National Council of State Housing Agencies

NOVOGRADAC Special Reports

ANALYZING THE IMPACT OF LOWERING THE 50% TEST FOR 4% TAX-EXEMPT BOND FINANCED PROPERTIES

MARCH 2021 UPDATE

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Executive Summary

In April 2020, Novogradac conducted an analysis of the private activity bond (PAB) financed-by test for low income housing tax credits (LIHTCs) for the National Council of State Housing Agencies (NCSHA). Since that initial analysis, affordable housing champions were successful in establishing a 4% floor for the 30% net present value LIHTC as part of 2020 year-end legislation, but additional steps are needed to address the nation's affordable housing crisis. It should also be noted that the inflation projections provided by the Congressional Budget Office (CBO) changed dramatically from January 2020 to February 2021, which affected the analysis. NCSHA has again engaged Novogradac and the updated analysis shows that lowering the percentage of affordable housing aggregate basis required to be financed by PABs and remain eligible to receive LIHTCs would result in the creation or preservation of as many as 1.5 million units of additional affordable housing over the next decade.

Totals over 2022-2031

	25% Test	33% Test	40% Test
Freed PAB Cap	$93.2 billion	$63.4 billion	$37.3 billion
Additional Homes Financing Capacity			
50% scalable gap financing	747,123 homes	384,881 homes	186,781 homes
100% scalable gap financing	1,494,246 homes	769,763 homes	373,561 homes

Source: Novogradac

As the updated and revised analysis has determined, lowering the financed-by test from 50% to 25% would "free" $93.2 billion in PAB cap over 2022-2031. These funds could be allocated for additional affordable rental homes or other PAB eligible uses.

A lower financed-by test threshold could translate into hundreds of thousands of additional affordable rental homes being created or preserved: over 2022-2031, as many as nearly 1.5 million homes could be created or preserved. This figure represents the best-case scenario where the new threshold level is set at 25%, all "freed" PAB cap is devoted to affordable housing and gap financing is 100% scalable, i.e., sufficient soft financing sources are available to maximize the unit financing capacity of the "freed" PAB cap and additional equity. The analysis also examined the effects of lowering the financed-by test to 33% and 40%, which would "free" an additional $63.4 billion and $37.3 billion, respectively, over 2022-2031. Lowering the threshold would likely lead to properties having less permanent debt, which in turn would allow PAB financed properties to serve lower income households, making the 25% threshold a particularly useful tool for addressing the affordable housing crisis currently plaguing the country.

Background

Need for affordable rental housing grows

When NCSHA first engaged Novogradac in early 2020 to conduct an analysis of varying reductions in the percentage of aggregate basis required to be financed by PABs for affordable housing properties to be eligible for the full amount of 4% LIHTCs, the first coronavirus cases were turning up in the United States. At that time, PAB-financed properties in 2020 could only access LIHTC at the monthly floating percentage rate. By the time the analysis was released in May 2020, it was clear that low-income households would be particularly hard-hit by the ensuing economic downturn. Since that time, the research has grown on just how dire the situation became for low-income renter households, even with the enactment of several pieces of COVID-19 relief legislation that has included renter protections and assistance.

The economic strain caused by the fallout from the pandemic has amplified the need for affordable rental housing in the U.S. Low-income renters were among those most likely to be negatively impacted by the pandemic as they tend work in industries shuttered as a result of the pandemic. Though protections were put in place to keep renters in their homes–an eviction moratorium put in place by the Centers for Disease Control (CDC) was extended to March 31–this does nothing to address the larger issues renters face. Data analysis commissioned by NCSHA in 2020 estimated that by January 2021, renters could owe between $13.2 to $24.4 billion in back rent. Similar research by Moody's Analytics estimated that renters owe nearly $60 billion in back rent. With the number of Americans filing for unemployment hitting all-time highs since the pandemic has started, it will take more than eviction protections to assist renters.

The Urban Institute (UI) published an article and policy brief showing that in order to serve all renter households experiencing affordability issues–this included renters who were cost-burdened (paying more than 30% of their income toward rent) before the pandemic hit and those who lost income as a result of the ensuing economic downturn–$16 billion in monthly housing support would be needed.

Where other research looks at need through just the lens of the pandemic, UI took the pre-pandemic housing crisis into account. The $16 billion in monthly assistance is the amount needed to address the needs of all renters who were cost-burdened before the pandemic and those who lost income as a result of COVID-19.

Renters will undoubtedly need help being made whole, but it will not be enough to return them to pre-pandemic levels when a significant percentage of low- and moderate-income renters were cost-burdened. The supply of rental homes affordable to low-income renters is not enough to meet demand and there has not been enough federal housing assistance to serve all those who are eligible. Pre-pandemic, nearly 11 million renter households were severely cost-burdened, spending more than half of their income on rent, per research from the Joint Center for Housing Studies (JCHS) of Harvard University. In recent years analysis has shown just how far up the income scale cost-burdens have crept. Nearly three-fourths of renters (72%) who earned less than $15,000 were severely rent burdened. For renters earning $15,000 to $29,999, 43% were severely rent burdened. Even among moderate and middle-income renter households, JCHS' analysis found an increase in the number of cost-burdened households. Among the various income cohorts, the largest percentage increase in cost-burdened renter households from 2011 to 2018 occurred among households earning $30,000-$44,999 annually, where there was an increase of 5.4 percentage points to 56%.

At the same time low- and moderate-income households are facing cost- burdens, most new rental housing is geared more toward meeting demand at the higher end of the income scale, thus making it even more difficult for low-income renters to find homes they can afford. The nation's affordable rental housing stock is disappearing–the JCHS reports that nearly 4 million low-cost units were lost between 1990 and 2017 and the nation continues to lose affordable rental homes annually due to market-rate conversion, expiration of federal assistance, obsolescence and deterioration. Another JCHS report documents shifts seen in the rental housing stock between 2004 and 2019, when increases in the rental housing supply occurred among single-family rental homes and large multifamily buildings, building types that were prone to significant rent increases. The supply of apartments in multifamily buildings with two to four units, properties that are typically more affordable, fell by 38,000 during the same time. The same report found that between 2004 and 2019, 2.5 million units with rents less than $600 disappeared from the housing stock.

