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Alternatives to the Low Income Housing Tax Credit

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A comprehensive project submitted in partial satisfaction of the requirements for the degree Master of Urban & Regional Planning

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Disclaimer

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Executive Summary

Producing less than 20,000 units on average annually in California, the Low-Income Housing Tax Credit (LIHTC) cannot meet the outsized demand for subsidized housing alone [1]. This report examines alternatives to the Low-Income Housing Tax Credit in the State of California, with particular emphasis on the Los Angeles market. This report analyzes project feasibility in today's conditions, as well as an analysis of the financial impact that certain international policies could have on affordable housing development at the project level. The analyses aim to illustrate possible project models as additional options beyond LIHTC, and demonstrate the value of including higher income projects within an affordable housing system on being able to leverage more debt, equity and other financial resources and thereby produce more affordable housing at all levels.

Within the existing policy environment, there are a few contexts in which affordable housing could be developed without subsidy. Mixed-income development, low interest financing programs, programs for expedited approval tracks, and density incentive programs all play a crucial role in making these projects feasible. Operating outside of the LIHTC system also allows developers to reduce their operating and soft costs. Tax credit subsidies far exceed the cost of these requirements, but this efficiency plays an important role in improving the feasibility of non-LIHTC projects. As these projects rely on higher rent units to support enough debt to cover the construction of low-income housing, their best application is in markets with relatively high rents, where higher income units in a project still cost tenants less per month when compared to other new developments in the area. Here are the findings about potential project feasibility using existing tools and policies:

General findings

- In addition to subsidy, social housing regimes internationally use policies and tools that don't constitute a large government expenditure, and these tools could greatly improve the production of affordable housing in the United States.
- Government, philanthropy, or impact equity with a 10 year or greater investment period could have an outsize impact on producing mixed income and middle-income housing
- Without action, inclusionary zoning in California is in trouble. Escalating costs show that relatively low development costs per unit are needed to even support 20% of a project's units being restricted to 80% of area median income (AMI), deeper affordability is even less likely.
- The financial benefit of higher income units outweighs the costs incurred by forgoing the welfare tax exemption starting at 100% of AMI
- Income mix, labor, and other requirements should be measured in relation to the financial benefit being provided in exchange. Greater subsidy, more flexible income mix requirements or both are needed to support prevailing wages and avoid a contraction in affordable housing production.

[1] Mac Taylor, "California's High Housing Costs - Causes and Consequences," 2015.

Findings: Generic Non-LIHTC Development in Today's Environment

- Workforce housing (80-120% AMI) projects are feasible from 100 units upward provided a 10-year equity repayment, though most investors presently require quicker repayment.
- Assuming a payout in year 7, projects show about a $5M gap, 6% internal rate of return (IRR).
- SB 4 projects on religious institution or non-profit educational land in today's environment are very unlikely to be feasible without subsidy.
    - Removing land costs is not enough to compensate the 20% per square foot cost increase of labor requirements.

Beyond what is possible in our existing housing policy ecosystem, **land banking, new low-cost financing, and the expansion of tax incentives like the welfare tax exemption, could expand the areas in which mixed-income developments are feasible**, as well as allow developers to produce more affordable housing units and/or deepen the affordability of their unit mixes.

The pro forma analysis examining the impact of various policies practiced internationally found the following:

- **Providing construction, permanent and refinance loans with a 4% interest rate closed the financing gap on every model analyzed in this project.**
- Land Banking and pre-entitlement provided savings between $7M-$21M, but a prevailing wage requirement outweighs this financial benefit when provided in isolation.
- Increasing the threshold for the property tax exemption cuts financial gaps in half, but was not able to make middle income projects feasible alone.
- **These policies have a much more substantial impact when taken together**, reducing total development cost per unit to as low as $399,000.

The most important through line for all of these ideas is that creating a broader socioeconomic base of affordable housing beneficiaries not only leads to greater likelihood of political support, but also can create a virtuous cycle through the introduction of more income that can be used to support larger loans, maintain projects over time, and even allow for higher income units to be converted into low income units as project debts amortize. Lastly, most international systems that produce substantial amounts of affordable housing provide both demand and supply side subsidy at varying levels all the way up to the 80th percentile of incomes. **This project does not emphasize direct subsidy in order to point towards near term solutions, but considering how to subsidize and incorporate higher income tenants into an affordable housing system is a vital component of successful affordable housing programs abroad.** Indeed, most countries analyzed in this report provide both demand and supply-side housing subsidies to tenants up to about 120% of their area median incomes. With the insufficient supply of affordable housing, and increased development costs, and government budget deficits, **our most recent legislative efforts will fall short to produce remotely enough housing for California and greater efforts are needed to facilitate affordable housing development beyond what LIHTC can presently produce.**

Glossary of Terms

9% Tax Credits: tax credits are calculated based on a project's "eligible basis" which is then multiplied by either 4 or 9%. 9% credits apply the latter multiple, meaning a greater subsidy. In California, these competitive funds are intended to provide deeply-targeted affordable housing to special needs populations like seniors, people experiencing homelessness, and large families.

Affordable Housing: Housing where rents are restricted to 30% of a household's income. Households that qualify for affordable housing depend on the unit's income restriction (e.g. 30% AMI would mean the tenant would need to make 30% or less of the area median income).

Amortization: Amortization is the process of repayment of debt through periodic installments over a period of time. Over time, more of a loan payment goes to ownership in an asset, rather than interest.

Area Median Income (AMI): Area median incomes are set by local and federal governments, (typically based on the amounts set by the Federal Housing and Urban Development Department) and represent the median income per household, typically by County. These incomes form the basis of rent limits for affordable housing at different levels. These levels are based on percentages of AMI. For example, 30% AMI in the state of California is classified as "extremely low income".

Low Income Housing Tax Credit: The Low-Income Housing Tax Credit (LIHTC) subsidizes the acquisition, construction, and rehabilitation of affordable rental housing for low- and moderate-income tenants. LIHTC was enacted as part of the 1986 Tax Reform Act and has been modified numerous times. LIHTC allocations are awarded to each state in the United States and then are administered by the tax credit allocation committees of each relevant state.

California Debt Limit Allocation Committee (CDLAC): The agency that administers and regulates the state bonds and state tax credits that are used for affordable housing production in California.

4% Tax Credit: 4% tax credits derive from a project's use of tax-exempt bond authority allocated by the (CDLAC) and are limited only by the amount of bond cap available. These credits typically provide less subsidy to projects with lower requirements. This source has also become competitive in recent years.

California Tax Credit Allocation Committee (CTCAC): The agency that oversees the regulation distribution of 9% Tax Credits in California.

Construction Loan: A construction loan is granted to housing developments based on a percentage of the total development cost. Interest is paid during the construction period based on the amount of money that has been drawn from the loan, and then repaid in full when the project refinances to a permanent loan.

Conversion: When a project reaches 90% occupancy for 90 days, it becomes eligible for a permanent loan. Taking out a permanent loan and paying off a construction loan is known as conversion.

Cost Per Unit (CPU): Cost per unit is an important metric for analyzing housing developments to better understand the scale of a particular project cost. For example, a total project cost of $30M could be low

for a project with 60 units ($500,000 per unit) but extremely high for a project of 30 units ($1M per unit).

Debt Service Coverage Ratio (DSCR): A debt service coverage ratio places a limit on how much an applicant can borrow by requiring them to divide their net operating income by their loan payment. The resulting ratio represents how much income a project must have in relation to the debt it sustains. For example, a DSCR of 1.2 means a project must have a net operating income 1.2 times higher than its loan payment.

Hold: For the purposes of this report, a 'hold' refers to the period of investment. Investors will typically have a limit to how long they're willing to hold their investment in a project.

Internal Rate of Return (IRR): The internal rate of return (IRR) is the annual rate of growth that an investment is expected to generate. Generally, real estate investors have a target IRR that a project must be able to achieve in order for them to agree to an investment.

Loan to Cost (LTC): The percentage of a total development cost that a bank will allow an applicant to borrow. For example, a $1M project with a 60% LTC may borrow $600,000.

Limited Partner (LP): The investment partner providing equity for a project.

Net Operating Income (NOI): Income after subtracting operating expenses and taxes.

Permanent Loan: A permanent loan is the loan that is used to pay off a project's construction loan and is constrained by the income of the project, rather than the total project cost. This constraint is called a debt service coverage ratio.

Prevailing Wage: California's prevailing wage rates are determined by the state's Department of Industrial Relations. Each rate varies depending on the job type and location of the project. This typically, but does not always, entail the use of union labor in the context of housing development.

Social Housing: Social housing is defined differently by a number of different parties. In this report, social housing refers to affordable housing regimes internationally, particularly in Europe, South America and Asia, that refer to their programs as 'social housing' or a like variant of the term.

Total Development Cost (TDC): Total development cost refers to the cumulative cost of every aspect of a housing development inclusive of loan interest, construction, contingencies, insurance and all other expenses.

Introduction

Producing less than 20,000 units on average annually in California, the Low Income Housing Tax Credit (LIHTC) cannot meet the outsized demand for subsidized housing alone [2]. Both market rate and middle income housing are not meeting their return on costs thresholds in today's environment statewide, which threatens to deepen our housing crisis even further [3]. **Figure 1** shows the trend of LIHTC Production in California, peaking at around 23,000 units in 2021. **Figure 2** shows the need for affordable housing in California as demonstrated by a California Housing Partnership study [4]. The line at the bottom right of the graph represents the peak of LIHTC production, visualizing the immense gap faced. Over the past few years, many affordable housing developers, advocates and academics have toured Vienna to learn about their social housing program [5]. AB309, a bill to create a statewide social housing program, passed the state legislature but was ultimately vetoed by the Governor [6]. At the same time, SB 555, a bill directing HCD to produce a plan for social housing, was codified into law. Despite the interest in social housing from activists, housing reformers and local elected officials, and clear roles for nonprofits in models coming from overseas, many Affordable Housing developers in California have yet to full-throatedly endorse social housing proposals [7]. Among some developers there may be a sense that new forms of affordable housing production would displace or replace, rather than compliment, the LIHTC system. Developers may also think that more involvement from the government in housing development means a shrinking of the nonprofit housing sector. However, examining the structure of international housing models demonstrates a continued need for the participation of nonprofit developers. Among other developers there is a growing interest in LIHTC alternatives as the credits become more competitive and the capital stacks needed to finance LIHTC-funded projects become more competitive and more complex. Facing the compounding challenges of increasingly competitive and complex funding sources, a statewide budget deficit, and long stagnant developer fee limits. As a result, many affordable housing developers are exploring additional alternatives to LIHTC development. Additionally, across the United States, local housing authorities are also exploring alternative models.

