About the Study

Housing is Critical Infrastructure: Social and Economic Benefits of Building More Housing was prepared by Rosen Consulting Group for the National Association of REALTORS®. This report highlights the size of the existing underbuilding gap, consequences of underinvesting in housing, benefits of building more housing, the role of housing infrastructure in communities and the need for a once-in-a-generation response to address the nation’s housing shortage and affordability crisis.

About Rosen Consulting Group

Rosen Consulting Group (RCG) is a leading independent real estate economics consulting firm. Founded in 1990 and with offices in Berkeley and New York, RCG provides strategic consulting and unbiased investment guidance through all market cycles. RCG is a trusted advisor to leading banks, insurance companies, institutional investors, public and private real estate operators and industry trade groups. For more information go to www.rosenconsulting.com.
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EXECUTIVE SUMMARY

Following decades of underbuilding and demand, the state of America’s housing stock, which is among the most critical pieces of our national infrastructure, is dire, with a chronic shortage of affordable and available homes. The nation’s housing stock is around the nation has seen widespread under-construction and under-construction of new housing units. The demand-supply gap in housing during the last two decades, while the total stock of U.S. housing grew at an average annual rate of approximately 1.5 million units, the underbuilding gap in the U.S. totaled more than 6.8 million units.

The large gap in housing production contributed to an escalation in the cost of renting and a rapid increase in home prices, which resulted in an affordability crisis and an existing housing stock that is aging and increasingly in need of repair. All of the elements of the public and the economy have resulted from the underbuilding gap. The significance of the underbuilding gap is enormous and will require a major national commitment to build more housing of all types by expanding resources and addressing barriers to new development. New housing construction is an integral part of a national infrastructure strategy.

Underbuilding Housing

- The total stock of housing grew at an annual average rate of approximately 1.5 million units per year. This would represent an increase of more than 2 million housing units during the next 10 years, while accounting for historical underbuilding completions.
- The large gap in housing production contributed to an escalation in the cost of renting and a rapid increase in home prices, which resulted in an affordability crisis and an existing housing stock that is aging and increasingly in need of repair.
- The underbuilding gap dramatically shifted the age of the existing housing stock during the past two decades, increasing by 4 million people.
- The underbuilding gap significantly increased the number of households aged 25 to 34 years living at home.
- Underbuilding and the growing affordability crisis dramatically affected the age of the existing housing stock, which is among the most critical pieces of the country’s national infrastructure.

5Negative Consequences of the Underbuilding Gap

- Historically, from 1968 to 2020, the sector of economic activity that includes housing construction and renovation, residential building, and related engineering services accounted for approximately 3.0% of GDP (1960-2020).
- Residential fixed investment (RFI), accounted for approximately 5.0% of GDP, representing a significant shortfall. During the past 12 years (since 2008), RFI accounted for only 3.0% of GDP, representing a significant shortfall.
- The underbuilding gap greatly exacerbated the nation’s affordability crisis, with the underproduction of new housing units relative to household formation. The implied cumulative social cost was approximately 6.8 million units.
- The underbuilding gap significantly increased the number of households aged 25 to 34 years living at home.
- The underbuilding gap significantly increased the number of households aged 25 to 34 years living at home.

Executive Summary

The growing affordability crisis has resulted from the underbuilding gap, which has significantly outstripped demand for new homes and constrained the supply of housing units generally fueled by rapid increases in home prices. The underbuilding gap has significantly outstripped demand for new homes and constrained the supply of housing units generally fueled by rapid increases in home prices. The underbuilding gap has significantly outstripped demand for new homes and constrained the supply of housing units generally fueled by rapid increases in home prices.

In order to fill an underbuilding gap of at least 5.5 million housing units per year, the underbuilding gap in the U.S. totaled more than 6.8 million units.

In January 2021, the months’ supply of inventory plunged to 1.9 months, or 1.0 million homes available—the lowest level since tracking began in 1999—and one third of the historical norm. Inventories remained extremely low through March.

Following decades of underbuilding and underinvestment, the state of America’s housing stock, which is among the most critical pieces of the country’s national infrastructure, is dire, with a chronic shortage of affordable and available homes. The nation’s housing stock is around the nation has seen widespread under-construction and under-construction of new housing units. The demand-supply gap in housing during the last two decades, while the total stock of U.S. housing grew at an average annual rate of approximately 1.5 million units, the underbuilding gap in the U.S. totaled more than 6.8 million units.

The large gap in housing production contributed to an escalation in the cost of renting and a rapid increase in home prices, which resulted in an affordability crisis and an existing housing stock that is aging and increasingly in need of repair. All of the elements of the public and the economy have resulted from the underbuilding gap. The significance of the underbuilding gap is enormous and will require a major national commitment to build more housing of all types by expanding resources and addressing barriers to new development. New housing construction is an integral part of a national infrastructure strategy.
Dramatically increasing the pace of new home construction and increasing the supply of all types of housing is the only way to address the severe negative consequences from the enormous underbuilding gap that the nation faces. This would help lift the housing affordability challenges and promote economic opportunity.

While the major investment in the interstate highway system proved to be a critical step on the evolution of the nation’s transportation network, it was also a major contributor to the negative ramifications of the highly segregated neighborhoods of concentrated poverty. Infrastructure for Inclusive Communities

Increasing and preserving the supply of affordable housing—especially in areas connected to good schools, well-paying jobs, and transportation—will help more families climb the economic ladder and help communities meet their workforce needs.

Large-scale investment in the national housing market, including considerable new federal income taxes related to the costs of new housing units, is another important case of inequality resulting from narrowly-centric approach that takes into account the cost burden of utility bills, as well as access to and resilience of existing energy infrastructure, effectively reduces housing affordability and limits the productivity of many communities around the country. This underscores the need for coordination between federal, state and local entities and other positive fiscal and socioeconomic impacts.

Economic, Fiscal and Social Benefits of New Housing Construction

The Economic Multiplier Effects of Spending on New Housing Construction are comparable to those of renewable energy spending on infrastructure and other types of infrastructure spending, such as construction of highways and streets.

Reduce the Supply Deficiencies of Housing Construction

The total economic impact of building 550,000 additional new homes per year for the next 10 years would support an estimated 2.8 million new jobs, spread across numerous sectors and industries. This additional new residential construction would also be expected to generate more than 2.3 million new federal, state and local tax revenues, including $35 billion in federal taxes, reflecting a wide range of activity, including considerable new federal income tax revenues, extending into numerous areas of the economy, including significant employment gains in the immediate term, increased income generated and induced measures.

Policy Considerations: The Crisis Demands a Once-in-a-Generation Response

Increasing and preserving the supply of affordable housing—especially in areas connected to good schools, well-paying jobs, and transportation—will help more families climb the economic ladder and help communities meet their workforce needs.