Analysis from the National Low Income Housing Coalition (NLIHC), The Gap: A Shortage of Affordable Homes released March 2021, documents affordable rental housing shortfalls, finding that there is a shortage of nearly 7 million affordable and available rental homes for extremely low-income renters (household earning at or below 30% AMI or the federal poverty line, whichever is greater) in this country. Every state was found to have a deficit of affordable and available rental homes and nationally, there are 37 affordable and available rental homes for every 100 extremely low-income renter households. States with the biggest deficits include Nevada (with 20 affordable and available homes for every 100 extremely low-income renter households), California (24), Oregon (25), Arizona (26), and Florida and Delaware (28).

On top of supply not meeting demand, lower-income households are unable to depend on the programs designed to assist them. More 17 million at-risk renter households eligible for renter assistance do not receive it due to underfunding, leaving just 23% of eligible households receiving assistance. Rental assistance includes Housing Choice Vouchers, Section 8 Project-based Rental Assistance and public housing, which assists approximately 90% of renters receiving aid.

Additional research from the NLIHC shows that in no state, metropolitan area or county in the U.S. can workers earning minimum wage–whether federal or the prevailing state or local minimum wage–afford a modest two-bedroom rental home at fair market rent by working a standard 40-hour week. According to Out of Reach 2020, NLIHC's annual report, renters need to earn an average of $19.56 per hour to afford a modest one-bedroom rental and $23.96 per hour to afford a modest two-bedroom rental home. The average minimum-wage worker must work nearly 97 hours per week to afford a two-bedroom rental home, according to the report. The federal minimum wage is $7.25 per hour and state minimums vary; the hourly wage needed to afford a two-bedroom apartment ranges from $14.19 in Arkansas to $38.76 in Hawaii.

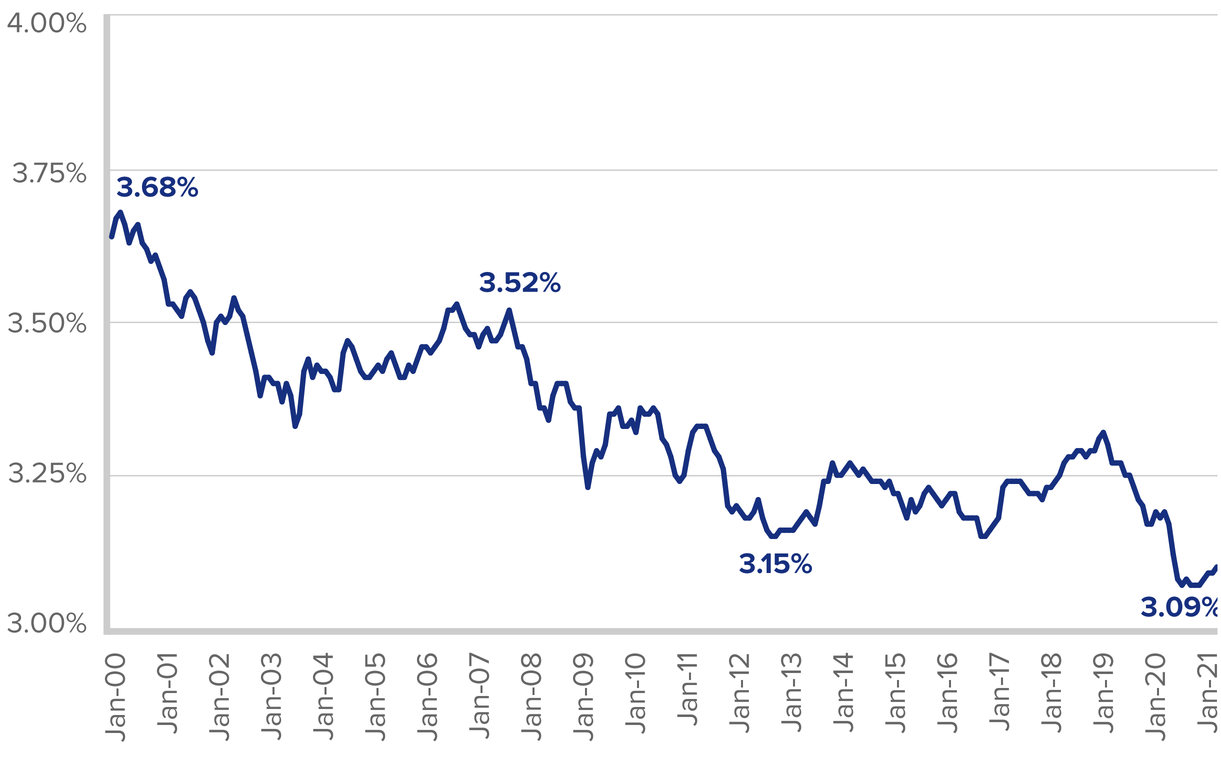
Lowering the 50% threshold can address housing needs

The analysis in this report looks at how changes to LIHTC requirements can increase the supply of affordable rental housing, especially for lower-income households. The LIHTC is responsible for the creation and preservation of nearly 3.5 million affordable rental homes, according to NCSHA, making it the leading tool for expanding supply. Affordable housing advocates have worked tirelessly to expand and enhance the LIHTC and these efforts paid off in 2020 when year-end legislation established a 4% minimum LIHTC rate for acquisition LIHTCs and tax-exempt PAB-financed developments. The setting of a 4% floor had previously been included in both the Affordable Housing Credit Improvement Act

