AIA New York

House Select Committee on the Climate Crisis RFI Response, American Institute of Architects New York

Sector-Specific Policies

1. What policies should Congress adopt to decarbonize the following sectors consistent with meeting or exceeding net-zero emissions by mid-century? Where possible, please provide analytical support that demonstrates that the recommended policies achieve the goal.

a. Transportation

Although most infrastructure planning and implementation occurs at the local and state level, public utilities, as well as transportation routes and modes, span beyond their boundaries. The Federal Government should step in and provide regional planning across state lines, while also offering supplementary funding to realize carbon-reducing transportation projects.

Congress should prioritize rail infrastructure. When measured by carbon emissions, rail is the cleanest form of transportation for moving people and freight. Rail also has higher capacity than trucking or busses and is able to move more goods and people than other forms of transportation. The subsequent projects, which are all vital to reducing carbon emissions in the New York City region, require significant Federal funding. Action by Congress is needed to make these carbon-reducing projects a reality:

- Freight rail: The Port Authority of New York and New Jersey, with strong support from Rep. Nadler, has been moving towards the design and construction of the Cross-Harbor Rail Tunnel. The tunnel would help limit the increasing amount of delivery trucks passing through New York City, which would reduce carbon emissions from transportation. The tunnel would also reduce congestion and allow for quicker movement of public buses, encouraging greater use of that crucial mass transit option.
- Inter-City Rail: The success of the Gateway Program, which would build a new rail tunnel under the Hudson River while also reconstructing an existing one, is essential to reducing carbon emissions in the Northeastern United States. The tunnels serve the heavily trafficked Northeast Corridor, which provides service over the Hudson River for Amtrak and New Jersey Transit. Should the new tunnel not be built and the existing tunnel fail, the entire Northeastern transit network would become unbearably strained. This would not only dramatically increase carbon emissions due to increased driving and flying but would also severely harm the economy of the region.
- Urban Rail Transit: The Metropolitan Transportation Authority (MTA) recently released their 2020-2024 Capital Plan, which would significantly improve the subway system by, among other things, installing new signals and completing Phase II of the Second Avenue Subway.

Other ways the Federal Government can reduce transportation-derived carbon emissions include:

- Increasing the Federal fuel tax to restore the nation's transportation infrastructure to a state-of-good-repair through the Federal Highway Trust Fund. The tax basis should be changed to vehicle miles traveled (VMT) rather than fuel consumed since more efficient

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vehicles have eroded its revenue-generating capability. Furthermore, the tax needs to be indexed to the rate of inflation, which would have increased the tax by 73% since 1993.

- Rebalancing Federal transportation multi-modal grants under the BUILD program from the current 30% multi-modal/70% roads & bridges split in FY '17-'19 to the previous 65% multi-modal/35% roads & bridges split in FY '14-'16.
- Committing to reinstate United States participation in the Paris Climate Accord at the earliest opportunity.
- Supporting the Regional Greenhouse Carbon Initiative (RGGI) and other similar state efforts to reduce carbon emissions from fossil fuels related to energy generation.

b. Electric power. The Select Committee would like policy ideas across the electricity sector but requests specific comment on two areas:

i. If you recommend a Clean Energy Standard, how should it be designed?
N/A

ii. How can Congress expedite the permitting and siting of high-voltage interstate transmission lines to carry renewable energy to load centers.
N/A

c. Industry
N/A

d. Buildings
Mandating that buildings lower their emissions is essential to reaching net-zero emissions. Throughout much of the country, buildings are the largest contributor to carbon emissions. Production of construction materials, construction itself, and building operations are all very energy intensive activities. In New York City, 70% of carbon emissions come from buildings alone, while numbers are similarly high elsewhere in the country, particularly in urbanized areas.

New York City has chosen to address this issue through Local Law 97 of 2019, which places carbon emissions limits on most large existing buildings, both publicly and privately owned. A few buildings already comply with the emissions limits placed on them, while others will need to retrofit to various degrees to avoid fines for exceeding the limits. This approach manages to significantly reduce carbon emissions, increase air quality, create green jobs through retrofitting, and provide necessary quality of life improvements for those living and working in dilapidated buildings.