While there are a wide range of potential pathways that could help to increase the pace of housing construction, considering the magnitude of the problem, measurable progress could help lift the housing affordability challenges and promote economic opportunity.

The uneven energy burden on different socioeconomic groups is another important case of inequality resulting from narrowly-centric approach that takes into account the cost burden of utility bills, as well as access to and resilience of existing energy infrastructure, effectively reduces housing affordability and limits the productivity of many communities around the country. This underscores the need for coordination between federal, state and local entities and other positive fiscal and socioeconomic impacts.
Among many other promising ideas, housing infrastructure investments should seek to:

- Address large shortages in capital and lending for the development of affordable housing by expanding resources and maximizing the potential of existing programs.
- Incentivize shifts in local zoning and regulatory environments to substantially increase the quantity and density of developable residential space.
- Increase housing supply by promoting conversions of older or underutilized commercial space.
- Expand capacity for residential construction by applying federal resources to help address construction capacity challenges such as rising construction costs and labor and material shortages.
- Perhaps most importantly, addressing the national underbuilding gap will require a coordinated approach to planning, funding, and development of all forms of infrastructure to not only build more housing but also build better housing that will be more inclusive and well-integrated into local communities. In particular, mechanisms to achieve these goals include strengthening and expanding the existing Affirmatively Furthering Fair Housing (AFFH) framework, a comprehensive recognition of the need for genuine community engagement in all types of infrastructure development and systematic adoption of planning tools such as fair housing and equity impact analyses.

While supply solutions represent long-term infrastructure solutions vital to the future of the nation, these approaches will necessarily take time to implement, and will undoubtedly need to be combined with a range of demand-side efforts and structural changes to expand access, level the playing field, and address the ongoing challenges of racial and socioeconomic equity in our housing and communities.
Housing Is Critical Infrastructure: Social and Economic Benefits of Building More

I. Introduction: Housing Is Critical Infrastructure

The Department of Homeland Security defines critical infrastructure as:

“the physical and cyber systems and assets that are so vital to the United States that their incapacity or destruction would have a debilitating impact on our physical or economic security or public health or safety. The nation’s critical infrastructure provides the essential services that underpin American society.”

“Affordable housing should be viewed as infrastructure with an adequate supply assured through planning and development. The availability of safe, decent, and affordable homes is critical to the ability of families and communities to thrive.”

The Department of Homeland Security defined critical infrastructure as:

“Affordable housing is a component of housing infrastructure and a long-term asset that helps families by connecting them to resources. It ensures a place to call home for everyone, especially those in need of support.”

The Department of Homeland Security defined critical infrastructure as:

“Safe, decent, and affordable housing is a vital part of our nation’s infrastructure. It is an impediment to building more housing and the opportunity to pursue the path of homeownership, especially for those middle-class families with an acute shortage of available housing, an ever-worsening affordability crisis, and a chronic shortage of affordable homes.”

I. Introduction: Housing Is Critical Infrastructure

The infrastructure that forms the backbone of our economy and our society is in dire shape, with chronic shortages of affordable and available homes. Underbuilding and underinvestment have led to a growing number of households being priced out of the housing market, while the stock of existing housing has fallen into disrepair, exacerbating a wide range of social and economic challenges.

Despite the importance of housing as infrastructure, the national strategy to build infrastructure for the 21st Century is a powerful tool to close the existing underbuilding gap and the need for a once-in-a-generation holistic policy response to address the nation’s chronic housing shortage and deteriorating housing affordability crisis.

Leading research institutes, policy think tanks, academics and local government agencies have identified the following as:

1. The size of the existing underbuilding gap
2. The negative consequences of underbuilding and underinvestment
3. The role of housing infrastructure in building inclusive communities
4. The economic, fiscal and social benefits of building more housing
5. The need for a comprehensive, coordinated national strategy to build infrastructure for the 21st Century

In order to demonstrate the nature and urgency of the problem, this report seeks to highlight the size of the existing underbuilding gap, the negative consequences of underbuilding and the need for a once-in-a-generation holistic policy response to address the nation’s chronic housing shortage and deteriorating housing affordability crisis.
II. Underbuilding Housing

The United States is in the midst of a severe housing shortage as a result of a persistent underproduction of housing during the last decade.

From 1968 through 2000, the annual number of new housing units completed in the United States averaged 1.5 million. However, housing construction in the U.S. averaged only 950,000 new units from 2008 to 2020 and remained less than 1.3 million units in 2020, despite a recent, considerable increase in construction activity.

Chronic Underproduction of Housing Units

While the total stock of U.S. housing grew at an average annual rate of 1.7% from 1968 through 2000, the U.S. housing stock grew by an average annual rate of 1% in the last two decades and only 0.7% in the last decade, or less than half of the longer-term historical growth.

When compared with the long-term average (1968-2020), which includes the period of dramatic underbuilding immediately following the Great Recession, the shortfall in housing completions totaled 5.8 million housing units since 2008. In order to better account for the period of elevated housing construction during the mid-2000s that preceded the onset of the Great Recession, RCG also examined the pace of housing production during the past 20 years. Even inclusive of the mid-2000s construction boom period, compared with the prior historical period (1968-2000), when housing completions averaged approximately 1.5 million housing units per year, the underbuilding gap in the U.S. totaled more than 5.5 million housing units in the last 20 years.

It is also critical to note that the underproduction of the last decade took place in all building types. Especially in multifamily buildings from 2008 through 2020, the average annual rate of housing unit completions decreased from 74,000 to 19,000. The historical underbuilding gap in the last 20 years increased dramatically to 1.1 million units in 2008 through 2020 compared with the long-term average, for a cumulative gap of approximately 2 million single family homes.

This gap placed severe strain on the single family housing market. It created a variety of issues including a rapid decline in single family housing affordability and limited access to homeownership. While this underproduction of housing contributed to numerous major challenges, these issues were compounded by broader trends creating a growing housing shortage and exacerbating the affordability crisis across the United States.

Historical Residential Completions (Units)

<table>
<thead>
<tr>
<th>Period</th>
<th>Average Annual Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968-2000</td>
<td>1,500,000</td>
</tr>
<tr>
<td>2001-2020</td>
<td>1,225,000</td>
</tr>
</tbody>
</table>

Cumulative Gap 2001-2020: 5.5 million units

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>1,041,000</td>
<td>940,000</td>
<td>101,000</td>
<td>2,020,000</td>
</tr>
<tr>
<td>2-4 Unit</td>
<td>74,000</td>
<td>19,000</td>
<td>55,000</td>
<td>1,100,000</td>
</tr>
<tr>
<td>5+ Unit</td>
<td>387,000</td>
<td>267,000</td>
<td>120,000</td>
<td>2,400,000</td>
</tr>
<tr>
<td>Total Completions</td>
<td>1,501,000</td>
<td>1,225,000</td>
<td>276,000</td>
<td>5,520,000</td>
</tr>
</tbody>
</table>

Sources: Census, RCG

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Multifamily housing and elevated demand out of the single-family market placed a large burden on renter households and limited the ability for these households to save for major life events or spend money on goods or services other than housing needs. The starkest underbuilding shift was for units in two-to-four-unit structures, a segment known as the 'missing middle' of housing production, which includes duplexes, triplexes and as well as smaller apartment and condominium buildings.

