

A
GREEN NEW DEAL
FOR
**PUBLIC
HOUSING**

to Deliver Racial, Economic, and Climate Justice

April 19, 2021, Philadelphia





In the early 2010s, Boston’s Castle Square affordable housing complex underwent a green, energy-efficient retrofit that dramatically improved living conditions and cut energy use almost in half. The retrofit was funded by the 2009 American Recovery and Reinvestment Act. Last year, Bloomberg reported on this success: “Mostly people wanted new kitchens,” says Deborah Backus, a founding member and current executive director of the tenants’ organization.”*

Here, we show a “before and after” graphic of how a Green New Deal could transform kitchens in public housing, based on our research in New York City Housing Authorities (NYCHA) apartments, on green retrofit

standards around the world, and feedback from tenants. In this 2D drawing, we’ve taken some artistic license. E.g., we stretched out the (normally quite small) NYCHA kitchen; and we show how a fully electric HVAC system usually eliminates window units, even though NYCHA kitchens don’t normally have windows where we’ve pictured them.

* Leslie Kaufman, “Making Homes Energy Efficient Is Expensive. Stimulus Could Help,” Bloomberg Quint, April 30, 2020, <https://www.bloombergquint.com/technology/making-homes-energy-efficient-is-expensive-stimulus-could-help>.

Key components of before (left)

- Leaky faucet and ceiling
- Outdated, inefficient appliances
- Gas range, no ventilation
- Indoor mold
- Poor maintenance and patching
- No central HVAC
- Rodent issues
- Cracked, unsafe cabinets

Key components of after (right)

- Enhanced plumbing
- Energy and water efficient appliances
- US-made induction range, electric oven, microwave, ventilation
- All mold and toxins removed
- High-quality maintenance, union jobs
- Controllable thermostats
- Pest control
- Refinished cabinets
- Energy-efficient window
- Intercom, additional outlets



A Green New Deal for Public Housing to Deliver Racial, Economic, and Climate Justice

April 19, 2021, Philadelphia

DANIEL ALDANA COHEN, University of Pennsylvania, ccp co-director, @aldatweets

RACHEL MULBRY, University of Pennsylvania, @rachelcarita

A.L. MCCULLOUGH, ccp, @plantedperson

KIRA MCDONALD, ccp, @kiram_____

NICK GRAETZ, University of Pennsylvania, ccp, @NickGraetz

BILLY FLEMING, University of Pennsylvania, ccp co-director, @JooBilly

Graphics by A.L. McCullough

The **climate + community project (ccp)** works to connect the demands of the climate justice movement to the policy development process. We aim to do this by developing new, investment-forward public policy proposals under the framework of the Decade of the Green New Deal that target the intersection of climate justice and the built environment. We support efforts to address the climate emergency at the scale, scope, and pace needed to confront our overlapping crises.

Suggested citation: Cohen, Daniel Aldana, Rachel Mulbry, A. L. McCullough, Kira McDonald, Nick Graetz, Billy Fleming. "A Green New Deal for Public Housing to Deliver Racial, Economic, and Climate Justice." Philadelphia: climate + community project, 2021.
<https://www.climateandcommunity.org/a-gnd-for-public-housing>

SPONSORS:



ENDORSER:



CONTENTS

5 ACKNOWLEDGMENTS

6 EXECUTIVE SUMMARY

10 GREATER INVESTMENT, GREATER BENEFIT

10 A Green New Deal vision to deliver justice for disadvantaged communities and build green community infrastructure

12 The cascading benefits of the GND approach

14 Defining the scope of capital improvements

16 GOOD GREEN WORK

16 Launching high-paying, unionized green careers in public housing communities

16 Quality jobs across sectors

18 Secure, long-term jobs

19 Accessible jobs

20 CONCLUSION

ACKNOWLEDGMENTS

For their invaluable review and feedback on this report, we are grateful for the time and expertise of Joshua Barnett (Local 375 DC 37-AFSCME; architect and New York City employee; Architecture Lobby), Ilona Duverge (Movement School), Jessie Jones (Movement School), Romaine Singleton (Movement School), LaKeesha Taylor (Movement School), César Yoc (Movement School), Lydia Bach (Sunrise NYC), Day Bradshaw (Sunrise NYC), Gaby Fernandez DaSilva (Sunrise NYC), Jack Dunnington (Sunrise NYC), Larry Ge (Sunrise NYC), Anika Langberg (Sunrise NYC), Ariel Lembeck (Sunrise NYC), Charlotte Sadelain (Sunrise NYC), Jonathan Salazar (Sunrise NYC). Countless others have helped inform our research and analysis in the prior three years. Thank you.

We are also grateful to Data for Progress, and for the work of Julian Brave NoiseCat, Katie Lample, Xan Lillehei, Mark Paul, and Anunya Bahanda, with whom many of the authors of this report collaborated in 2019 on a series of research reports on the Green New Deal for Public Housing. We cite that research extensively in this report.

This report would not have been possible without the generous financial support of the Summit Foundation.



EXECUTIVE SUMMARY

“

We need a massive federal investment that would finally provide American public housing communities with healthy, comfortable, energy-efficient homes—fighting racism, unemployment, the housing crisis, and the climate emergency at the same time and in the same places, and building out badly needed green community infrastructure.

”

Green public housing is community infrastructure

We need a Green New Deal for Public Housing. **We need a massive federal investment that would finally provide American public housing communities with healthy, comfortable, energy-efficient homes—fighting racism, unemployment, the housing crisis, and the climate emergency at the same time and in the same places, and building out badly needed green community infrastructure.** Yes, this will be expensive. It will also meet all the key conditions of President Biden’s Build Back Better Vision, while providing a slew of health, social, economic, and climate improvements.

A Green New Deal for Public Housing would deliver massive health and economic benefits to disadvantaged communities, including in Indigenous nations, in keeping with the president’s Justice 40 policy mandate to deliver 40 percent of climate investment benefits to disadvantaged communities that have suffered most from racism, disinvestment, and pollution; it would save public housing, a cornerstone of the country’s endangered affordable housing stock; it would turn public housing into green community infrastructure that raises the living conditions of entire communities, providing resilience against extreme weather during crises, and community services every day; it would train a new generation of union workers in the green building industries, creating good skilled jobs in the communities that suffer most from unemployment today; it would breathe life into the American manufacture of green buildings materials and appliances; it would remove all lead, mold, and other toxins from public housing to help remediate environmental racism and racial health disparities; it would repair elevators in all public housing, meeting the basic needs of disadvantaged community members, including those with disabilities; and it would repeal the Faircloth Amendment, allowing towns and cities across the country to build new, green, healthy public housing. We know how to do this.

