City and County of Honolulu (the City)

Empty Homes Tax Program – Feasibility Analysis Executive Summary

April 21, 2025

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Ernst & Young LLP ("EY") was engaged by the City and County of Honolulu ("the City") to design an empty home tax program and to outline the essential steps required for the effective implementation of the program. The material included in this presentation supports Task 1: Clarification, Research and Assessment. In preparing this document ("Report"), EY relied upon unaudited data and information from the City, Board of Water Supply and other third-party sources (collectively, the "Supporting Information"). EY reserves the right to revise any analyses, observations or comments referred to in this Report, if additional Supporting Information becomes available to us subsequent to the release of this Report. EY has assumed the Supporting Information to be accurate, complete and appropriate for the purposes of the Report. EY did not audit or independently verify the accuracy or completeness of the Supporting Information. Accordingly, EY expresses no opinion or other forms of assurance in respect of the Supporting Information and EY does not assume any responsibility or liability to entities or persons other than the City that may gain access to the Report.

Purpose of this report

The purpose of this report is to provide an overview of the potential feasibility of a Residential E ("Res E") / Empty Homes Tax ("EHT") and summarize key findings of analysis completed to date. This analysis was conducted based on methodologies reviewed by Honolulu staff and customized to Bill 46.

This report reflects analysis completed toward the above objective, including:

1. Estimating the number of vacant residential units in Honolulu based on the latest available water usage data.
2. Analysis of potential revenue generated by a tax on empty homes using eligibility and tax rates observed in other jurisdictions.
3. Conducting scenario analysis to determine the impacts of exemptions and the tax policy design (new classification compared to conventional supplementary tax).
4. Estimating potential implementation and ongoing operating costs to administer a tax on empty homes.

1. Executive Summary

Project Background and Scope

Bill 46 Context

Bill 46 is proposing a new property classification for empty homes (Res E). The Bill seeks to tackle pressing issues of homelessness and the shortage of affordable housing by:

1. Motivating property owners to either lease their vacant properties for longer terms or sell them for residential use.
2. Enhancing the City's housing availability to align more closely with demand, thereby helping to alleviate the market pressures contributing to prohibitively high housing costs.
3. Producing City income that can be directed towards affordable housing solutions and combat homelessness.
4. Facilitating the transformation of current investment properties into housing units, eliminating the need for expensive construction, time-consuming development and approval procedures, or the purchase of additional land.

Project Context

The City has engaged EY to design an effective tax program and establish the necessary steps to create and enforce a program that levies a tax on "empty homes." The project is split into two key tasks:

Task 1: Assess the feasibility of a tax on empty homes. This involves detailed financial feasibility analysis and a high-level operating model design.

Work is complete; this report outlines the key findings from Task 1.

Task 2: Design the operating model for the tax, including people, process and technology requirements, and development of an implementation plan.

Task 2 is planned to be completed over the coming months.

Feasibility Analysis: Approach

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Components of Feasibility Analysis

Three key components drive the feasibility study; revenues, costs and scenario analysis.

Estimate Revenues

From two sources:

- **Tax Levy** – Revenue earned from homeowners who declare/report their homes to be empty.
- **Penalties** – Revenue from homeowners who have been found to be non-compliant or fraudulent in their declaration/ reporting and are charged a penalty.

Which is driven by:

- **Housing Supply** (i.e. number of properties)
- **Assessed Value** (where the tax rates are a percentage of the properties value)
- **Tax Rates**

Estimate Costs

This includes:

- **One Time Costs** – Upfront costs associated with implementing the tax (e.g., software upgrades).
- **Ongoing Costs** – Ongoing costs associated with operating the tax (e.g., staffing and compensation for compliance, customer service, reporting).
- **Foregone Revenue** – As currently drafted, the City will reclassify empty properties from Res or Res A to Res E. This means that the City will forego existing property taxes.

Conduct Scenario Analysis

Analysis with respect to key parameters conducted to:

- Estimate revenues from the tax and penalties, as proposed in Bill 46 and compared to other jurisdictions
- Assess the feasibility of the tax by estimating potential net revenues under the scenarios.

Revenue Estimation: Methodology Walkthrough

Estimate the Tax Base (i.e.. the number of empty homes that do not qualify for an exemption)

Analysis	Resulting Values
1. Identify total number of taxable properties and assessment values, for condos and non-condos.	287K – 292K properties 47% Condos, 53% other $726.6K average (Condo) $1.38M average (other)
2. Estimate the vacancy rate using water consumption data.	2.4% -4.2% vacancy rate 7,316 – 11,184 properties
3A. Estimate the percentage of properties that are **empty and qualify for an exemption**[1]**.**	81 – 87% exemption rate 6,365 – 9,059 properties
3B. The remaining properties **are empty and do not qualify for an exemption** ("Non-Exempt Rate")[1].	13 – 19% non-exempt rate 958 – 2,125 properties
4. Estimate how many non-exempt empty properties (from 3B) will return to the market.	At a 1% tax rate, 38 – 86 properties return annually (4% of empty properties)