Production of two-to-four-unit structures fell by nearly 75% during the last two decades, when compared with the long-term average from 1968 to 2000. The underproduction of these small multifamily buildings led to a large undersupply of what were historically more affordable homes and apartments, further exacerbating the affordability crisis across the country.

Demand-Supply Gap

While the underproduction of units measured through comparing historical trends with more recent trends provides a straightforward assessment of the issue, this metric of historical building does not directly account for demand-side factors. As an alternative method of calculating the underbuilding gap, RCG also compared housing production to household formation. Using these measures, household formation alone exceeded housing production by nearly 3.2 million housing units from 2010 to 2020. However, this method does not account for the destruction of existing homes due to natural disasters, and it does not consider the number of household holdings, occupying vacation and second homes.

The shortfall in residential housing production extended across all regions of the country, with the East Coast regions reporting the largest shortfall. The shortfall in housing production, which increased significantly from the available data from the Department of Housing and Urban Development, has resulted in the permanent loss of over 6.8 million housing units or an annual average of approximately 325,000 units lost. The shortfall in residential housing production has translated to more than 3.6 million housing units lost from 2010 through 2020.
The underbuilding gap extends across almost every major city in the country. Based on a simplifying assumption of two-earner households, it would be reasonable to expect demand for one housing unit for every two jobs created in a given housing market. However, by this measure, even metropolitan areas typically thought of as having relatively low barriers to building significantly underbuilt housing.

### Residential Completions by Region

<table>
<thead>
<tr>
<th>Year</th>
<th>South</th>
<th>West</th>
<th>-IDWEST</th>
<th>Northeast</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>2.0</td>
<td>1.5</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2008</td>
<td>1.5</td>
<td>1.0</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>2016</td>
<td>1.0</td>
<td>0.5</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>2020</td>
<td>0.5</td>
<td>0.2</td>
<td>0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Census

### Annual Residential Completions by Region

<table>
<thead>
<tr>
<th>Year</th>
<th>South</th>
<th>West</th>
<th>-IDWEST</th>
<th>Northeast</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>700</td>
<td>600</td>
<td>500</td>
<td>400</td>
</tr>
<tr>
<td>2008</td>
<td>600</td>
<td>500</td>
<td>400</td>
<td>300</td>
</tr>
<tr>
<td>2016</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
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<tr>
<td>2020</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
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</table>

Source: Census

### Most Underbuilt Markets by Metro Area Size (Pre-Pandemic)

<table>
<thead>
<tr>
<th>Metro Size</th>
<th>Metropolitan Areas</th>
<th>State</th>
<th>Jobs Added</th>
<th>Units Permitted</th>
<th>Units Permitted / 2 Jobs*</th>
<th>Underbuilding Gap (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>Riverside-San Bernardino-Ontario</td>
<td>CA</td>
<td>390,000</td>
<td>107,000</td>
<td>107,000</td>
<td>107,000</td>
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<tr>
<td></td>
<td>Los Angeles-Long Beach-汆儿alia</td>
<td>CA</td>
<td>440,400</td>
<td>113,200</td>
<td>113,200</td>
<td>113,200</td>
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<tr>
<td></td>
<td>Detroit-Warren-Dearborn</td>
<td>MI</td>
<td>200,600</td>
<td>43,700</td>
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<td></td>
<td>San Diego-Carlsbad</td>
<td>CA</td>
<td>212,300</td>
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<tr>
<td></td>
<td>Miami-Fort Lauderdale-West Palm Beach</td>
<td>FL</td>
<td>437,200</td>
<td>67,600</td>
<td>67,600</td>
<td>67,600</td>
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<tr>
<td></td>
<td>Chicago-Naperville-Elgin</td>
<td>IL-IN-WI</td>
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<td>55,450</td>
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<td></td>
<td>New York-Newark-Jersey City</td>
<td>NY-NJ-PA</td>
<td>1,102,100</td>
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<td>Boston-Cambridge-Newton</td>
<td>MA-NH</td>
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<td>Phoenix-Mesa-Scottsdale</td>
<td>AZ</td>
<td>437,400</td>
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<td>Grand Rapids-Wyoming</td>
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<td>San Jose-Sunnyvale-Santa Clara</td>
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<td>Sacramento-Roseville-Arden-Arcade</td>
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<td>Providence-Warwick-Rhode Island</td>
<td>RI-MA</td>
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<td>Milwaukee-Waukesha-West Allis</td>
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<td>Modesto</td>
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<td></td>
<td>Lancaster</td>
<td>PA</td>
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<td>Lansing-East Lansing</td>
<td>MI</td>
<td>18,800</td>
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<td></td>
<td>Worcester</td>
<td>MA-CT</td>
<td>24,100</td>
<td>8,050</td>
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<td>Allentown-Bethlehem-Easton</td>
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<td>51,600</td>
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<td></td>
<td>Fresno</td>
<td>CA</td>
<td>73,500</td>
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<td>Oxnard-Thousand Oaks-Ventura</td>
<td>CA</td>
<td>29,400</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
</tr>
</tbody>
</table>

Note: *A value of 1.0 implies that one unit would be permitted for every two jobs, a rough proxy for household demand.

Sources: Census, RCG
From coast to coast, border to border, in cities large and small, in urban communities and in suburbs, it is clear that the United States has fundamentally underbuilt housing, a fact that has led to ever-increasing affordability challenges and financial instability for millions of households.

**New Supply Needed to Close the Gap**

Looking ahead, in order to fill an underbuilding gap of approximately 5.5 million housing units during the next 10 years, while accounting for historical growth, new construction would need to accelerate to a pace that is well above the current trend, to more than 2 million housing units per year (approximately 550,000 more than the 1.5 million historical average). This would represent an increase of more than 700,000 units per year, or approximately 60%, relative to the pace of housing production in 2020 of less than 1.3 million units.

