



# Building Progressive Infrastructure

How Infrastructure Investments Can Create Jobs,  
Strengthen Communities, and Tackle the Climate Crisis

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By Kevin DeGood, Alison Cassady, Karla Walter, and Rejane Frederick January 2019

Center for American Progress



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# Introduction and summary

Infrastructure is the foundation that makes the economy possible, shaping how Americans move, communicate, and earn a living. It is also essential to national competitiveness. When done right, infrastructure investments produce broad-based prosperity for American workers, facilitating social mobility and access to jobs, essential services, educational opportunities, people, and ideas.

Unfortunately, this social and economic foundation is crumbling. The American Society of Civil Engineers (ASCE) gives the United States an overall infrastructure grade of D+, estimating a more than \$2 trillion funding gap between needs and expected spending by all levels of government over the next 10 years.<sup>1</sup> This gap is troubling, because inadequate facilities drag down economic productivity—especially in growing, dynamic regions. Many smaller communities struggle to repair crumbling older facilities, pushing out businesses and creating a downward spiral of population loss and a reduced tax base.

At the same time, the global scientific community has reached a consensus that transformational change is needed to rapidly decarbonize the economy in order to avoid the most catastrophic consequences from climate change. The International Panel on Climate Change estimates that the world has a little more than a decade to take decisive action.<sup>2</sup>

Historically, infrastructure and protection of the environment have been treated as separate, with the former a foundational element of economic production and the latter an amenity—something nice to have but incidental to the economy and economic issues of wages, growth, and competitiveness. The increasing severity and frequency of catastrophic wildfires, droughts, floods, and hurricanes have laid waste to this false dichotomy. In truth, the economy and the environment are intricately linked and mutually reinforcing. Infrastructure investments not only facilitate growth, but they also affect the production of greenhouse gases and other harmful pollutants in both direct and indirect ways. Infrastructure investments should help the United States transform its economy away from fossil fuels and toward clean energy.

In addition, Congress should ensure that investments expand access to opportunity, raise wages, and improve job quality for millions of working Americans, as well as help rebuild communities left behind. Even as the overall unemployment rate has fallen, many workers have not received a pay increase in inflation-adjusted terms since the 1970s. By comparison, corporate profits have soared over that same period of time.<sup>3</sup> During 2018, real corporate earnings increased by more than 16 percent while average wages for workers rose by a meager 0.2 percent.<sup>4</sup>

There is a long overdue need for major new federal investments in infrastructure—but increasing federal spending alone is not enough. To ensure the benefits of federal investments are shared broadly, an infrastructure bill should include policies designed to protect labor rights; fight workplace discrimination; set high standards for wages and benefits; and support high-quality training and apprenticeships. Additionally, federal funds should be targeted to those communities facing the greatest need as well as redress the unequal burden of pollution and geographic isolation that neglectful and discriminatory investment policies and projects cause.<sup>5</sup>

The best opportunity to meaningfully address these challenges is a comprehensive package of national infrastructure investments designed to raise wages, rebuild struggling communities, and achieve a greenhouse gas reduction target. A federal infrastructure bill should have the following five characteristics:

- **Robust:** The United States faces an enormous infrastructure investment gap and pressing climate challenges that require immediate and substantial investment. Over the next 10 years, Congress should provide at least \$1 trillion in direct federal infrastructure spending above baseline after adjusting for inflation.
- **Comprehensive:** The bill should provide funding for sectors that have historically received federal support, including transportation, water, clean energy, affordable housing, community health and rural broadband internet.<sup>6</sup> Additionally, Congress should expand the scope of its support to include K-12 schools and child care, among other sectors.
- **Climate smart:** The bill should make a down payment on transforming the United States economy from one reliant on fossil fuels to one rooted in clean energy. The bill also should help states and cities plan for the impacts of climate change and build resilient and accessible infrastructure.