There are a few caveats to a carbon emissions limit. First, density, which is generally beneficial for sustainability, can have the effect of increasing the emissions produced by a building. Emissions limiting legislation and rules should not punish buildings for having higher density. The alternative to increasing density is further new construction, which is particularly carbon intensive. Second, such legislation or rules should consider the architectural programming of a building, since some buildings have uses that are inherently more carbon intensive than others. There ought to be flexibility with enforcement to ensure that buildings like hospitals are not unnecessarily penalized for the intensity of their use.

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Besides carbon emissions limits, New York City has chosen other ways to address the emissions caused by buildings, such as by requiring that buildings display letter grades reflective of their Energy Star scores to increase public awareness of sustainable design. This is the core provision of Local Law 33 of 2017. In the long term, this should hopefully increase pressure on owners from their tenants to make their buildings more sustainable.

AIA New York has strongly supported local government measures to require that buildings implement sustainable design measures, such as the laws mentioned above. Within its power, Congress should consider adopting similar measures to those being implemented in New York City. It is paramount that buildings be mandated to reduce their energy use, whether that be a carbon emissions limit as in New York City or a limit on kBTUH/sf. At the very least, Federally-owned buildings should have mandated energy reductions.

2. What policies should Congress adopt to ensure that the United States is a leader in innovative manufacturing clean technologies; creating new, family-sustaining jobs in these sectors; and supporting workers during the decarbonization transition?

A significant portion of US emissions are externalized through resource extraction and manufacturing performed in other countries. In construction, many finished and unfinished materials, such as steel, glass, stone, and wood, originate in other countries. These are then shipped overseas to the US for either further refinement by manufacturers or installation. This has a significant effect on climate change, especially since resource extraction and manufacturing overseas are often not sustainable and transportation from such distances emits huge sums of carbon emissions.

The embodied carbon of products—the carbon which is expended to produce them—is becoming easier to assess. For instance, a Life Cycle Assessment includes transportation costs. If imported construction materials, as well as materials used in other industries, were assessed based on their carbon footprint and country of origin, it would encourage those countries to implement more renewable practices. Furthermore, assessing carbon footprints for imports would give US manufacturers who have already adopted more sustainable measures for resource extraction and manufacturing a competitive edge.

3. What policies should Congress adopt to ensure that environmental justice is integral to any plan to decarbonize these sectors?

In the buildings and transportation sectors, Congress should ensure that improvements benefit economically distressed and marginalized groups. Expanding mass transit networks can not only provide cleaner forms of transportation, but also provide more affordable and accessible transportation access for underserved communities. Making transit more affordable and accessible will give people more options for work, education, and recreation. Furthermore, reducing driving in these communities should result in improved air quality. It is for many of these reasons that in New York City, the highest priority expansion of the subway by the MTA is Phase II of the Second Avenue Subway. This expansion would provide improved transit access to some of New York City's most economically distressed communities in East Harlem and the South Bronx. While transit improvements are needed, Federal assistance should also be provided

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to assist local jurisdictions in the preservation of affordable housing, which often comes under pressure from increased real estate speculation after transit is improved.

Regarding buildings, Congress should be vigilant in ensuring that poorly maintained housing and workspaces benefit from the implementation of sustainable design practices and technologies. While the homes, offices, and institutions of the well to do currently benefit from improvements such as the installation of thermostats and triple-pane windows, this is often not the case for buildings used by more economically distressed Americans. Thermostats and triple-pane windows limit carbon emissions, but they also significantly increase the quality of life for building tenants. Though there are often claims that landlords for less expensive buildings cannot afford such improvements, their tenants are the most vulnerable and need these improvements most. These tenants also have the most to benefit from the lower utility costs that come with sustainable design.

Another benefit of retrofits is the reduction of air pollution, which often has a disproportionate impact on lower-income communities. Retrofitting increases the energy efficiency of buildings, which lowers the amount of dirty fossil fuels emitted into the local air. The same goes for the electrification of buildings, which eliminates the release of dirty oil and gas from heating and cooking.