To provide further context, nationally, new housing starts reached a seasonally adjusted annual rate of slightly more than 1.7 million units in March 2021. This increase was a significant acceleration from previous years, and marked the highest pace of housing starts since 2006. However, emphasizing the need for large-scale investment to expand housing production, even if building were to continue at the current pace—the most rapid pace in more than a decade—it would still take more than 20 years to close the 5.5 million-unit housing gap.

| Housing Completions Needed Annually to Close the Underbuilding Gap (Units) |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Variable                    | 10-Year Period  | 15-Year Period  | 20-Year Period  |
| Return to Historical Norm   | 1,501,000        | 1,501,000        | 1,501,000        |
| Additional Units to Close Gap | 552,000          | 368,000          | 276,000          |
| Total Annual Completions Needed | 2,053,000       | 1,869,000        | 1,777,000        |

Sources: Census, RCG
In terms of lost economic activity, this prolonged shortfall in residential fixed investment translated to a $4.4 trillion gap in housing investment during the past two decades (2001-2020), compared with a business-as-normal scenario in which residential investment remained at the long-term average of 5% of GDP (1960-2020). Alternatively, if the RFI during the past two decades is compared with the prior historical period (1960-2000), when the share of GDP averaged 5.6%, this gap would be significantly larger, with an estimated underinvestment in housing of approximately $6.4 trillion.

Limited Household Formation

Underbuilding and the growing affordability crisis dramatically limited the pace of household formation, particularly among millennials in the past decade. In fact, the number of adults aged 25 to 34 years living at home with parents surged by 2.5 million since 2010 and more than doubled from 2000 to 2020, increasing by 4 million people. Based on a conservative assumption of two adults per millennial household, the increase since 2010 would represent an enormous pool of 1.25 million potential households, reflecting the large scale of pent-up housing demand that could be unlocked if there was sufficient affordable and available housing.

Moreover, it is worth noting that this does not consider what would likely be significant demand from single-person millennial households. The addition of this demand from unformed households to the aforementioned figures would significantly increase the underbuilding gap, further highlighting the need for dramatic policy intervention.

Lost Economic Activity from Residential Underinvestment

<table>
<thead>
<tr>
<th>Time Period</th>
<th>RFI Average Share % of GDP</th>
<th>Gap (Missing Residential Investment 2001-2020 in Tril.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td>n/a</td>
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<tr>
<td>0%</td>
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</tr>
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</tr>
<tr>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Economic Activity from Residential Fixed Investment (Inflation-Adjusted)

- Cumulative Gap 2001-2020: $4.4 trillion

- Change since 2010: +2.5 million
- Change since 2000: +4 million

Residential Underinvestment

The underbuilding gap of the last two decades produced a wide range of negative externalities and contributed to a series of major consequences that have severely affected communities across the U.S.

Residential Underinvestment

The vast scale of the underbuilding and the associated lack of residential investment cost the U.S. economy trillions of dollars in lost economic activity in recent years. Historically, the sector of economic activity that includes housing construction and renovation—residential fixed investment (RFI)—accounted for approximately 5% of total GDP during the past 20 years. Since RFI accounted for only 3.0% of GDP during the past 12 years, this decline in investment represented a significant decline in investment in housing infrastructure relative to the size of the national economy. Even elevated building activity during the period of elevated building in the mid-2000s, RFI averaged 3.8% of GDP during the past 20 years.

Share of GDP

- Long-Term Average (1960-2020)
- 5.0%

- 1960 to 2000 Average
- 5.6%

- Cumulative Gap 2001-2020
- $4.4 trillion

Adults 25 to 34 Living At Home with Parents

- Change since 2010: +2.5 million
- Change since 2000: +4 million

Limited Household Formation
Aging Existing Housing Stock

In addition to the negative impact on the ability of new households to form, the underbuilding gap dramatically shifted the age of the existing U.S. housing stock during the past two decades. As of 2000, prior to the early 2000s housing boom and subsequent extended period of underbuilding, one third of the U.S. housing stock was more than 40 years old, while slightly more than 16% was 10 years old or newer. In contrast, by 2019, the majority of housing units were 40 years old or older, while the share of homes built in the last 10 years declined rapidly to less than 7.5%. The aging stock of housing not only increases ongoing maintenance costs, but also makes it likely that more units will begin to reach the point of functional obsolescence in the coming years, a factor that would further contribute to the loss of existing stock, as described earlier, and further reduce available housing, expanding the demand-supply gap. This problem is even more apparent in some of the major northeastern cities in the U.S., such as New York, Boston and Philadelphia, where more than 60% of the housing stock was built more than 50 years ago, as of 2019. However, the issue is most acute in many industrial hubs such as Buffalo, Pittsburgh and Cleveland, where this share is 70% or more. The aging housing stock across the country poses a significant challenge going forward as these homes continue to deteriorate and are increasingly removed from the housing stock, further contributing to the underbuilding gap and hampering the ability of households to shift to homeownership or the capacity to house a greater number of households, a factor that would further reduce available housing, expanding the demand-supply gap.

Unsustainable Strain on the Housing Market

In addition to these issues, underbuilding placed a significant strain on the for-sale housing market in recent years, as the inventory of homes available for sale steadily declined prior to the pandemic, before reaching historic lows amid the pandemic. Specifically, during the period from 1996 through 2016, the months’ supply of existing for-sale housing averaged 6.1 months, which translated to a monthly inventory of 2.5 million homes available for sale. However, from 2017 to 2019 the average months’ supply of inventory declined to 3.9 months, or a monthly inventory of 1.8 million homes available for sale. In and of itself, this posed a major challenge to the U.S. housing market as the supply of for-sale housing and access to the American Dream of homeownership was severely constrained by a lack of inventory. While there were numerous factors contributing to this trend, the prolonged period of underbuilding was undoubtedly a major factor that contributed significantly to the problem. More recently, the COVID-19 pandemic greatly exacerbated this issue. In January 2021, the supply of inventory plunged to 1.9 months, or 1.0 million homes available—the lowest level since tracking began in 1999—and one third of the historical average. The situation did not improve significantly and the number of homes available for sale continued to dwindle, reaching an extremely constrained level of 1.0 million homes available in March 2021, one third of the historical average. The situation did not improve significantly through March, and the number of homes available for sale was 28.2% less than in March 2020. This extremely constrained level of supply limits the ability for households to a) shift to homeownership and buy a home, b) move up or c) downsize, and in-turn, vacate the stock they currently occupy. This inhibits the normal functioning of the housing market and limits the natural tendency for housing units to transition to a greater level of affordability over time as buildings age and higher-income occupants of older buildings are displaced, often choosing to reside in newer stock of homes or apartments that are more affordable, a transition that is increasingly constrained by a lack of inventory.