- **Raises wages and improves job quality:** Even with the unemployment rate at less than 4 percent, wages for working American have barely increased.<sup>7</sup> The bill should include a suite of policies designed to boost workers' wages and benefits, provide opportunities for advancement, and make it easier for workers to unionize, among other labor improvements.
- **Targeted, equitable, and transparent:** Federal funding should be targeted to those communities facing the greatest need. Resources should redress the harms of geographic isolation and excessive pollution caused by past and present infrastructure policies and projects, as well as racial discrimination. Moreover, the bill should ensure environmental review continues to provide transparency and public engagement in project planning.<sup>8</sup>

Infrastructure investments are about more than steel and concrete; they represent the direction the country should take. Making progressive investments will help to create thriving, healthy communities that deliver inclusive and sustainable prosperity for decades to come. This report discusses the need for a comprehensive infrastructure package, exploring the size and scope of current U.S. infrastructure investments and highlighting underinvestment in a number of important policy areas. It then provides more detail on financing the infrastructure investments, as well as making sure they support climate-smart policies—ones that help American workers and that are targeted, equitable, and transparent.

## Size and scope

The ASCE estimates a \$2 trillion shortfall in infrastructure spending by all levels of government over the next 10 years.<sup>9</sup> Yet, even this sobering estimate does not account for the unprecedented challenges climate change creates, the pressing needs of communities left behind during the economic recovery, and the need to address social inequity exacerbated by discriminatory infrastructure investment policies.

Currently, the federal government focuses most of its infrastructure spending on surface transportation through the Highway Trust Fund (HTF). The HTF is slated to become insolvent at the end of fiscal year 2021 and run a cumulative shortfall of \$159 billion for the period fiscal year 2022 through fiscal year 2029.<sup>10</sup>

While addressing this shortfall is important, surface transportation is only one area of critical need. To achieve inclusive, equitable prosperity and transformational decarbonization of the economy, federal infrastructure investments must break with business as usual in both scale and scope. This means dramatically increasing outlays for traditional infrastructure sectors as well as expanding federal support to include K-12 public schools, child care centers, and other facilities that serve as community anchor institutions.

Traditional infrastructure sectors, including transportation and water, have more clearly defined needs estimates. However, the following needs estimates do not take into consideration the substantial additional cost that climate change imposes. Beyond the usual wear and tear of heavy use, for instance, transportation agencies will need to reconstruct many facilities to withstand more frequent and severe flooding, higher temperatures, and stronger winds. At the same time, changing rainfall patterns will alter the chemistry of drinking water sources, adding to the cost and complexity of delivering safe drinking water.<sup>11</sup>

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## Transportation and water

The following are needs estimates for transportation and water facilities:

- **\$90 billion** for public transportation maintenance backlog<sup>12</sup>
- **\$360 billion** to improve the condition and performance of highways over 20 years<sup>13</sup>
- **\$157 billion** for airport repair and expansion<sup>14</sup>
- **\$37 billion** to improve ports and inland waterways<sup>15</sup>
- **\$472 billion** to deliver safe drinking water over 20 years<sup>16</sup>
- **\$271 billion** to treat wastewater over 20 years<sup>17</sup>
- **\$30 billion** to replace all lead drinking water service lines<sup>18</sup>
- **\$80 billion** to repair and improve levees over 10 years<sup>19</sup>

Unfortunately, even with these estimates in hand, the Congressional Budget Office reports that following the brief uptick in infrastructure spending as part of the 2009 American Recovery and Reinvestment Act, federal expenditures on transportation and water have fallen as a percentage of gross domestic product (GDP).<sup>20</sup>

Congress must increase spending on transportation and water but with a focus on lowering greenhouse gas emissions, creating equitable economic growth, and improving public health. This means that the federal government should prioritize investments that increase resilience and reduce dependence on automobiles; deploy nonpolluting alternatives such as electric vehicles; and increase affordable access to opportunity, including biking, walking, and public transportation. For water, this means prioritizing threats to public health such as clean air and water—especially among vulnerable populations—as well as improving the energy efficiency of drinking water and wastewater operations.

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## Community facilities

The need for robust federal investment does not stop with transportation and water. Laying the foundation for inclusive and equitable economic growth also means investing in the suite of facilities that local communities need to attract new economic development and that working families need to thrive. These include K-12 schools, child care centers, community health, affordable housing, and broadband internet, among others. Historically, however, these community facilities have received either no federal assistance or an amount woefully inadequate to meet local needs. For instance, there is no federal program to support public school construction and rehabilitation. By one estimate, underinvestment in capital construction and ongoing maintenance for K-12 schools exceeds \$46 billion annually.<sup>21</sup> Similarly, the federal government does not provide capital support for child care facilities.