In Europe, healthy, green, energy-efficient renovations of existing public housing, and projects to build new public housing, are winning some of the world’s most prestigious architecture awards.¹ And in cities across North America, we’ve seen all kinds of new and retrofitted green affordable housing develop.² The most sustainable building is a building that has already been built; we must make the most of what we already have, while also expanding with construction of new, green, affordable housing. The world already has the policies, technologies,

and labor skills needed to provide American public housing residents with a splendid quality of life, while developing a green building economy that fights climate change. Instead, the federal government has scandalously neglected public housing, leaving it with tens of billions of dollars in repair backlogs, leaving residents in horribly unhealthy conditions, and maintaining the most energy-inefficient housing in the country. It's past time for the federal government to invest in public housing at the level needed to catch up to the rest of the rich world—and even do better, inventing distinctive new models of healthy, green public housing. Renovating and beautifying American public housing will create beautiful and functional green community infrastructure with broad public appeal and benefit.

In 2019, many of this report's authors, working with the Socio-Spatial Climate Collaborative, or (SC)², the McHarg Center on Urbanism and Ecology, and Data for Progress, analyzed all the existing information on the likely costs of delivering truly healthy, truly green, and truly climate-friendly retrofits to the nation's one million public housing units, and their two million residents.³ **The research is clear: the widely cited estimate that public housing requires a \$70 billion investment is incorrect; that level of funding would be inadequate to deliver healthy, modern, climate-friendly living conditions for public housing residents. We estimate the need for \$119–\$172 billion over ten years to deliver benefits consistent with residents' everyday needs, the climate emergency, and President Biden's policy vision.**

Whole-building retrofits are designed to remove all harmful toxins, make needed repairs, electrify building systems, and improve energy efficiency at the same time. This carries high upfront costs, but it is the most efficient and cost-effective way to meet all of

residents' and buildings' needs. Retrofits can be done without displacing residents. But the more efficient, cost-effective approach would be to also build new, green public housing, and use those spaces initially as temporary housing for residents of buildings under renovation. When renovations are complete, the new construction would become permanent public housing for new residents.

In this report, we consolidate and extend our earlier research to summarize the benefits of a \$119–\$172 billion (over ten years) Green New Deal for Public Housing. We explain in depth why we developed our higher number and what that level of investment will deliver, in contrast to the prevailing, lower estimates. And we explain the new strategies for protecting workers and getting public housing residents into unionized green careers that are present in the revised, 2021 version of the Green New Deal for Public Housing Act. The most important changes from the 2019 precedent are on the labor question.

Size matters. Nationally, **a Green New Deal for Public Housing that invests \$119–\$172 billion would create 166,000 to 241,000 jobs annually, including 59,000 to 95,000 high-paying jobs in skilled maintenance and construction jobs in public housing complexes.**⁴ **In New York City alone, this would create 33,000 jobs per year, including 11,000 skilled maintenance and construction jobs.**⁵ This level of new jobs, many of them union jobs, would only be possible thanks to the proposed level of investment ambition.

Investing in green retrofits will **spur job creation across many sectors**, far beyond the construction and maintenance jobs that will be created directly. In the case of New York City, \$48 billion invested in the NYC Housing Authority (NYCHA) over ten years would

1. Michael Kimmelman, "At Edge of Paris, a Housing Project Becomes a Beacon," *The New York Times*, March 27, 2012, <https://www.nytimes.com/2012/03/28/arts/design/renovated-tour-bois-le-pretre-brightens-paris-skyline.html>; Catherine Slessor, "Grand Parc, Bordeaux Review—A Rush of Light, Air and Views," *The Guardian*, May 12, 2019, <http://www.theguardian.com/artanddesign/2019/may/12/grand-parc-bordeaux-lacaton-vassal-mies-van-der-rohe-award>; Oliver Wainwright, "I've Seen the Future and It's Norwich: The Energy-Saving, Social Housing Revolution," *The Guardian*, July 16, 2019, <http://www.theguardian.com/artanddesign/2019/jul/16/norwich-goldsmith-street-social-housing-green-design>; Kriston Capps, "Can America Learn From France's Award-Winning Public Housing Architects?" *Bloomberg City Lab*, March 17, 2021, <https://www.bloomberg.com/news/articles/2021-03-17/pritzker-prize-honors-public-housing-architecture>.

2. Laura Legere, "How a Pa. Affordable Housing Agency Is Making Ultra-Efficient Buildings Mainstream," *Pittsburgh Post-Gazette*, <https://www.post-gazette.com/business/development/2018/12/31/pa-affordable-housing-tax-credits-pennsylvania-housing-finance-agency-passive-house-design/stories/201812190012>; Leslie Kaufman, "Making Homes Energy Efficient Is Expensive. Stimulus Could Help," *Bloomberg Quint*, April 30, 2020, <https://www.bloombergquint.com/technology/making-homes-energy-efficient-is-expensive-stimulus-could-help>; Stefanos Chen, "Counting Down to a Green New York," *The New York Times*, July 12, 2019, <https://www.nytimes.com/2019/07/12/realestate/counting-down-to-a-green-new-york.html>.

3. Daniel Aldana Cohen, Billy Fleming, Kira McDonald, Julian Brave NoiseCat, Nick Graetz, Katie Lample, Xan Lillehei, Mark Paul, and Anunya Bahanda, "A Green New Deal for American Public Housing Communities," *Data for Progress* (2019), 12, 37-38, <https://www.filesfor-progress.org/reports/green-new-deal-public-housing-national.pdf>.

not only generate 11,000 jobs in construction and maintenance, but also indirectly lead to over 1,500 jobs in manufacturing, 1,200 in finance and insurance, and almost 400 in arts and entertainment.⁶ Many of these jobs will not disappear after retrofits are complete, as they will become the foundation for a new, green economy.

Retrofit jobs don't have to be precarious or poorly paid. By instituting a strong **union preference** and requiring **prevailing wage** (per the Davis-Bacon Act) on all retrofit work, the Green New Deal for Public Housing will ensure that workers at the heart of the Green New Deal are paid well and fairly.

A Green New Deal for Public Housing would create union apprenticeship programs for public housing residents to combat structural unemployment in public housing communities. Nationally, we find that from 2015 to 2019, unemployment in census tracts with public housing was 42 percent higher than the average in all other census tracts.⁷ The average unemployment rate in tracts with public housing was 7.97 percent, compared to 5.63 percent in tracts without public housing; this is the structural difference before the Covid-19 pandemic (which has spiked unemployment rates). Absent massive green investment in public housing communities, that structural disparity in employment will remain.

A Green New Deal for Public Housing will ensure that **residents of disadvantaged communities will be prioritized for good union jobs in the new green economy, consistent with President Biden's Justice 40 mandate.** Only this level of investment, with these apprenticeship programs, will allow public housing communities to fully participate in the skilled, high-paying, unionized

4. These numbers are derived from our 2019 research. Note that the 2019 report did not specify our estimate for total jobs for an investment level of \$119 billion; and it reported estimated construction and maintenance jobs for public housing residents only. According to provisions in the 2019 bill, Section 3 eligible workers—public housing residents and low-income workers living nearby—would get 75 percent of the on-site jobs; we estimated that half those jobs would go to public housing residents, i.e., 37.5 percent of on-site construction and maintenance jobs. Here we report total estimated construction and maintenance jobs (i.e., the numbers reported in our prior report multiplied by 2.6667). For the 2019 report's numbers and methods, Cohen et al., "A Green New Deal for American Public Housing Communities."