Inventory of Existing Homes for Sale

Source: NAR

Months Supply of Existing Homes for Sale

Source: NAR
Housing Affordability Crisis

The demand-supply gap in housing during the past two decades, a constrained supply of housing units generally, fueled rapid price increases that outstripped income growth. Prior to the rapid home-price growth during the last two decades, the median home price in the U.S. increased by nearly 30%, cumulatively, while the median household income increased by less than 11% during that period. This significantly outpaced rapid increases in home price growth that outstripped the growth in median income, making the median home price increasingly unaffordable. The RCG measure of affordability, which utilizes traditional mortgage and down payment assumptions to determine the share of households able to afford the median-priced home, showed that housing affordability decreased in 45 of the 50 states from 2012 to 2019. In fact, among these states, the share of households able to afford the median-priced home declined by an average 7.2 percentage points. The largest declines were in states with sizable population growth like Nevada, Utah, and Idaho, as well as states with sizable population growth like Georgia. In all of these states, the share of households able to afford the median home price declined by more than 15 percentage points (as seen in the nearby maps). Broadly, single family housing affordability declined across the country, from the Sunbelt to the Snowbelt. In this strained environment, addressing the underbuilding gap that the nation faces would help alleviate some of these affordability challenges and promote economic opportunity.

In the for-sale housing market, improving single family affordability would expand pathways for wealth building and homeownership, especially for segments of the population which have been unable to do so in recent decades. This includes those with large student loan burdens, low-to-moderate income households and households of color. In fact, with a gap between Black and White (Non-Hispanic) homeownership of nearly 30 percentage points, the national racial homeownership gap is as wide as it was in the 1960s, before the passage of the Fair Housing Act of 1968, when housing discrimination was still legal. Considering the current challenges, expanding the supply of affordable housing will be critically important to support increased racial equity.

More broadly, increasing access to affordable and sustainable homeownership would provide a wide range of social, educational, and financial benefits to households and positive externalities for neighborhoods and communities across the nation.

**Income Growth vs. Housing Costs (Inflation Adjusted, 1999-2019)**

**Share of Households Able to Afford the Median Priced Home 2012**

**Share of Households Able to Afford the Median Priced Home 2019**

**Sources:** NAR, RCG
The number of cost-burdened white renter households increased by 21.0% from 2001 to 2019, while the total number of cost-burdened renter households grew by 40.4%. Additionally, the number of 'severely burdened' Hispanic households nearly doubled during the nearly two-decade time period. These increases exemplify the necessity for housing infrastructure solutions that can tackle the need for more supply on a large scale and can more equitably address the housing shortfall and affordability crisis.

Critical National Infrastructure

Treating housing as infrastructure, and attempting to relieve the cost burdens placed on millions of renter households, as a result of the large undersupply of housing, could provide substantial benefits for households and the economy. Notably, it would provide funds for other living costs, such as child care, health care, education or student loan payments, and raise the quality of life for renters currently struggling with mounting housing costs. Reduced cost burdens would also allow renters to save or spend on other items, producing increased economic activity and tax revenue for the economy at large. Finally, by allowing households to save and build wealth through greater housing affordability, addressing the underbuilding gap would help provide a path towards homeownership for households looking to do so.

For these reasons, and in order to address a national crisis of a size and scale that is severely limiting financial stability and economic opportunities for millions of Americans, the housing underproduction gap must be treated as a critical piece of infrastructure in the United States. Like roads and bridges, affordable housing is a long-term asset that provides a safe, quality living environment for families. Increasing and preserving the supply of affordable housing—especially in areas connected to good schools, well-paying jobs, health care and transportation—will help more families climb the economic ladder and help communities meet their workforce needs. When it comes to housing, this means our children's future, health, education, social and racial equity, opportunities for economic mobility, among many other potential benefits, but the scale and complexity of the problem in many local areas make it increasingly difficult to tackle without large-scale national solutions.

In addition to the for-sale housing market, renter households faced severe negative consequences from the past two decades of underbuilding. The State of the Nation's Housing, 2020 report, from the Harvard Joint Center for Housing Studies, found that the number of cost-burdened renter households—those spending 30% of their income or more on housing—increased by 37.8% from 2001 to 2019. This translated to a 5.6 million increase in the number of cost-burdened renter households, and a 6% increase in the share of renter households around the country who were burdened. More than one in four renter households were cost-burdened, while nearly one quarter were severely burdened, spending more than 50% of their income on housing. The severely burdened group alone grew by nearly 3.1 million households from 2001 to 2019. It should also be noted that this increase was not proportional across racial categories. The increase from 2001 to 2019 in the number of cost-burdened households was significantly greater among minority households than among white households, with the largest increase occurring among Hispanic households, followed by Asian/Other and Black households.

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IV. Benefits of Making New Housing Construction an Integral Part of a National Infrastructure Strategy

Economic Impact of New Construction

Sources of Economic Activity

New construction activities have a significant impact on the economy, providing direct and indirect employment and revenue benefits. The direct spending associated with new home construction includes the purchase of materials sold to homebuilders and multifamily developers, while home purchases are typically accompanied by considerable rent payments also provide a source of ongoing economic activity, within the local economy. In the case of new rental units, monthly revenues sources or in-kind benefits for the local community. Furthermore, new home construction provides an additional source of ongoing spending and revenue, extending utility services, and in some cases, a range of other services. Supply chain operations within these sectors also benefit from increased spending directed towards labor, materials, architectural and engineering services, overhead, insurance, taxes and other costs associated with new housing construction, including professional and construction costs.

Notably, direct and induced measures have a significantly larger impact on the economy. Additional spending from increased spending directed towards local businesses, infrastructure, and other activities has a multiplier effect on employment, income, and economic activity. As a result, the total economic impact of new construction activities is far greater than what is captured by direct spending alone.

Costs and Benefits

The costs associated with this new development are estimated to be approximately $233,500 per unit, which incorporates national data from IMPLAN, every $1 million in direct spending on new housing construction is expected to generate 14.4 new full-time jobs and approximately $347,000 in new taxes. In comparison, the construction of a single-family home would generate 17.6 new full-time jobs and approximately $359,000 in new taxes. Moreover, the construction of a single-family home was approximately $296,700, based on recent construction costs in 2019. Specifically, the National Association of Home Builders reported that the average cost for the construction of a single-family home was $296,700, which is comparable to or even greater than the same spending on the construction of highways and streets. In fact, based on expenditures on infrastructure spending such as construction of highways and streets, which could generate a large positive local impact, cross all levels of government and employment gains would be generated from single-family housing and represented multifamily. Furthermore, the construction of additional new housing units would need to be constructed per year to significantly expand the home supply. If the construction of additional new housing units were not to occur in the future, it would produce a range of issues, including declining homeownership rates, reduced economic activity, and decreased productivity. Therefore, the need for a prolonged period of new housing construction is expected to translate to positive macroeconomic impacts.