Estimate Compliance Impacts

Analysis	Resulting Values
5. Estimate rate of compliance (the homeowner declares that the property is vacant and pays the tax).	70.5% compliance 29.5% non-compliance
Of non-compliant homes:	
• Estimate percentage identified through audit, paying the tax (1%) and penalty (0.05%).	65% of non-compliant homes identified
• Estimate percentage remaining unidentified, tax and penalty uncollected.	35% of non-compliant homes remain unidentified

Revenue Estimate

Analysis	Resulting Values
6. Multiply the number of homes by assessed value and applicable tax and penalty rate (for condos and non-condos)	10-year average annual gross revenue $42.3M - $60.2M

Notes: 1. Values are for the Tax Year 2027/2028

Key Messages: Feasibility Analysis

Defining Feasibility

For the purposes of this report, feasibility is defined in financial terms and is evidenced by total revenues exceeding total operational costs. Further discussion and agreement by City Staff and Council is required to address non-financial considerations that may impact a potential program's financial results or operations, and thereby its feasibility in practice.

Additional risks and factors should be considered, including:

- Higher tax rates (e.g., 3% vs. 1%) that significantly exceed current property taxes may result in higher rates of properties returning to the market than experienced in other jurisdictions, and may incentivize higher rates of non-compliance. These outcomes could directly and materially impact the financial feasibility of the program.
- Market and geopolitical factors may reduce incentives to hold properties defined as empty, reducing vacancy rates and potential program feasibility.

Future analyses (Task 2) will focus on design of administrative requirements and associated processes, including further assessment of operational feasibility.

Data-Driven Approach

EY has employed a data-driven, assumption-based methodology to forecast the revenue and costs associated with Bill 46. For example, real property data was used to understand the number of homeowner exemptions. Historical growth in assessed value was analyzed to forecast growth over a ten-year period, and assumptions with respect to homeowner behavior have been made to model the impact to overall housing supply.

The analysis models the impact of Bill 46 as currently drafted and compares this with leading practices in other jurisdictions. It is important to note that tax policy is inherently complex and is influenced by several factors such as home prices, rent prices, interest rates, and migration. As such, the results of analyses performed should be interpreted as informed estimates rather than precise predictions.

Lower Revenue Estimates Compared to Other Studies

EY's analysis provides a lower revenue estimate compared to studies commonly cited in Bill 46 discussions, as EY's methodology differs from those studies (e.g., some studies assume certain properties are vacant, or use atypical tax rates).

Key Messages: Policy Considerations

Program Outcomes

In other jurisdictions, an Empty Homes Tax (EHT) is neither intended nor proven to address affordability issues alone, as numerous market and policy factors also influence housing supply and costs, some directly and some indirectly. These include inflation, interest rates, migration and zoning regulations. However, EHTs have been shown to increase existing housing supply by reducing the number of vacant homes. For instance, in Vancouver, the vacancy rate in 2017 was 1.18% (equivalent to 2,193 properties), while the vacancy rate in 2023 dropped to 0.54% (equivalent to 1,073 properties).

Changes in the tax rate also affect the number of homes returned to the market. As the tax rate increases, so does the behavioral response rate—the percentage of homeowners who return their properties to the market—because the cost of maintaining an empty home becomes more and more prohibitive. Additionally, tax avoidance increases, requiring additional effort in audit and compliance activities to mitigate its impact.

Further, an EHT is one of several policy tools available to address housing and homelessness issues. In jurisdictions like Toronto and Vancouver, the EHT is administered alongside a Non-Resident Speculation Tax in Ontario and a Speculation and Vacancy tax in British Columbia, tenancy legislation, short-term rental regulations, and zoning by-laws. These policies and regulations work together to create a tax and regulatory environment that promotes the use of residential properties for housing, supports rental affordability, and addresses issues related to vacant and underutilized properties in these municipalities.

It is recommended to provide further clarification on what Bill 46 aims to achieve so that relevant performance indicators can be defined and tracked.

Use of Tax Revenue

Where similar programs have been implemented, it is common practice for program costs to be recovered first, with remaining funds allocated to affordable housing and homelessness initiatives.

These initiatives include financial support (e.g., rent subsidies), development of affordable housing units, and partnerships with community organizations to deliver housing and homelessness-related services.

Key Messages: Policy Considerations

Bill 46 Analysis

Bill 46 provides a foundation for a tax on empty homes. Review of the ordinance indicates potential opportunities to better align the policy and implementation with other jurisdictions, including:

- Simplifying the Bill by rationalizing some of the exemptions (e.g., exempting non-profit organizations to replace two exemptions with one) could make it easier for the public to understand, and reduce the complexity of administering the policy.
- Increasing revenue by removing exemptions for second homes and properties listed for sale or rent, and reducing loopholes by removing Section 5.
- Consider the appropriate rates and penalties to encourage compliance with the tax.

Key Components of Bill 46 to Guide the Analysis

Bill 46 was used as guide to assess the feasibility of a tax on empty homes for Honolulu. There are four key aspects of the tax policy:

Definition of an Empty Home

Bill 46 does not explicitly define "empty". Rather, the ordinance establishes a new real property tax classification of "residential E" for certain properties, including residential properties that are vacant or not likely to be long term residences, to be taxed at a rate intended to help address the City's lack of affordable housing crisis that arises from inadequate housing supply and inadequate funding to address these problems.