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[2] Taylor..

[3] David Garcia, "Making It Pencil: The Math Behind Housing Development (2023 Update)," 2023; David Garcia, "Making It Pencil: Can We Get Housing for Middle-Income Households to Work?," *Terner Center* (blog), 2024, https://ternercenter.berkeley.edu/research-and-policy/middle-income-development-math/.

[4] Danielle Mazzella, "California Housing Needs Report 2023," 2023.

[5] LTSC, "Lessons in Social Housing: LTSC's Eye-Opening Visit to Vienna," *Little Tokyo Service Center* (blog), July 24, 2023.

[6] Alex Lee, "Bill to Pursue Social Housing in California Introduced," 2021.

[7] Terner Center, "2023 California Housing Legislative Round Up," *Terner Center* (blog), 2023.

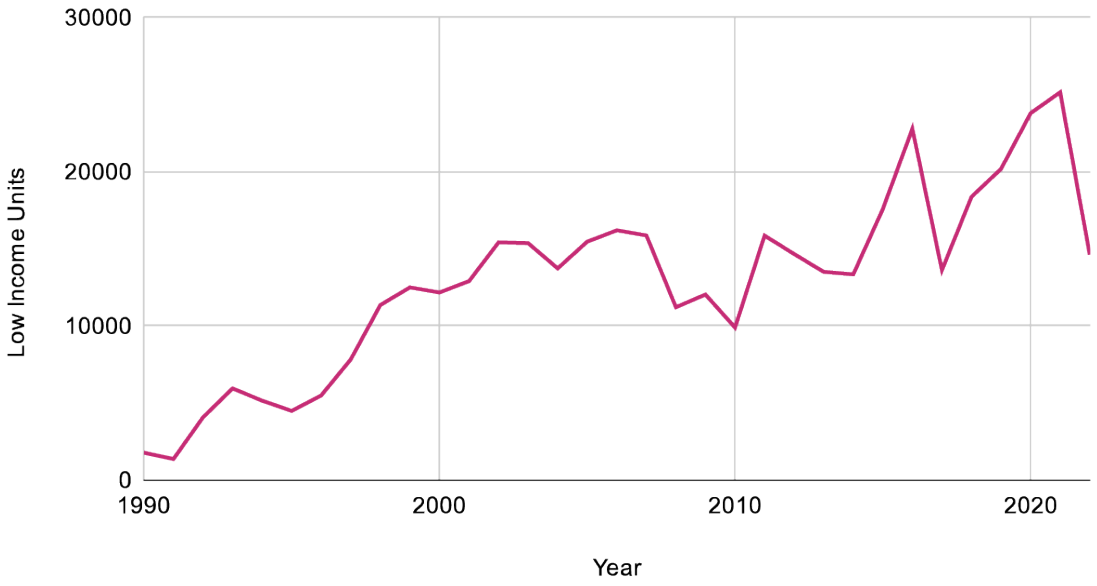

Figure 1. Annual LIHTC Production (California)

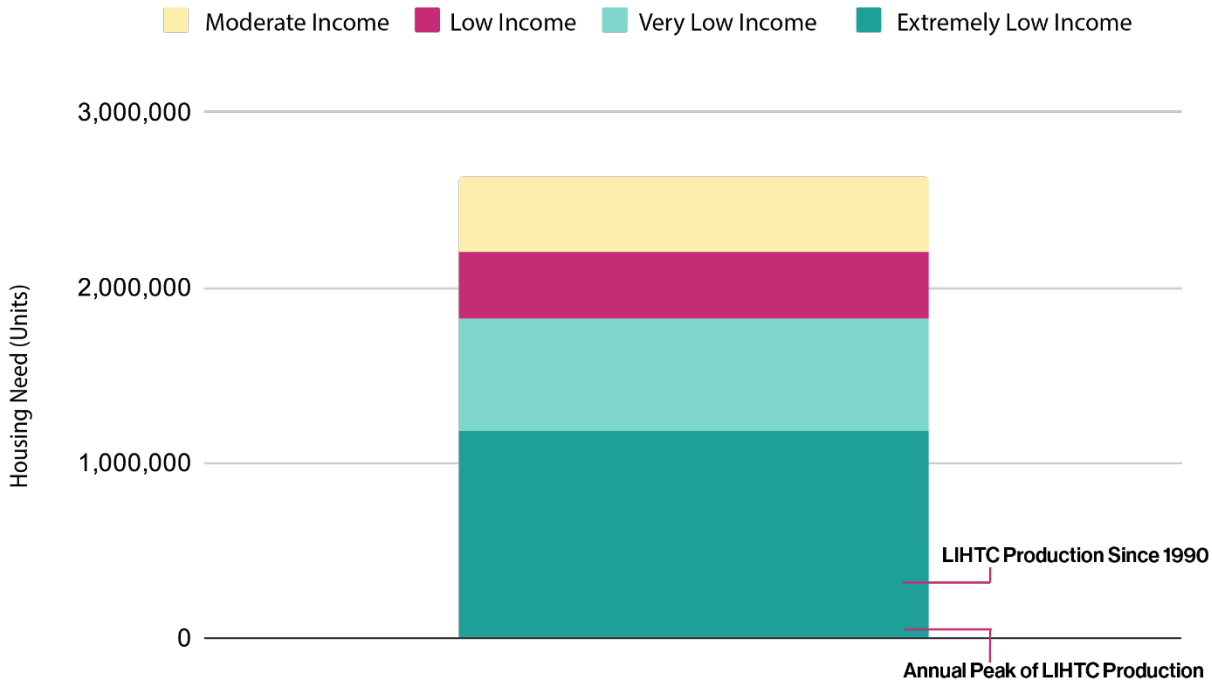

Figure 2. California Housing Need [8]

[8] Mazzella, "California Housing Needs Report 2023."

Academic literature and case studies can serve to support both ideas for and the acceptance of alternatives to LIHTC [9]. Additionally, these models show alternative methods of rental cross-subsidy, financing, land management, and construction methods and economies of scale that make a greater volume of affordable housing production possible.

The policy analysis for this report can be applied broadly to California as a whole, however all projects and data analyzed are within Los Angeles County. This means that while trends and implications for costs and savings for projects apply generally, all costs referenced are most closely related to the LA market.

Finally, the purpose of this report is to demonstrate a path to a system of affordable housing development that could expand, and ideally incorporate subsidy to produce a much greater amount of affordable housing. This report does not purport to imply that affordable housing development can or should occur at scale without subsidy. The unsubsidized models of affordable housing discussed in this report could serve to provide developers with the funds to subsidize further affordable housing development, or reduce the costs of rents on projects once all the project debt is fully amortized. As shown from international case studies there are many ways to incorporate these models and policies in different political and economic contexts. **The most important through line for all of these ideas is that creating a broader socioeconomic base of affordable housing beneficiaries not only leads to greater likelihood of political support, but also can create a virtuous cycle through the introduction of more income that can be used to support larger loans and maintain operating budgets.**

[9] Rachel G. Bratt, "The Quadruple Bottom Line and Nonprofit Housing Organizations in the United States," *Housing Studies* 27, no. 4 (June 1, 2012): 438–56, https://doi.org/10.1080/02673037.2012.677016; Rachel G. Bratt, "The Role of Nonprofits in Meeting the Housing Challenge in the United States," *Urban Research & Practice* 12, no. 1 (January 2, 2019): 7–37, https://doi.org/10.1080/17535069.2017.1341951.

Background: Affordable Housing Production Fundamentals

Many affordable housing developers are asking themselves how they can increase their output of affordable units and diversify their portfolios. As affordable housing organizations grow and competition for tax credits gets more intense, affordable housing developers are looking at new opportunities to provide themselves with the necessary funds to operate, and some are even discussing expanding development into states outside of California. In this environment, we need to explore alternatives to LIHTC, or additional ways to produce affordable housing without federal tax credits. I examine two primary strategies - reducing costs and attracting different income mixes that have the potential to cross-subsidize affordable units. The pro forma analysis section will examine three case examples of potential non-LIHTC executions that would not require new public policy and would rely on existing financial products. Additionally, this report will quantify the potential financial impact of several policies derived from best practices in international social housing regimes.

As a starting point, this report analyzed sources from winning 4% tax credit project applications to the California Debt Limit Allocation Committee (CDLAC) from 2020-2023 to establish a baseline understanding of costs and trends in statewide affordable housing that is not programmed for populations with special needs.

Findings from 4% application analysis

As a primer into researching alternatives to LIHTC, I conducted a brief analysis on awarded 4% LIHTC projects from 2020-2023. The data from this analysis are available for download on **GitHub**. **Figure 3** demonstrates the average total development costs (TDC) by region, as well as the average cost of various components of development (e.g. construction).

Statewide Figures	Los Angeles County
Average Units: 105	Average Units: 97
Average TDC: $56,884,353 /Per Unit: $559,185	Average TDC: $55,132,609 / Per Unit: $581,040
Average Land Cost: $2,861,683 /Per Unit: $27,877	Average Land Cost: $4,200,038 /Per Unit: $41,558
Average Construction Cost: $34,813,938 /Per Unit: $340,433	Average Construction Cost: $31,393,320 / $344,146 Per Unit
Use of Prevailing Wage: 56%	Use of Prevailing Wage: 76%

Figure 3. 4% Tax Credit Data Points

Figure 4 visualizes the financial gap filled by tax credits. This project will explore ways to fill that gap by reducing project costs, as well as innovative policies and financial tools to provide additional funding to a project.