In order to measure the potential economic benefits generated by construction activities, it is necessary to consider the total magnitude of the economic impact of new construction activities. This includes direct, indirect, and induced spending associated with new housing construction, including professional and construction costs, as well as employment, income, and overall economic activity across the nation. Multipliers for economic impact of multifamily and single-family home construction are comparable to or even greater than the same spending on the construction of highways and streets. In fact, based on expenditures on infrastructure spending such as construction of highways and streets, which could generate a large positive local impact, cross all levels of government and employment gains would be generated from single-family housing and represented multifamily. Furthermore, the construction of additional new housing units would need to be constructed per year to significantly expand the home supply. If the construction of additional new housing units were not to occur in the future, it would produce a range of issues, including declining homeownership rates, reduced economic activity, and decreased productivity. Therefore, the need for a prolonged period of new housing construction is expected to translate to positive macroeconomic impacts.
Beyond the critical housing need and the enormous, potential economic benefits, rebuilding our national housing stock at the scale needed to fill the underbuilding gap would generate large fiscal, social and community benefits. In addition to new employment and economic activity, the construction of 550,000 additional new homes per year would be expected to generate more than $53 billion dollars annually in new tax revenue, including $18 billion in state and local taxes and $35 billion in federal taxes, reflecting a wide range of activity, including substantial new federal income taxes related to new job creation, as well as taxes on production and imports net of subsidies, sales taxes, property taxes and other forms of revenues generated through the construction timeline.

Of particular importance for communities around the country, taxes generated by new housing supply would add to local property tax revenue. In fact, property tax revenue accounted for approximately 72% of all local tax collections as of 2018, according to data from the U.S. Census Bureau, and is a major source of funding for K-12 education, parks, first responders and many other essential community services.

### National Economic Benefits

RCG estimates that building 550,000 additional new homes per year for the next 10 years would support an estimated 2.8 million new jobs nationwide, and generate approximately $411 billion per year in additional economic activity (including direct, indirect and induced measures). Notably, these estimates of the potential macroeconomic impacts of the kind of large-scale construction that would be necessary to rebuild the nation's housing infrastructure are based only on the needs of refilling the underbuilding gap, and do not include the considerable additional costs of deferred maintenance for the aging stock of existing housing.

### Economic Impact of New Construction

#### Impact for every $1 Million of Direct Spending

<table>
<thead>
<tr>
<th>Property Type</th>
<th>Employment</th>
<th>Tax Revenue</th>
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</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>17.6</td>
<td>$347,000</td>
</tr>
<tr>
<td>Multifamily</td>
<td></td>
<td>$359,000</td>
</tr>
<tr>
<td>Highways and Streets</td>
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<td>$303,000</td>
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</table>

Notes: Taxes include combined local, state and federal revenues; constant 2019 dollars. Sources: IMPLAN, RCG.

### Economic Impact of New Homes Construction

<table>
<thead>
<tr>
<th>550,000 Additional New Homes Constructed Annually</th>
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</thead>
<tbody>
<tr>
<td>Impact</td>
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<tr>
<td>Direct</td>
</tr>
<tr>
<td>Indirect &amp; Induced</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Sources: IMPLAN, RCG.

### Tax Revenue Generated by Source

- **Federal**: 35.2 bil.
- **State**: 10.6 bil.
- **Local**: 7.6 bil.

### Housing Affordability

Dramatically increasing the pace of new home construction and expanding the supply of all types of housing is the only way to substantially reduce the size of the current demand-supply gap and thereby stabilize housing costs in a more affordable range. Increasing the supply of available single-family, multifamily, market-rate and affordable homes across the full income spectrum would make the best use of the underbuilding gap to provide homeownership opportunities and improve the trajectory of household incomes.
Effort would begin to unlock the backlog of pent-up housing demand by supporting household formation especially among the millions of millennials currently living at home with parents.

From a macroeconomic perspective, new household formation and greater levels of affordability would be expected to lead to significant potential for overall personal consumption expenditures as individuals with more disposable income seek to improve their lives and businesses in their local communities but could also stimulate additional economic activity across the national economy. Greater levels of economic activity would further help to reduce joblessness in a period of continued profound economic weakness for large segments of the population.

The positive impact of major initiatives to accelerate new housing construction would likely extend far beyond these more direct economic measures among other benefits affordability would:

- Translate to improved labor market mobility, making it possible for households to seek out new job opportunities whenever they are available.
- Provide greater financial stability, enabling individuals and families to keep up with other rising costs of living such as education, health care, and child care.
- Enable more households to save for college, retirement, or unexpected future expenses.
- Increase the ability of any household to save or own their own payment on future home purchase expanding access to the American Dream of homeownership narrowing the racial homeownership gap and providing opportunities for building wealth that could help to close the national racial wealth gap over time.
- Help to reduce or prevent homelessness in communities around the nation.

Importantly, the combination of increased economic opportunities and expanded availability of affordable housing at greater mobility and financial stability would be particularly beneficial for low- and moderate-income households and communities of color currently facing the greatest housing cost burdens.
V. Infrastructure for Inclusive Communities

Interstate Highway System: Lessons from the 20th Century

The most visible examples of infrastructure development at the time were highway systems that were designed with a community-centric approach and incorporated community input and engagement. However, the negative impacts of highway construction were disproportionately felt in Black communities and other economically disadvantaged communities. These negative impacts coincided with courts striking down the use of racial zoning to keep Black communities segregated.

When the Federal Aid Highway Act of 1956 was enacted, critics noted that it went beyond just building highways. It was intended to support community development and growth. However, consistent redlining pushed many lower-income residents, especially Black residents, to live in neighborhoods that were not served by the new highways. While the major investment in the interstate highway system proved to be a critical step in the nation's economic growth and competitiveness, the negative ramifications of pursuing infrastructure projects without taking a holistic, community-centric approach are still visible in many cities today in terms of the broader growth of Syracuse. From 1950 to 2010, the city of Syracuse grew rapidly through the first half of the 20th century, cities looked to catalyze growth by building highways. The Federal Aid Highway Act did not require cities to build the additional highways they signed. Interstate-81 to bisect the Rondo community has still not recovered, and severe negative effects that the Rondo community experienced and in the context of a holistic, community-based approach to infrastructure development that includes housing and community-centric planning, considering the need for new and affordable housing that complements and enhances other types of infrastructure.

St. Paul, Minnesota

The Rondo neighborhood of St. Paul, Minnesota was a thriving community, home to about half of the Black population in St. Paul. The housing was relatively affordable, and the neighborhood was relatively safe. In the 1930s, the neighborhood was acknowledged in a formal apology by the state Department of Transportation Commissioner Charlie Zelle in 2016. The Federal Aid Highway Act of 1956 was enacted to connect the cities of St. Paul and Minneapolis by building a highway (Interstate 94) directly through the middle of the neighborhood (as shown in the nearby map). To facilitate the construction, more than 650 homes were demolished (with some residents forcibly removed) and 100 Black-owned businesses were closed.