5. Daniel Aldana Cohen, Billy Fleming, Kira McDonald, Nick Graetz, Mark Paul, Alexandra Lillehei, Katie Lample, and Julian Brave NoiseCcat, "A Green New Deal for New York City Housing Authority (NYCHA) Communities," 5.

green career labor market of the 2020s and beyond.

By electrifying all public housing, and sourcing all electricity from carbon-free sources (including new on-site solar), **this investment would fully eliminate public housing's carbon pollution, slashing annual carbon emissions by 5.6 million metric tons—the equivalent of taking 1.2 million cars off the road**—while developing American skills and technologies essential for the full decarbonization of the housing and buildings sectors more broadly.⁸ No other proposals for investing in public housing would fight climate change to this degree.

Whole-building, deep energy retrofits would also deliver energy cost savings of up to 70 percent, cutting public housing energy bills by up to \$613 million a year; this is far in excess of a 10–30 percent energy cost reduction for a more conventional energy efficiency retrofit. **The proposed retrofits would also cut housing water bills by up to 30 percent per year, or \$97 million.**⁹ All these savings could go toward greater maintenance and programming budgets for public housing authorities. Lesser upfront investments would yield far fewer long-term financial benefits for public housing agencies.

A Green New Deal for Public Housing would fund badly needed retrofits and new construction in tribal areas, addressing scandalous levels of underfunding. These investments would bring improvements ranging from better health conditions to funding for on-site clean energy like solar photovoltaic cells, which could bring additional revenue for housing and other services to tribal communities.¹⁰

6. Daniel Aldana Cohen, Billy Fleming, Kira McDonald, Nick Graetz, Mark Paul, Alexandra Lillehei, Katie Lample, and Julian Brave NoiseCcat, "A Green New Deal for New York City Housing Authority (NYCHA) Communities." <https://www.filesforprogress.org/reports/green-new-deal-public-housing-nycha.pdf>

7. We developed this estimate—which is not included in earlier reports—based on public data from the American Community Survey and data from HUD on the location of public housing complexes.

8. Cohen et al., "A Green New Deal for American Public Housing Communities," 5.

9. Cohen et al., "A Green New Deal for American Public Housing Communities," 12.

10. Cohen et al., "A Green New Deal for American Public Housing Communities," 31–33.

A Green New Deal for Public Housing would create stronger and more efficient manufacturing and construction sectors, increasing U.S. manufacturing capacity and lowering costs for sustainable appliances and building materials of the highest quality for everyone, thanks to bulk public sector procurement. We have already seen, for instance, how in New York State, the public housing agency NYCHA worked with a public utility, the New York Power Authority, to create a competition that yielded the country's first energy-efficient, apartment-sized refrigerator, which was manufactured in the United States. These fridges were installed throughout NYCHA, and old fridges were recycled in a plant in Syracuse, New York. This became the first Energy Star fridge of that size; the program slashed energy costs for public housing, and for apartment-dwellers across the country for years to come.¹¹ **A smaller investment in public housing would merely cause more procurement of existing appliances, lower-quality materials, and older building systems, which risk being obsolete on delivery. Today, public housing residents are exhausted and despairing at the low quality of work and materials used in the (extremely slow) maintenance of their homes.**

The proposed Green New Deal for Public Housing's level of investment would create community resilience centers located at public housing sites to prepare neighborhoods and cities for climate disasters like floods, heat waves, wildfires, and snowstorms. And this program **would create more vibrant neighborhoods, with commercial and community amenities (gardens, daycares, bookstores, grocery stores) built into public housing sites.** No other proposals for public housing include these visionary steps to turn public housing into green community infrastructure.

This level of investment would create better health outcomes for public housing residents and their neighbors, thanks to improved indoor environmental quality (eliminating mold, lead, dust, gas) and new on-site health clinics and services. For instance, **we estimate that in New York City's public housing, this proposal would cut asthma rates by 18 to 30 percent.**¹²

The provisions of this act would create sustainable, democratic governance structures allowing public housing resident leaders to shape and maintain the improvements to their homes and neighborhoods. Governance reforms are essential to improving

accountability of public housing management to its tenants.

Other estimates of capital improvement need for public housing attach a lower price tag—between \$70 and \$89 billion, depending on whether Rent Assistance Demonstration (RAD) or Choice Neighborhood funding is taken into account—but this smaller budget only covers basic repairs that would return public housing buildings to a level of quality and performance reminiscent of the 1970s, when many public housing sites were built. **In contrast, the Green New Deal for Public Housing places public housing—and public sector investment more broadly—at the center of the 21st-century green buildings economy: zero carbon, healthy, resilient community infrastructure.**

11. Cohen et al., "A Green New Deal for New York City Housing Authority (NYCHA) Communities," 20.

12. Cohen et al., "A Green New Deal for New York City Housing Authority (NYCHA) Communities," 6.

GREATER INVESTMENT, GREATER BENEFIT

A Green New Deal vision to deliver justice for disadvantaged communities and build green community infrastructure

In 2019, the Socio-Spatial Climate Collaborative, or (SC)2, McHarg Center, and Data for Progress estimated the cost—and positive outcomes—from implementing a Green New Deal (GND) for Public Housing. Our two reports outlined what the jobs, climate, and housing impacts of the GND for Public Housing would be at the national level,¹³ as well as for the New York City Housing Authority (NYCHA),¹⁴ the nation's largest public housing authority. **We attached a \$119–\$172 billion price tag to the national effort, including a \$48 billion cost to meet NYCHA's specific needs.** This would encompass improvements to all Section 9 units. These reports accompanied the introduction of H.R. 5185, the Green New Deal for Public Housing Act,¹⁵ which proposed a series of HUD-administered grant programs to fund the types of deep energy retrofits, jobs programs, and amenities that would be necessary.

We based our national estimates on scaling up the estimate in the 2010 HUD study (contracted to Abt) of capital repair needs (including project needs to 2030).¹⁶ Our low-end estimate of \$119 billion takes the HUD 2010 report's national estimate (\$89 billion), subtracts its estimate of NYCHA repair needs (at \$15 billion), and substitutes the more updated and thorough 2017 AECOM estimate of NYCHA repair needs over 20 years (\$45B).¹⁷

13. Cohen et al., "A Green New Deal for American Public Housing Communities."

14. Cohen et al., "A Green New Deal for New York City Housing Authority (NYCHA) Communities."

15. Alexandria Ocasio-Cortez, Green New Deal for Public Housing Act, Pub. L. No. H.R. 5185, 54 (2019), https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/OCASNY_053_xml.pdf.