Tax Rate and Structure[1]

The Tax Rate directly impacts the revenue estimate through tax levies and the increase in properties that are released to the market as a result of the tax (behavioral impact)

Initial drafts of Bill 46 proposed a conventional supplemental tax rate of between 1 and 3% ,which is aligned to other jurisdictions.

However, the change to a new property classification means that the rates are not defined in the Bill. This is due to property tax rate being set by Council on an annual basis.

Notes:
1. Impacts the Revenue Estimates.
2. Due to data limitations, analysis of the financial impact of Section 5 was not possible.
3. Could potentially impact program feasibility.

Exemptions[1,2]

Exemptions recognize allowable reasons for properties to be empty. Exemptions directly impact financial feasibility as they reduce the number of homes that will pay the tax.

Bill 46 has proposed 16 exemptions, of which 14 are aligned with those typically observed in other jurisdictions. This analysis has estimated the financial impact of the two exemptions that are divergent from other jurisdictions (Properties listed for Sale or Rent and Second Dwelling).

In addition to the exemptions, Section 5 outlines criteria for instances when Res E would not apply – see extract below.

"SECTION 5. This ordinance does not apply to property classified as residential or residential A that is subject to a bona-fide lease or rental agreement in effect on the effective date of this ordinance, but upon the termination date stated in the lease or rental agreement, this ordinance shall apply to said property without regard to any provision allowing optional extensions."

Use of Revenue[3]

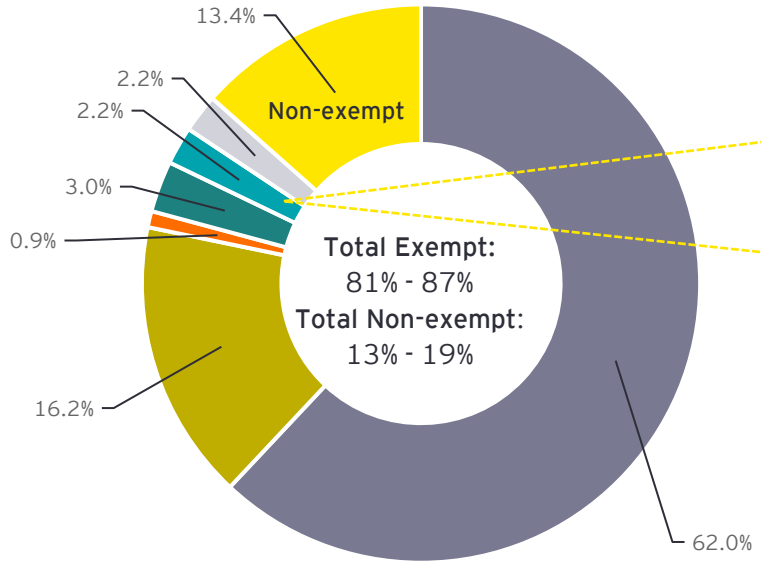
Bill 46 stipulates" that at least 20 percent of the tax revenues collected from residential E properties may be deposited into the housing development special fund to be used as provided in ROH Section 6-46.3(e) and credited to the affordable housing development account".

Key Input - Approach to Estimating the Impact of Exemptions

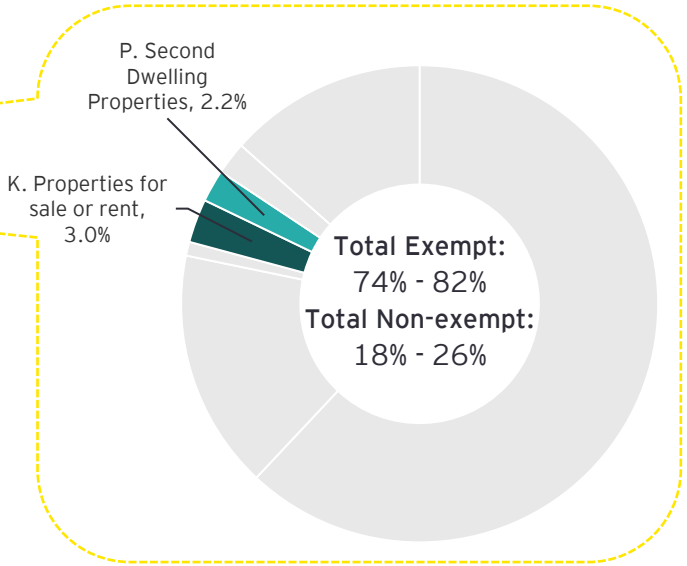
The share of non-exempt properties that qualify for the tax is estimated to be between **13% and 19% with Bill 46 exemptions.**

The following charts are a visual demonstration of the estimated shares of properties qualifying under the exemptions. The approach and assumptions for estimating the shares under the two exemptions divergent from other jurisdictions are outlined below.

Exemptions as Proposed in Bill 46



Exemptions Divergent from Other Jurisdictions



Top 5 exemptions

- A. Home Exemption
- J. Properties with an Open Building Permit
- P. Second Dwelling Properties
- Non-exempt properties
- D. Renter Occupied Properties
- K. Properties for sale or rent
- Others

Exemption K includes properties that are subject to active effort to sell or rent the property during the prior tax year.