To provide a traffic artery to the center of Syracuse, city planners de
toy encourage the growth of Syracuse. From the 1950s to 2010, the city of Syracuse grew rapidly through the first half of the 20th century, cities looked to catalyze growth by building highways. The Federal Aid Highway Act did not require cities to build the additional highways they signed. Interstate-81 to bisect the Rondo community has still not recovered, and severe negative effects that the Rondo community experienced and in the context of a holistic, community-based approach to infrastructure development that includes housing and community-centric planning, considering the need for new and affordable housing that complements and enhances other types of infrastructure.

Bisection of Rondo Neighborhood

Source: Center for American Progress
While the true opportunity cost of razing the 15th ward is unknown, the construction of I-81 contributed heavily to the destabilization of the Black community in Syracuse. In fact, decades later, Syracuse is one of the most racially segregated communities in the county, with one of the highest shares of Black and Hispanic residents living in neighborhoods of extremely concentrated poverty among major metropolitan areas.

The state of New York recently recognized the damage done by the highway. I-81 has aged to the point of requiring substantial repairs, and the city will remove the downtown section in an effort to mend the damage done to the 15th ward. The removal of the elevated, downtown section of highway is scheduled to start in 2022.

How-ever-ever years of negative economic and social consequences might have been avoided if this analysis had been done prior to construction of I-81.

Highway Removal

While it is difficult to measure the exact social and economic cost of the highway construction in St. Paul and Syracuse, there are many other examples that highlight the potential for community growth and reinvestment after inner city highways were removed. For example, in 2002, a 0.8-mile section of the Park Freeway was removed in Milwaukee, WI. This reallocation of space increased property values and private investment. From 2001 to 2006, the average land values in the freeway footprint grew by more than 180% per acre. Property values in the surrounding area compared with the citywide increase of 25%.

In fact, the $25 million government expenditure to remove the freeway has garnered more than $886 million in investment, with projected total investments exceeding $2 billion as of 2019.

While it is unclear the extent to which this reinvestment recovers the local economic losses and stalled growth sustained by the highway, the magnitude of reinvestment provides an indication of the significance of the lost economic activity in the area related to the highway.

Similarly, in Rochester, NY, a section of the Inner Loop Highway was removed in 2017 to create a boulevard with commercial and residential development. In total, more than 500 housing units (more than half either subsidized or below-market rent) and 152,000 square feet of commercial space will be created. This development will yield a local community of approximately 1,000 people. Local community organizations, low- and moderate-income households are particularly interested in these numbers.

Planning for Inclusive Communities

Examples of the many negative effects of poorly planned highway development are not limited to St. Paul, Syracuse, Milwaukee, and Rochester. Similar examples exist in Orlando, New Haven, and Miami (among many others).

Looking ahead, while an influx of federal dollars for infrastructure development could provide great opportunities for many communities, doing so without community input, holistic planning, transit-oriented development, and critically, consideration for how to alleviate the shortage of affordable and available housing supply in cities around the country, could lead to a repeat of these historic setbacks.

Large-scale investment in infrastructure for the 21st century provides an opportunity to avoid committing to infrastructure that will unnecessarily exacerbate community problems. An investment in infrastructure for the future, one that plans for inclusive and sustainable growth of communities around the country, could lead to a repeat of these historic setbacks.

3IMILARLY, NOCHESTER, A SECTION OF THE INNER LOOP HIGHWAY WAS REMOVED TO CREATE A BOULEVARD WITH RESIDENTIAL DEVELOPMENT. IN TOTAL, 500 HOUSING UNITS WERE CREATED, MORE THAN HALF OF WHICH WERE SUBSIDIZED OR BELOW-MARKET RENT. 152,000 SQUARE FEET OF COMMERCIAL SPACE WILL BE CREATED, WHICH WILL YIELD A LOCAL COMMUNITY OF 1,000 PEOPLE. LOCAL COMMUNITY ORGANIZATIONS,low- AND MODERATE-INCOME HOUSEHOLDS ARE PARTICULARLY INTERESTED IN THESE NUMBERS.

SOURCE: SYRACUSE UNIVERSITY
Energy Infrastructure: Planning for Affordability, Efficiency and Resiliency

The uneven energy burden on different socioeconomic groups is another important aspect of inequality resulting from narrowly focused infrastructure development. Specifically, inequality in the cost burden of utility bills, as well as access to and resilience of existing energy infrastructure, effectively reduces housing affordability and limits productivity and economic development for many communities around the country. Of particular note, low- and moderate-income communities often recover slower from natural disasters that disrupt their energy infrastructure. Improved planning and coordination between housing and utility infrastructure would improve the lifestyles and economic development of low-income households and communities of color.

Pricing and Household Energy Efficiency

Due to market dynamics and government pricing, utility costs can be regressive, creating a greater economic burden on lower-income households and adding to the total cost of housing. Specifically, utility use is typically billed on a per-use basis. However, there is often a minimum monthly payment that can include fixed contributions for a range of priorities, such as solar panel subsidies, wildfire protection, etc. (dependent on the state). This payment system is effectively regressive, as LMI households must spend a higher percentage of their income not only on a basic level of necessary energy utilization, but also on those fixed costs. This effect is compounded further because many LMI households occupy older and less energy-efficient homes or rental units. These households often lack the means (and authority in the case of rental units) to improve insulation and must therefore use additional energy to maintain the same internal temperatures relative to more costly, modernized or newly built housing units. Many states also require a utility deposit for those with lower credit ratings. This further reduces housing affordability and limits the ability of low-income households to move past basic needs and attain greater financial stability. A thoughtful approach to building affordable and energy efficient housing in coordination with planning for upgrades to the physical energy infrastructure could help improve inequality and expand economic opportunities for LMI households.

Energy Resilience: Texas Blackouts

Inequality in terms of energy access and the resilience of the energy grid in many communities around the country highlight another major opportunity to “build back better” by making housing an integral part of infrastructure planning. In the event of local or regional power outages, households which live closer to priority assets (e.g., hospitals) are typically much more likely to have their power preserved or restored sooner than those living farther from priority assets. Because the households in closer proximity to priority assets tend to be higher-income households, it is often LMI households that have to wait the longest for restoration of power. A recent example of this disparity was the February 2021 Texas blackouts. Notably, Downtown Austin did not experience any blackouts, while the less-affluent East Austin area endured long, rolling blackouts (as illustrated in the nearby figure).