16. Meryl Finkel, Ken Lam, Christopher Blaine, R. J. de la Cruz, Donna DeMarco, Melissa Vandawalker, Michelle Woodford, Craig Torres, David Kaiser, and Steven Winter, "Capital Needs in the Public Housing Program," *Abt Associates Inc.* 20 (2010), https://www.hud.gov/sites/documents/PH_CAPITAL_NEEDS.PDF.

The high end of our estimate, \$172 billion, scales up the lower estimate to reflect increased budget for deep green retrofits and additional community amenities. Moreover, given that the HUD 2010 report's estimate for NYCHA's repair needs was so much lower than the more detailed 2017 AECOM study, it is reasonable to assume that the 2010 report systematically understated retrofit and maintenance costs. Our scaling up of per unit retrofit costs was based in part on NYCHA's 2016 study of whole-building retrofit costs.¹⁸ (See Table 1 for more detail.)

Both before and after the release of these GND-affiliated proposals, other groups have produced their own estimates of what it would cost to undo the decades-long underinvestment in public housing that has left it in deep crisis. HUD commissioned a report in 2010 on capital needs that identified \$89 billion in necessary upgrades and maintenance activities, projected out to 2030;¹⁹ NYCHA commissioned a similar evaluation in 2017 that identified \$45.2 billion in costs.²⁰ NYCHA more recently produced a more ambitious, but as of yet unfunded, set of recommendations for low-carbon retrofits,²¹ many of whose ideas are included in the Green New Deal for Public Housing proposal.

The National Association of Housing and Redevelopment Officials (NAHRO) has estimated that the public housing's backlog for capital repairs is currently at \$70 billion.²² That number has become the basis of a suite of bills and proposals to inject \$70 billion of funds into national public housing. This number takes account of Rental Assistance Demonstration (RAD) and Choice Neighborhoods program money that has

17. STV AECOM PNA, "Final Report: Physical Needs Assessment 2017," New York City Housing Authority, 2018, <https://www1.nyc.gov/assets/nycha/downloads/pdf/PNA%202017.pdf>.

18. Alicia Glen, "NextGeneration NYCHA Sustainability Agenda," New York City Housing Authority, April 22, 2016, <https://www1.nyc.gov/assets/nycha/downloads/pdf/NGN-Sustainability.pdf>.

19. Finkel et al., "Capital Needs in the Public Housing Program."

20. STV AECOM PNA, "Final Report: Physical Needs Assessment 2017."

21. "NYCHA Climate Mitigation Roadmap: Meeting Local Law 97 through Energy Efficiency and Beneficial Electrification," New York City Housing Authority, 2020, <https://www1.nyc.gov/assets/nycha/downloads/pdf/NYCHA-LL97-Whitepaper.pdf>.

FUNDING FOR REPAIRS OVER TIME FOR PUBLIC HOUSING

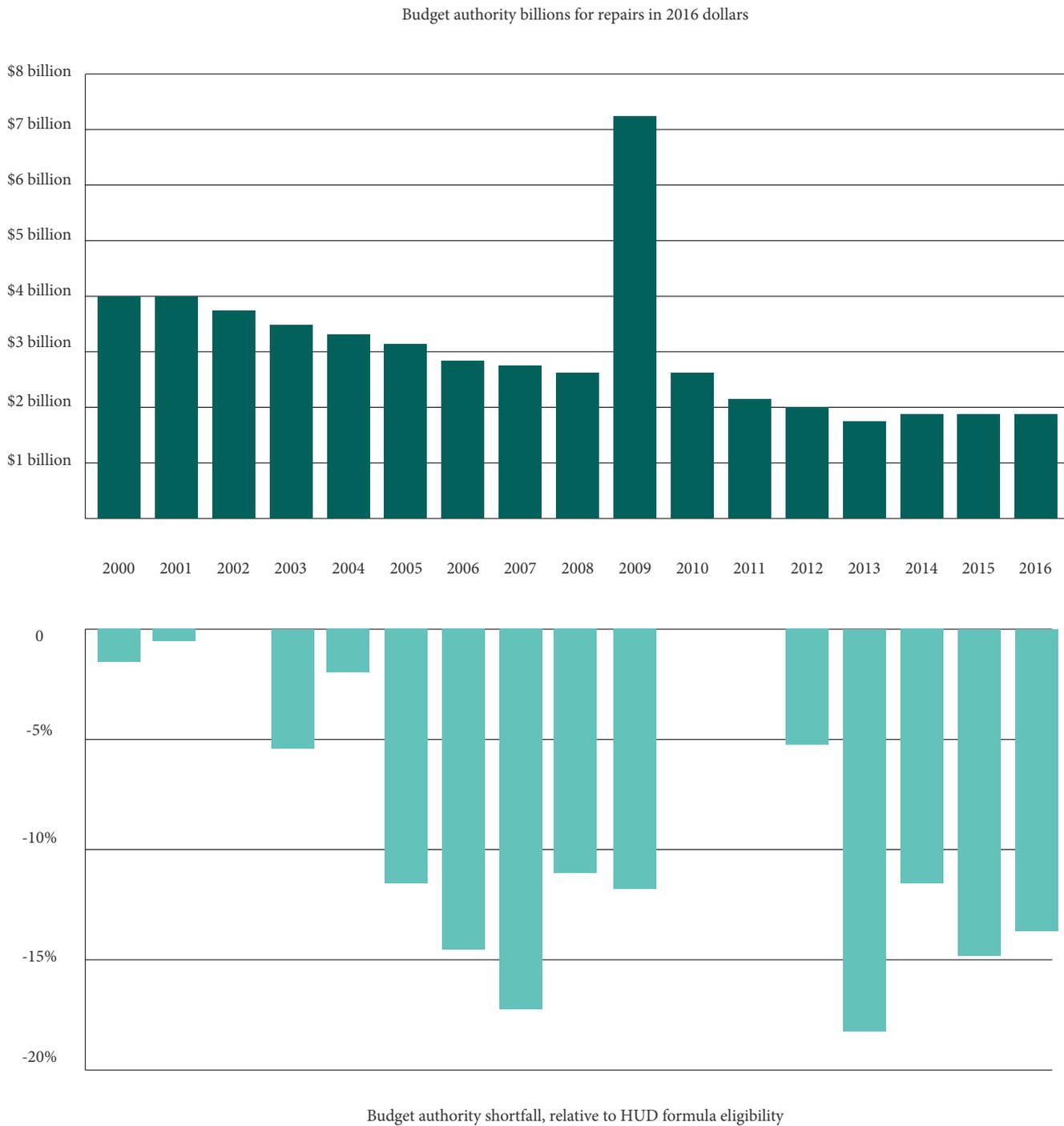


FIGURE 1. “Public Housing funding has fallen far behind need,” originally published by Center on Budget and Policy Priorities, <https://www.cbpp.org/public-housing-funding-has-fallen-far-behind-need>

been spent, but it is fundamentally based on the same underlying data and methodologies as HUD's 2010 study. A Green New Deal for Public Housing would stop RAD and ideally roll it back, by putting fully public housing on sustainable footing. We do not believe that RAD-funded retrofits meet the quality thresholds advanced in the Green New Deal for Public Housing vision; additional work on those units is likely needed.