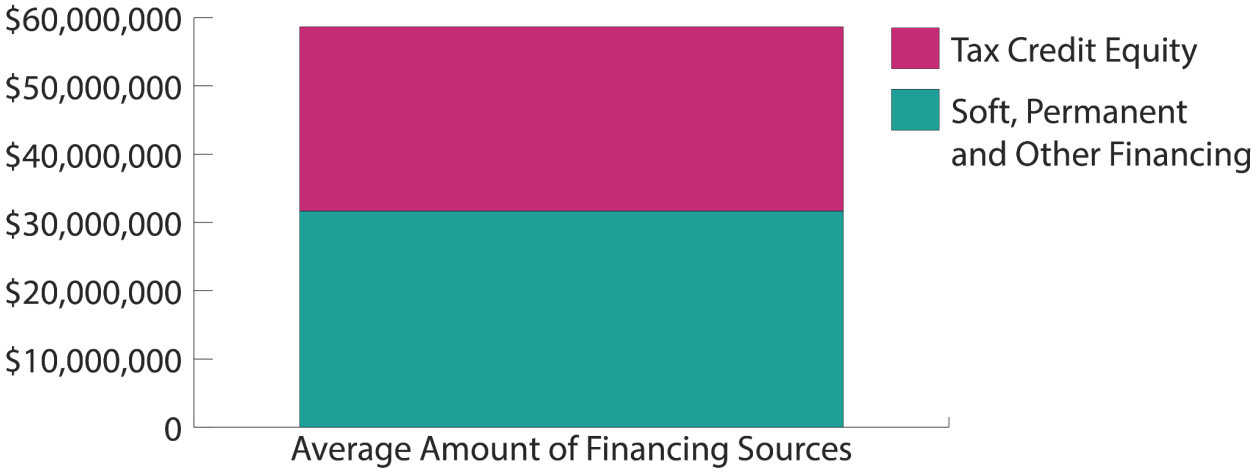

Figure 4. 4% Tax Credit Financing Structure

This analysis provides a baseline understanding of the current costs of development for affordable housing in California that does not include the additional costs associated with housing that serves populations with special needs. The pro formas used to analyze the impact of current and hypothetical development tools and policies with reference a control pro forma that represents these costs, showing

the amount of savings yielded in TDC, as well as whether or not these changes are great enough to provide financial feasibility without tax credit subsidy.

Cost Components of Affordable Housing Development

Financing and constructing housing is a very complex process with myriad inputs. For the purposes of research and financial analysis, this report has categorized approaches to create hypothetical or existing efficiencies into the categories below. Each of these cost components and their connection to one another has been considered in examining policy concepts to improve the potential feasibility of non-LIHTC developments.

Construction

Construction costs are by far the largest share of project costs for any kind of residential development. In many ways, these costs are fairly fixed. Changes in design, material choice, and emerging technologies show promise to reduce these hard costs, but to a limited extent. Because of the high risk associated with financing the construction phase of development, this is also when interest rates are highest for a project, so reducing the time needed for construction, as well as offering subsidies or low interest financing at this phase of development has a greater impact on reducing the bulk of interest accrued during development. As will be explored later, generating greater returns for affordable housing developers may increase their capacity to provide up-front equity in projects and reduce these costs beyond what subsidies are already provided. As demonstrated in **Figure 5,** Studies of construction cost as a function of the density of a project have shown promise for reducing the overall cost per unit, and even per square foot as projects approach 7 stories. After which point, building codes require steel reinforcement, which is much more expensive [10].

[10] Michael D. Eriksen and Anthony W. Orlando, "Returns to Scale in Residential Construction: The Marginal Impact of Building Height," *Real Estate Economics* 50, no. 2 (2022): 534–64, https://doi.org/10.1111/1540-6229.12357.

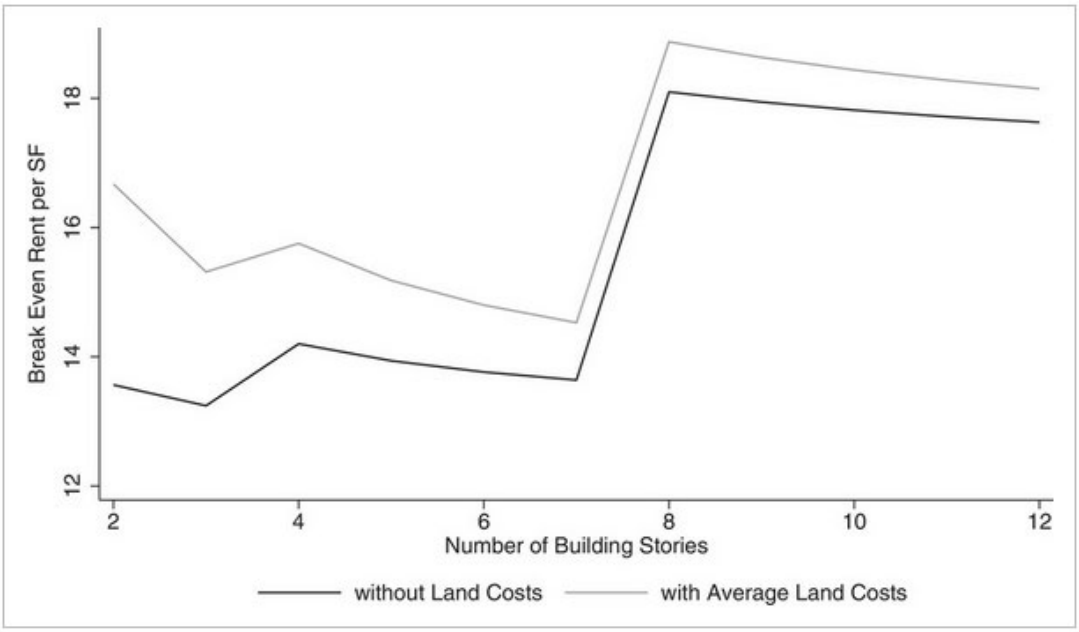

Figure 5. From Eriksen and Orlando: Break Even Rent Per Square Foot for Housing Development

Financing

As can be seen in the current real estate market, the cost of borrowing money can make the difference between a feasible and infeasible project. Many subsidized and low-cost financing options for affordable housing have requirements meant to allow these options to accompany state or federal tax credits (e.g. CDLAC Bonds, tax-free loans). However, some options like the CalHFA Recycled Bond program allow for quite a bit of flexibility. This program, among some international examples, can provide a starting point for examining what can be accomplished outside of LIHTC. Large state investment funds are used to provide these options internationally, and in California funds like the California Public Employees' Retirement System (CalPERS) operate $462.8B, meaning that using even a mere fraction of these funds would constitute a substantial investment in the affordable housing market. CalPERS in particular is bound by the California constitution to act in the sole interest of its investors, but a combination of investment incentives, as well as promotion of affordable housing investment opportunities as viable alternatives to similar investments elsewhere could help to shift funds into the affordable housing system. An example of this strategy from Canada will be discussed in the Near-Term Policy Options Section.

Speed and Simplicity of Predevelopment

The predevelopment phase of affordable housing production has a twofold impact on the cost and feasibility of affordable housing. The complexity of an entitlement and approvals process often involves

more consultants and experts, raising costs. Additionally, the time it takes to align and complete all necessary steps, as well as any uncertainty, increases risk, and thereby the cost of capital. Recently in Los Angeles the introduction of Executive Order 1 has been so effective that even some for-profit developers have 100% affordable in construction, based solely on how time-efficient this expedited process is [11].

Land

Within the overall predevelopment process is the procurement and entitlement of land. In many countries, government agencies or partners will proactively bank land, entitle the land for development, and then release it to affordable housing developers through a bidding process. Land donation (without pre-entitlement) happens in parts of California in certain circumstances as well. Though the scale, and amount of front-end labor to handle all development permissions for a particular project do not compare to international best practices. The cost of land currently constitutes around 10% of LIHTC development (4% tax credit) budgets statewide, and a donation of pre-entitled land would reduce risk substantially enough for developers to be able to access lower-interest financing. As will be explored in the pro forma analysis, however, adding additional requirements like prevailing wage or community amenities without additional subsidy can increase costs more than a land donation reduces costs.

Operating Expenses

Operating expenses affect the net operating income of a development, and thereby impact the amount of permanent debt a developer can leverage to pay off their construction loan. Tax credit projects have a high average operating cost per unit when compared to naturally occurring affordable housing. The subsidy from tax credit equity far surpasses the costs associated with applying and adhering to rules, but projects not utilizing tax credits can benefit from a small reduction in costs, that when combined with other efficiencies may make the difference between whether a project is financially feasible or not.

Current Innovations in Affordable Housing

Facing a high amount of competition for 9% tax credits (sometimes even from projects within the same organization), as well as the required bonds for 4% tax credits, affordable housing developers are increasingly looking to additional types of financing and projects to supplement their development pipelines. In interviews with developers, bankers and impact investors, a major focus was finding cheap sources of financing that are available during construction. Another consideration for projects is using higher income units (80% AMI-120% AMI) to cross subsidize more affordable units in a project and leverage a higher permanent loan. One consideration in this approach is the loss of the welfare tax

[11] Ben Christopher, “Los Angeles’ One Weird Trick to Build Affordable Housing at No Public Cost,” *CalMatters*, February 7, 2024

exemption, which only applies to projects that are underwritten with maximum rents of 80% AMI. Existing project types that exemplify these efforts include:

1. *Low-Interest, Low-Requirement Financing*
   CalHFA's Recycled Bond program allows for greater flexibility on rents in developments while still offering advantageous interest rates. The Recycled Bond Program in particular offers low interest financing at construction, which depending on the product structure could allow project feasibility at the margins. This source requires 20% of the units in a development to be income-restricted to tenants earning at or below 50% AMI.

2. *Workforce Housing*
   Workforce housing typically targets middle-income affordability ranges (80-120% AMI), but can also include mixed income projects. Recent developments have focused on leveraging more permanent debt by utilizing higher overall rents for buildings while still maintaining rents much lower than market-rate new construction projects.