- The share of properties under Exemption K was estimated from housing market data reported by the Government of Hawai'i
- The estimate did not account for the duration of the property on the market

Exemption P includes properties that are a second dwelling of an owner with a home exemption.

- The share of properties under Exemption P was estimated from property tax data provided by the City
- The estimate was also adjusted for the potential overlap with renter-occupied properties and properties on the market

Limitations

- Multiple data sources have been used to estimate the number of exempt properties based on the most recent draft of Bill 46. The non-exemption ratio does not estimate the number of homeowners that may falsely claim an exemption.
- Exemption H (military personnel on active duty outside the City) is included in the estimates in both scenarios, although it is unique to Honolulu.
- Home exemption data may not be up to date, as it is self-reported and renewed automatically.
- The non-exempt ratios are applied uniformly to all properties. This approach did not account for potential impact variations on different properties.

Key Messages: Implementation Considerations

Public Communication & Engagement

Implementing this tax represents a significant change to current real property tax processes. A dedicated and well-resourced public engagement and education strategy is essential to ensure public understanding and compliance. Public testimony indicates that there is a misunderstanding of the tax policy, and it will likely require multiple engagement channels, concise messaging and a simplification of exemptions to increase understanding of the Bill.

Implementation and Ongoing Costs

In collaboration with City Staff, cost assumptions have been developed to estimate the implementation and ongoing costs associated with the administration of the tax. Costs are primarily driven by people and technology to enable the end-to-end administration of the tax including declaration, customer service, billing, compliance, appeals and ongoing monitoring and evaluation. There are several program design decisions that will impact costs, and the estimated operating and implementation costs will be further refined in Task 2.

Implementation Plan

Assessing feasibility is the first part of the task. Developing the operating model for administering this tax will require detailed process mapping, confirming responsibilities, designing technology and data requirements, and refining the organizational structure. BFS needs time to build a realistic implementation plan, which will be the focus in the coming months.

Legal Context

It is important to note that there is ongoing litigation regarding an Empty Homes Tax (EHT) in San Francisco. The EHT was found to be unconstitutional under the Just Compensation Clause of the Fifth Amendment to the United States Constitution, also known as the "Takings Clause". An appeal was filed against the decision of the California Superior Court by the City and County of San Francisco on December 6, 2024, meaning it may be some time before there is complete legal clarity around this issue. To support additional legal analysis, research and response to litigation, an estimate for legal fees has been included in the implementation and operational cost budgets.

Revenue Estimation Approach: Adjusting the Housing Supply and Assessed Value to Account for the Tax Implementation Date

In the current draft of Bill 46, the **Residential E tax will come into effect for the Tax Year 2027/2028** (TY 27/28), covering the period from July 1, 2027, to June 30, 2028.

Analysis of historical Real Property Assessment Data (RPAD) indicates that, from now until TY 27/28, **there is likely to be an increase in both housing supply (i.e., the number of properties) and assessed value.** The feasibility analysis accounts for this growth as outlined below.

Housing Supply Growth Rate (TMKs)

EY conducted an analysis of the ten-year historical growth rate of Tax Map Keys (TMKs) by property type to estimate future growth in Housing Supply. The findings were as follows:

- Single units/non-condos: 0.15% - 1%
- Condos: 1% - 1.08%

This means that the number **of TMKs will increase by an additional 6,551- 11,393** from now until TY 27/28.

Average Assessed Values Growth Rate

A similar analysis was conducted on Average Assessed Values, resulting in a growth rate of over 4%. This would have a material impact on the revenue estimates. As a result, EY used a rate from All Urban Consumers (CPI-U) to adopt a more conservative approach. The growth rates are as follows:

- Single units/ non-condos : 2.57%
- Condos: 2.57%

For TY 27/28, the average assessed values are projected to be:

- Single units/ non-condos: $1,378,557
- Condos: $726,610
- Overall Average: $1,075,757

Notes:

- Single units / non condos are those with no CPR number in the TMK (TMK ending in 4 zeros), this may include apartment buildings.
- The following Residential and Residential A properties were excluded:
  - Properties with the following non-residence exemptions: churches, hospitals, schools, cemeteries;
  - Properties identified as parking space;
  - Properties with outlier assessed values: Properties valued under $50,000 or valued above $10,000,000.

Annual Behavioral Response Rate (ABBR)

ABBR is based on the tax rate, and the overarching assumption that the higher the tax rate, the greater the impact to behavior. For the Feasibility Analysis, the following rates were used

Tax Rate	ABBR
1%	4%
2%	5.5%
3%	7%

Tax implemented at 1%

Tax rate raised from 1% to 3%

		Tax Year										
		TY26/27F	TY27/28F	TY28/29F	TY29/30F	TY30/31F	TY31/32F	TY32/33F	TY33/34F	TY34/35F	TY35/36F	TY36/37F
Exemptions in Bill 46	Number of homes returned to market (Conservative) (1)	N/A	38	38	69	69	69	70	70	71	71	71
	Number of homes returned to market (Optimistic) (2)	N/A	86	86	153	154	156	157	158	160	162	162
	Cumulative # homes returned to the market (Conservative)	N/A	38	76	145	214	283	353	423	494	565	636
	Cumulative # homes returned to the market (Optimistic)	N/A	86	172	325	479	635	792	950	1,110	1,272	1,434
Exemptions Aligned with other jurisdictions	Number of homes returned to market (Conservative) (3)	N/A	55	55	95	95	96	96	97	97	98	98
	Number of homes returned to market (Optimistic) (4)	N/A	119	120	211	213	215	217	220	222	225	227
	Cumulative # homes returned to the market (Conservative)	N/A	55	110	205	300	396	492	589	686	784	882
	Cumulative # homes returned to the market (Optimistic)	N/A	119	239	450	663	878	1,095	1,315	1,537	1,762	1,989

