

The Rental Assistance Demonstration Program and Its Current and Projected Consumption of Low-Income Housing Tax Credits

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The Rental Assistance Demonstration (RAD) program is the nation's latest and largest initiative to preserve public housing. Launched in 2012, RAD transfers public housing units to another federal subsidy program, Project-based Section 8, to benefit from a more stable stream of federal subsidy dollars and leverage this subsidy to finance essential capital improvements.¹ In addition, RAD also preserves housing built under selected older federal subsidy programs. RAD is currently authorized to convert 455,000 units of public housing, and all of the remaining housing supported with such subsidies as Rent Supplements, RAP, and Section 8 Mod Rehab, to project-based Section 8.²

Unlike nearly all federal housing programs, RAD is revenue neutral; Congress has not appropriated any RAD funds. The operating and capital subsidies that a housing development receives in the public housing program are merely converted to project-based rental assistance under the Section 8 program. Once the subsidy is converted, the owner can borrow against it to pay for rehabilitation and related expenses. Often, owners augment bank loans or bond financing with the federal Low-Income Housing Tax Credit (LIHTC) program and other funding sources.

RAD presents a zero-sum situation for the LIHTC program. The LIHTC is the nation's largest project-based subsidy program for rental housing. It provides a fixed amount of tax credits each year to construct or preserve low-income rental housing. The more the program is used to preserve rental housing in the RAD program, the fewer credits are available to help expand the supply of affordable rental housing. The RAD program highlights a fundamental tension between the preservation and creation of affordable housing in implementing the LIHTC program.

¹ Consolidated and Further Continuing Appropriations Act, 2012. Public Law 112–552.

² Consolidated and Further Continuing Appropriations Act, 2012. As amended. Public Law 115–141.

The purpose of this article is to document the current use of LIHTC in the RAD program and to estimate the degree to which RAD will consume LIHTCs once all of the 455,000 units of public housing currently authorized to participate in the RAD program are converted to project-based rental assistance. This article will also estimate the impact on the LIHTC if the entire stock of public housing is converted to RAD.³

The article is organized as follows: First, we present a brief overview of the RAD and LIHTC programs. Next, we summarize the state of the RAD program as of September 2020, focusing on the number of developments and units in various phases of RAD conversion and the use of LIHTCs to help finance the conversion. Third, we discuss assumptions and procedures for estimating RAD's use of LIHTCs once the current 455,000 unit limit is reached. In addition, we examine the impact on LIHTCs if all public housing is converted. In the final section, we summarize the findings and offer policy recommendations.

Overview of the Rental Assistance Demonstration and Low-Income Housing Tax Credit Programs

The Rental Assistance Demonstration Program

RAD is the latest and largest of several federal programs designed to rehabilitate and rebuild public housing. The most recent assessment of the public housing stock's capital needs, released in 2010, found a backlog of nearly \$25 billion, with an additional \$3.4 billion in new capital needs accruing every year (Finkel et al., 2010). Extrapolating from this study, the National Association of Housing and Redevelopment Officials put the backlog at \$70 billion in 2019. New York City alone reported a backlog of more than \$40 billion in 2019. Annual appropriations for U.S. Department of Housing and Urban Development (HUD) public housing capital fund fall far short of the need, averaging \$2.3 billion annually from fiscal 2015 to 2020 (in 2018 dollars). Moreover, housing authorities may spend up to 20 percent of this fund on operating costs—leaving even less for major renovations and building system replacements (HUD, 2020d).

The RAD program makes it possible to address these capital needs far more quickly than if a property remained in the public housing program. By transferring the capital and operating fund subsidies associated with particular public housing development to project-based Section 8, the property can leverage these subsidies along with tenant rental payments to take out loans to cover the cost of essential capital improvements. In addition to bank loans or bonds, participating properties can also receive LIHTCs and funds from other sources.

RAD differs in fundamental ways from HOPE VI and Choice Neighborhoods, two previous programs designed to shore up or replace distressed public housing. First, as noted previously, RAD receives no federal funding. The program transfers housing developments from the public housing program to project-based Section 8, thereby enabling the property to access private and public funds that would not be available if it remained in the public housing program.

³ Because of data limitations, the article does not examine the use of LIHTC in the conversion of older project-based subsidy programs to project-based Section 8. RAD will ultimately convert about 40,000 such units. According to HUD, the large majority of these units do not receive LIHTCs.