Cross-Cutting Policies

4. Carbon Pricing:

a. What role should carbon pricing play in any national climate action plan to meet or exceed net zero by mid-century, while also minimizing impacts to low- and middle-income families, creating family-sustaining jobs, and advancing environmental justice? Where possible, please provide analytical support to show that the recommended policies achieve these goals.
Carbon pricing is critical to aiding low- and middle-income families and advancing environmental justice. The most vulnerable in our communities have seen the fewest benefits from innovative sustainable design practices and technologies. This is unfortunate, as these advances often save tenants and owners money on energy costs and lead to other important capital improvements in buildings.

The push that carbon pricing provides to improving the condition of buildings is crucial for combatting inequality in the built environment. Lower income areas generally have worse maintained buildings of all typologies, meaning those communities are most in need of en masse retrofitting. Carbon pricing is an important tool to push owners, whether they be private landlords or the government, to undertake essential upgrades. New York City's law to mandate that buildings remain under carbon emission limits sets higher targets for city-owned buildings than private buildings in order to help more marginalized communities. The residents of those communities rely more heavily on buildings like public schools and public housing.

There is also the question of what to do with revenue begotten by a carbon tax. Revenues can be delivered directly back to lower- and middle-income families through dividends, tax returns, and tax swaps by lowering tax rates on more regressive taxes. Meanwhile, these revenues could be

used for sustainable government projects to further limit carbon emissions and mitigate the effects of climate change, such as environmental cleanups and resiliency projects.

b. How could sectoral-specific policies, outlined in questions 1-3, complement a carbon pricing program?

Buildings should be charged for producing excessive carbon emissions. This fee will incentivize building owners to retrofit, as it will be financially advantageous to spend upfront on capital improvements rather than pay a fee later for carbon emissions. Striking the right balance for the price of carbon and the cost of retrofitting buildings is crucial. Should carbon prices be too low, owners will consider the extra fee a cost of doing business and will not retrofit their buildings. However, should the cost of retrofitting buildings be too high, owners will not be able to afford the work needed to reduce their building's carbon emissions.

Federal legislation and rules around carbon pricing will need to delineate responsibility for emissions, as lease agreement provisions alone may not make this clear. Owners and tenants both have control over the production of emissions but in very different ways. If an owner operates an inefficient building, responsibility for the carbon tax should be on the owner. The same goes for a tenant who operates a space within a building inefficiently. In order to change behavior, carbon pricing should target the party producing the emissions.

Expanding financing for retrofitting is essential to also ensuring that carbon pricing leads to actual improvements for buildings. New York State has several innovative programs to make retrofitting more affordable, such as the direct financing offered through the NY Green Bank. Furthermore, the state's energy agency, NYSERDA, operates the Commercial Tenant Program to completely cover the design costs of retrofits.

Education is also a crucial aspect to ensuring a successful carbon pricing plan in the buildings sector. Owners, architects, engineers, and tradespeople will all need further training on the implementation of sustainable design practices. In New York City, for instance, Federal OSHA safety training is required for those in the construction industry to work on a job site, but no equivalent training is offered or required for sustainability practices. Owners too need additional information, as they often fail to understand the current availability of financing options and lack the knowledge of how sustainable design would make their buildings more efficient.

It is important to note that with improvements to buildings can come increased rents for tenants. Living or working in a sustainable building should not be a luxury for the few, but a right for all. Carbon-pricing programs should be developed to ensure that the capital improvements they spur are beneficial for tenants, not detrimental through higher rents. In New York State, new rent laws limiting the ability of owners to raise residential rents, coupled with provisions in New York City's Local Law 97 of 2019 providing an alternative compliance path for buildings with rent stabilized units, should limit rent increases due to sustainability improvements.

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5. Innovation:

a. Where should Congress focus an innovation agenda for climate solutions? Please identify specific areas for Federal investment and, where possible, recommend the scale of investment needed to achieve results in research, development and deployment.
Federal funding for educating the workforce in sustainable design practices and technologies is crucial to successfully limiting carbon emissions. High school students interested in the arts, trades, and sciences should have curriculums that guide them to gainful employment working on sustainable design projects. This should not only include learning in the classroom, but also learning in the field, where they can be exposed to potential careers.