Cost Estimation Approach & Key Parameters

Cost Model

The key cost categories that are considered as part of the model include:

- Implementation costs (project team, technology upgrades, professional services etc.)
- Operational costs (staffing and compensation, facilities, equipment, postage, ongoing technology maintenance etc.)

Note – cost estimates are the same in each scenario.

These costs are based on assumptions from a number of inputs including:

- Research from other jurisdictions to identify staffing drivers (e.g. number of homes per customer service agent, number of audits completed by a compliance analyst in one year).
- Research on market rates for professional services.
- Estimates from the City's external technology vendor for costs associated with upgrades to Real Property Assessment system.
- Assumptions from City Budgeting experts based on historical actuals e.g. computer equipment, office space.
- Assumptions from HR with respect to role classifications and associated salary bands.
- An inflationary growth factor of 2.67% was applied to the ongoing operational costs (i.e., costs are estimated in nominal terms). (Data Source: Bureau of Labor Statistics)
- Contingency of 10% was added to the total estimated costs.

An overview of the operations associated with the tax is provided on the following page.

Three scenarios were developed – low, medium and high-cost base. For the purposes of feasibility, the medium cost base was used.

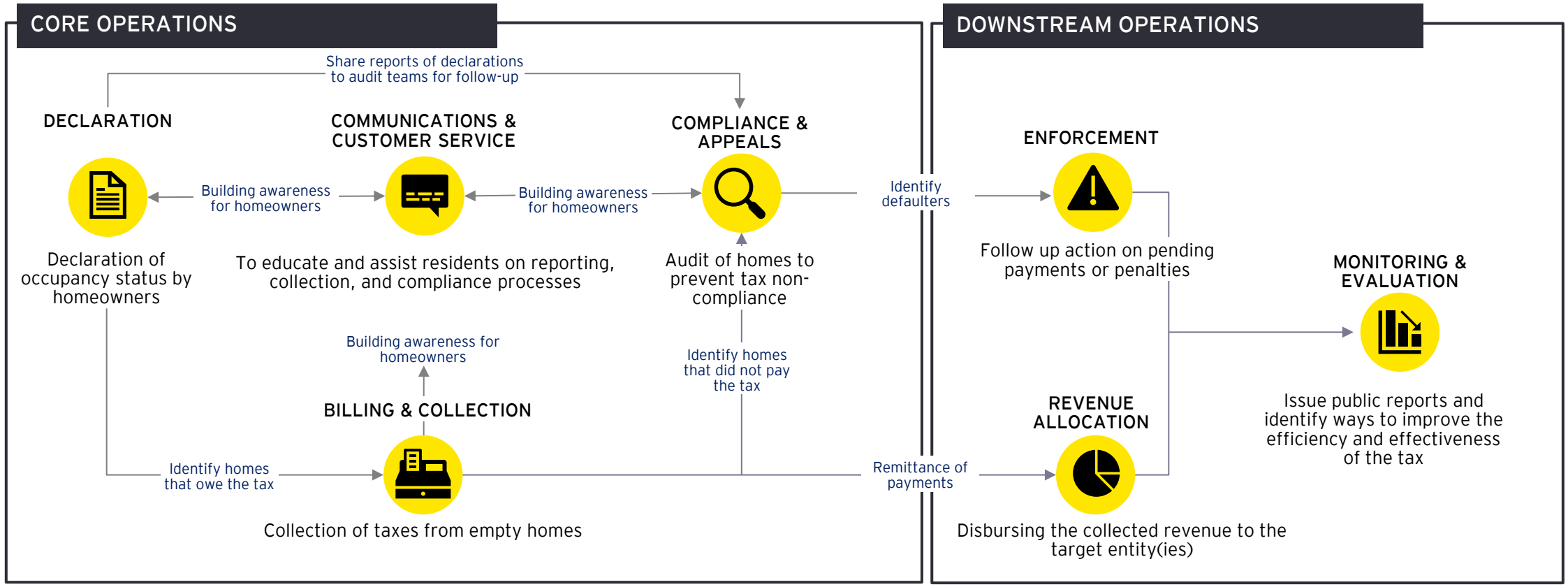
Foregone Revenues

Foregone revenues are defined as the revenues that the City would have collected from non-exempt empty properties if they kept paying current property tax instead of Residential E tax.

- Foregone revenues were estimated based on current Residential and Residential A tax structures.

Operational Components of the Cost Model

Res E operations can be segmented into two major groups – **core operations** and **downstream operations** – as illustrated below. Core operations consist of functions that occur consistently and are required for the program to function effectively. Downstream operations are supporting (enforcement) or end-state (revenue allocation) functions that occur inconsistently (as-needed) or represent the output of the overall process, respectively.