RAD is also much larger than these other programs. As of September 23, 2020, public housing developments with nearly 140,000 units had completed the conversion process, and nearly 190,000 more units were in the pipeline. In contrast, HOPE VI rehabilitated or rebuilt a total of 97,389 units, of which only 55,314 units remained in the public housing program (Gress, Cho, and Joseph, 2016: 17).

The third distinction between RAD and HOPE VI is that the program requires all properties to retain the same number of deeply subsidized units; all public housing units within a property must be converted to project-based Section 8.

Fourth, all tenants recognized on the lease in public housing units converted to RAD are automatically entitled to live in the development after it completes the conversion process; owners and managers cannot impose any eligibility standards to screen out existing residents.

Funds leveraged through RAD conversion can be used to cover the cost of rehabilitating public housing. They can also be used to finance the demolition and replacement of public housing units—either on the original site or at a different location. There is no loss of deeply subsidized units in all circumstances, and all residents of the original public housing development must be allowed to move into the new property.⁴

When Congress launched the RAD program in 2012, it limited the amount of public housing that could be converted to project-based Section 8 to 60,000 units. Congress subsequently increased this limit several times, more recently setting it at 455,000 units in 2018.⁵

The Low-Income-Housing Tax Credit Program

The LIHTC program is the nation's largest subsidy program for the development and preservation of low-income housing. Created by the Tax Reform Act of 1986, the program provides tax credits to investors in eligible housing developments. Investors receive tax credits over a 10-year period in exchange for their equity investment, and the housing must remain affordable for not less than 30 years. LIHTC has helped finance the construction and preservation of more than 3.2 million housing units through 2018 (HUD, 2020b).

There are two types of LIHTCs—9 and 4 percent. The larger of the two credits is based on 9 percent of a property's eligible development costs.⁶ Until January 2021, the smaller credit varied month to month, generally hovering around 3.2 percent since 2012 (Novogradac, 2020a). It is

⁴ For more details on the RAD program, see Reid (2017), Schwartz (2017), and Stout et al., (2019).

⁵ *Consolidated and Further Continuing Appropriations Act, 2012. As amended.* Public Law 115–141.

⁶ In addition to the 9-percent LIHTC, state housing finance agencies (HFAs) also provide 4-percent credits on a competitive basis for projects that primarily involve the acquisition of existing buildings. Developers must compete for these credits, as opposed to the 4-percent credits that are automatically awarded to developments that receive tax-exempt bond financing.

now set at a minimum of 4 percent (Novogradac, 2020b).⁷ State housing finance agencies allocate the credits to eligible housing developments in accordance with their housing allocation plans. Investors, mostly financial institutions, provide equity for the development or rehabilitation of affordable housing in exchange for the tax credits (the amount of their investment is based on the present value of the 10-year stream of tax credits).

The amount of tax credits that can be distributed each year is capped. The supply of 9 percent credits that states may allocate is determined by multiplying a state's population by a per-capita credit amount which is pegged to inflation, with small states assured of a minimum credit amount. As of 2020, the per-capita credit stood at \$2.81.⁸ Competition for the 9-percent credit is intense. In 2018, the last year for which data are available, developers applied for more than \$2.5 billion in 9-percent credits, two and one-half times the total amount available (NCSHA, 2019).

Properties financed with tax-exempt private activity bonds receive 4-percent credits automatically. Although developers do not need to compete for these credits, their supply is capped by limits on the total value of tax-exempt bonds that states can issue each year. Total tax-exempt bonding authority is determined by multiplying a state's population by a per-capita amount, \$105 in 2020. In addition to the development of affordable housing, tax-exempt private activity bonds may also be used to finance low-interest mortgages for first-time homebuyers and economic development projects, water and sewer services, mass transit, and student loans. Thus, 4-percent LIHTCs must compete with these other uses for the limited supply of private activity bonds.

LIHTCs may expand the supply of affordable rental housing and preserve the supply that already exists. In recent years a substantial portion of credits has been used to renovate and upgrade subsidized housing developments, including properties originally financed with LIHTCs, and to ensure their continued affordability. For example, fully 36 percent of the housing that received LIHTCs in 2018 had previously been built or rehabilitated with LIHTCs (NCSHA, 2019). The use of LIHTCs to preserve subsidized housing produces limits to the amount of new affordable housing that can be financed with LIHTCs. The use of LIHTC to finance RAD projects may further diminish credit availability to expand the supply of affordable housing.