3. *Partially Constructed Acquisitions*
   Many government-supported housing programs internationally focus on countercyclical investment, increasing development in down markets with high interest rates, where developers building affordable housing can better take advantage of special interest rates and tools not available in the for-profit market. This same principle could theoretically be applied in the United States, and one interesting case that this report examines is partially constructed, foreclosed developments. When interest rates dramatically increase, partially completed projects are more prevalent. While they bring administrative, insurance, and legal hurdles, they may also provide a model for countercyclical affordable housing development.

4. *SB 4 Developments on Religious Institution or Private School Land*
   In 2023 the California State Legislature passed Senate Bill 4, which streamlines and aids the development of affordable housing on religious institution and/or private school land. This report analyzes a model of one such case to determine how feasible non-LIHTC developments may be when taking advantage of this new law.

Working Towards New Forms of Affordable Housing in California

If producing more affordable housing in California were simple, we would already be doing it. There are many organizations and individuals working hard to come up with new models, technologies, programs and mechanisms to produce more affordable housing, and some show great promise. In examining some international systems that produce large amounts of affordable housing, it becomes clear that the state and local governments in California would need to change policies and programs to support alternatives to LIHTC. Some models may be feasible without any policy or program changes, but even these models would greatly benefit from removing restrictions and creating new policies and programs.

To maximize the potential impact of this report, policies were screened in interviews and will be presented as flexible concepts, rather than concrete, prescriptive policies, to allow for the greatest potential for political uptake. Policy ideas were also selected based on having a reduced fiscal impact. It is easy to say that more money will produce more affordable housing. These policy concepts aim to create efficiencies across all models and programs that produce affordable housing, regardless of the quantity of subsidy they are receiving at any given time.

Non-Governmental Actors Within International Housing Systems

Very few countries' housing systems involve the government as the sole developer and manager of housing [12]. Unique cases like Singapore and Hong Kong allow certain efficiencies in a comprehensive all-government development economy due to near complete state control over land [13]. However, most countries do not match these unique cases, and as a result rely on a network of government agencies, quasi-government bodies, and for-profit and nonprofit actors to plan for, build, and manage their social housing or affordable housing stock.

There is a range to this spectrum, with high government support and involvement on one end, and little government support and an expectation of self-sufficiency on the other. The following case studies can demonstrate this range and give a sense of the organizational dynamics of housing systems internationally.

Bolivia

In Bolivia the central government works very closely with all actors in the housing system, aiding in the formation of community land trusts, setting interest caps on loans for social housing, and working to ensure adequate supply of building materials and labor [14]. However, even in this largely government-driven system, there are a diversity of actors involved in the construction and management of social

[12] Patrick Boadu et al., "Associating for Affordable Housing: Nonprofit Social Housing in Germany and the USA," in *Modernizing Democracy: Associations and Associating in the 21st Century*, ed. Matthias Freise and Thorsten Hallmann (New York, NY: Springer, 2014), 247–61, https://doi.org/10.1007/978-1-4939-0485-3_20; Lena Magnusson and Bengt Turner, "Municipal Housing Companies in Sweden – Social by Default," *Housing, Theory and Society* 25, no. 4 (December 1, 2008): 275–96, https://doi.org/10.1080/14036090701657397; Kathleen Scanlon, Christine Whitehead, and Melissa Fernández Arrigoitia, *Social Housing In Europe*, 2014.

[13] Beng Huat Chua, "Navigating Between Limits: The Future of Public Housing in Singapore," *Housing Studies* 29, no. 4 (May 19, 2014): 520–33, https://doi.org/10.1080/02673037.2013.874548.

[14] Andrea Carrión Hurtado, María Elena Acosta Maldonado, and Fernando Casado Gutiérrez, "Constitucionalismo, acción colectiva y judicialización del derecho a la vivienda en Bolivia, Ecuador y Venezuela," *Revista de Direito da Cidade* 11, no. 4 (2019): 01–28, https://doi.org/10.12957/rdc.2019.39738; Edmundo Linares Viscarra, "Fortalecimiento a la construcción de viviendas y el subsidio a la vivienda social en Bolivia" (Thesis, 2000), http://repositorio.umsa.bo/xmlui/handle/123456789/18088.

housing units [15]. In Bolivia hundreds of nonprofit, quasi-governmental, and for-profit entities participate in the construction of social housing (at least 16 to every 1 Million inhabitants).

Austria

In Austria there are approximately 200 limited-profit housing companies (22 to every 1 Million inhabitants) that construct and manage social housing [16]. The central government has agencies that collaborate with these limited profit entities and construct their own affordable housing (typically targeted to the lowest income groups) [17].

France

In France there are approximately 250 nonprofit actors (4 to every 1 million inhabitants) that construct and manage social housing. Government agencies license and support these entities, and they are extended subsidies and preferential financing [18].

The Netherlands

In the Netherlands, there are 284 independent, nonprofit housing associations (16 to every 1 million inhabitants). These entities are expected to be financially self-sufficient, and do not receive substantial subsidy. However, these organizations are regulated and supported by the government through preferential financing, land use and land donation [19].

An Important Takeaway

Even in countries with a high level of government involvement in development, public-private partnerships are the foundation of affordable housing systems. These partnerships are strongest in countries that are able to scale contracts, financial tools, and other policies to maximize output, often entailing local and federal governments having development departments beyond planning to facilitate greater collaboration.

[15] Natalya Naqvi, "Renationalizing Finance for Development: Policy Space and Public Economic Control in Bolivia," *Review of International Political Economy* 28, no. 3 (May 4, 2021): 447–78, https://doi.org/10.1080/09692290.2019.1696870.

[16] Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*. 2014

[17] Scanlon, Whitehead, and Fernández Arrigoitia.

[18] Scanlon, Whitehead, and Fernández Arrigoitia.

[19] Hanneke van Deursen, "The People's Housing: Woningcorporaties and the Dutch Social Housing System - Part 2: The Mechanics | Joint Center for Housing Studies," 2023, https://www.jchs.harvard.edu/research-areas/working-papers/peoples-housing-woningcorporaties-and-dutch-social-housing-system-0.

Opportunities for Alternatives to the Low Income Housing Tax Credit

Scale, Scale, Scale

As demonstrated in the analysis of 4% tax credit projects between 2020-2023, limits on subsidy place an artificial cap on affordable housing development to around 100 units. The pro forma analyses below will demonstrate that as projects scale, they not only become more cost-efficient, but a greater overall income allows for greater equity to be pulled from a development at re-finance, giving nonprofits or government agencies an opportunity to rehabilitate their developments, fund programs like rent subsidies, or to put down as equity in other housing developments. Models of developments that provide knock-on financial benefits will be absolutely critical to scaling up efforts to produce affordable housing in California, especially as state and local governments face budgetary deficits [20].

Counter-Cyclical Real Estate Development

In many countries, investment in affordable housing, while constant, is intensified during down periods in the economic cycle. These administrations reason that this investment in housing has a great number of co-benefits. Firstly, in difficult economic times, there is a greater need for affordable housing. Secondly, this investment is aimed to spur economic activity and provide employment opportunities. Finally, and most importantly to this report, interest rates are typically highest during economic downturns, meaning that offering low interest financing to affordable housing developments has an even greater benefit when compared to a traditional market loan. While increasing spending during times of recession and budget deficits is a challenge, **this report will demonstrate that providing patient capital that requires returns below 9% would make a substantial impact on affordable housing production**, meaning that state investment programs (e.g. pension funds, public banks) could have an outsized impact on affordable housing development in down cycles for real estate.

Parking Reform and Transit Oriented Development

As will be explored in more detail in the pro forma analyses, parking represents an outsize financial burden on affordable housing development. Even assuming only .5 parking spaces for every unit can result in mixed income housing developments being financially infeasible, especially when they include less than 150 units. Parking's impact on development has only become more pronounced as

[20] California League of Cities, "New Budget Proposal Includes Major Cuts to Housing and Homelessness Programs," 2024.

construction costs and interest rates have increased [21]. It is notable that the best performing model in terms of returns and capacity to sustain affordable units without subsidy is the largest project with no parking (150 units, unparked). New legislation like AB 2097, as well as density bonus programs like the City of Los Angeles' Transit Oriented Communities program legalizes low-to no-parking in affordable housing development, but issues may persist in acquiring loans or even during the lease up of new developments [22]. Policymakers will need to consider how to reduce the need for parking in cities, as well as apply pressure on debt and equity providers to ease the demand for parking in underwriting.

Organizational Net Operating Income

When most affordable housing developers execute a project, they rely on the developer fee to sustain their operations, and typically leverage very little of their own equity in deals. This mitigates the organization's risk, and ensures that an organization doesn't need to have a large amount of cash on hand to initiate a project. Additionally, the deeply targeted nature of LIHTC projects results in very low Net Operating Income (NOI) for projects. This is a necessity for deeply targeted affordable housing, but has the impact of most projects requiring regular refinancing just to stay financially solvent as maintenance and operating costs exceed rent growth. Internationally, this issue is often dealt with by expanding the eligible incomes within an affordable housing system overall. This could mean reserving units restricted at higher rents in a specific development, or having developments catering to middle income or even slightly above middle income tenants [23]. The idea is not to serve one particular segment of incomes in particular, but rather to allow higher rents to subsidize the overall system. This system-wide cross subsidy allows affordable housing developers to put their own money into projects, which in turns allows them to generate some projects that create financial returns while others are revenue neutral, or even slight financial liabilities. For example, in Vienna, Austria, limited profit developers (not too dissimilar to nonprofit developers in the US) invest 30% of total development costs into their projects as equity. This is a massive investment, and likely impossible in the US in the near future, but conceptually opening up the idea of having projects that can contribute to organizational NOI while still providing affordable housing for middle income tenants is one being explored by novel projects in the US.