Crucially, studies like HUD's 2010 evaluation only consider paying for building energy retrofits that would have a payback period of 12 years or less, and they have no explicit targets for energy efficiency or decarbonization. **In other words, the basis for many cost estimates is a framework that does not consider the ambitious green retrofits that are winning awards in other parts of the world for improving residents' quality of life while slashing energy costs.** A higher upfront investment will require a longer "payback," but the whole premise of President Biden's Build Back Better proposal, and his Justice 40 mandate, is that the public sector needs to make long-term investments in good-paying green careers, in the well-being of residents of disadvantaged communities, in racial justice, and in a carbon-free economy.

The prevailing cost estimates yielding the widely cited \$70 billion figure simply do not consider retrofits with higher up-front costs, but with all the longer-term cost-saving, carbon-free, and climate-resilient systems contemplated by the Green New Deal for Public Housing, whose co-benefits we outline below. We note that in 2016, NYCHA estimated that a conventional energy retrofit would cost \$94,000 per unit, compared to \$230,000 for a deep energy retrofit.²³ But the latter would have much greater health and environmental benefits, and would save much more energy long-term. But the latter would have much greater health and environmental benefits, and would save much more energy long-term. See Figure 1 above.

Different price tags are more than a product of different costing methodologies—they reflect vastly different visions for the role of public housing in the building sector, and differing levels of ambition for addressing climate change. The lower cost estimates propose basic repairs that return public housing buildings to a level of quality and performance reminiscent of the 1970s,

22. National Association of Housing and Redevelopment Officials, "Capital Fund Backlog," NAHRO, n.d., https://www.nahro.org/wp-content/uploads/2020/04/CAPITAL_FUND_BACKLOG_One-Pager.pdf.

23. "NextGeneration NYCHA Sustainability Agenda," New York City Housing Authority, April 22, 2016, <https://www1.nyc.gov/assets/nycha/downloads/pdf/NGN-Sustainability.pdf>.

when many public housing sites were built. In contrast, the Green New Deal for Public Housing places public housing—and public sector investment more broadly—at the center of a 21st-century project to transform all our buildings into healthy homes that fight climate change by abolishing carbon pollution. In this scenario, investment in public housing would catalyze the broader development, scaling, and cost reduction of green retrofit techniques, using a similar approach to that of many European governments.²⁴ As laid out below, this more holistic and strategic approach not only produces better health and employment outcomes for public residents, but has cascading benefits for nearby communities and the national economy.

The cascading benefits of the GND approach

The scope of improvements envisioned under a Green New Deal for Public Housing is clearly targeted towards slashing carbon emissions, and the projected annual **carbon emissions reductions of 5.6 million metric tons** should be considered one of the primary benefits of this more holistic approach. By tackling not only the climate change mitigation imperative, but also unemployment, poor housing quality, and a lack of essential services together, the Green New Deal for Public Housing brings other important benefits, listed below. Together, this holistic approach would make public housing an important component of climate mitigation and adaptation.

Labor/jobs

- Unlike the Abt and AECOM capital improvement reports, the Green New Deal recommendations provide specifically for the creation of a skilled and well-paid workforce that can market their skills on contracts both within and outside public housing. The labor required to carry out deep retrofits of public housing has the potential to create up to 240,000 jobs per year, including up to 95,000 skilled maintenance and construction jobs.
- There are grants for workforce development in the GND for Public Housing Act and provisions around prioritizing employment and apprenticeship opportunities for public housing residents.

24. Dimitris Mavrokefalidis, "EU Unveils New Energy Efficiency Strategy to Retrofit 35m Buildings," Energy Live News, October 16, 2020, <https://www.energylivenews.com/2020/10/16/eu-unveils-new-energy-efficiency-strategy-to-retrofit-35m-buildings/>.

Health and quality of life investments

- Many public housing units are plagued by mold, lead, toxins, and pests, which cause and/or exacerbate asthma and other respiratory problems. In Washington, DC, and across the country, children and families live in units that are almost uninhabitable and are causing residents severe health problems.²⁵ Deep green retrofits would abate these health concerns, leading to **lower health costs and better physical and mental health outcomes** for residents. While other capital needs assessments acknowledge some of the same issues (mold, lead paint, etc.), the recommended improvements target only immediate health and safety concerns, not larger interventions that improve longer-term health outcomes.
- The level of investment proposed here would address long-standing demands by public housing residents for the complete repair of all elevator systems; for the installation of modern intercom systems with cameras and screens, to enhance security; for full electrification of building systems using heat pump and associated technologies; for individual thermostats for each apartment; and for higher-quality construction and maintenance work, using higher-quality materials and fully modern appliances, that will last for years and offer a healthy, dignified home environment. Indeed, from building lock systems to mailboxes to bathroom fixtures, public housing units and buildings require a permanent, structural increase in the quality of work and materials. Depending on the relevant urban, suburban, rural, and tribal context, and depending on resident desires expressed throughout the retrofit process, these investments would meet specific needs in disadvantaged communities.
- Physical improvements to buildings would be accompanied by grants for health services and on-site clinics.

Cost savings (water, energy, future accrual costs)

- A deep energy retrofit, which might cost \$230,000 per unit in the most expensive scenarios (i.e., a poorly maintained tower complex) and likely much less in smaller developments, can produce up to **70 percent reductions in energy costs**. In contrast, the 2010 HUD-

commissioned report from Abt estimated that for an additional \$3,800 on top of the average per unit capital needs of \$80,000, housing authorities could implement a series of water and energy efficiency upgrades with a payback of 12 years or less. The interventions included in traditional retrofits like this generally produce between 10 and 30 percent of energy savings.

- A larger upfront investment in building systems, efficient appliances, and windows leads to greater energy cost savings and also positions housing authorities to comply with more stringent building performance requirements, like Local Law 97 in New York City.

Community and national economic benefits

- Public procurement of the materials and equipment is needed to implement green retrofits (e.g., energy-efficient windows, large building heat pumps, apartment-size induction stoves). These more cost-effective products will then be available to the wider market, lowering the cost and **increasing the accessibility of green retrofits** across the building sector.
- Demand within the public sector for the specialized workers and firms in the building trades that will complete the public housing retrofits will allow these same workers and firms to perfect their retrofit techniques, enabling them to offer more efficient and effective services to the building sector more broadly. This will massively speed up the process of decarbonizing the building sector.

Disaster mitigation and climate resilience

- Public housing that has been retrofitted and floodproofed has the potential to serve not only residents, but wider communities as well. The Green New Deal for Public Housing will convert public housing sites into **community resilience centers** through the purchase and installation of solar and energy storage, wall insulation of the highest quality to keep spaces from getting too hot or too cold during power outages and protect against wind and earthquakes. In addition to these physical interventions, resilience centers can also serve as a logistics hub to coordinate aid and services in times of crisis.