Data Source and Methodology

The following analysis is based on two publicly available data sets provided by HUD. The first is a spreadsheet listing all RAD properties. The spreadsheet—regularly updated by HUD—provides

⁷ When the LIHTC program was launched in 1987 the two credits were initially set at exactly 9 and 4 percent. Starting in 1988, the credit rates fluctuated month to month to reflect changes in government's cost of borrowing. The rates for the two credits were set by formula to yield a tax credit that will offset 70 and 30 percent, respectively, of the depreciable costs of the development (Affordable Rental Housing ACTION, 2020; Keightley, 2021). Congress set the larger credit exactly at 9 percent in 2008 and the smaller one at a minimum of 4 percent in 2021 (Keightley, 2021; Novogradac, 2020b).

⁸ State tax credit allocations were originally set at \$1.25 per capita, an amount that remained unchanged until 2002 when they were increased to \$1.75 and pegged to inflation for each year afterward. The Housing Economic Recovery Act of 2008 (HERA) temporarily increased the allocation for 2009 to \$2.20 per capita and a statewide minimum of \$2,557,500. The legislation called for the cap to decrease to \$2.00 per capita in 2010, with a minimum of \$2,325,000 to each state, and be adjusted for inflation thereafter. In 2018, Congress temporarily increased the per capita amount from \$2.40 to \$2.70. However, this allocation will revert back to \$2.40 in 2022, adjusted for inflation (Novogradac, 2018).

information on the location of each property, its current status in the program, the number of units in the property, whether the project involves rehabilitation or new construction, the date at which the property received a commitment to enter into a Housing Assistance Contract (CHAP), the date at which the conversion process was completed (closed), and certain aspects of the cost of the project and its financing. The latter includes the use of 9- and 4-percent LIHTCs (HUD, 2020a).

The second data source is HUD's LIHTC database (HUD, 2020b). Updated annually, the dataset currently includes information on 48,672 properties placed in service between 1987 and 2018, encompassing 3.23 million housing units.

To estimate the current impact of the RAD program on the LIHTC program, we divided the total number of housing units in properties that received LIHTC allocations from 2013 through 2017 by the number of units in RAD properties that received LIHTCs when they completed the conversion process to project-based Section 8 during this time period. The analysis estimated the degree to which RAD accounts for properties that received 9-percent LIHTCs or 4-percent LIHTCs with tax-exempt bonds during the 2013–2017 period.

To estimate the extent to which the RAD program will consume LIHTCs when the current cap of 455,000 units is reached, we assume that the percentage of RAD conversions that use 9- and 4-percent LIHTCs will remain at their current level and that the conversion process will be completed by 2030. We then assume that the number of housing units produced with 9- and 4-percent LIHTCs will remain steady at 42,300 and 43,500 annually. Our projection of how the conversion of the entire remaining inventory of public housing to RAD (should that be allowed) would affect the LIHTC program is based on the same assumptions regarding the percentage of RAD properties using the LIHTC and the annual number of additional units allocated LIHTCs. We assume that the conversion of the entire public housing stock to RAD would be completed by 2030.

The two data sets are not perfectly aligned. We assume that the “closing” dates specified in the RAD dataset for the completion of the conversion process to project-based Section 8 corresponds roughly to the dates given in the LIHTC database on when properties were allocated LIHTCs. We recognize that allocation dates may precede closing dates by several months, if not longer. However, they are probably more closely matched to the closing dates than when the property was completed (“placed into service”). As noted previously, the analysis will aggregate all RAD properties with LIHTCs that closed between 2013 and 2017 to estimate RAD's impact on LIHTC use during this period. Therefore, gaps of months or even years between the allocation of LIHTCs and completion (closing) of a RAD conversion should not substantially affect the analysis. Finally, because the LIHTC dataset does not include properties that received LIHTC allocations after 2018, we omitted from the analysis RAD properties that completed the conversion process in 2019 or 2020. We also omitted RAD properties that completed the conversion process in 2018 because the LIHTC database only includes some of the properties that were allocated with LIHTCs in 2018—those that were put into service in the same year, omitting properties that were allocated with LIHTCs in 2018 but still in construction or otherwise awaiting occupancy.