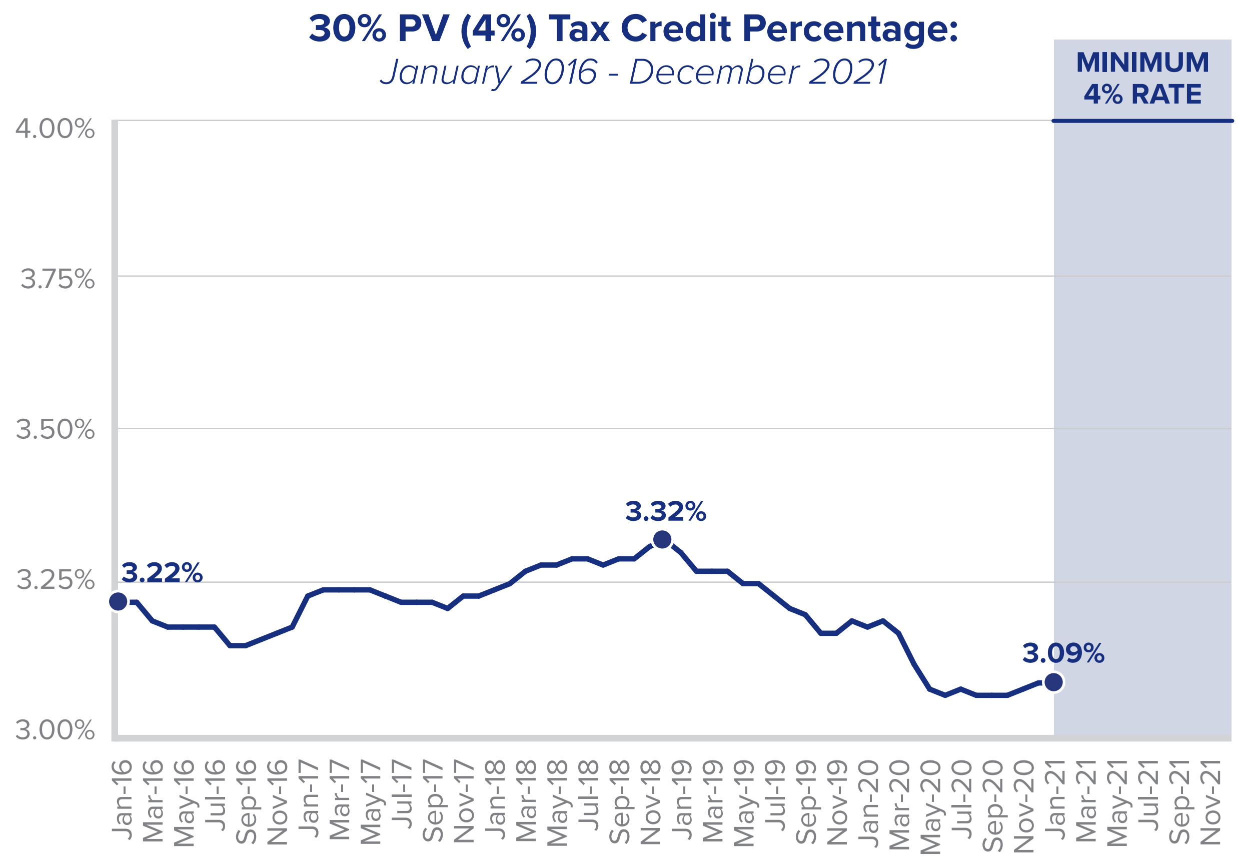
(AHCIA, S. 1703, H.R. 3077) and the Moving Forward Act (H.R. 2), neither of which managed to advance during the 116th Congress. The 4% LIHTC, formally known as the "30% present value credit" is primarily used for the acquisition and rehabilitation of existing properties where additional subsidies are needed. The 9% LIHTC, or the "70% present value credit" is designed to subsidize 70% of the eligible low-income unit costs in a property financed without tax-exempt private activity bonds, and is primarily used for new construction.

The establishment of a minimum 4% LIHTC floor has provided policy parity with the 9% LIHTC–the establishment of the 9% floor was enacted by the [Protecting Americans from Tax Hikes Act in December 2015]. Before the passage of the December 2020 tax legislation, which was attached to final fiscal year 2021 appropriations, the 4% LIHTC actually fluctuated each month, due to changes in the monthly credit percentage determined by the IRS based on the U.S. Department of the Treasury interest rates.

30% PV (4%) Tax Credit Percentage:
January 2000 - January 2021



Source: Novogradac



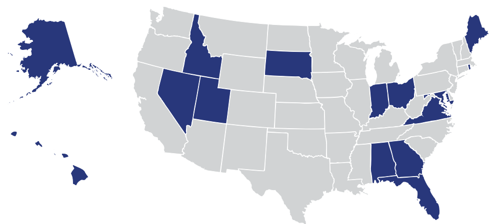
Source: Novogradac

The 4% floor is effective for acquisition LIHTCs allocated after Dec. 31, 2020, and for bond-financed properties placed in service and receiving allocations from private activity bonds issued after Dec. 31, 2020. It is unclear whether properties that initially receive bond allocations or bond drawdowns before Dec. 31, but then receive subsequent allocations or drawdowns after Dec. 31, are eligible to receive 4% rate on the entire LIHTC basis. Further guidance from IRS is likely needed.

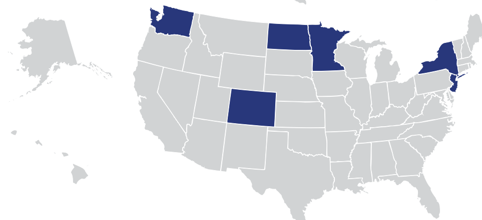
Considering changes seen since the last report, Novogradac has estimated, for the 10-year period of 2022 to 2031, the additional capacity to finance residential rental units that would be generated if the 50% threshold to be financed by PABs were lowered to 40%, 33% or 25%. In addition, Novogradac was asked to estimate how much additional PAB cap would be "freed" over the 10-year period from 2022 to 2031. The primary catalyst for seeking these answers is demand for PAB volume cap in many states, which is increasing substantially faster than the supply. An increasing number of states use virtually all of their available PAB bond cap for residential rental property. This is a relatively recent phenomenon since the PAB volume cap was increased annually for inflation in 2000. In fact, the national carryforward amount–the unused cap from the previous three years–has been at least $32 billion annually since 2008.