Many sectors that are essential to rebuilding communities have substantial need but no standing cost estimates. Community redevelopment is one example. In fiscal year 2017, Congress appropriated \$3 billion for the Community Development Block Grant (CDBG) program.<sup>22</sup> The CDBG program supports a host of activities, including construction of affordable housing and community facilities. However, the number of localities that qualify for assistance has increased significantly while funding has not kept pace with inflation. As a result, the average annual entitlement grant to eligible local governments is a little more than \$200,000, which is down from a peak of roughly \$1.6 million in constant-dollar terms.<sup>23</sup> To say the least, this amount is not enough to meaningfully assist communities facing sustained economic hardship.

Beyond brick and mortar, access to affordable, high-speed internet is essential to economic development. According to the Federal Communications Commission (FCC), approximately 24 million American households lack high-speed internet.<sup>24</sup> Roughly 80 percent of these households are in rural areas.<sup>25</sup> Each year, several agencies, most notably the FCC and the U.S. Department of Agriculture, provide grants and loans for internet infrastructure and monthly service support, principally in rural areas. In fiscal year 2017, subsidies across the federal government totaled \$8.5 billion.<sup>26</sup> While important, these expenditures are modest compared with the estimated \$80 billion in potential costs to deploy high-speed internet connections to all American households.<sup>27</sup>

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## Clean energy

The needs of the energy sector are equally substantial. The path to true decarbonization requires investment and change from generating, transmitting, and storing electricity without pollution to using it more efficiently in U.S. homes, businesses, factories, and vehicles. Beyond adding proven clean energy technologies to the U.S. electric grid and buildings, the federal government should fund pilot and demonstration projects that advance the frontiers of clean energy and carbon removal to invest further in a clean energy future.

To truly address America's infrastructure, economic development, and climate needs, the federal government should spend \$1 trillion above baseline when adjusted for inflation over the next 10 years—an essential down payment on the future, considering the needs estimates above. These outlays should be comprehensive, covering transportation, water, affordable housing, community facilities, energy, K-12 schools, and rural broadband internet, among other areas.

# Further details of progressive infrastructure investments

The following sections provide more details about the robust financing required for a progressive infrastructure package, in addition to highlighting the necessity of climate-smart policies; policies that raise wages and improve job quality; and policies that are targeted, equitable, and transparent.

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## Financing

The United States has more than enough economic and fiscal capacity to make substantial, much-needed investments in its infrastructure—as it has done at other points in its history. In fact, the investments described above would cost significantly less than the tax giveaway that Congress passed in December of 2017. The \$1.9 trillion Tax Cuts and Jobs Act (TCJA) cut tax rates for the wealthiest individuals and corporations while creating deeply problematic loopholes that will lead to tax abuses and potentially encourage new offshoring of American jobs.<sup>28</sup> The TCJA represents an enormous and immoral upward redistribution of wealth and has already reduced federal tax revenue to just 16.5 percent of GDP—an exceptionally low level for a high point in the business cycle.<sup>29</sup> Repealing the most egregious provisions of the TCJA could provide more than enough tax revenue to cover the cost of comprehensive infrastructure investment, and the United States has available many other progressive revenue options as well.

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## Climate smart

At its core, climate change is an infrastructure problem. For the last century, the United States government, at all levels, has invested in infrastructure that centers around the consumption and combustion of fossil fuels. From how homes and businesses are powered to how people physically get from home to work, the burning of coal, oil, and natural gas has been inextricably embedded in the functioning of the U.S. economy. Local, state, and federal infrastructure decisions largely have reflected this reality. With each new coal-fired power plant or multilane freeway, the nation has been baking in decades of greenhouse gas emissions.

In addition, the impacts of climate change—including stronger storms, rising sea levels, and heat waves—are already straining the nation’s aging water, transportation, and energy infrastructure. These impacts will only grow more severe as the planet continues to warm. Low-income communities and communities of color are on the front lines of climate change, as their infrastructure is more likely to be older and chronically underserved. They also may have fewer resources with which to adapt to withstand these impacts or rebuild after a devastating storm.

For these reasons, infrastructure policy sits at the center of climate change policy. The United States cannot become a 100 percent clean energy economy at the pace and scale that the scientific community has said is needed without conscious and ambitious infrastructure policy intervention. At the same time, state and local leaders need federal help to build a strong and equitable defense against the climate impacts that are already here—and against the more damaging ones to come. Therefore, any infrastructure bill needs to tackle both parts of the problem: driving the clean energy transition to reduce carbon pollution while making communities more resilient to the climate change impacts that cannot be averted.