Current Status of RAD Conversions

Before examining the current and projected use of LIHTCs in the RAD program, we offer a brief overview of RAD activity. As of September 2020, a total of 1,294 properties containing 139,694 units had completed the conversion process, switching from public housing to project-based Section 8. An additional 59,131 units are in properties that had received a CHAP from HUD—the application for RAD conversion had received conditional approval, and the housing authority can proceed to conduct a physical assessment of the property and assemble the necessary financing. An additional 4,979 units are in properties with pending RAD applications. In addition to units that have completed the conversion process and those in the conversion pipeline, 114,874 units are “reserved for future conversion.” These units belong to housing authorities with permission to convert their entire public housing inventory to project-based Section 8 through the RAD program or convert a large portion of their housing in multiple phases. These authorities⁹ cannot convert all of their public housing at once and have received permission from HUD to convert the rest over time (Schwartz, 2017). In total, 329,382 units are in properties that have converted to project-based Section 8, are in some stage of the conversion process, or are authorized to convert at a future date, leaving room for an additional 125,618 given the current cap of 455,000 conversions.

Exhibit 1

Units in the Rental Assistance Demonstration Program by Development Status		
	Units	Percent
RAD Applications	4,979	2
CHAP Awarded	59,131	18
Closed	139,694	42
Financing Plan Submitted	10,704	3
Reserved Units	114,874	35
Total Units Closed and in Processing	329,382	100
Potential Units	125,618	
Total Authorized by Congress	455,000	
Public housing units 2013	1,115,867	
Public housing units 2019	957,971	
Change 2013 to 2020	157,896	
Closed RAD units as of 2020		
As percent public housing 2013	13%	
As percent change 2013 to 2020	88%	
Authorized RAD units as percent of public housing units 2013	41%	

CHAP = Commitment to enter into a Housing Assistance Contract. RAD = rental assistance demonstration.

Sources: HUD (2020a); HUD (2020c)

⁹ As of 2016, 68 PHAs had been approved to convert all of their public housing to RAD and 42 had multiphase plans (Schwartz, 2017).

The 139,694 units that have completed the RAD conversion process constitute 13 percent of the nation's total public housing stock in 2013. These units account for 88 percent of the total decrease in public housing of 157,896 from 2013 to 2020. When the 455,000 units authorized to convert to project-based Section 8 under RAD complete the conversion process, the public housing stock will have declined by 41 percent (see exhibit 1).

Public housing authorities throughout the nation are participating in the RAD program. Exhibit 2 lists the number of properties and units converted from public housing to project-based Section 8 by state, plus the District of Columbia and Puerto Rico. Only two states—West Virginia and Hawaii—are not included and have properties with pending conversions. Nearly 70 percent of the converted units are located in 12 states, of which 7 are in the south. The four states with the most converted units—Texas, Georgia, North Carolina, and Tennessee—are all southern states and account for 31 percent of all converted units.

Exhibit 2

Closed Properties and Units in the Rental Assistance Demonstration Program by State (1 of 2)

State	Properties	Percent	Units	Percent
Texas	119	9.2	11,806	8.5
Georgia	105	8.1	10,990	7.9
North Carolina	106	8.2	10,568	7.6
Tennessee	63	4.9	9,674	6.9
New York	46	3.6	8,954	6.4
Illinois	66	5.1	8,702	6.2
New Jersey	57	4.4	7,400	5.3
California	109	8.4	6,962	5.0
Alabama	45	3.5	6,184	4.4
Maryland	45	3.5	5,546	4.0
Florida	49	3.8	5,445	3.9
Mississippi	45	3.5	5,078	3.6
Ohio	36	2.8	4,207	3.0
Minnesota	13	1.0	4,166	3.0
Virginia	42	3.2	3,138	2.2
Pennsylvania	36	2.8	3,030	2.2
Arkansas	21	1.6	2,885	2.1
Indiana	23	1.8	2,677	1.9
Washington	26	2.0	2,371	1.7
Michigan	25	1.9	2,046	1.5
South Carolina	25	1.9	1,696	1.2
Massachusetts	21	1.6	1,672	1.2
Wisconsin	22	1.7	1,622	1.2

Exhibit 2**Closed Properties and Units in the Rental Assistance Demonstration Program by State (2 of 2)**