States Using More Than 50% of the Private Activity Bond Cap

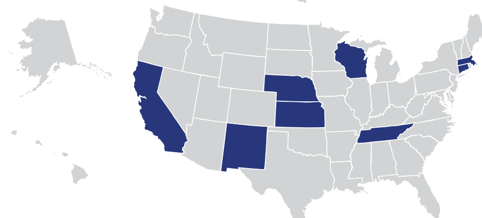
States using **50% to 74%** of their 2018 PAB cap



States using **75% to 100%** of their 2018 PAB cap



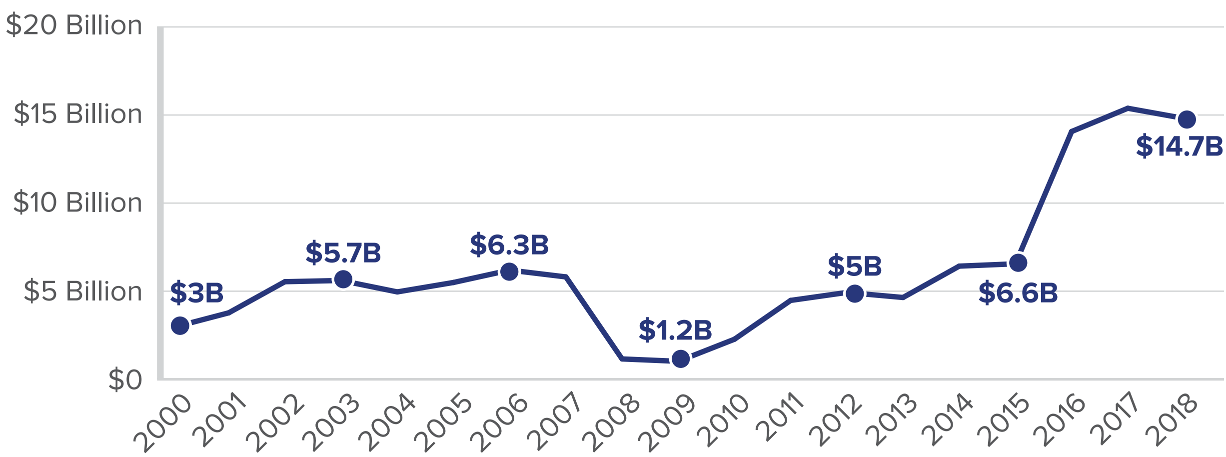
States using **more than 100%** of their 2018 PAB cap



Source: Council of Development Finance Agencies (CDFA); Novogradac

While a few states have been PAB-cap-constrained for many years, the recent significant increase in issuance has already forced some states to make difficult decisions on PAB allocations. Other states will likely face similar challenges in coming years unless there is a change in the way bonds are allocated, issued or used. According to the Council of Development Finance Agencies (CDFA), about $44 billion in PABs for residential rental housing were issued from 2016 through 2018, averaging slightly less than $15 billion a year.

Multifamily Private Activity Bond Issuance

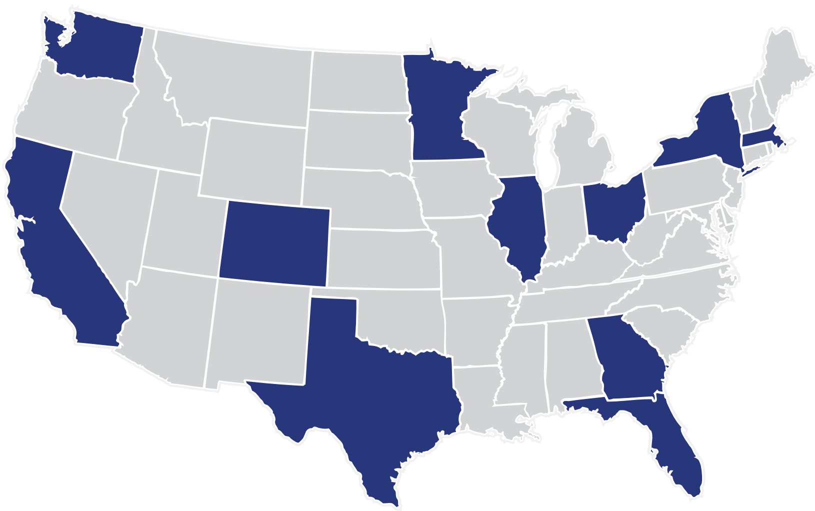


Source: Council of Development Finance Agencies (CDFA); Novogradac

More than 75% of that $44 billion was issued in 11 states, nine of which have a notable decline in PAB carryforward.

11 States, More than 75% of Multifamily Private Activity Bonds Issued

From 2016 to 2018: $33,644,430,000 out of $44,042,040,000 in total multifamily issuance



California
Colorado
Florida
Georgia
Illinois
Massachusetts
Minnesota
New York
Ohio
Texas
Washington

Source: Council of Development Finance Agencies (CDFA); Novogradac

Agencies with PAB cap shortages have no choice but to take actions such as suspending applications in what had been an open cycle, while other states will limit the use of PAB allocations to be no more than a maximum (e.g., 55%) of a property's costs.

While the impact of the COVID-19 pandemic on the economy and the municipal bond market affected PAB financing in 2020, the longer-term trends in PAB issuance for rental housing remain relevant. The elevated demand for affordable rental housing is arguably even more crucial due to the continued downturn that disproportionately affects low-income households.

As the current law establishing the financed-by-threshold has not changed since 1990, it is long past time to reevaluate this test. Back in 1990, the percentage of affordable housing aggregate basis required to be financed by PABs was lowered from 70% to 50% as part of the LIHTC reforms implemented in the Mitchell-Danforth Task Force. At that time, it was evident that the 70% threshold was unworkable and in order to enable most affordable rental housing to be financially feasible, the threshold would need to be lowered. Given this precedent of Congress lowering the percentage of PAB financing needed to trigger the full amount of eligible LIHTC authority, it is conceivable that Congress would be willing to act to lower the threshold further, especially in light of the continuing affordable housing crisis.