25. Morgan Baskin, "DCHA Says Thousands of Units Are Nearly Uninhabitable. Tenants Want to Know: What's Next?" *Washington City Paper*, February 14, 2019, <https://washingtoncitypaper.com/article/181681/dcs-public-housing-authority-says-thousands-of-units-are-nearly-uninhabitable-whats-next/>.

- The recent power and water outages in Texas illustrate the urgency of establishing functioning resilience centers that can protect public housing residents and other members of the community during natural disasters that disrupt the energy grid, transit systems, and food supply chains.

Community amenities

- Public housing sites are already home to essential community services, like daycare and senior centers. The Green New Deal for Public Housing Act expands on the role of public housing as a community hub by funding the establishment of **on-site commercial activities** like grocery stores, bookstores, and learning centers, alongside health and dental clinics.
- These services promise to improve health outcomes, create jobs, and generally improve quality of life for residents and neighbors.

Considerations for temporary displacement

- Deep green retrofits can be done quickly and with minimal disruption. However, the GND for Public Housing proposes to further mitigate the impacts of temporary displacement by building new public units that can serve as a hotel-like temporary residence for tenants who are displaced from their homes for a short period of time during the retrofit. These units would then serve as permanent homes for new tenants once the retrofitting of existing structures is complete. At the full cost of \$172 billion, we believe there would be budgetary space to accommodate short-term tenant housing in adjacent areas.
- Aside from the GND for Public Housing, none of the capital cost assessments incorporated the cost of housing residents during renovation.

Democratic governance

- Public housing residents know better than anyone what's needed to transform current units into dignified homes. The GND for Public Housing Act includes funding for up to \$1,000/month in stipends for resident association officers. This will ensure that decision-making processes for retrofit improvements and ongoing maintenance are participatory and democratic.

- The GND for Public Housing Act also provides for public housing residents to **vote on how to spend the majority of the profits from on-site renewable energy generation**. This will lead to new resident-driven amenities and stronger ties between residents and building management.

Defining the scope of capital improvements

Table 1 shows the disparity in proposed improvements to public housing in greater detail. However, it's worth highlighting the specific costing methodology used in the Data for Progress reports, since unlike the others, they didn't employ direct data collection or public housing unit inspection, and instead extrapolated from cost estimates done in prior evaluations.

The (SC)², McHarg, and Data for Progress cost estimates are based on scaling up the projected costs of the 2010 HUD Abt report, based on our analysis of other reports (especially those conducted by NYCHA) on likely costs of deep, whole-building retrofits, with additional budgetary space for broader investments in public housing as green community infrastructure. The (SC)², McHarg, and Data for Progress cost estimates are based on more recent, higher-quality studies.

COMPARING COST ESTIMATES FOR PUBLIC HOUSING RETROFITS

Scope	National		New York City			
	Plan	GND for Public Housing — National (2019)	HUD — Abt (2010)	GND for NYCHA (2019)	AECOM — NYCHA (2017)	NextGen NYCHA Sustainability Agenda (2016)
Total Cost		\$119–\$172B to meet capital backlog and all new needs accrued by 2030. The higher the level of investment, the more scope for workforce development, whole-building transformation, and enhanced community amenities.	\$89B (\$25.6B in 2010 dollars for existing capital needs—includes \$4.1–\$6.4B for improving energy and water efficiency; \$3.4B/year for ongoing accrual needs)	\$48B	\$45.2B over 20 years (includes \$3B for mechanical repairs— boilers, pipes, etc.)	N/A
Approximate cost per unit		\$150,000	\$82,125	\$270,000	\$250,000	\$230,000 per unit for deep retrofit, \$96,000 per unit for conventional retrofit
Timeframe		2020–2030	2010–2030	2020–2030	2017–2037	2016–2025
Methodology		Estimates based on scaling up 2030 capital needs, based on the 2010 Abt report. The low-end estimate of \$119B takes the Abt report's national estimate (\$89B), replaces its estimate of NYCHA repair needs (at \$15B) with the more updated and thorough 2017 AECOM estimate of NYCHA repair needs (\$45B). The high end of our estimate, \$172B, scales up the lower estimate to reflect increased budget for deep green retrofits, and additional community amenities.	Assessed 548 properties in 140 housing authorities to estimate existing needs; layered on accrual needs for replacement over 20 years	Multiplied short-term capital needs shortfall of \$32B by 1.5, since green retrofits would involve both capital repairs and new systems work, plus the creation of resiliency centers. Note that NYCHA estimates that deep energy retrofits cost \$230,000 per unit. A GND for NYCHA would also require funds to add clean energy, electricity storage, and community amenities, and cover additional costs from neglected maintenance since 2017.	Assessed 325 developments (20,000+ apartments); physical conditions of infrastructure, components in need of repair or replacement. For energy audit, placed buildings into 17 categories; audited 10% of each type (463 buildings).	N/A
Principal interventions required		Removal of all mold, lead, toxins; pest elimination; overcladding; electrified heat pumps for HVAC and water; Energy Recovery Ventilators (ERVs); efficient electric appliances; high-quality insulation; sub energy meters; rooftop solar; energy storage batteries; new community	The key cost drivers are windows, kitchens, and bathrooms, which account for nearly 40% of all capital needs. For energy efficiency: wall insulation, lighting, air sealing, efficient appliances, heat pumps.	Removal of all mold, lead, toxins; pest elimination; overcladding; electrified heat pumps for HVAC and water; Energy Recovery Ventilators (ERVs); efficient electric appliances; high-quality insulation; sub energy meters; rooftop solar; energy storage batteries; new community amenities	Bathrooms and kitchens (bathtubs, toilets, tile surrounds, sinks, refrigerators, stoves, kitchen cabinets, and related appurtenances). Replace pipes and walls affected by leaks	Roofs, façades, and pipes, mechanical exhaust systems; commercial-scale solar projects; Integrated Pest Management; heating and hot water system tune-ups
Energy cost savings		energy bills: up to 70%, water bills: up to 30%.	Not reported	35–70% of current energy costs, realizing \$200 to \$398M/year in energy savings; 10% of the annual capital expenditure	Not reported	No target; requires resident hiring and training plans in energy projects.
Jobs		240,000 jobs per year, including up to 95,000 on-site skilled maintenance and construction jobs	Not reported	33,000 jobs per year, including over 11,000 on-site skilled maintenance and construction jobs	Not reported	No target; requires resident hiring and training plans in energy projects.

TABLE 1. Comparing Cost Estimates for Public Housing Retrofits

GOOD GREEN WORK

Launching high-paying, unionized green careers in public housing communities

The Green New Deal is just as much a jobs program as it is an infrastructure intervention. The proposal to tackle decades of underinvestment in public housing through deep green retrofits can be structured to maximize the quality, security, and accessibility of union jobs across sectors. In keeping with President Biden's Justice 40 mandate, it invests disproportionately in disadvantaged communities. And few communities have suffered more structural disinvestment than public housing. Take levels of unemployment. **Nationally, we now estimate that from 2015 to 2019, unemployment in census tracts with public housing was 42 percent higher than the average in all other census tracts.**²⁶ The average unemployment rate in tracts with public housing was 7.97 percent, compared to 5.63 percent in tracts without public housing. Massive public, green investment will ensure that residents of disadvantaged communities will be prioritized for good union jobs in the new green economy.