Implementation Costs

	Estimated $		
	Low	Medium	High
Implementation Costs			
Administrative – People			
Project Team Salaries	$ 90,564	$ 181,128	$ 237,120
Project Team Benefits	$ 50,634	$ 101,269	$ 132,574
Training & Onboarding	$ 232,251	$ 696,754	$ 1,393,508
Administrative – Other			
Office Equipment	$ 113,994	$ 174,158	$ 234,321
Office Renovation	$ 90,000	$ 100,000	$ 110,000
Technology			
Software Development	$ 350,000	$ 350,000	$ 350,000
Public Education			
Advertising	$ 8,000	$ 10,000	$ 12,000
Professional Services			
Legal	$ 129,000	$ 258,000	$ 387,000
Other	$ 129,000	$ 258,000	$ 387,000
Contingency	$ 118,544	$ 211,931	$ 323,152
Total Implementation Costs	**$ 1,312,788**	**$ 2,342,239**	**$ 3,567,875**

- Comprised of 1 Data Analyst and 1 Branch Chief for 1 year
- Benefits at 55.91%
- 3 months of operational FTE estimate (27.5 FTE)
- Desks, Chairs, Laptops for 27.5 FTE
- Upgrades to RPAD system to enable declaration, collection and payment
- Legal, Tax, Accounting advice to inform program design
- 10% Contingency

Notes
- Some numbers may not add up due to rounding.

Operational Costs

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	Estimated $		
	Low	Medium	High
Operational Costs			
Administrative – People			
Branch Leadership	$ 104,670	$ 104,670	$ 104,670
Tax Operations	$ 273,336	$ 370,176	$ 464,100
Compliance	$ 740,730	$ 1,214,688	$ 1,693,962
Appeals	$ 65,364	$ 98,046	$ 130,728
Benefits	$ 662,030	$ 999,436	$ 1,338,183
Administrative – Other			
Facilities (Office & Parking)	$ 188,640	$ 288,200	$ 387,760
Communications	$ 100,000	$ 100,000	$ 100,000
Technology			
Maintenance & Support	$ 300,000	$ 300,000	$ 300,000
Professional Services			
Legal	$ 129,000	$ 258,000	$ 387,000
Other	$ 129,000	$ 258,000	$ 387,000
Contingency	$ 269,277	$ 399,122	$ 529,340
Total Operational Costs	**$ 2,962,047**	**$ 4,390,338**	**$ 5,822,744**

Role	FTE	Salary Cost (FTE x Mid Point of Salary Band)
Branch Leadership		
Branch Chief	1	$104,670
Tax Operations		
Supervisor	1	$55,992
Data Analyst	1	$76,458
Customer Service Agent	4	$187,848
Coordinator	1	$49,878
Compliance		
Supervisor	2	$152,916
Compliance Analyst I	13	$849,732
Compliance Analyst II	3	$212,040
Appeals		
Compliance Analyst I	1.5	$98,046
Total Salary Cost	**27.5**	**$1,787,580**
Benefits (55.91%)		**$999,436**
Total Administrative- People Costs		**$2,787,016**

Notes:

- Assumes a new branch that is part of the existing RPA division.
- Uses mid point of salary bands, based on provisional role classification. This will likely change in Task 2.
- An inflationary growth factor of 2.67% was applied to the ongoing operational costs (i.e., costs are estimated in nominal terms). (Data Source: Bureau of Labor Statistics)
- Some numbers may not add up due to rounding.

Scenario Analysis: Approach

Based on the experience in other jurisdictions, EY defined the **tax rates** applied in the analysis as:

- 1% tax rate for the first and second tax year
- 3% tax rate from the third year onwards

EY considered four scenarios with respect to exemptions and the tax policy design. The four scenarios are described below:

1. As currently proposed in Bill 46, being the full list of exemptions and the new property classification (Res E).
2. With exemptions proposed in Bill 46, but as a supplementary tax instead of new property tax classification.
3. With exemptions consistent with other jurisdictions, but as a new property classification.
4. How other jurisdictions have designed and implemented empty homes tax programs, being a smaller list of exemptions and a supplementary tax.

		Tax Policy Design	
		New Property Classification "Residential E" Net financial impact is reduced by the foregone revenue from Res and Res A property taxes.	**Conventional Empty Homes Tax (Supplementary Tax)** All revenue is in addition to existing property taxes, resulting in a higher overall net financial impact. There is no foregone revenue.
Exemptions	**As proposed in Bill 46** More empty units are eligible for exemptions, reducing the overall revenue.	Scenario 1	Scenario 2
	Aligned with other jurisdictions Lower number of units are eligible for exemptions, increasing the revenue.	Scenario 3	Scenario 4

Scenario Analysis: Summary by Scenario

- The financial analysis indicates that the tax **would be financially feasible in all four scenarios**.
- **The estimate of number of homes that are liable to pay the tax ranges from 1,541 (Scenarios 1 and 2) to 2,129 (Scenarios 3 to 4), this is approximately equal to 0.5%-0.7% of TMKs.**
- **If the City were to align with other jurisdictions** in terms of exemptions and with the conventional supplemental tax structure, over the 10-year period that would equate to **an additional $258M in revenue** (Scenario 1 vs Scenario 4).