Methodology and Assumptions

This report estimates the capacity of projected tax-exempt PABs use for the years 2022 to 2031 to fund additional residential rental homes and be eligible for the maximum amount of LIHTCs, if the "financed-by" requirement was lowered from 50% to 40%, 33% or 25%. The report assumes a proposal is adopted in calendar year 2021 and is effective for housing developments financed by PABs issued in calendar year 2022 and beyond.

To estimate the number of rental homes that could be funded, Novogradac developed a pro forma model that establishes national baseline percentages for the sources and uses of financing for PAB-financed LIHTC developments. This model is based on NCSHA Annual Factbook data available for 2016, 2017, 2018 and 2019 (the four most recent years available). The model is also is informed by the review of final cost certification data from a sample of PAB-financed developments. The pro forma model has distinct estimates for new construction, substantial rehabilitation and acquisition/rehabilitation developments.

In 2020, as part of the prior engagement, Novogradac interviewed dozens of experts in tax-exempt bond finance to help inform the methodology and assumptions, information that has been used to inform this updated analysis as well. These experts included bond lawyers, mortgage debt providers, current and former allocating agency officials, LIHTC syndicators and investors, and developers. The experts, in the aggregate, work nationwide and on a variety of PAB-financed developments. They noted a variety of financial products that could be used to help finance developments and largely replace the reduction in tax-exempt debt under a lowered financed-by threshold.

The following is a summary of key assumptions underlying the results of the analysis.

PAB Financing Percentage and Debt Service

The statutory requirement to generate LIHTCs on the entire amount of qualified basis is that 50% or more of land and building costs be funded by PABs. However, rental housing developments have historically been allocated PABs in excess of this minimum. The common practice is to finance developments with between 52% and 58% (or more) of PAB debt to maximize the benefits of below-market-rate financing associated with tax-exempt bonds and to avoid failing the statutory requirement due to unexpected construction cost overruns. The base model assumes projects finance 55% of land and building costs with PABs.

The model assumes that if the required financed-by percentage decreases, the amount of PAB debt allocated for each project is proportionally reduced. The model assumes the reduction in PAB debt is replaced by taxable and/or recycled tax-exempt bond debt, to the extent supportable by estimated net operating income (NOI). The estimated amount of NOI is based on estimated average interest rates and amortization periods for tax-exempt debt and an estimated annual debt service coverage.

LIHTC Calculation and Equity

The model assumes total development costs equal to 110% of land and building costs and about 11% of project costs are not includible in eligible basis. The model further assumes that about half of PAB-financed eligible basis among all the developments is eligible for the 130% basis boost for new construction and rehabilitation costs because they are located in a difficult development area or qualified census tract. The baseline assumes an applicable fraction of 98%. Lastly, the model assumes a median equity price of $0.94 per LIHTC dollar.

Gap Financing

Given the amount of PAB debt and LIHTC equity generated, the base model estimates a baseline percentage of gap financing needed of 16% of total project costs. Adding up the debt, equity and gap financing sources provides an overall amount of funding sources available to finance rental housing.

Major sources of gap financing

Often referred to as “soft financing” or “soft debt,” the gap funding from a variety of federal, state and local sources often have more favorable financing and repayment terms than conventional loans. There are, however, requirements that need to be met, in addition to the LIHTC income and affordability requirements, in order to take advantage of these funding sources. When using funds from multiple programs to finance the same property, developers must ensure compliance across all programs in terms of tenant eligibility, certifying income, determining rents and managing the unit mix, above and beyond what is required by the LIHTC. Developers must also keep in mind that the most restrictive requirements of each financing source will have to be met to stay in compliance, which adds a level of complexity.

There are numerous programs (too many to list here) that developers can avail themselves of. Examples of soft financing include, but is not limited to:

- **U.S. Department of Housing and Urban Development (HUD) administered programs.**
  - *Block grant programs.*

    Both the HOME Investment Partnership Program (HOME) and the Community Development Block Grant (CDBG) are formula-driven block grant programs where states and localities are provided funds for a number of eligible activities. While HOME was created to address housing affordability issues and CDBG has a much more varied list of activities, both programs' funds can be used to support affordable housing activities, including rental properties for low- and very low-income households. As such, both can be used to fill the financing gap for LIHTC developments.
  - *Project-based assistance.*

    HUD administers a variety of project-based rental assistance programs where the subsidy is tied to homes within rental properties. The two largest are the Project-based Rental Assistance (PBRA) program administered by the Office of Housing, where HUD contracts directly with private rental housing owners; and project-based vouchers (PBVs) administered by the Office of Public and Indian Housing, where HUD contracts with public housing agencies (PHAs), which in turn allocates the PBVs to a specific property. These subsidies can be used to finance affordable rental housing in conjunction with the LIHTC. HUD's Office of Housing also administers two supportive housing programs that are often used in conjunction with LIHTC to serve specific populations—the Section 202 Supportive Housing for the Elderly and the Section 811 Supportive Housing for People with Disabilities.
  - *Assistance to serve special needs populations.*

    Under the McKinney-Vento Homeless Assistance Act, HUD's Office of Special Needs Assistance Programs within the Office of Community Planning and Development administers programs to provide outreach, shelter, transitional housing, supportive services, short and medium-term rent subsidies, and permanent housing for people experiencing homelessness, and in some cases for people at risk of homelessness. Funding for these activities is distributed by formula to jurisdictions for the Emergency Solutions Grants program and competitively for the Continuum of Care process. Project-based resources authorized under McKinney-Vento are often used as soft financing sources with the LIHTC. HUD also administers the Housing Opportunities for People with AIDS (HOPWA), which sometimes is used with the LIHTC.