While downtown Austin does hold emergency centers and vital buildings, the downstream power also supplied energy to empty office buildings, outdoor lighting and those households with the financial means to live in Downtown Austin. There may be an absence of explicit bias with regards to energy supply, but in practice, there is often a distinct correlation between affluence and prioritization of energy access because any household with a good credit rating and ability to pay their energy bills within the required timeframe can attain energy access across communities. Because any household that occupies older and less energy-efficient homes or rental units is more likely to have lower credit ratings and therefore be less able to pay their energy bills on time, it becomes critical to have a coordinated and thoughtfully planned approach to utility access, energy efficiency and reliability. Taking an integrated new housing supply and community development approach to maximize economic opportunities would improve racial equity and offer greater economic benefits and competitiveness for communities around the country.
VI. Policy Considerations: The Crisis Demands a Once-in-a-Generation Response

Amid the urgency of our ongoing public health crisis, a more systemic response is required to address the chronic national shortage of housing. Sadly, there is no silver bullet to solving the scale of the problem, and any serious effort to fill the underbuilding gap and address the affordability crisis will require a major national commitment to build more housing.

While there is a wide range of potential policy pathways that could help to increase the pace of housing construction, considering the magnitude of the challenge, progress will likely require an all-of-the-above strategy that supports housing of all shapes and sizes across the full income spectrum, including:

- Incentivizing investment in distressed urban, suburban and rural neighborhoods through the Eighm Investment Act (EIGHT), which could create Opportunity Zones or area-wide projects to receive the funding needed to overcome the geographic hurdles.
- Rising the potential of existing programs such as HUD Community Development Block Grants (CDBG), Opportunity Zones, etc., offering tax credits and coordination efforts.
- Encouraging cities and states around the country to responsibly eliminate or reduce the number of hurdles that arise particularly in the private markets, creating the conditions that promote market-rate and affordable housing.
- Tackling the low-income housing shortfall, focusing on high-density development that produces the greatest output per acre of land.
- Boosting resources and accelerating the expansion of programs that create community development trusts, housing trust funds (HTF), and similar programs, including the slimming and intensifying of rezonings.
- Encouraging shifts in local zoning and regulatory environments to more economically feasible and developable commercial space.

Beyond incentives for rezoning at the municipal level, many parts of the country have a sizable stock of underutilized commercial space that is ripe for conversion to new housing and adding jobs. Resolving the underbuilding gap will require an all-of-the-above strategy that supports housing of all types, including affordable and market-rate housing, urban and suburban housing, and forms of community infrastructure such as transit, new housing alongside other types of infrastructure.

Considering the need to accelerate the pace of construction far beyond our current and historical production of housing, the problem over a period of several years will involve an unparalleled effort to dramatically expand resources and new development and address barriers that limit our ability to build.

Rural neighborhoods, particularly in the most desolate and underutilized regions, could prove to be the front lines of a new housing economy. Many parts of the country have a sizable stock of underutilized commercial space throughout the major sectors, including retail, hotels, office buildings, manufacturing facilities, and older ndustrial buildings, many of which are located in the hardest-hit commercial real estate sectors. Aside from the environmental and social benefits of revitalizing these sites, many of these commercial real estate sectors could see new life with the influx of housing and jobs.

- Address large shortages in capital and lending for the development of affordable housing by expanding existing programs such as the REACH+ Opportunity Zone Program and the Tax Credit (LIHTC) program, which has been highly successful in building multifamily housing over the past 3 decades. Intense competition in multiple rounds of Opportunity Zone projects to receive the funding needed to overcome the geographic hurdles.
- Expanding access to capital through the New Home Investment Act (NHIA), which would create a new federal tax credit for the development and renovation of single-family homes and two-to-four-unit buildings.

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Without access to affordable housing, investments in transportation and other forms of infrastructure will fall short of creating vibrant communities. Instead, building on lessons of the past, a coordinated and intentional national focus could help bridge communities and promote inclusivity, community revitalization and housing opportunities for households of all backgrounds.

In particular, mechanisms to achieve these goals include strengthening and expanding the existing Affirmatively Furthering Fair Housing (AFFH) obligation (established by the Fair Housing Act of 1968) by reinstating the 2015 AFFH framework, while making the process more efficient and less burdensome for communities, and seeking to ensure that the obligation to proactively consider housing and equity implications of new development is an integral part of all types of infrastructure planning in order to overcome existing patterns of segregation and foster inclusive communities.

In addition, substantive progress will likely require a comprehensive recognition of the need for genuine community engagement in all types of infrastructure development (including the importance of understanding the existing and historical community landscape and identifying the challenges, trade-offs and equity impact involved in new development) through community task forces and advisory committees, as well as systematic adoption of planning tools such as fair housing and equity impact analyses.

Collectively, these policy pathways, and likely many other promising ideas to address the chronic national shortage of supply, are critically important, and combined with thoughtful and integrated planning, certainly have great potential to ease the national housing affordability crisis. However, while supply solutions represent long-term infrastructure solutions vital to the future of the nation, these approaches will necessarily take time to implement, and will undoubtedly need to be combined with a range of demand-side efforts and structural changes to expand access, level the playing field and address the ongoing challenges of racial and socioeconomic equity in our housing and communities.

Expand capacity for residential construction by applying federal resources to help address construction capacity challenges such as rising construction costs and labor and material shortages. In addition to the regulatory environment, which adds significantly to the time and money required to produce new housing, labor and material availability and costs represent significant challenges that delay projects. Strengthening and expanding the AFFH framework and ensuring the obligation to proactively consider housing and equity implications of new development is an integral part of all types of infrastructure planning could help bridge communities and promote inclusivity, community revitalization and housing opportunities for households of all backgrounds.

Tax incentives for construction training and apprenticeships programs could also help expand the construction labor force. This would not only increase national capacity to build housing and address the affordability crisis, but could help get people back to work in an economy with outsized levels of unemployment and underemployment. Workers can develop valuable skills that are essential for the construction industry.

As highlighted previously, additional construction labor and income would generate a positive multiplier effect through the economy, increasing national economic activity and federal income tax revenue. Perhaps most importantly, addressing the national underbuilding gap will require a coordinated approach to planning, funding and development of all forms of infrastructure to not only build more housing, but also build better housing that will be more inclusive and well-integrated into local communities.

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In addition to the regulatory environment, which adds significantly to the time and money required to produce new housing, labor and material availability and costs represent major hurdles that delay projects, limit the financial viability of new housing construction and, ultimately, will continue to set a ceiling on the pace of housing production without a coordinated and intentional national focus could help bridge communities and promote inclusivity, community revitalization and housing opportunities for households of all backgrounds.

There are numerous factors contributing to the sharp rise in material costs (especially lumber), and the challenges of limited labor and materials availability that represent major hurdles to overcome the current increased pace of construction. In addition, ensuring that the obligation to proactively consider housing and equity implications of new development is an integral part of all types of infrastructure planning could help bridge communities and promote inclusivity, community revitalization and housing opportunities for households of all backgrounds.

While particularly challenging, potential steps to alleviate these strains could include minimizing trade/tariff restrictions on construction materials, while also leveraging federal resources to expanding domestic infrastructure for manufacturing, production and distribution of essential construction materials.

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