Scenario	Net cumulative 10-year financial impact	Average annual net financial impact	Payback Period	Estimated number of non-exempt empty properties (TY 27/28)
①	$291 M	$29.1M	12 months	1,541
②	$370 M	$37M	6 months	1,541
③	$438 M	$43.8M	10 months	2,148
④	$549M	$54.9M	4 months	2,148

- Over the 10-year period, the impact of **the two exemptions that are divergent from other jurisdictions is approximately $147M** (Scenario 1 vs Scenario 3). The actual impact of the Second Dwelling exemption may be higher, as the data does not account for the possibility that property titles may not be up to date with the real property records.
- If the City were to proceed the proposed exemptions but move to a more conventional, supplemental empty homes tax, **the additional revenue is estimated at $79M** (Scenario 1 vs Scenario 2).
- As noted earlier, due to data limitations, it **was not possible to model the impact of Section 5 of the Bill,** which could materially impact the number of empty properties that must pay the tax. This is due to the potential for property owners use this Section as a loophole to avoid the tax.
- EY's analysis provides a lower revenue estimate compared to studies commonly cited in Bill 46 discussions. EY's approach and methodology is different to those studies. For example, one academic study assumes that all properties that are owned by out-of-state owners are vacant for more than six months, another study used a higher tax rate of 3%-5%.
- This analysis **does not account for "collectable" revenue**, which is typically in the range of 60-75% for similar programs in Canada.

2. Appendices

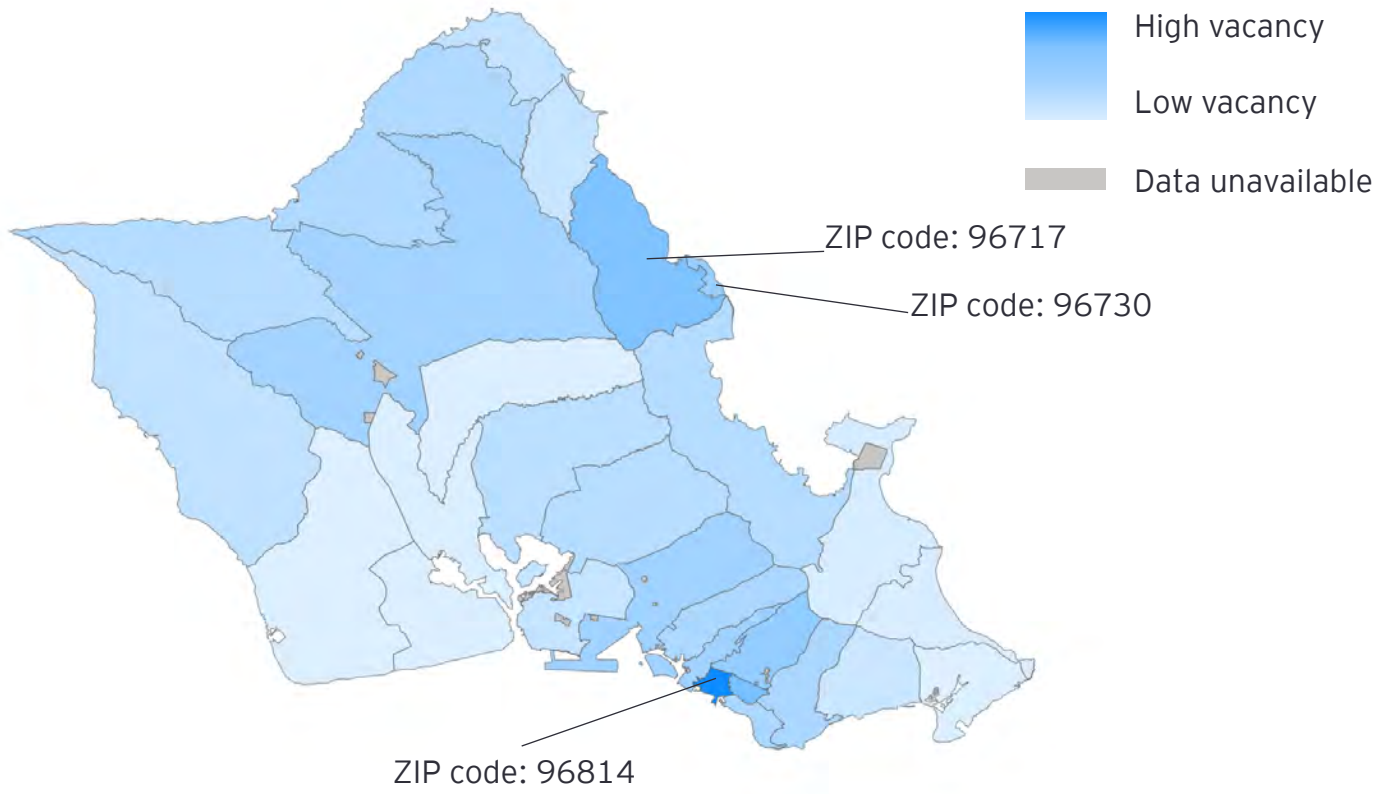
Key Input - Estimated Vacancy

Vacancy rate is estimated to be between **2.36% to 3.55 % for single-unit/non-condo properties, and between 2.76% to 4.16% for condos.**

This vacancy rate indicates that approximately 3,577 to 5,381 non-condos (single-unit properties) and 3,562 and 5,368 condos are vacant in Honolulu.