- **U.S. Department of Agriculture (USDA) multifamily housing programs.**
  The USDA's multifamily housing programs fund developments in rural communities for low-income households. A number of financing options are provided, including Section 515 Multifamily Housing Direct Loans and the Section 538 Multifamily Housing Loan Guarantee program. Direct loans provide competitive financing for affordable, multifamily rental housing for low-income, elderly or disabled individuals and families in eligible rural areas. The loan guarantee program works with qualified private-sector lenders to provide financing to qualified borrowers to increase the supply of affordable rental housing for low- and moderate-income individuals and families in eligible rural areas and towns. Both programs are used with the LIHTC.
- **Federal Sources authorized by the Federal Housing Finance Agency (FHFA)**
  Though administered by HUD, Treasury and Federal Home Loan Bank member institutions, these programs are discussed together as they are funded by contributions from Fannie Mae, Freddie Mac and the Federal Home Loan (FHL) Banks, the housing government-sponsored entities.
  - *National Housing Trust Fund (HTF).*
    HUD allocates HTF funding by needs-based formula to states for the production or preservation of affordable housing for very low-income households.
  - *Capital Magnet Fund (CMF)*
    The CMF competitively awards money to nonprofit housing organizations and Community Development Financial Institutions (CDFIs) to finance affordable housing for low-income households and related economic development, including community service facilities.
  - *Affordable Housing Program (AHP)*
    Each FHL Bank must establish an AHP and dedicate 10% of its annual earnings to this program. Funds can be used for the purchase, construction or rehabilitation of rental housing.
- **State and Local Sources**
  - *State LIHTC programs.*
    In addition to the federal LIHTC, there are separate state programs–currently there are 21 state housing tax credit programs, with additional programs proposed–that can be used to finance affordable rental housing properties. State programs can vary widely, with different compliance periods, recapture stipulations, funding caps and more.
  - *State and local affordable housing bonds*
    To support the development and preservation of affordable housing, cities, counties and states can chose to issue bonds to provide subsidies for affordable housing projects or fund other affordable housing programs or other related purposes. State and local governments may have laws and provisions that require taxpayer approval for the issuance of new bonds or bonding authority and as such, this form of financing for rental housing is not as common as state housing tax credits.

- *Other state and local sources*

  In addition to state housing credits and bonds, states and local funding sources can include state and local housing trust funds, assistance provided to developers in the form of relief from their property taxes, state and local rental assistance programs, and tax increment financing.

- **Deferred Developer Fees.**

  Another way of filling the funding gap between the amount of permanent debt that can be supported by a project and equity contributions is to defer the payment of developer fees owed to the developer until after the project has been placed in service. Where market-rate housing developers are compensated by a portion of the asset appreciation and cash flow, in LIHTC properties, developers are compensated by a specific fee as set by state agencies. Sometimes, given the financing needs of a particular property, instead of receiving the fee upon completion, some or all of the fee is deferred and paid over time.

- **Seller Notes.**

  The purchase price of a LIHTC property is typically the appraised value, in order to constitute an arm's-length transaction. The seller may decide to only require a portion of the purchase price to be paid in cash. When the seller of a property agrees to finance the remaining portion of the sale, a note is issued detailing the terms under which they will be repaid by the buyer.

Applying Model to Lowered Thresholds

The model adapts the established baseline elements to the following thresholds: 1) a 25% test, 2) 33% test, and 3) 40% test. Instead of 55%, the respective baseline percentages are adjusted by applying a similar 10% "cushion" to the required financed-by amount. The assumed financed-by percentages are 27.5% for the 25% test, 36.3% for the 33% test and 44% for the 40% test.

To replace a portion of the tax-exempt debt that is no longer statutorily required, the model assumes additional taxable and tax-exempt bond recycled debt based on the same overall net operating income (NOI) as the 50% model. Because the blend of taxable debt and recycled tax-exempt bond debt has a higher interest rate, the overall debt percentage–including tax-exempt and taxable–able to be supported is less than the amount in the 50% test scenario.

The model assumes that the sources of gap financing historically available to PAB-financed affordable housing (see overview above) are scalable on a percentage basis based on increases in the amount of housing financing. Given the lowered financed-by thresholds, the model anticipates that states, local governments, housing developers and others will on average respond by providing a scalable increase in gap financing to leverage the availability of PABs to finance more rental housing. Furthermore, the model estimates an overall increase in the percentage of costs of each development that need to be funded by gap sources under the lowered financed-by scenarios: 2.70% of total development costs for the 25% test, 1.56% for the 33% test and 0.56% for the 40% test. Given these additional amounts of gap financing, the model estimates an overall amount of financing available from debt, equity and gap financing to produce and preserve rental housing, and each scenario has a greater amount of funding sources, in the aggregate, to produce and preserve rental housing. The capacity estimates would be higher or lower, and/or the average income of families served would be lower or higher, if additional sources of gap financing are higher or lower, respectively.

Projections of PAB Issuance

To estimate the annual PAB financing needs over time for each of the scenarios, the model assumes new construction costs increase by 3.6% annually, while substantial rehabilitation and acquisition/rehabilitation costs increase by 3% annually. Those cost increases lead to a higher amount of PABs needed to finance each unit for each type of development each year for the 10-year period.

Furthermore, based on historical NCSHA data, the model assumes that every year on average, 53% of annual PAB allocations is used to finance new construction development and 47% is used to finance substantial rehabilitation or acquisition/rehabilitation developments. The unit-financing capacity estimates would change if the ratio of new construction to acquisition/rehabilitation were changed.

Using historical NCSHA and CDFA data on rental housing PAB issuance, Novogradac estimates about $16.6 billion in rental housing PAB issuance in 2022. Based on the projections of the annual overall PAB cap available over 2022 through 2031, the model assumes the same annual percentage increase in rental housing PAB issuance as the percent of annual increase in overall PAB cap as projected by inflation and population growth. The annual PAB cap increases are estimated based on February 2021 CBO projections of inflation and the U.S. Census Bureau's projections of state population growth.