First, the bill should include robust spending to expedite the clean energy transition and make a down payment on the long-term and sustained investments needed to put the U.S. economy on a low-carbon path. Most of these investments are proven ideas using now-familiar technologies. They include installing more electric vehicle chargers and replacing dirty diesel buses with cleaner electric buses; deploying more clean energy; retrofitting homes and businesses to make them more energy efficient; repairing leaky natural gas pipelines; and modernizing the electricity grid to accommodate more renewable energy, just to name a few.

Second, the bill should ensure that all infrastructure investments—from roads and bridges to schools and hospitals—are built to stand the test of time, which increasingly will include the worst impacts of climate change. It is not a question of if the next extreme weather event or devastating wildfire will come, but when and how severe will it be. Any infrastructure bill needs to help communities in both rural and urban areas prepare for climate change impacts, particularly in flood-prone and under-resourced areas.

Given the urgency of the climate crisis, policymakers need to know that these investments will reduce carbon pollution and other greenhouse gas emissions. As such, House leadership should set a clear, ambitious, and specific goal for reducing carbon pollution through the suite of infrastructure investments.

Importantly, however, a single bill cannot solve a problem given the scope of climate change. Infrastructure investment therefore is just one element of a broad suite of policies that is necessary to decarbonize the U.S. economy by 2050, which is the date by which the global scientific community estimates carbon emissions must drop to zero to avoid catastrophic effects from warming.<sup>30</sup>

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## Able to raise wages and improve job quality

A robust and comprehensive federal infrastructure plan would create millions of jobs. However, in the absence of strong job quality standards, many of those jobs would pay low wages, provide few benefits, and offer too few opportunities for advancement.<sup>31</sup> This would not only harm American workers, but also put responsible businesses that respect their workers and offer decent pay and benefits at a competitive disadvantage.<sup>32</sup> And when workers are poorly compensated, research shows that taxpayers often bear hidden costs. First, the goods and services produced by low-road firms are often of poorer quality. Second, the government often must supplement workers' incomes with Medicaid, Earned Income Tax Credits, and nutrition assistance.<sup>33</sup>

For nearly a century, federal lawmakers have sought to uphold the basic guarantee that government spending should create good jobs through a variety of protections, such as prevailing wage laws and discrimination protections. Yet today, these protections are under constant attack and cover less than half of all federal spending.<sup>34</sup> Additionally, existing job quality standards too often allow employers to pay very low wages and do not protect workers attempting to form a union from employer opposition, leaving workers with little power to negotiate for better wages and benefits.

The bill should require all jobs created through federal infrastructure spending to provide family-supporting wages and benefits, opportunities for advancement, and a voice for workers on the job. This includes funds obtained through federal grants, loans, contracts, and public-private partnerships that include federal participation. Moreover, these standards should apply not only to initial construction work but ongoing maintenance, service, and operations jobs as well.

All jobs created by the bill should include coverage under existing prevailing-wage and benefit laws, as well as a \$15 wage floor so that the investment does not support poverty-wage jobs and helps build momentum for legislation to raise the federal minimum wage for all workers. The jobs should also include requirements that companies respect workplace laws, including workers' right to join a union, and that companies cannot attempt to persuade workers in the union selection process. Finally, the jobs

should expand training and apprenticeship programs as well as discrimination protections in order to raise workplace standards and help ensure that women, workers of color, and other historically disadvantaged groups are able to access decent jobs.<sup>35</sup> To help sustain American manufacturing, the infrastructure package should expand the coverage of Buy America and Buy American preference—which are federal procurement laws designed to maximize the use of U.S. materials, including steel, iron, and other manufactured goods—to include more types of spending programs, as well as strengthen monitoring and enforcement of existing standards.<sup>36</sup>

In the last session, progressive leaders in Congress made it clear that any infrastructure package must include prevailing-wage protections and contain endorsed protections on all government spending to ensure that workers who want to form unions are able to do so.<sup>37</sup>

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## Targeted, equitable, and transparent

Federal infrastructure programs overwhelmingly distribute money based on the geography of political power rather than need. Moreover, most federal programs function as lightly structured block grants for states, with few requirements about how these dollars are spent. This means that national policy goals have little meaning beyond the rhetorical. All too often, federal dollars flow to projects based on politics and industry pressure instead of to communities that face the greatest challenges and need.