State	Properties	Percent	Units	Percent
Louisiana	17	1.3	1,553	1.1
Connecticut	21	1.6	1,484	1.1
Oregon	21	1.6	1,379	1.0
Arizona	12	0.9	1,311	0.9
Vermont	8	0.6	1,245	0.9
Oklahoma	7	0.5	1,198	0.9
Nevada	8	0.6	845	0.6
Missouri	5	0.4	597	0.4
Colorado	10	0.8	478	0.3
New Mexico	5	0.4	437	0.3
Rhode Island	4	0.3	332	0.2
Kentucky	2	0.2	232	0.2
Utah	7	0.5	231	0.2
Delaware	3	0.2	218	0.2
New Hampshire	1	0.1	184	0.1
Puerto Rico	1	0.1	168	0.1
Kansas	3	0.2	141	0.1
Idaho	2	0.2	122	0.1
Nebraska	1	0.1	120	0.1
South Dakota	1	0.1	112	0.1
District of Columbia	3	0.2	109	0.1
North Dakota	1	0.1	97	0.1
Montana	1	0.1	96	0.1
Maine	2	0.2	89	0.1
Wyoming	1	0.1	50	0.0
Iowa	1	0.1	47	0.0
Total	1,293	100.0	139,694	100.0

Note: Percentages may not add to 100 percent due to rounding.

Source: HUD (2020a)

Exhibit 3 shows that an average of 1,293 public housing developments containing 139,694 units have been converted to project-based Section 8 under the RAD program. The program's peak year was 2017, when 304 properties with 30,684 units were converted. On average, the RAD program converted 193 properties, containing 21,282 units, each year.

Exhibit 3

Closed Properties and Units in the Rental Assistance Demonstration Program by Year Closed

Year Project Closed	Properties	Units
2013	13	1,248
2014	115	11,904
2015	130	14,686
2016	263	29,621
2017	304	30,684
2018	182	22,097
2019	163	18,698
2020*	123	10,756
Total	1,293	139,694
Average 2014–2019	193	21,282

* = Partial year.

Source: HUD (2020a)

Most RAD projects fund the physical rehabilitation of public housing developments. Of the 1,293 properties that have completed the conversion process as of September 2020, 1,092 (84 percent) underwent some level of rehabilitation and upgrading of existing buildings. The remaining 16 percent of the projects involved new construction, either on the original public housing site it replaced or at a new location. However, rehabilitated projects tend to be larger than new construction. As a result, rehabilitation accounts for more than 91 percent of all units in properties that completed the RAD conversion process (see exhibit 4).

Exhibit 4

Closed Properties and Units in the Rental Assistance Demonstration Program by Construction Type

	New Construction	Percent	Rehabilitation	Percent	Total	Percent
Properties	201	16	1,092	84	1,293	100
Units	11,990	9	127,704	91	139,694	100

Source: HUD (2020a)

About 43 percent of all the properties and units that completed the RAD conversion process from September 2020 received LIHTCs. Exhibit 5 also shows that 33 percent of all RAD units are in properties that received 4-percent LIHTCs with tax-exempt bond financing, and 11 percent are in properties that received 9-percent credits.

Exhibit 5**Rental Assistance Demonstration Program Properties and Units Closed by September 2020 and Use of Low-Income Housing Tax Credits**

Type of Tax Credit	RAD Properties	Total (%)	RAD Units	Percent of Total (%)
4% Credit	355	27	45,453	33
9% Credit	190	15	14,784	11
Both	5	0	231	0
None	743	57	79,226	57
Total	1,293	100	139,694	100

Note: Numbers may not add to 100% due to rounding.

Source: HUD (2020a)

RAD projects that involve new construction are especially likely to receive LIHTCs. Exhibit 6 shows that 95 percent of all new construction projects were financed with LIHTCs, compared to 38 percent of all properties that underwent rehabilitation. About one-half of all 9-percent LIHTCs allocated to RAD properties supported new construction, compared to 10 percent of all 4-percent LIHTCs.

Exhibit 6**Closed Units in the Rental Assistance Demonstration Program by Construction Type and Use of Low-Income Housing Tax Credits**

Type of Tax Credit	New Construction	Percent	Rehabilitation	Percent	Total	Percent
4% credits	4,297	36	41,156	32	45,453	33
9% credits	6,876	57	7,908	6	14,784	11
Both	165	1	66	0	231	0
None	652	5	78,574	62	79,226	57
Total	11,990	100	127,704	100	139,694	100

Notes: Numbers may not add to 100% due to rounding. Properties with missing values are assumed to not use low-income housing tax credits.