Analysis by (SC)², the McHarg Center, and Data for Progress has shown that an aggressive program of deep green retrofits would **create up to 240,000 jobs nationally**, not only near public housing sites but around the country in places where required materials and technologies are produced.²⁷ On site, **up to of 95,000 career-track, high-paying jobs** would be created each year in skilled maintenance and construction. The 2019 Green New Deal for Public Housing Act called for 75 percent of on-site jobs to go to Section 3 workers—public housing residents and low-income workers in those communities. A 2021 revision to that law removes this onerous, artificial, and one-size-fits-all requirement. Instead, it adds stronger provisions that create concrete opportunities for public housing residents to enter union apprenticeship programs, which would allow them to become unionized trade workers with skills that will develop throughout their careers, allowing them to mobilize their skills in the green building sector within—and beyond—public housing.

26. We developed this estimate based on public data from the American Community Survey, and data from HUD on the location of public housing complexes.

Creating these jobs will come from taking the following actions:

- Expand registered apprenticeship and workforce development opportunities through the Department of Labor.
- Provide support for small businesses run by public housing residents.
- Require that workers be paid prevailing wage, and give preference to contracts with union workers.
- Incentivize local and domestic production of the materials and technologies needed for deep green retrofits to spur job creation in industries far beyond the construction trades.

Beyond sheer quantity, the Green New Deal for Public Housing will be good for labor quality, security, and accessibility. Here's how that can be done, in more detail.

Quality jobs across sectors

First and foremost, by instituting a strong **union preference** and requiring **prevailing wage** (per the Davis-Bacon Act) on all retrofit work, the 2021 Green New Deal for Public Housing can ensure that workers at the heart of the Green New Deal are paid well and fairly. Applying the Davis-Bacon Act to public housing investments would require that locally prevailing wages, as determined by the Department of Labor, be paid for all construction, alteration, or repair work. It would also ensure that workers are paid time-and-a-half for any time worked over 40 hours/week.

For example, an electrician working on a residential project in 2021 in Cleveland, Ohio, must make at least \$39.88/hour and a roofer \$16.85/hour.²⁸ The Green New Deal for Public Housing would further prioritize union workers by **supporting project labor agreements (PLAs), which establish the terms and conditions of employment** on a construction project and protect

27. Cohen et al., "A Green New Deal for American Public Housing Communities."

NEW DIRECT AND INDIRECT JOBS, CITYWIDE - BREAKDOWN BY SECTOR, FOR NEW YORK CITY

Industry	Estimated new jobs per year	Average wages
Construction and maintenance	11,942	\$81,866
Professional scientific and technical services	2,842	\$135,337
Administrative and waste management services	2,346	\$63,372
Real estate and rental and leasing	2,294	\$83,320
Health care and social assistance	2,022	\$50,970
Retail trade	1,778	\$44,103
Management of companies and enterprises	1,703	\$194,405
Durable goods manufacturing	1,429	\$62,082
Food services and drinking places	1,310	\$36,354
Finance and insurance	1,243	\$299,863
Other services	974	\$51,517
Education services	445	\$73,628
Wholesale trade	429	\$94,990
Arts, entertainment, and recreation	375	\$74,354
Transportation and warehousing	360	\$58,337
Accommodation	344	\$36,354
Information	305	\$150,909
Nondurable goods manufacturing	137	\$62,082
Utilities	38	\$127,672

TABLE 2. New direct and indirect jobs, citywide - breakdown by sector, for New York City. Originally published in Cohen et al., “A Green New Deal for New York City Housing Authority (NYCHA) Communities,” 22.

collective bargaining rights. To account for the fact that fewer minority- and women-owned businesses have union agreements in place, PLAs in places like New York City have “bring-along” provisions, under which, according to PolicyLink, “certified minority- and women-owned firms receive specific ‘bring-along’ which allows them to bring some of their non-union workforce to the project (in lieu of union-provided labor). For minority- and women-owned businesses that become signatory to the unions they have access to union training and standards for proficiency for all of their employees.”²⁹ Since PLAs work best for large-scale projects involving multiple trade unions, the bill makes an exemption for smaller projects with budgets under \$25 million. Using PLAs and mandating that prevailing wages be paid will also prevent the return of “workfare,” where low-income recipients of government assistance were hired onto public projects and paid low wages, which undercut the earning potential of other, primarily unionized, workers employed to do similar work at higher wages. Such “workfare” programs also cheated the workers themselves. Instead, the combination of provisions in the revised Green New Deal for Public Housing Act would protect all workers—and it would require that apprenticeship and pre-apprenticeship programs recruit aggressively in public housing communities, and provide a gentle onramp into the union apprenticeship process.

Second, similar to Maryland’s Workplace Fraud Act,³⁰ construction and landscaping workers with companies contracted to work on public projects should be assumed to be employees—not contractors—unless proven otherwise. This will ensure that union benefits and fair wages are conferred on more workers.

Investing in green retrofits will spur job creation across many sectors, far beyond the construction and maintenance jobs that will be created directly. In the case of New York City, \$48 billion invested in NYCHA over ten years would not only generate 12,000 jobs in construction and maintenance, but also indirectly lead to over 1,500 jobs in

manufacturing, 1,200 in finance and insurance, and almost 400 in arts and entertainment, as shown in Table 2.³¹ Many of these jobs will not disappear after retrofits are complete, as they will become the foundation for a new, green economy.

Secure, long-term jobs

As public housing authorities have seen their budgets cut over the last decades, they have turned to contractors and temporary employees to fill labor shortages. Within NYCHA, the number of staff has dropped by 30 percent, from almost 15,000 in 2001 to around 10,000 in 2019.³² The design and architecture teams lost over 50 percent of their capacity during the same period of time (445 employees in 1999; 201 in 2019) and the maintenance workers have seen their numbers dwindle too. This has clear impacts on the quality of building design, renovations, and maintenance. Contracting out construction management, technical repair, and other services does little to take advantage of institutional knowledge, and may slow down response times when problems arise. The Green New Deal for Public Housing should reverse this trend by **incentivizing the hiring of public employees and building up in-house technical capacity** to design, implement, and maintain retrofitted buildings. Staffing up housing authorities will also make it easier to do both pre-design investigation to uncover building quality issues before retrofitting begins and post-occupancy evaluations to improve retrofit techniques and meet residents’ needs. Both pre-design investigation and post-occupancy evaluation are often deprioritized in settings where employees are overworked or contractors on time-limited contracts.