Separately, Federal funding for developing better sustainable technologies is also needed. While the private sector has done much to advance technological efficiency, Federal assistance is important to spur further improvements. Replacements for hydrochlorofluorocarbon (HCFC) systems, packaged terminal air conditioner heat pump (PTHP) units, and large commercial boilers and chillers all need further research and development. Power generation and storage, while much improved, still need advances in order to make the grid cleaner. Materials also could benefit from further research and development to make them more efficient and sustainably produced.

b. How can Congress incentivize more public-private partnerships and encourage more private investment in clean energy innovation?
Financing is a key tool to make clean energy improvements in the built environment a reality. Many building owners are unsure if savings, oftentimes years down the road, are worth the upfront costs of retrofitting their buildings. This makes it essential that immediate costs be lessened and risks mitigated through financing options and subsidies such as the many programs offered by New York State.

Nevertheless, sometimes incentives are not enough to engender the large-scale improvements in the built environment needed to lower carbon emissions. Throughout the 2000s and much of the 2010s, New York City pursued an incentives-based policy, requiring that building owners and architects do very little to lower carbon emissions from buildings. This was not a success in the long-term, as too few existing buildings instituted sustainable design measures. Therefore, advocacy groups successfully pressured the City to implement Local Law 97 of 2019, which will essentially mandate that buildings undergo retrofits in order to limit carbon emissions.

Agriculture

6. What policies should Congress adopt to reduce carbon pollution and other greenhouse gas emissions and maximize carbon storage in agriculture?
N/A

7. What policies should Congress adopt to help farmers, ranchers, and natural resource managers adapt to the impacts of climate change?
N/A

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Oceans, Forestry and Public Lands

8. How should Congress update the laws governing management of Federal lands, forests, and oceans to accelerate climate adaptation, reduce greenhouse gas emissions and maximize carbon storage?
Resource extraction for the construction and powering of buildings from Federal lands should be limited, and that which takes place should have significant oversight. Clear cutting forests for timber, mining masonry materials, and drilling for fossil fuels is harmful to Federal lands. Not only do these activities cause destruction to local ecosystems, but they are very carbon-intensive. The very process of extracting these resources, let alone producing them into usable materials for construction, releases significant amounts of carbon emissions and other pollutants. This is particularly problematic for Federal lands, which ought to be protected.

Non-CO2 Greenhouse Gases

9. What policies should Congress adopt to reduce emissions of non-CO2 greenhouse gases, including methane, nitrous oxide, and fluorinated gases?
N/A

Carbon Removal

10. How can Congress accelerate development and deployment of carbon removal technology to help achieve negative emissions?
N/A

Resilience and Adaptation

11. What policies should Congress adopt to help communities become more resilient in response to climate change? The Select Committee welcomes all ideas on resilience and adaptation but requests comments on three specific questions:

a. What adjustments to Federal disaster policies should Congress consider to reduce the risks and costs of extreme weather and other effects of climate change that can no longer be avoided?
N/A

b. How can Congress better identify and reduce climate risks for front-line communities, including ensuring that low and moderate-income populations and communities that suffer from racial discrimination can effectively grapple with climate change?
N/A

c. What standards and codes should Congress consider for the built environment to ensure Federally-supported buildings and infrastructure are built to withstand the current and projected effects of climate change?
N/A

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Climate Information Support

12. Our understanding and response to the climate crisis has relied on U.S. climate observations, monitoring and research, including regular assessment reports such as the National Climate Assessment. What policies should Congress adopt to maintain and expand these efforts in order to support solutions to the climate crisis and provide decisionmakers – and the American people – with the information they need? Where possible, recommend the scale of investment needed to achieve results.
N/A

International

13. The climate crisis requires a global response. U.S. leadership is critical for successful global solutions. What policies should Congress adopt to support international action on the climate crisis?
N/A

In addition to your responses to any of these questions, please include any other specific policies that you think Congress should adopt to solve the climate crisis and adapt to the impacts of climate change.

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