This concept has been applied in the United States in the past, though the particular circumstances were not ideal for success. For example, the first 20-30 years of public housing in the United States was more universal and less deeply targeted based on income [24]. Explicitly racist policies of segregation, displacement of Black and other communities of color for public housing development, disparities in

[21] Andrew Slocum, Capstone Interview- Green Development Company, February 23, 2024; Chris Larkin, Capstone Interview-Century Development, December 19, 2023; Factory OS, Capstone Interview, December 8, 2023; Alex Stamas, Capstone Interview- Century Development, March 7, 2024.
[22] "Why California's Parking Reform Matters for Housing and Climate," Governing, September 7, 2022, https://www.governing.com/community/why-californias-parking-reform-matters-for-housing-and-climate.
[23] Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*.
[24] Nicholas Dagen Bloom, *Public Housing That Worked*, 2009.

community development along racial lines, disinvestment, and other problems led to a myriad of issues with public housing stock [25]. In some cases, certain public housing projects were able to continue maintenance, leverage community development and stave off some of the worst impacts of public housing in the United States, showing that not all public housing was necessarily destined for the same outcomes [26]. In a later period, the privatization of public housing was another attempt at broadening incomes in public housing. Projects like HOPE VI are infamous for displacement and there are a number of analyses of the various failures of this period [27]. The 90's and early 2000's marked a period where broader income mixes involved demolishing low-income units, rather than adding to overall housing stock. In all cases an important distinction for this report is that most countries produce both deeply targeted, as well as more universal affordable housing. Additionally, and crucially, **many countries provide subsidies for both the construction of housing, as well as subsidies for tenants, making less deeply targeted affordable housing attainable for people with a much broader range of incomes.** In these regimes, **housing developers are able to generate enough income to stay afloat financially while taking minimal gains or even losses** on projects restricted to the lowest incomes in a system [28].

High Debt Leverage Vs. Speed of Return and Cost Efficiency

Two strategies that are currently being explored by governments and developers to produce affordable housing without using tax credits are to leverage more debt than usual, or to produce a hyper efficient project at breakneck pace. Each of these strategies will be described in greater detail as U.S. case studies below. The first strategy relies on governmental support to leverage more debt, as well as a bridge loan, and yields very low returns but provides an asset to a local housing authority [29]. The second strategy is utilized by a for-profit developer taking advantage of streamlining to bring projects online quickly enough to entice impact capital investors [30]. Elements of both of these strategies can aid developers and governments depending on the context and goals of the program or development they're examining. The first case study demonstrates what is possible with some changes to financing programs and policy. The second is unlikely to be fully replicable, but demonstrates what can be achieved with cost efficiency, and perhaps some new programs or creative thinking around demand side housing subsidies.

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[25] Rhonda Y. Williams, ed., *The Politics of Public Housing: Black Women's Struggles against Urban Inequality*, New. ed., Transgressing Boundaries (New York: Oxford University Press, 2004); Dagen Bloom, *Public Housing That Worked*; David M. P. Freund, *Colored Property: State Policy and White Racial Politics in Suburban America*, Pbk. ed (Chicago: University of Chicago Press, 2010).

[26] Dagen Bloom, *Public Housing That Worked*.

[27] Popkin J Susan et al., "A Decade of HOPE VI: Research Findings and Policy Challenges," accessed June 2, 2024, https://webarchive.urban.org/publications/411002.html; Michael Brazley and John I. Gilderbloom, "HOPE VI Housing Program: Was It Effective?," *The American Journal of Economics and Sociology* 66, no. 2 (2007): 433–42, https://doi.org/10.1111/j.1536-7150.2007.00518.x; Roderick W. Jones and Derek J. Paulsen, "HOPE VI Resident Displacement: Using HOPE VI Program Goals To Evaluate Neighborhood Outcomes," *Cityscape* 13, no. 3 (2011): 85–102; John Arena, *Driven from New Orleans: How Nonprofits Betray Public Housing and Promote Privatization* (Minneapolis: University of Minnesota Press, 2012); Williams, *The Politics of Public Housing*.

[28] Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*.

[29] Paul Williams, Capstone Interview- Center for Public Enterprise, February 23, 2024.

[30] Slocum, Capstone Interview- Green Development Company.

Case Study: The Laureate

Units: 268
Commercial Space: 59,326 Sqft
Acres: 2.9
TDC: $118,693,560 ($442,886 Per Unit)
Construction: Type V over Type I

Context: The Housing Opportunities Commission in Montgomery County, Maryland has developed public, mixed-income housing without using direct subsidy.

Photo Credit: Housing Opportunities Commision, Montgomery County

The Laureate Project: The first tangible outcome of Montgomery County's social housing initiative was The Laureate, a 268-unit apartment building that opened its doors in April 2023. The project is serviced by high-end amenities like a spa and fitness center. The 70% of units dedicated to market rents are able to subsidize the remaining 30% of units that are affordable to residents making 50-80% of AMI. Within the first year of operations, market rents outperformed their underwriting so substantially, that the County Housing Opportunities Commission was able to convert more of the market rate units into affordable units.

Financing: The project was able to leverage most of its project financing as debt by using a loan program from the county housing authority in combination with a bridge loan. Cutting traditional equity almost entirely out of the deal.

Expansion and Collaboration Encouraged by The Laureate's success, Montgomery County proceeded with other social housing projects, including a 463-unit complex for seniors and families and a 415-unit building. As news of this innovative model spread, city leaders from across the country expressed interest in replicating it to address their own housing challenges.

Conclusion: Using risk-sharing and subsidized loan products allowed the County to largely replace investment equity in their project with sources that required much lower returns. This strategy brought what may have been an 20% affordable housing deal (80/20), to restrict over 30% of its units, leaving the County able to further restrict units in the future as the project’s debt amortizes. Proceeds from the project also benefit the housing authority, which can then reinvest those funds into more affordable housing developments, tenant programs, or other resources.

Case Study: ED1 Project- 1542 W. Court St, Los Angeles

Units: 190
Acres: .52
TDC: $41,006,326 ($215,823 Per Unit)
Construction: Type V, Slab on Grade
Parking: None

Context: Green Development Company, taking advantage of the City of Los Angeles' Executive Directive 1 for affordable housing streamlining, is producing affordable housing with no subsidy.

Photo Credit: Josh Olalde Via Unsplash

Construction Costs: Green development Company has an in-house general contractor, a fund for construction, and other resources that allow it to outperform many for-profit and non-profit developers in terms of cost efficiency. Additionally, forgoing the inclusion of parking provides substantial savings for the project.

Financing: Green development company works with impact investors to generate project investment equity at slightly lower return requirements. Additionally, working with debt and equity brokers allows the developer to provide multiple rent projections based on different levels of tenant subsidies, allowing investors to make risk-adjusted investments in projects without project-based voucher guarantees.

Conclusion: The level of value engineering achieved by Green Development company is unlikely to be accessible to many developers, but provides an exaggerated example of what might be possible with cost savings for affordable housing development. Additionally, the financing strategy for their ED 1 projects sheds light on the impact that an expansion of tenant-based subsidies, or even government efforts to intentionally direct voucherized tenants to affordable developments could have on project feasibility.

Affordable Housing Tools Utilized Internationally

Use of Cross-Subsidy and For-Sale Units

Austria

In Austria social housing is income restricted, but the income threshold is high enough that 80-90% of the population is eligible. In 2013 the largest municipality, Vienna, raised the ceiling for incomes in order to achieve a better social mix in their social housing system, as well as provide more organization equity for both municipal and nonprofit organizations to reinvest into the construction of new social housing units [31].

France

In France about 46% of the population, and 80% of tenants qualify for social housing. However the social mix of housing has faced pressure from increasing demand, leading to newer tenants being primarily very low income. Additionally for-profit landlords and developers have posed legal challenges to the French housing system, arguing that broader eligibility in social housing creates undue competition for them, and decreases market rents [32]. This pressure is supported by non-competition laws in the European Union. Despite this trend, the social housing sector in France supports a relatively diverse mix of incomes, internationally [33].

The Netherlands

Prior to European Union laws regarding non-competition in the housing sector, the social housing system in the Netherlands was open to all citizens [34]. The current cap for incomes in the Netherlands sits at around the median income, so the eligibility base is still wide, and the government is exploring avenues to boost housing production as the country is experiencing a housing crisis [35].

In the Netherlands and Austria selling social housing units, both to qualified tenants, as well on the private market, have been an important source of organizational equity for social housing developers to allow them to pursue the construction of new social housing units [36]. Leaning into scale efficiencies

[31] Scanlon, Whitehead, and Fernández Arrigoitia.

[32] Scanlon, Whitehead, and Fernández Arrigoitia.

[33] Marja Elsinga and Hans Lind, "The Effect of EU-Legislation on Rental Systems in Sweden and the Netherlands," *Housing Studies* 28, no. 7 (October 1, 2013): 960–70, https://doi.org/10.1080/02673037.2013.803044.

[34] Elsinga and Lind.

[35] Robin Pascoe, "The Dutch Housing Market: What Exactly Is the Government Doing?," DutchNews.nl, March 30, 2023.

[36] Kathleen Scanlon, Christine Whitehead, and Melissa Fernández Arrigoitia, *Social Housing In Europe*, 2014; Hanneke van Deursen, "The People's Housing: Woningcorporaties and the Dutch Social Housing System - Part 2: The Mechanics | Joint Center for Housing Studies," 2023.

Low-Interest Financing

France

The French government offers a 40 year loan that serves as a permanent and construction loan hybrid to social housing organizations. The loan has a base interest rate of 3% with limited variation. In addition to direct subsidy from traditional tax sources (e.g. income tax), the French government supports a high-yield, public savings account called the *Livret A*. The *Livret A* offers variable, but competitively high interest rates for French residents when compared to most checking and savings accounts [37]. This public account is leveraged to support low interest financing for social housing construction, acquisition and rehabilitation projects. This system of low interest rates allows soft financing (i.e. government subsidized financing) to be repaid back out to French residents [38]. Conversely, in the United States, soft financing functions largely as a grant, but for tax purposes is defined as a loan [39].

Austria

Federally distributed brick and mortar subsidies remain a large part of the housing finance system in Austria, but in recent years economic conditions have required local jurisdictions to lean on other financial innovations for project feasibility. Similar to France, Austria has the *Bauspar* (contract saving) program, which funds *Wohnbaubanken* (housing banks) [40]. *Bauspar* loans are funded by contractual savings programs that typically span seven years. These programs are complemented by government savings and tax incentives.