Furthermore, the model assumes the same aggregate annual rental housing PAB issuance under each of the lowered test scenarios as projected under the 50% test baseline. Given the lowered amount of PABs needed under each of the lowered test scenarios to generate the maximum amount of 4% LIHTCs and the estimates on the amount of PAB per unit needed, the model estimates the amount of PAB cap that would be "freed" under each scenario over 2022 to 2031.

Projections of Rental Homes Financed

Informed by the pro forma analysis discussed above, the model estimates the PAB allocation needed per unit for both new construction and acquisition/rehabilitation under each lowered test scenario, projected forward based on the annual percentage cost increases. From these calculations, the model further estimates the maximum capacity of units financed if all of the estimated "freed" PAB cap were to be devoted to financing additional units.

Results of Analysis

"Freed" PAB Cap

Given the methodology described above, Novogradac projects that lowering the financed-by test from 50% to 25% would "free" nearly $93.2 billion in PAB cap over 2022 to 2031. If it were lowered to 33%, Novogradac estimates $63.4 billion in "freed" PAB cap, and for 40%, Novogradac estimates nearly $37.3 billion. Overall, Novogradac estimates $62,359 in "freed" PAB cap per unit. See the following 10-year schedule:

"Freed" PAB Cap

Year	25% Test	33% Test	40% Test
2022	$8,317,126,426	$5,655,645,970	$3,326,850,571
2023	$8,387,026,738	$5,703,178,182	$3,354,810,695
2024	$8,784,226,977	$5,973,274,345	$3,513,690,791
2025	$8,859,352,968	$6,024,360,018	$3,543,741,187
2026	$9,267,219,612	$6,301,709,336	$3,706,887,845
2027	$9,346,312,952	$6,355,492,807	$3,738,525,181
2028	$9,764,180,568	$6,639,642,786	$3,905,672,227
2029	$9,847,023,469	$6,695,975,959	$3,938,809,387
2030	$10,275,157,250	$6,987,106,930	$4,110,062,900
2031	$10,327,241,377	$7,022,524,136	$4,130,896,551
2022-31 Total	**$93,174,868,337**	**$63,358,910,469**	**$37,269,947,335**

Source: Novogradac

Additional Rental Homes Financed Capacity

If all of the "freed" PAB cap were devoted to rental housing financing, Novogradac projects an increase in rental housing financing capacity over 2022 to 2031 of 1,494,246 homes under the 25% test, 769,763 homes under the 33% test, and 373,561 homes under the 40% test. See the following 10-year schedule:

Estimated Additional Units Financed by Capacity

Year	25% Test	33% Test	40% Test
2022	153,892	79,278	38,473
2023	150,414	77,486	37,604
2024	152,695	78,661	38,174
2025	149,268	76,896	37,317
2026	151,343	77,965	37,836
2027	147,946	76,215	36,987
2028	149,814	77,177	37,454
2029	146,446	75,442	36,612
2030	148,122	76,305	37,031
2031	144,304	74,338	36,076
2022-31 Total	**1,494,246**	**769,763**	**373,561**
% increase	**100%**	**52%**	**25%**

Source: Novogradac

Approximately 30% of the estimated additional-units-financed capacity is new construction and the remaining 70% is substantial rehabilitation or acquisition/rehabilitation properties.

If the gap financing was scalable by only 50% of what was assumed in the model, then Novogradac projects an increase in rental housing financing capacity over 2022 to 2031 of 747,123 homes under the 25% test, 384,881 homes under the 33% test, and 186,781 homes under the 40% test. See 10-year schedule that follows on the next page:

Estimated Additional Units Financed by Capacity

Year	25% Test	33% Test	40% Test
2022	76,946	39,639	19,236
2023	75,207	38,743	18,802
2024	76,348	39,331	19,087
2025	74,634	38,448	18,659
2026	75,672	38,982	18,918
2027	73,973	38,107	18,493
2028	74,907	38,588	18,727
2029	73,223	37,721	18,306
2030	74,061	38,153	18,515
2031	72,152	37,169	18,038
2022-31 Total	**747,123**	**384,881**	**186,781**
% increase	**50%**	**26%**	**13%**

Source: Novogradac

Justification for a Lowered Threshold

As noted earlier, it has been more than 30 years since the threshold to be financed by PABs has been adjusted. When the LIHTC was created in 1986, Congress set the threshold at 70% of aggregate basis be financed by PABs for affordable housing properties to be eligible for the full amount of 4% LIHTCs, because the remaining 30% was intended to be covered by tax credit equity. However, given how difficult it was to service the debt given the income-targeting requirement, it was soon found to be unfeasible and Congress changed the threshold to 50% in 1990. Current conditions again warrant reevaluating the financed-by-threshold to ensure requirements are in line with the reality of bond-financed properties.