Source: HUD (2020a)

The Rental Assistance Demonstration's Current and Projected Consumption of Low-Income Housing Tax Credits

This section estimates the degree to which the RAD program has absorbed LIHTCs allocated to affordable housing projects from 2014 through 2017 (the last year for which relatively complete LIHTC allocation data are available) and the RAD project's future consumption of LIHTCs. As noted previously, we assume that the year of LIHTC allocation is roughly coterminous with the year of a RAD project closing (completion of the conversion process).

Exhibit 7 shows that 27,218 units were in properties that completed the RAD conversion process from 2014 through 2017 by using LIHTCs. They account for 17 percent of all LIHTC allocations from 2014 through 2017, including 24.9 percent of all 4-percent LIHTC allocations and 9.8 percent of all 9-percent allocations.

Exhibit 7

Closed Rental Assistance Demonstration Units With Low-Income Housing Tax Credits and Total Low-Income Housing Tax Credit Allocations, 2014–2017

Type of Tax Credit	RAD Units with LIHTC	LIHTC Allocations	RAD as % LIHTC Allocations (%)
4% tax credit units	27,218	109,515	24.9
9% tax credit units	8,142	82,967	9.8
Both	203	20,833	1.0
Total	35,563	213,315	16.7

LIHTC = low-income housing tax credit. RAD = rental assistance demonstration.

Note: Total 'LIHTC Allocations' excludes Tax Credit Exchange Program and missing values.

Sources: HUD (2020a, 2020b)

Of the 455,000 public housing units currently authorized to participate in the RAD, 88,143 are in properties that had completed the conversion process through 2017. This leaves the 51,551 units in properties that closed between January 2018 and September 2020 and 315,303 additional units eligible for conversion, including 189,688 currently in the conversion pipeline and slots for an additional 125,618 units that remain potential units for RAD conversion (see exhibit 1).

Assuming that the same share of these units receives LIHTC funding, as occurred from 2013 to September 2020, we estimate that 43 percent will be in properties that receive 4- or 9-percent LIHTCs (see exhibit 6). Given the heavy use to date of 4-percent credits, we expect 75 percent or 101,685 units will be in properties that receive 4-percent LIHTCs, and the remaining 33,895 units will be in properties competing for 9-percent LIHTCs (see exhibit 8).

On average, 43,551 units were allocated 4-percent LIHTCs per year, and 42,348 were allocated 9-percent LIHTCs per year. If we assume that the remaining units subject to the 455,000-limit on RAD conversions complete this process over 10 years, they would take up 26 percent of all 4-percent LIHTCs and 7 percent of all 9-percent LIHTCs. These figures are quite similar to the share of LIHTC allocations consumed by RAD from 2014 to 2018 (see exhibit 7) but still quite substantial.

Exhibit 8 shows that RAD would take up a much larger share of LIHTC allocations if the remaining public housing stock (987,133 as of 2019) were to convert to project-based Section 8 through the RAD program, as Presidents Obama and Trump have both proposed. Assuming this conversion also took place over 10 years, it would consume 61 percent of all 4-percent LIHTCs and 20 percent of all 9-percent LIHTCs.

If present trends continue, the RAD program is poised to strain the LIHTC program's ability to produce or preserve affordable housing outside of the RAD program. In fact, our analysis most likely understates RAD's consumption of LIHTCs because it does not take into account RAD's conversion of other types of subsidized housing to project-based Section 8. As noted previously, "Component 2" of RAD has converted more than 35,000 housing units that were originally supported by such programs as Rent Supplements, RAP, Section 8 Mod Rehab, and Section 202, with more than 3,000 units in the pipeline. Unfortunately, data are not available on the extent to which these RAD conversions involve the LIHTC.

Exhibit 8

Projections of Rental Assistance Demonstration’s Consumption of Low-Income Housing Tax Credits

Scenario 1: All 455,000 currently authorized for the RAD program are Converted to Project-based Section 8

344,696	Total Remaining Units to be Converted
43%	Assumed to use LIHTC
149,205	assumed RAD units seeking LIHTC
75.5%	expected use of 4% credits
112,586	expected RAD units seeking LIHTCs through 4% bond financing under Private Activity Bond limits of each state
24.5%	expected use of 9% credits
27,632	expected RAD units competing for 9% LIHTCs through state competitions
Assuming 10-year build out	
11,259	expected units per year of 4% LIHTCs
2,763	expected units per year of 9% LIHTCs
LIHTC program	
2,748,779	total units produced in 1987–2018 year history of the program
85,899	average production per year
Units are divided about evenly between 4% and 9% credits	
43,551	approximate number of units per year of 4% credits
42,348	approximate number of units per year of 9% credits
RAD would need:	
26%	of the annual use of 4% tax credit units consumed by RAD over an entire decade
7%	of the annual use of 9% tax credit units consumed by RAD over an entire decade