The construction and maintenance phases of deep green retrofits will require jobs—both on-site and off—that last during the ten years of intensive Green New Deal investment and beyond. To maximize demand generated through procurement, the **Buy American**

28. Davis-Bacon Act Wage Determinations, Pub. L. No. OH20210008 (2021). https://beta.sam.gov/wage-determination/OH20210008/0?index=wd&keywords=&is_active=true&sort=-modifiedDate&date_filter_index=0&date_rad_selection=date&wdType=dbra&construction_type=Residential&state=OH&county=14449&page=1.

29. Kalima Rose and Judith Dangerfield, “Strategies for Addressing Equity in Infrastructure and Public Works,” PolicyLink, 2015, https://www.policylink.org/sites/default/files/pl_brief_nola_infrastructure_FINAL_0.pdf.

30. Maryland Department of Labor, “Are You Complying with the Workplace Fraud Act?—Worker Classification Protection,” <https://www.dllr.state.md.us/workplace/wcpcomplying.shtml>.

31. Cohen et al., “A Green New Deal for New York City Housing Authority (NYCHA) Communities.”

32. Victor Bach and Tom Waters, “Strengthening New York City’s Public Housing,” Community Service Society, July 2014, https://b3cdn.net/nycss/2c5a651f36299b9dbf_02m6vzhld.pdf; “NYCHA 2019 Fact Sheet,” New York City Housing Authority, 2019, https://www1.nyc.gov/assets/nycha/downloads/pdf/NYCHA-Fact-Sheet_2019_08-01.pdf.

Act should be applied, so that manufacturing jobs that help produce essential materials and technologies are secure in the long term. As the name implies, Buy American requires domestic procurement so long as the materials are reasonably available commercially. Where possible, grant programs should further incentivize local sourcing, as required by the Regional Materials LEED credit.³³ This minimizes energy use from transportation.

Procurement also provides a pathway for public support of small businesses, specifically those owned by public housing residents. A separate **small business program** nested within a Green New Deal for Public Housing could provide technical assistance and priority procurement opportunities for public housing resident-owned small businesses.

Accessible jobs

The labor intensity of deep green retrofits provides the opportunity to direct accessible job opportunities to people and places where precarious and poorly paid job options previously dominated. Provisions in H.R. 5185, the 2019 Green New Deal for Public Housing Act, specify a priority for grants that commit to hiring workers from **low to moderate income areas and those returning from incarceration**. In addition to targeting specific workers, green retrofits open up space for **extensive pre-apprenticeship and apprenticeship programs**. Pre-apprenticeship programs are especially important, as they can be readily adapted to meet changing market demand and prepare workers for entry into registered apprenticeship programs in the construction trades and other industries.

Apprenticeship programs use the “earn and learn” model, which allows participants to learn valuable skills while earning good wages. The Green New Deal for Public Housing calls for no less than 20 percent of individuals employed on a project to be part of a registered apprenticeship program, and should give priority to those run through unions. The structure to connect workers to union apprenticeships already exists through

the Department of Labor’s Apprenticeship.gov site,³⁴ which helps manage registered programs that already employ over 500,000 apprentices across the country. **This provides a direct vehicle for the training and hiring of public housing residents alongside other workers.** Outreach and recruitment strategies will need to be tailored to match the needs of public housing residents with the right set of apprenticeship opportunities.

As proposed in S.1769, the Offshore Wind Jobs and Opportunity Act,³⁵ the Green New Deal for Public Housing should also prioritize workforce grants for partnerships between unions and educational institutions like community colleges that **allow workers to attain a recognized postsecondary credential**. This will take advantage of pre-existing programs while strengthening local institutions.

As the bill continues to evolve, we would urge some additional labor provisions.

Allocate funding for permanently restoring and/or **raising staffing levels within housing authorities and other public entities in perpetuity**, to eliminate the need for contracting out to private firms. This is in line with several proposals for a federal jobs guarantee.³⁶ This would also help rebuild institutional knowledge and capacity for long-term design, construction, and maintenance work. The existing bill text offers sufficient funding for administering grants, but ongoing staffing beyond grants is also essential.

We would also **urge priority procurement from places and firms that are part of Just Transition initiatives** (i.e., employing former fossil fuel or utility workers). Note that there is public housing all across the country, and there are fossil fuel workers all across the country working in any number of sub-sectors. The Just Transition Listening Project has called for targeting procurement to under-resourced regions and urban areas to prepare them for the economy of the future. For example, in Los Angeles, the advocacy and organizing group Jobs to Move America has successfully pushed for government procurement to support public transportation and manufacturing jobs for local residents and displaced refinery workers.³⁷ We believe

33. LEED, “Regional Materials,” U.S. Green Building Council, 2009, <https://www.usgbc.org/credits/new-construction-schools/v2009/mrc5>.

34. Apprenticeship.gov, <https://www.apprenticeship.gov>.

35. Edward J. Markey, Offshore Wind Jobs and Opportunity Act, Pub. L. No. S.1769 (2019), <https://www.congress.gov/bill/116th-congress/senate-bill/1769/text>.

36. Mark Paul, William Darity, Jr., and Darrick Hamilton, “The Federal Job Guarantee—A Policy to Achieve Permanent Full Employment,” Center on Budget and Policy Priorities, March 9, 2018, <https://www.cbpp.org/research/full-employment/the-federal-job-guarantee-a-policy-to-achieve-permanent-full-employment>.

this measure would be very much in the spirit of the bill. **Priority contracts are needed for worker co-ops**, especially those owned in part by public housing resident members. The proposed legislation indicates support for worker co-operatives, but more could be done. As the New York City Network of Worker Cooperatives has suggested,³⁸ the definition of a minority business enterprise could be expanded to include co-ops that have a large percentage of minority members or whose members reside in the relevant jurisdiction. In addition, procurement officers should make an effort to solicit bids from worker co-ops.

37. J. Mijin Cha, Vivian Price, Dimitris Stevis, Todd Vachon, and Maria Brescia-Weiler, “Workers and Communities in Transition: Report of the Just Transition Listening Project,” Labor Network For Sustainability, 2021, <http://www.labor4sustainability.org/jt1p-2021/jt1p-report/>.

38. NYC’s Future Is Cooperative, “City Procurement,” n.d., <http://www.workercoop.nyc/en/procurement>.

CONCLUSION

No single policy can on its own solve the climate emergency or American housing crisis. But policies that tackle both at once, with environmental and social ambition, are policies that will do the greatest good, while building political support for even more ambitious policies later in the decade. Saving American public housing will be a massive benefit for public housing communities, the affordable housing sector more broadly, the green building industry, and millions of workers. In the process, such an intervention would not only directly eliminate all carbon emissions caused by public housing. It would also drive down the costs of green retrofits, while increasing firms’ and workers’ skills and capabilities. In 2021, leveraging public investment for social, environmental, and economic benefit should be a no-brainer. And under a Biden administration that has committed to delivering 40% of the benefits of its climate investments to disadvantaged communities, a Green New Deal for Public Housing is an essential policy tool for achieving that goal.