To contrast this program with the French *Livret A,* the *Bauspar* program is operated by independent financial institutions, both public and private, and paid into housing banks, who issue special housing construction convertible bonds (HCCB) for the production of affordable housing [41].

Land Management For Social Housing

Austria

In Austria, local authorities consistently acquire and pre-entitle land, which is offered in a request-for-proposal type system for all developers. For-profit developers technically have access to this pool, but the requirements for affordability swing most applications and awards towards social housing entities [42]. This system allows Austria to comply with European regulations, while also providing a favorable environment for social housing developers. The pre-entitlement of land greatly accelerates the

[37] Housing Europe, "Household Savings – a Force for a Renewed and 'Solidaire' Europe of Housing Opportunity," 2021.

[38] Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*.

[39] Mike Hollar, "Trending: Demystifying the LIHTC: An Interview with Mike Hollar | HUD USER," 2015.

[40] Alexis Mundt and Elisabeth Springler, "Milestones in Housing Finance in Austria over the Last 25 Years," in *Milestones in European Housing Finance* (John Wiley & Sons, Ltd, 2016), 55–73.

[41] Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*.

[42] LTSC, "Lessons in Social Housing"; Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*.

development timeline for new construction, and allows for more direct implementation of city planning goals.

The Netherlands

In the Netherlands, the government does not often pre-entitle land, but does acquire and donate land for the purposes of social housing. Additionally, local authorities have the ability to zone for social housing, effectively reducing the potential for-sale value of parcels [43]. While a zoning instrument for affordable housing would be more politically controversial in the United States, the level of coordination between federal and regional governments in strategizing for and executing the procurement of land for social housing could be replicated without substantial legislative or legal changes [44].

[43] van Deursen, "The People's Housing."

[44] Scanlon, Whitehead, and Fernández Arrigoitia, *Social Housing In Europe*.

Financial and Data Analysis Methodology

This report engaged in a literature review of international social housing practices to generate a list of potential policies and practices that could be applied by government and private actors to reduce the cost of producing affordable housing and/or provide novel forms of affordable housing finance. These practices were discussed in interviews with elected officials, public agency staff, affordable housing developers, and general contractors in order to determine their feasibility. Interviews were also conducted with developers with recent experience in producing unsubsidized affordable housing units to provide insight on their development strategies and analytical frameworks.

Additionally, the California Debt Limit Allocation Committee's (CDLAC) data on applications for 4% LIHTC tax credits from 2020-2023 were analyzed to determine average line item costs, as well as explore reported financing sources that were utilized in addition to the credits. The applications were downloaded off of CDLAC's website, and then scraped using an Excel parser library in Python to create an analyzable spreadsheet. The code utilized to extract and clean this data is available on **GitHub**. Lastly, pro forma financial models provided by Abode Communities were adapted, refined and utilized to determine the financial feasibility in two parallel types of analysis:

1) A financial analysis of proposed projects utilizing novel practices in construction and finance that are currently available without any change in policy
2) A financial analysis of proposed projects using assumptions in the areas of land, construction, finance and time efficiency to quantify the financial impact that certain policies might have on different affordable housing projects.

Each of these analyses focuses on isolating, then combining financial variables to determine how they will affect the feasibility of the selected model projects. Those variables were isolated and combined in the following models:

Analysis Variables: Assuming No Policy Change

1. A Control model based on an income mix from a typical 4% LIHTC project in LA County
2. Setting rents to 100% at 80% AMI vs. 20% of units at over 100% AMI with no property tax exemption
    a. High AMI, No exemption
    b. 80% AMI, Exemption
3. Parking
    a. .5 parking spaces per unit
    b. Unparked (only for projects 150 units and below)
4. Financial Products
    a. Market rate permanent and construction loans
    b. Recycled bond permanent loan
5. Project Size

a. 100 units
b. 150 units
c. 200 units
d. 250 units

Analysis Variables: Quantifying Policy Concepts' Impact on Project Feasibility

1. Control model
2. Land Donation and Pre-entitlement
3. Low Interest financing
4. Property tax exemption
5. Small subsidies without typical LIHTC exemption

Each variable was isolated by holding other assumptions in a pro forma financial model constant. The results were then analyzed by examining differences in the cost per unit, financing surplus or gap, internal rate of return (IRR), debt yield, quantity of affordable units included in the development, and the level of affordability of those units. Each model sets a target IRR of 9% to determine how much investment could be supported by impact equity, starting first by setting all rents at 120% AMI, and then setting aside affordable units in the project until the project hits the absolute minimum IRR. Finally, for the models that showed funding gaps to achieve the minimum IRR, the total development cost was hard coded based on an imputed cost per unit to determine how low the cost per unit would need to be in order for that project example to be financially feasible. Some of the unique features of each analysis are as follows:

Generic Non-LIHTC

A minimum of 20% of units were set to 80% AMI. If the project was financially capable of including more units at 80% AMI, then more units would be set aside at that income level. However, there were gaps for all of these projects, even with only 20% of the units being set at 80% AMI.

SB 4

These models assumed prevailing wage and set rents in accordance with SB 4 regulations. Depending on feasibility, any excess funds would go towards a land payment towards the donating institution, but this was not possible based on the outputs of the models.

Recycled Bonds

Recycled bonds require at least 20% of units to be restricted at 50% AMI, so this was accounted for. Additionally, a 1.5% annual negative arbitrage fee during construction was included to reflect this requirement.

Lowered TDC

For all models with gaps, the development budget was overridden and the cost per unit was hard-coded in order to determine at what cost per unit the projects would be feasible.

Cross Subsidy Concept Explored

As mentioned above, including higher income units in a development allows a project to leverage more debt as opposed to equity or subsidy. For unsubsidized or lightly subsidized affordable housing, the inclusion of these units also helps greatly with providing equity value when refinancing a project. This created value allows for financial returns that can support a greater initial investment. Overall, this means that as higher income units are included in a project, they produce a somewhat multiplicative effect on the financials, helping to close funding gaps. **Figure 6** shows an example of an income mix that one might find in a typical 4% tax credit project. **Figures 7**and **8** demonstrate how much of an impact going from an income cap of 80% AMI to 120% has on a project gap. The gap reductions in **Figure 8** show that while the increase in rents is around 60%, the reduction of the financial gap reduces nearly 100%.

4% Tax Credit Example Income Mix	
Income	**% of Units**
30% AMI	20%
40% AMI	30%
50% AMI	50%

Figure 6. 4% Tax Credit Financing

80% AMI		
Income mix	**Gap**	**Change from Original**
4% Tax Credit Mix*	$ (106,595,303)	-
20% of units at 80AMI	$ (93,891,074)	**$ 12,704,229**
50% of units at 80 AMI	$ (78,539,462)	**$ 28,055,841**

Figure 7. 4% Tax Credit Financing

120% AMI		
Income mix	**Gap**	**Change from Original**
4% Tax Credit Mix*	$ (106,595,303)	$ -
20% of units at 120AMI	$ (83,728,902)	**$ 22,866,401**
50% of units at 120 AMI	$ (53,029,837)	**$ 53,565,466**

Figure 8. 4% Tax Credit Financing

Pro forma Analysis Results: Alternatives to LIHTC Today

Case 1: Generic Mixed-income Housing

As the case study above explores, non-profit and government entities have begun to experiment with developing residential projects incorporating a wider range of incomes, which allow for the development of affordable units with little to no subsidy. In some ways, this is practiced by for-profit developers subject to inclusionary zoning or taking advantage of density incentives. However, governments and nonprofits are not subject to the same requirements for returns on investment, and may be able to leverage policies or financial tools that for-profit actors do not have access to. While no project is truly 'generic', this case is meant to demonstrate an example of a development without highly unique properties (e.g. a partially constructed acquisition).

One challenge in executing this type of development is ensuring that market rents in the development area are high enough that moderate income units are able to financially support enough debt for the project, while still being more affordable or comparable to market-rate new construction in the area. **That would make this project type best suited for areas aiming to meet fair housing goals.**

The income mixes of these types of developments could vary greatly. **The approach to maximize the number of affordable units in this case is by modeling a typical, for-profit development, and then removing market rate units and replacing them with affordable units in the financial model until the minimum hurdles are just barely met for returns.** This allows a developer or agency to understand how many affordable units (at the target AMI) can be supported by the market rate or moderate-income units in the development. This approach can be repeated after introducing new assumptions like a lower interest rate, removed parking, increased density, or waived developer fees. **Figure 9** demonstrates the gaps of projects at various sizes assuming a construction cost of **$300 per square foot.** **Figure 10** shows some of the fundamental assumption**s** and an example pro forma is available **for download on Github.** With each project showing a total cost per unit above $600,000, none of these projects would be financially feasible in today's market at time of publishing this report. However, every developer faces unique opportunities and challenges. **Figure 11 also demonstrates what cost per unit (TDC PU) would need to be achieved for each project to pencil.**

20% of Units at 80% AMI							
Parked, .5 spaces per unit							
Project Size	**Gap Amount**	**Gap as % TDC**	**LP IRR**	**TDC**	**TDC Per Unit**	**TDC PU Needed to Pencil**	**Delta**
100 Units	$ (11,560,774)	18%	-1%	$ 65,696,173	$ 650,457	$ 525,000	23.90%
150 Units	$ (14,681,961)	15%	0%	$ 95,899,447	$ 635,096	$ 520,000	22.13%
200 Units	$ (18,287,203)	14%	1%	$ 126,412,064	$ 625,802	$ 525,000	19.20%
250 Units	$ (21,285,018)	14%	1%	$ 156,525,038	$ 621,131	$ 525,000	18.31%
Unparked							
100 Units	$ (6,856,311)	11%	2%	$ 61,446,295	$ 608,379	$ 525,000	15.88%
150 Units	$ (7,583,063)	8%	4%	$ 89,488,564	$ 592,640	$ 525,000	12.88%