Scenario 2: All remaining public housing is converted to Project-based Section 8 through RAD

987,133	units of public housing in 2019
36%	assumed to use tax credits
351,917	assumed RAD units seeking LIHTC
75.5%	expected use of 4% credits
265,546	expected RAD units seeking LIHTCs through 4% bond financing under Private Activity Bond limits of each state
24.5%	expected use of 9% credits
86,371	expected RAD units competing for 9% LIHTCs through state competitions
Even if assumes results in 10-year build out	
26,555	expected units per year of 4% LIHTCs
8,637	expected units per year of 9% LIHTCs
If a 10-year build out, this would more than double the demand by RAD for LIHTCs	
61%	of the average annual use of 4% tax credit units consumed by RAD, placing strain on the competition for private activity bond competitions
20%	of the annual use of 9% tax credit units consumed by RAD creating a squeeze for scarce LIHTCs

*LIHTC = low-income housing tax credit. RAD = rental assistance demonstration.
Sources: HUD 2020a, 2020b, 2020c*

Conclusions and Policy Recommendations

This article shows that the RAD program accounts for about 25 percent of all 4-percent LIHTCs allocated from 2014 through 2017 and 10 percent of all 9-percent LIHTCs. When the RAD program's current cap of 455,000 units to be converted from public housing is reached, we estimate that the RAD program will have used 26 percent of all 4-percent LIHTCs and 7 percent of all 9-percent LIHTCs allocated through 2029. RAD's impact on the use of LIHTC will be even greater if the entire remaining stock of public housing converts to RAD. These results show that if current trends continue, RAD would claim three-fifths of all 4-percent LIHTC allocations and one-fifth of all 9-percent allocations over a decade. The RAD program's consumption of LIHTC units is problematic only to the extent to which it crowds out tax credits to construct and preserve other affordable housing. If the potential supply of LIHTCs is sufficient to meet RAD's increased demand, then there would be no problem. Concerning 9-percent LIHTCs, demand greatly exceeds supply. States may only allocate a finite amount of tax credits each year (in 2020, the greater of \$2.82 per capita, or \$3,217,500), and applications for LIHTCs exceed annual allocations by a factor of more than 2.5 to 1 (NCSHA, 2019).

The situation is more complicated when it comes to 4-percent credits, especially those that are automatically awarded to projects that receive financing through tax-exempt private activity bond (PAB) funding. As of 2020, states received the greater of \$105 per capita or \$321.775 million in PAB bond authority. These bonds may be used for 14 purposes, multifamily rental housing being one. If a state does not allocate all of its PAB authority in a given year, it can carry the unused amount forward to the next 3 years. Nationally, about \$32 billion or more in PAB authority had been carried each year from 2008 through 2018. In 2018, states used \$24.1 billion of their bonding authority and carried forward \$51.1 billion to 2019 (Novogradac, 2019). With so much unused bonding authority, it might seem that states have the wherewithal to issue additional PABs for affordable rental housing, generating more 4-percent LIHTCs in the process. If so, perhaps the RAD program is not competing with other uses of the 4-percent LIHTC.

Although there appears to be ample PAB authority nationally, this is not the case in a growing number of states. More and more states are now using all of their bonding authority and no longer carry forward unused authority. Novogradac points out that 11 states account for 75 percent of all multifamily housing bonds issued from 2016 through 2018. Of these states, Massachusetts had no carry-forwards in 2019, and eight of them "saw significantly less carry-forward than 3 years earlier" (Novogradac, 2019). More broadly, 60 percent of all states had less carry-forward in 2019 than in 2013 (Novogradac, 2019). With less or no carry-forward bond cap to draw on, states face heightened competition for PAB authority. California, for example, had \$1.5 billion in bonding authority in 2018 that had carried forward from the 2 previous years. In 2019, the state consumed all of its PAB bonding authority and carried forward nothing. As a result, California's total bonding authority in 2020, at about \$4.2 billion, was less than 75 percent of the total in 2018 (Novogradac, 2019). Nationally, it is estimated that 10 to 15 states exhausted all of their PAB authority in 2020 (Kimura, 2020). With less bonding authority carried forward from previous years, demand for PABs is increasingly exceeding the supply. According to *Affordable Housing Finance*, demand for PABs has already exceeded supply in Connecticut, Massachusetts, Minnesota, New York, and Washington state. Demand is "surpassing or nearing the limits" of supply in

California, Colorado, Georgia, Hawaii, Nevada, Oregon, Tennessee, Texas, and Washington, D.C. (Kimura, 2020).