Additionally, federal infrastructure policy does not account for the harms caused by investments that displace residents, create barriers to opportunity, and result in unequal infrastructure burdens. This means that Congress should set a national policy of redressing the harms caused by past and present projects and avoiding harm with future infrastructure projects. For example, constructing the interstate highway system tore through local communities, often siting routes through low-income areas and communities of color.<sup>38</sup> This resulted in displacement and dislocation from employment, services, and social networks—something that is especially true for Americans with disabilities. Even though the Americans with Disabilities Act (ADA) is approaching its 30-year anniversary, many Americans with disabilities still lack access to much of what society has to offer. Federal infrastructure investments should expedite the implementation of projects that achieve ADA compliance as well as reform infrastructure planning requirements to ensure that state and local governments better account for the needs of Americans with disabilities.

Yet state and local governments continue to plan and build infrastructure projects that create unequal burdens instead of maximizing community benefits. For example, when a port authority expands its maritime port complex to allow for larger cargo volumes, the regional economy and consumers nationally benefit. But residents living in proximity to the port or along connecting highway corridors disproportionately bear the weight of higher levels of harmful air pollution, noise, vibrations, accidents, and even reduced property values.

As discussed above, climate change will require major infrastructure investments to manage rising water levels, increased flooding, and more severe fires. These projects will present their own challenges, including the hard reality that certain at-risk communities will need to relocate to reduce their extreme weather exposure and to accommodate new facilities. Federal policy must recognize that infrastructure projects deliver both benefits and burdens—and it must start with a goal of promoting equity, inclusion, and restitution. This will ensure that federal dollars are not discriminatory in their intent or their effect. Moreover, federal infrastructure policy and funding must incorporate and support the needs of Americans with disabilities. Infrastructure and climate progress cannot come at the expense of foundational civil rights.

Increased federal spending must come with clear objectives for targeting resources to achieve national policy goals for environmental sustainability, community health, and inclusive economic development, among other areas. This means establishing transparent, regularly updated, and quantifiable performance metrics for both existing and new programs. Additionally, it involves continuing to require project sponsors to undertake a comprehensive environmental review under the National Environmental Policy Act with robust public engagement and disclosure of potential harms.<sup>39</sup> Only through regular and substantive community input will infrastructure projects deliver the maximum benefit with the least harm possible.

How the federal government spends money is just as important as how much and where money is spent. And performance management based on progressive metrics combined with public input is essential to ensuring that public dollars deliver the greatest social, economic, and environmental return on investment for the workers, families, and communities facing the greatest challenges.

# Conclusion

Comprehensive national infrastructure investment represents the best opportunity to meaningfully raise wages, rebuild struggling communities, and begin decarbonizing the economy. The case for bold, transformative investments is unambiguous and will require Congress to break with business as usual. This means dramatically increasing federal outlays and extending federal assistance to infrastructure sectors that have historically been neglected or underfunded. It also means targeting spending in ways that lift up struggling communities, reduce greenhouse gas emissions, and improve equity by expanding access to opportunity and redressing discriminatory policies and projects. Taken together, these investments will lay the foundation for inclusive, equitable, and sustainable prosperity for decades to come.

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## About the authors

**Kevin DeGood** is the director of Infrastructure Policy at the Center for American Progress.

**Alison Cassady** is the managing director of Energy and Environment Policy at the Center.

**Karla Walter** is the director of Employment Policy at the Center.

**Rejane Frederick** is the associate director for the Poverty to Prosperity Program at the Center.

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## Our Mission

The Center for American Progress is an independent, nonpartisan policy institute that is dedicated to improving the lives of all Americans, through bold, progressive ideas, as well as strong leadership and concerted action. Our aim is not just to change the conversation, but to change the country.

## Our Values

As progressives, we believe America should be a land of boundless opportunity, where people can climb the ladder of economic mobility. We believe we owe it to future generations to protect the planet and promote peace and shared global prosperity.

And we believe an effective government can earn the trust of the American people, champion the common good over narrow self-interest, and harness the strength of our diversity.

## Our Approach

We develop new policy ideas, challenge the media to cover the issues that truly matter, and shape the national debate. With policy teams in major issue areas, American Progress can think creatively at the cross-section of traditional boundaries to develop ideas for policymakers that lead to real change. By employing an extensive communications and outreach effort that we adapt to a rapidly changing media landscape, we move our ideas aggressively in the national policy debate.