Figure 9. Project Gaps: Generic Non-LIHTC Models

Assumptions	
Permanent Loan	6.05% Interest, 35 Year Term, 1.2 DCSR
Construction Loan	7.1% Interest, 60% LTC
Construction Cost/SQFT	$300/SQFT Site Work + Structures
Refinance	Year 7, 6.5% interest rate
Target IRR	9%
Parking	.5 spaces per unit, podium
LP Exit	Year 7
Land Cost	$65,000 per unit

Figure 10. Generic Non-LIHTC Model Assumptions

Case 2: SB 4 Projects

Developers are likely considering using tax credits for projects that could benefit from SB 4 streamlining, however, non-LIHTC options were analyzed to potentially provide affordable housing developers with a greater range or amount of opportunities to possibly pursue on religious or non-profit school land. However, based on the pro forma analysis, **even the most financially efficient model faced an over $49M gap.** The project results are displayed below in **Figure 11.**

One challenge with this type of development is that, depending on the institution, the host entity may not wish to pursue a development at a density that could financially support an unsubsidized (or even subsidized development). Additionally, this analysis assumes 25% of units set at 120% AMI, which is allowed by SB 4 (20% allowed at 120% AMI, with an additional 5% allowed to be set aside for staff of the institution). While the inclusion of these units helps the project's bottom line, **it would likely be difficult to find local and state public sources of funding that would allow subsidy to be granted to an SB 4 project with this income mix, making its mixed-income provisions less likely to be utilized.** The assumed income mix is displayed in **Figure 12**. The table in **Figure 13** shows the assumptions used in the model, which is available in full in **Appendix C**

Project Size	Gap Amount	Gap as % TDC	LP IRR	TDC	TDC Per Unit
150 Units	$ (49,766,621)	48%	-9%	$ 104,065,531	$ 689,176

Figure 11. SB 4 Project Example

4% Tax Credit Example Income Mix	
Income	**% of Units**
50% AMI	20%
80% AMI	55%
120% AMI	25%

Figure 12. SB 4 Project Income Mix and Assumptions

Assumptions	
Permanent Loan	4.5% Interest, 30 Year Term, 1.2 DCSR
Construction Loan	7.1% Interest, 60% LTC
Construction Cost/SQFT	$380/SQFT Site Work + Structures
Refinance	Year 7, 6.5% interest rate
Target IRR	9%
Parking	None
LP Exit	Year 7
Land Cost	Donated

Figure 13. SB 4 Project Assumptions

Case 3: Foreclosed Partially Constructed Property

With a large increase in the cost of construction, insurance and interest rates, many affordable housing developers notice an increase in offers from brokers or struggling developers to collaborate on or purchase partially constructed residential developments. Some foreclosures generate widespread attention, and may pose opportunities for policy or financial intervention from local governments. These developments pose an interesting opportunity for affordable housing developers to embrace counter-cyclical housing development, and potentially save on construction costs. The largest challenges inherent in this case are higher insurance costs, being locked into a specific unit mix, and challenges in utilizing certain low-interest financing options like recycled bonds due to inducement requirements. These challenges would likely stand in the way of scaling this model, but there may be cases in which foreclosed properties could aid affordable housing developers in implementing affordable housing projects with little to no subsidy, or deepening the affordability of subsidized projects.

Findings:

- Because 100% of the loan must be induced at the start of construction, partially constructed structures are ineligible for recycled bonds, and another low interest financing option would likely need to be found to produce a feasible project.
- A substantial discount on a partially completed structure would be needed to offset increased insurance costs, inspections, and other costs associated with this unique case.
    - Other constraints include predetermined unit sizes and parking ratios that may not be congruent with desired programming.

- Developers interested in pursuing a partially constructed or near completed project should run their sensitivity analysis based on the maximum supported offer for the project to decide whether to proceed.
- Completed and foreclosed projects would qualify for recycled bonds for acquisition and rehab

Philanthropic and Other Financing Sources

A number of new sources for low-interest financing, program related investments, and grants from philanthropic organizations are emerging. Loan terms, available funding and other details for these funds vary greatly, so rather than analyze potential project feasibility utilizing some of these programs, this project demonstrates what kinds of terms, returns or subsidy would be needed in order to make novel forms of affordable housing feasible. In particular, the low-interest financing analysis demonstrates how aspiring programs could shape their requirements to maximize potential project feasibility.

Looking Forward: Near-Term Policy Options

As stated in the introduction, the goal of the second half of this report is to provide broad, adaptable policy recommendations that would not constitute large, new financial expenditures or prove to be outside the scope of near-term political possibility. Through interviews with legislative and government agency staffers, as well as a review of housing legislation that has passed over the past several years, this report has identified the following broad concepts in the following categories that could expand the production of affordable housing in addition to the tax credit funded affordable housing that is being produced today. **Importantly, as will be shown in the pro forma analysis section, taking these policy concepts as a complete package, rather than in individual parts, would have the greatest impact on affordable housing development, as well as the depth of affordability that housing developments could feasibly achieve.**

These policy concepts, derived from international best practices and novel ideas within the United States, are intended to provide ideas for policymakers and advocates for more concrete policies that could aid in the production of affordable housing. None of these concepts are proposed in the form of a complete, discrete policy, but rather as building blocks that could be molded based on further analysis, political debate, and negotiation. The analysis below will provide a financial representation of how these policy impacts would improve the financial feasibility of affordable housing projects and/or increase the overall amount of affordable housing included, or the depth of income targeting (I.e. lower AMI targets).

Land and Pre-Entitlement

Land donation is already a widespread practice within California for affordable housing development. Shifting the burden of entitlement onto either a central or local entity that could specialize and scale this process could help to expedite developments using donated land, as well as reduce their costs, resulting in more affordable housing produced.

Some existing programs that could be adapted to support this policy concept include[45]:

- HCD Excess Sites Program
- Surplus Land Act
- Transportation authority joint development programs
- Regional Affordable housing finance entities like Los Angeles County Affordable Housing Solutions Agency (LACAHSA) and Bay Area Housing Finance Authority (BAHFA)

[45] Michael Coulom, Capstone Interview-Housing and Community Development Department, November 17, 2023; Lisa Kraus, Captstone Interview- Housing and Community Development Department, November 7, 2023.

Low Interest Financing and Equity

There are a number of programs statewide and nationally that aim to provide low interest rates for affordable housing development. These rates are achieved using several strategies including subsidy and risk-sharing (e.g. HUD Section 542(c)). In some countries like the Netherlands, the government will guarantee 100% of the risk on loans for affordable housing, allowing them to leverage higher percentages of total development costs at much lower rates[46]. Considering these programs provides a number of ideas for ways to scale low interest financing options, and provide new financing options with flexible requirements. Another potential financing strategy comes from the transit development space. In recent years, Canadian pension funds have begun investing in major public transportation projects [47]. If local or state governments are able to provide some baseline guarantees on investment, this could become a large viable source of funding for mixed income housing development. Additionally, LIHTC foreclosures are extremely low, meaning that these developments could face a lower risk profile [48].

Established policies and program ideas that could support low-interest finance products include:

- Public Banking [49]
- Risk sharing and Assumed Risk
- Pension investment in infrastructure

Existing agencies/entities that could support this type of programming include:

- California Housing Finance Agency
- California Municipal Finance Authority
- California Public Employees' Retirement System

Time/Cost-efficiency

Lastly, reducing the time and cost of affordable housing development provides the additional benefit of making investment less risky and more viable. By right approvals, and expedited entitlement processes could have a significant impact on supporting other financing and policy ideas to produce more affordable housing in California. Executive Directive 1 in the City of Los Angeles has already demonstrated how impactful reducing administrative friction on projects can be, though this policy is already facing pushback to limit its scope and efficacy [50]. Additionally, the welfare tax exemption's

[46] Robin Pascoe, "The Dutch Housing Market: What Exactly Is the Government Doing?," DutchNews.nl, March 30, 2023.
[47] Matt Scuffham, "Quebec Pension Fund Ups Stakes in Infrastructure Test Case," *Reuters*, September 19, 2016, sec. World.
[48] Christine Serlin, "LIHTC Properties Maintain Their Strength During Pandemic," Housing Finance, November 29, 2021.
[49] Halah Ahmad, "Municipal Bank of LA: Housing Solutions and Portfolio Options," *Jain Family Institute* (blog), May 5, 2023; Ahmad.
[50] Christopher, "Los Angeles' One Weird Trick to Build Affordable Housing at No Public Cost"; Steven Sharp, "L.A. City Council Motion Calls for Curbing ED1 Projects in Historic Districts," Urbanize LA, May 1, 2024; David Wagner,

capacity to facilitate the inclusion of more affordable housing in projects if expanded will be examined below. Results: A Pro forma Analysis of Policy Inputs

Example 1: Low Interest Financing

Taking recycled bonds as a permanent loan was a good demonstration of how lower interest financing options could impact affordable housing feasibility, but recycled bonds come with a number of restrictions and limitations. Assuming that there were products available that allowed for a **4% interest rate for construction, permanent, and refinance loans**, all of the models in this report became financially feasible. Furthermore, the models were able to support substantial percentages of units restricted at 60% AMI as an additional option beyond restricting units at 80% AMI. The results from this analysis are summarized in **Figure 14** below.

Permanent, construction, and refinance loan at 4% interest						
Parked, .5 spaces per unit						
Project Size	**Gap Closed**	**Affordability Mix at 80AMI**	**Affordability Mix at 60AMI**	**LP IRR**	**TDC**	**TDC Per Unit**
100 Units	$ 11,560,774	20 units at 80%AMI	Does not pencil	9%	$ 64,323,197	$ 636,863
150 Units	$ 14,681,961	60 Units at 80% AMI	30 units at 60%AMI	9%	$ 89,612,312	$ 593,459
200 Units	$ 18,287,203	80 Units at 80% AMI	40 units at 60%AMI	9%	$ 123,534,639	$ 611,558
250 Units	$ 21,285,018	113 Units at 80% AMI	65 units at 60% AMI	9%	$ 152,844,569	$ 606,526
Unparked						
100 Units	$ 6,856,311	45 Units at 80% AMI	26 units at 60% AMI	9%	$ 56,766,802	$ 562,048
150 Units	$ 7,583,063	75 Units at 80% AMI	48 Units at 60% AMI	9%	$ 80,942,903	$ 536,046

Figure 14. Low-interest financing model outputs

"Environmental Reviews Are Holding Up New Affordable Housing In LA, Despite Mayor's Promise," LAist, January 22, 2024.