The RAD program's growth constrains the LIHTC program's capacity to expand the supply of affordable rental housing and preserve existing affordable housing outside of the public housing program, including housing previously financed with LIHTCs. Indeed, even without RAD, state housing finance agencies are allocating a substantial share of their tax credits to preserve existing LIHTC developments. For example, from 2016 through 2018, state housing finance agencies allocated 7 percent of their 9-percent credits and 16 percent of their 4-percent credits (11.5 percent overall) to resyndicate existing LIHTC developments (NCSHA, 2019 and previous editions). Moreover, LIHTC properties containing more than 929,000 units will reach the end of their initial 15-year compliance period between now and 2030. A substantial portion of this housing will require new tax credits to support its preservation as affordable housing.

Public housing provides urgently needed affordable housing to low-income families, including many who would struggle to find suitable housing with other subsidy types (Popkin, 2020). Public housing requires billions of dollars in capital improvements if it is to remain viable. The RAD program has demonstrated that it is possible to rehabilitate or replace public housing without displacing existing residents (Stout et al., 2019). An essential question is whether the urgently needed capital investments in public housing made possible through the RAD program should be at the expense of other critical housing needs.

Several options are worthy of consideration to alleviate the tension between RAD and the LIHTC.

1. Increase allocation of tax-exempt private activity bonds to low-income rental housing development. Nearly 80 percent of the RAD projects that utilize LIHTCs receive tax-exempt bond financing with 4-percent LIHTCs. States may allocate their private activity bond authority across multiple uses, including housing development, low-interest mortgages for first-time homebuyers, economic development projects, water and sewer services, mass transit, and student loans. However, there is often keen competition for these bonds, and it is not clear that many states would choose to increase the proportion directed to affordable housing development, especially since many have already increased their allocations for such housing (Novrogradac, 2019)
2. Increase the supply of private activity bonds and/or LIHTCs. Congress could increase the amount of money available to states for tax-exempt housing bonds and 4-percent LIHTCs and/or for 9-percent LIHTCs. Congress could require that this increase be earmarked for RAD projects. Congress has periodically increased the per capita amount of bond authority and LIHTC allocations, and it could do so again to preserve the public housing stock.
3. Provide direct subsidies for public housing capital improvements. RAD projects frequently use LIHTCs because it is one of the only project-based housing subsidies available and because the RAD program is revenue-neutral and does not provide any additional subsidies. Congress could, however, appropriate funds to HUD to support the rehabilitation needs of public housing properties so that they will not require LIHTCs. Direct subsidies could occur

within the context of the RAD program, or they could be used to help preserve public housing in other ways. For example, instead of setting project-based Section 8 subsidies in the RAD program on the operating fund and capital fund subsidies that the properties received in the public housing program, Congress could authorize HUD to allocate housing choice vouchers (HCVs) to each unit. The subsidies provided by HCVs are keyed to Fair Market Rents and are usually significantly larger than the subsidies provided through RAD. The San Diego Housing Commission transferred all of its public housing to project-based Section 8 in this manner. The New York City Housing Authority recently proposed a plan to rehabilitate the city's remaining public housing by allocating tenant-protection vouchers (which generally pay more than regular HCVs) to each unit (Kully, 2020). Higher-paying project-based vouchers could leverage more debt to cover essential capital investments, making LIHTCs less essential.

4. Finally, Congress could directly fund the rehabilitation and preservation of public housing by increasing the Capital Fund so that it is sufficient to cover the accumulated backlog of public housing capital needs. Instead of the current appropriation of less than \$3 billion (in FY 2020), Congress could appropriate \$70 billion or so over a few years to cover the full cost of public housing's capital needs. Advocates have argued that this investment could be part of a broader infrastructure spending bill (Kimura, 2019). In many ways, this would be the simplest and most direct way of preserving the nation's public housing.¹⁰

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¹⁰ President Biden's proposed infrastructure plan, as announced on March 31, 2021, includes \$40 billion to address public housing's capital needs (The White House 2021).

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