides participants with a nationally recognized building evaluator certification to assess structures consistently and safely for habitability. SAP also serves as a pre-requisite course for CEDAR certification.

AIANYS would be remiss if it did not assert the importance of joining the majority of other states in passing legislation to extend protections to licensed design professionals and others in the construction industry when providing professional advice, services, equipment, and materials at the request of the state and a local government to respond and recover from a disaster. For years the state of New York has been an outlier in adopting Good Samaritan legislation which has helped other states engage, organize, and deploy the private sector during declared emergencies.

The time has come for New York to join the rest of the country in leveraging the skills, expertise, and resources of the private sector to help our communities when they need it the most. A significant coalition has formed to support and advance the Emergency Responder Act (A.5769/S.6377) in the State Legislature. AIANYS respectfully requests the CAC to support a recommendation in the Final Scoping Plan to expand the private sector's involvement in disaster response and advocate for the protections needed to ensure full participation.

## **V. Transportation and Land Use Sector Recommendations**

### Planning Must Promote Livable Communities

The design of buildings and the built environment has a direct impact on public health and wellness. Quality design can promote activity and fitness, connect people with nature, and support mental health and social well-being. AIANYS supports policies to integrate transportation, housing, and land-use policies at the neighborhood, community, and regional scales to create safe, healthy, affordable, equitable, walkable, sustainable, and resilient communities that recognize and address local natural hazards.

The transformation of the buildings sector will require extensive coordination with the transportation and land use sectors to ensure buildings are designed to support clean transportation options and encourage Smart Growth principles throughout the state. The Draft Plan offers plenty of feasible recommendations to achieve these goals and foster Transit Oriented Development (TOD).

The creation of tax credits to prioritize development adjacent to and integrated with public transportation services, along with aligning current state incentives with TOD and Smart Growth principles are actions which should be taken as soon as possible. A comprehensive toolkit should be created and provided to local governments containing the various programmatic tools, such as model zoning laws for solar-ready buildings, model Smart Growth laws, the proposed Clean Energy Development Mapping tool, guidance to apply for the Restore NY and Environmental Restoration Program, and the Sustainable Development Resource Guidebook listing all the programs relevant to sustainable communities and clean energy development. This toolkit would also be a useful resource for architects and other design professionals.

Reconnecting and knitting our downtown communities back together after decades of separation caused by transportation and planning debacles that pitted residents against commuters, to the benefit of the latter, needs to be top priority at all levels of government. As communities face decisions to repair or replace aging highway arterials which cut through disadvantaged and low-income neighborhoods, many are weighing alternative options to address the injustice perpetrated by prior planning decisions. AIA members have already been active in influencing conversations related to reimagining the future of I-33 (Buffalo), the Inner Loop (Rochester), I-81 (Syracuse), I-787 (Albany), the Brooklyn-Queens Expressway (Brooklyn/Queens), among other highways across the state.

The AIA Central NY chapter based in Syracuse was a prominent and early proponent of the community grid option for the replacement of I-81 in Syracuse. The chapter produced multiple reports explaining the advantages of replacing the elevated highway with a community grid and was part of a broad coalition supporting the option. Relentless advocacy and coalition efforts led to the New York State Department of Transportation (DOT) endorsing the plan to replace I-81 with a community grid/boulevard option. U.S. Senator Charles Schumer has said that the elimination of the I-81 viaduct through the city is a “top transportation priority.”

The federal Infrastructure Investment and Jobs Act of 2021 included over \$1 billion for the Reconnecting Communities Pilot Program, and New York should do everything in its power to take advantage of the program. Moreover, the governor, CAC, and the State Legislature should press the New York Congressional Delegation to support the passage of the Reconnecting Our Communities Act, sponsored by Senators Schumer and Gillibrand, to provide the funding needed to truly transform and mend the errors of the past and provide new economic opportunities to those low-income communities of color displaced by these decisions. If buildings are going to be fully integrated to support clean transportation options, it will be crucial for transportation infrastructure to reduce its domination of downtown urban centers and allow for safer and more sustainable options to flourish.

## **VI. Climate Forward Workforce**

### Education, Training, and Workforce Development

Education, training, and workforce development are areas ripe with opportunities for partnership and empowerment. The transformation of the built environment will necessitate a transformation and investment in human resources as well as renewable energy. The integration and universal adoption of sustainable and resilient design curriculum should be leveraged to energize the next generation of architects through mentorship, research, recruitment, and architectural education.

AIANYS supports the Draft Plan’s recommendations to introduce decarbonization curricula in K-12 schools, Pathways in Technology Early College High Schools (P-TECH), Board of Cooperative Education Services (BOCES), community colleges and public colleges and universities with accredited architecture and engineering programs. Additionally, AIANYS supports the recommendations to encourage private colleges and universities to adopt decarbonization curricula and state support for training and upskilling of design professionals on the sizing, selection, and installation of energy efficient technologies and

the transition of low-Global Warming Potential (GWP) alternatives for building equipment and materials.

In addition to these recommendations, AIANYS requests the CAC to support initiatives to create public-private partnerships to expand mentorship programs to introduce students to a career in architecture and other design professions, especially in DACs. The final recommendations should also support increased funding and visibility for the Path to the Professions program administered by the Office of Professions, an expansion of student loan forgiveness and repayment incentives for those pursuing STEAM careers, and an expansion of accredited architecture programs at community colleges and SUNY/CUNY schools. The vast majority of accredited architecture programs are offered by private colleges and universities, which restricts access to certain scholarships offered exclusively for attendance at a public institution. Finally, STEAM programs should be universally adopted, supported, and recognized to help unlock scholarship opportunities and other benefits currently set aside for STEM programs.

### Continuing Education

The Draft Scoping Plan recommends mandating continuing education on topics related to building decarbonization for architects, engineers, and other professions/trades in the building sector. Currently New York State does not require continuing education for a specific topic, but it does include energy efficiency, environmental issues, and environmental analysis of building materials and systems as eligible topics.

The current demand for decarbonization continuing education belies the potential need to mandate it in regulation or statute, as architects are in-tune with its necessity and actively seek it out. Instead of mandating continuing education in building decarbonization, the state should partner with AIANYS in an effort to help deliver quality educational programming on topics related to building decarbonation, net-zero design, energy-efficiency, advanced building codes, resiliency, building materials science, embodied carbon, and other topics to help promote the health, safety, and welfare of the public, which is the primary motivation for mandatory continuing education.

## **VII. Conclusion**

“Architecture profoundly affects people. The work of architects is essential to human well-being, and architects must embrace their ethical obligation to uphold the public trust.” This statement, which is the Meta Statement of the American Institute of Architects, defines the role of the architect in a world shaped by many forces both within and external to the architectural scope of practice. As we near the quarter century mark, architects and other stakeholders in the built environment have arrived at a pivotal moment, one that presents immense challenges and transformational opportunities.

The alarm bells on climate change have been sounded, and government decision makers are watching to see who will answer the call. It is evident that government leaders are seeking partners to help refine the recommendations, provide input, and offer alternatives in-line with the climate goals. The Draft Scoping Plan cites the American Institute of Architects as a potential partner to assist in outreach, education, research, and input on a broad range

of recommendations to decarbonize the buildings sector and fortify it against the worst climate impacts. As an organization with local, state, national, and even global reach, we implore leaders of the Empire State to partner with the architectural community and forge the path toward a sustainable and resilient future.