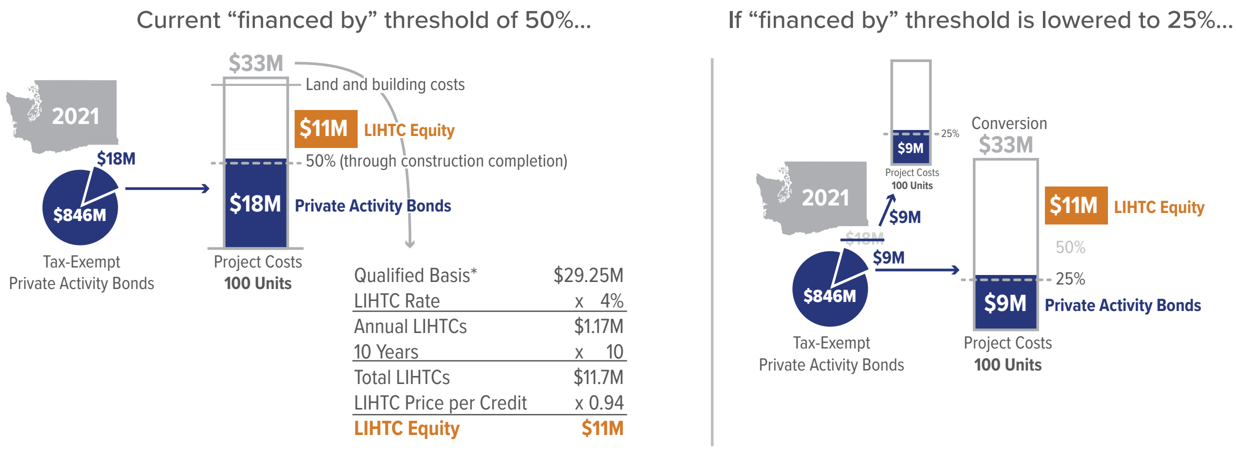
Under current law, if at least 50% of a rental housing property's aggregate basis (land and building) is financed by PABs, the property is eligible to receive the full amount of 4% LIHTCs. When applying for bond allocations to satisfy the 50% test, developers often request and are allocated more than 50% to ensure they don't fail the test, since not receiving the full amount of 4% LIHTCs could render a property financially infeasible. As noted in the methodology and assumptions section above, the common practice is to finance 52% to 58% of the aggregate basis with PABs to provide a financing cushion in case of unexpected cost increases. The developer uses bond proceeds for construction financing and once property is ready to be placed in service (PIS), a portion of the bonds are often repaid with tax credit equity and/or other soft financing sources. Upon being placed in service, the properties' permanent debt financing level is set at a lower, more sustainable level given the income demographics of the households served. When developers apply for PAB authority, the planned permanent debt level is often much less than the 50% threshold required to trigger the full amount of 4% LITHC allocation.

As an increasing number of states start to find themselves at or near their annual bond cap–a number that is expected to increase in coming years given the effect of the 4% LIHTC floor–lowering the bond requirement would free up bonds to be used to finance additional affordable rental homes without endangering their financial feasibility. Lowering the threshold makes for a more efficient use of PABs.

Further, lowering the 50% test threshold would make it more efficient for stakeholders to serve lower income households. Property NOI–which is derived from the income demographics of tenants served, as rent payments are based on 30% of the applicable income limit–pays permanent debt service. Lower permanent debt means properties can more deeply income target tenants. For example, a property is able to decrease rents by roughly $6,000 per month for every $1 million reduction in permanent debt (calculation assumes an interest rate of 6% and an amortization period of 30 years.) Requiring a property to achieve a 50% threshold, when only 25% or less may be necessary as discussed below, increases the overall financing cost and the permanent debt needed to finance the property.

Bond application data shows a number of properties are designed to have permanent debt levels at 25% or less. According to data on 2020 bond applications in California, 57% of properties had hard permanent debt that accounted for of 25% or less of total sources. Furthermore, 67% of the properties with 4% LIHTCs and $500 million in state credits had hard permanent debt of 25% or less; and for the remaining properties that had 4% federal credits and $15 million in state credits reserved for preservation, 80% had hard permanent debt that accounted for 25% or less of the total costs. Analysis of application data for housing authority properties in Washington revealed that 57% of properties had hard permanent debt that accounted for 25% or less of total sources. A review of Massachusetts applications for 2018 to 2020 found 36% of properties had hard debt that accounted for 25% or less of total sources. Slightly increasing the hard debt limit to 30% or less of total debt increases the percentage to 52% of properties. It should be noted that these data were from bond-financed properties before the enactment of the 4% floor. With the 4% floor now enacted, it will be easier for properties to reduce the percentage of permanent debt.

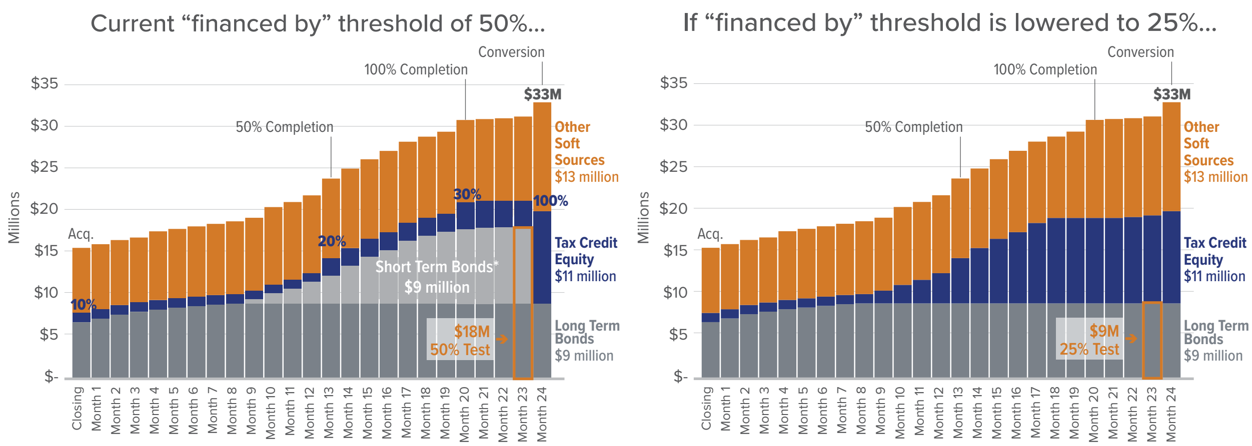
Example Based on Seattle Property



*Eligible fixed assets multiplied by portion of total units that are dedicated for low-income households

Source: Novogradac

Example Based on Seattle Property



*Short term bonds secured by full $11 million in tax credit equity

Source: Novogradac

The research cited previously illustrates the affordable housing crunch that the nation continues to face. The nearly 1.5 million affordable rental homes that could be financed over 2022-2031 if the PAB 50% test was lowered to 25% would have a dramatic effect on the country's affordable rental housing supply, which would be especially impactful as the coronavirus pandemic has yet to be brought under control and the economy is still reeling from its effects. Lowering the threshold could free billions of dollars of bond cap and allow tens of thousands–potentially hundreds of thousands–of affordable rental homes to be financed every year. And with the lower threshold making it more efficient to set a lower permanent debt level, such housing could serve lower-income households.

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