Example 2: Pre-Entitled Land Donation

Assuming a 20% hard cost increase for prevailing wage, issuing pre-entitled land to a project is not enough to make up for the added hard costs. That is to say, the increased cost is greater than the financial benefit of pre-entitled land (assuming that land costs $65,000 per unit). Assuming non–prevailing wage hard costs ($300/SQFT), all of this report's models are financially feasible, except for the two smallest models that included parking. The results of the projects with gaps are summarized in Figure 15 and the results of the financially feasible projects are summarized in Figure 16.

Land donation with entitlement costs paid (Gaps)								
Project Size	Originial Gap	Gap With Policy	Gap as % TDC	LP IRR	TDC	TDC Per Unit	TDC PU Needed to Pencil	Delta
Parked, .5 spaces per unit								
100 Units	$ (11,560,774)	$ (2,106,685)	4%	6%	$ 56,890,088	$ 563,268	$ 525,000	7.29%
150 Units	$ (14,681,961)	$ (1,602,167)	2%	8%	$ 83,158,542	$ 547,096	$ 520,000	5.21%

Figure 15. Pre-entitled land donation model outputs (Gaps)

Land donation with entitlement costs paid (Feasible)					
Project Size	Gap Closed	Affordability Mix	LP IRR	TDC	TDC Per Unit
Parked, .5 spaces per unit					
200 Units	$ 18,287,203	40 Units at 80% AMI	9%	$ 108,965,130	$ 539,431
250 Units	$ 21,285,018	50 Units at 80% AMI	9%	$ 135,304,731	$ 536,924
Unparked					
100 Units	$ 6,856,311	30 Units at 80% AMI	9%	$ 52,560,684	$ 520,403
150 Units	$ 7,583,063	52 Units at 80% AMI	9%	$ 76,822,671	$ 505,412

Figure 16. Pre-entitled land donation model outputs (Feasible)

Example 3: Full Property Tax Abatement On All Units

If the welfare tax exemption were extended to a broader range of incomes, the additional debt that could be leveraged by projects would not be enough alone to close the gaps these projects faced without the exemption. The impact that this policy would have on each model's gap is summarized in **Figure 17** below. While all of these models showed financing gaps, they were cut down very substantially by a tax exemption. While these models did not show any feasible projects, it is worth further consideration and analysis to see if expanding the welfare tax exemption would make these projects feasible, especially given a recent Terner Center analysis that found this policy would support middle-income housing development [51].

Full property tax exemption, 20% of units at 80% AMI								
Project Size	**Original Gap**	**Gap With Policy**	**Gap as % TDC**	**LP IRR**	**TDC**	**TDC Per Unit**	**TDC PU Needed to Pencil**	**Delta**
Parked, .5 spaces per unit								
100 Units	$ (11,560,774)	$ (5,662,693)	9%	3%	$ 66,024,851	$ 653,711	$ 575,000	13.69%
150 Units	$ (14,681,961)	$ (6,509,559)	7%	5%	$ 96,909,579	$ 637,563	$ 585,000	8.99%
200 Units	$ (18,287,203)	$ (6,830,083)	5%	5%	$ 127,066,147	$ 629,040	$ 580,000	8.46%
250 Units	$ (21,285,018)	$ (7,853,883)	5%	6%	$ 157,343,328	$ 624,378	$ 585,000	6.73%
Unparked								
100 Units	$ (6,856,311)	$ (2,182,475)	4%	7%	$ 61,750,583	$ 611,392	$ 575,000	6.33%
150 Units	$ (7,583,063)	$ (1,695,507)	2%	8%	$ 90,464,545	$ 595,161	$ 590,000	0.87%

Figure 17. Property tax abatement model outputs

[51] Garcia, "Making It Pencil."

Example 3: All Inputs Combined

The table in **Figure 18** below demonstrates the combined impact that low interest financing, paired with a pre-entitled land donation and full tax abatement would have on a generic mixed income development. Combining all of the above policy concepts into one model provides much more flexibility. **Figure 19** demonstrates an example assuming prevailing wage and shows that with all policy concepts combined, the project is feasible with a 20% reduction in units targeted to either 80% or 60% AMI.

All above policy concepts applied						
Project Size	**Gap Closed**	**Affordability Mix at 80% AMI**	**Affordability Mix at 60% AMI**	**LP IRR**	**TDC**	**TDC Per Unit**
Parked, .5 spaces per unit						
100 Units	$ 11,560,774	60 units at 80%AMI	35 units at 60% AMI	9%	$ 52,906,770	$ 523,829
150 Units	$ 14,681,961	115 units at 80% AMI	85 units at 60%AMI	9%	$ 72,897,130	$ 482,762
200 Units	$ 18,287,203	160 units at 80% AMI	115 units at 60%AMI	9%	$ 90,427,205	$ 447,659
250 Units	$ 21,285,018	205 units at 80% AMI	100 units at 60% AMI	9%	$ 110,872,662	$ 439,971
Unparked						
100 Units	$ 6,856,311	85 units at 80% AMI	65 units at 60% AMI	10%	$ 42,949,909	$ 425,247
150 Units	$ 7,583,063	135 units at 80% AMI	100 units at 60% AMI	10%	$ 60,294,376	$ 399,301

Figure 18. All policy inputs combined model outputs

Prevailing Wage Example						
Project Size	**Gap Closed**	**Affordability Mix at 80% AMI**	**Affordability Mix at 60% AMI**	**LP IRR**	**TDC**	**TDC Per Unit**
Unparked						
150 Units	$ 7,583,063	90 units at 80% AMI	60 units at 60% AMI	10%	$ 85,746,557.20	$ 567,857.99

Figure 19. All policy inputs combined model outputs, prevailing wage example

Conclusion

While California has all but reached the limit of our current affordable housing finance system, there are many financial, policy, administrative, and scale-related changes that could be tapped in order to produce more affordable housing. Two immensely important concepts that could aid in the advancement of the concepts in this report are 1) the impact of scale and new technologies on construction costs, as well as 2) the impact of improving nonprofit developers' operating income on their ability to produce affordable housing at various levels overall.

As policymakers and government leaders consider how to greatly expand affordable housing production, considering how this could impact investment and implementation of construction technology could shed light on what types of savings might be possible for developments, which would support more investment into construction labor and technology as the number of projects increases statewide. An analysis of whether there is enough of a labor force available to produce the amount of housing needed could also aid this analysis. Additionally, this report explores the difference between projects that include or do not include parking, but a further analysis of the design possibilities and cost differences for projects including surface, rather than concrete podium structured parking could be helpful for affordable housing developers.

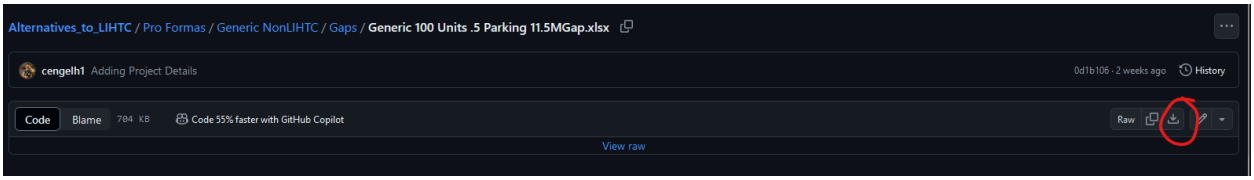
Increasing nonprofit developers' organization income would allow these entities to put their own equity into projects to fill gaps, or make returns more favorable to their equity partners. **A demonstration of how much organizational income could be added by adding higher income projects into an organizational portfolio would allow a better understanding of how much more equity developers would be able to put into affordable housing projects**. For example, In Vienna developers typically invest 30% of a project's total investment as equity. While this is far beyond what might be possible in the United States, it exemplifies an approach that creates cost efficiencies, saves predevelopment time, and reduces risk.

As seen in the pro forma analyses, rising costs pose a massive threat to affordable housing production in California. As such, new policy, financial products, and programs will be needed in order for California to continue to increase the scale of affordable housing production. **Low-interest financing options, including the ability to refinance projects at low costs emerged as a highly important policy option.** Additionally, returns for projects were often much higher at year 10 instead of year 7, showing an **opening for policymakers to conceptualize a lower-return, longer-term equity product that could even be revenue neutral for government in the long term**. Envisioning government agencies as equity partners would allow for limited-profit investment that would aid local governments and multiply the potential for affordable housing development in California.

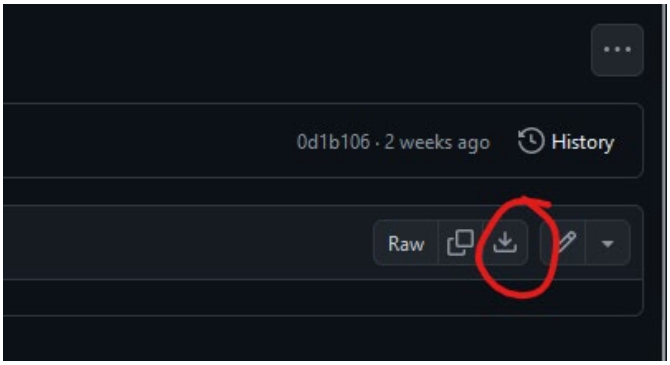
Appendices

Appendix A: Download Instructions for Github

In order to download any data or pro formas from Github, click the relevant link provided in the report or appendix, and then click the download icon on the page, circled in **red** in the image below.



Zoomed in view:



Appendix B: 4% LIHTC Application Data

Appendix C: SB 4 Pro Forma

Appendix D: Generic Non-LIHTC Pro Formas

Appendix E: Recycled Bond Pro Formas

Appendix F: Policy Hypothetical Pro Formas