A demonstration of vacancy rate by Oahu ZIP code is shown below. The three regions with highest vacancy in 2024 are in Honolulu (ZIP code 96814) and Koolauloa (ZIP codes 96730 and 96717).

Vacancy Rate Estimates by Oahu ZIP Code, 2024



Data Source: Board of Water Supply

Note: The vacancy rate estimates shown in the map was based on the water consumption threshold of 1,000 gallons per month.

EY used monthly water consumption data from 2023 and 2024 to estimate vacancy rates of over 6 months for single family homes based on the following thresholds:

- Less than 300 gallons per month (conservative)
- Less than 1,000 gallons per month (optimistic)

These thresholds likely indicate empty properties as average water consumption in Honolulu is 9,000 gallons per month.

EY estimated the rate for condos based on the vacancy rate ratio observed in other jurisdictions.

Assumptions and Limitations

- Utility data is commonly used to estimate vacancy rate. However, this has not been observed to be used in enforcement, as it may encourage avoidance behaviors.
- Honolulu Board of Water Supply data on water consumption for condominium properties is not available by individual units.
- A unit may be vacant when water consumption above the thresholds is observed.

Annual Net financial Impact by Tax Year and Scenario

The following table presents a comparison of the estimated net financial impact for each scenario of the program from the tax year 26/27 to tax year 36/37, and the cumulative total. Further detail is included in the following pages.

Tax implemented at 1%

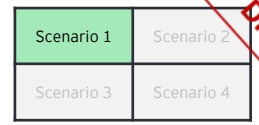
Tax rate raised from 1% to 3%

Scenario	Tax Year											
	TY26/27F	TY27/28F	TY28/29F	TY29/30F	TY30/31F	TY31/32F	TY32/33F	TY33/34F	TY34/35F	TY35/36F	TY36/37F	Cumulative Total
Scenario 1 – New Classification Bill 46 Exemptions	($2.3M)	$2.9M	$3.0M	$31.7M	$32.8M	$34.0M	$35.1M	$36.4M	$37.6M	$38.9M	$40.3M	$290.6M
Scenario 2 - Supplementary Tax Bill 46 Exemptions	($2.3M)	$9.6M	$10.0M	$38.9M	$40.3M	$41.7M	$43.2M	$44.7M	$46.3M	$47.9M	$49.6M	$369.9M
Scenario 3 – New Classification Exemptions Aligned with Other Jurisdictions	($2.3M)	$7.0M	$7.3M	$47.2M	$48.9M	$50.5M	$52.3M	$54.0M	$55.9M	$57.8M	$59.8M	$438.5M
Scenario 4 - Supplementary Tax Exemptions Aligned with Other Jurisdictions	($2.3M)	$16.3M	$16.9M	$57.2M	$59.3M	$61.3M	$63.5M	$65.7M	$68.0M	$70.3M	$72.8M	$549.0M

Notes

- Revenue increases each year due to increases to housing supply and assessed value.
- Uncertainty in terms of market conditions and behavioral response increases over time, adding uncertainty to long-term forecasts. As such, the reader should focus more on the first five years than the longer-term forecast.
- Some numbers may not add up due to rounding.
- Due to data limitations, it is not possible to model the financial impact of Section 5 of Bill 46, which could have a material impact to revenue estimates.

Scenario 1 | Financial Analysis



DRAFT

Tax rate raised from 1% to 3%

Average Annual Gross Revenue is $32.8M in the first five years of the tax

CAGR of Gross Revenue (TY29/30 – TY36/37) is 3.00%

Scenario 1	Tax Year											Cumulative Total
	TY26/27F	TY27/28F	TY28/29F	TY29/30F	TY30/31F	TY31/32F	TY32/33F	TY33/34F	TY34/35F	TY35/36F	TY36/37F	
Gross Revenue from Tax & Penalties	-	$14.1M	$14.6M	$43.6M	$45.2M	$46.7M	$48.3M	$50.0M	$51.7M	$53.5M	$55.4M	**$423.1M**
Implementation Costs	($2.3M)	-	-	-	-	-	-	-	-	-	-	**($2.3M)**
Operating Costs	-	($4.5M)	($4.6M)	($4.8M)	($4.9M)	($5.0M)	($5.1M)	($5.3M)	($5.4M)	($5.6M)	($5.7M)	**($50.9M)**
Foregone Revenue	-	($6.7M)	($6.9M)	($7.2M)	($7.5M)	($7.7M)	($8.0M)	($8.3M)	($8.7M)	($9.0M)	($9.3M)	**($79.3M)**
Annual Net Financial Impact	($2.3M)	$2.9M	$3.0M	$31.7M	$32.8M	$34.0M	$35.1M	$36.4M	$37.6M	$38.9M	$40.3M	**$290.6M**
Cumulative Net Financial Impact	($2.3M)	$.6M	$3.6M	$35.4M	$68.2M	$102.2M	$137.3M	$173.7M	$211.3M	$250.3M	$290.6M	

Payback in Year 1 of Tax

Raising the tax rate to 3% brings the annual revenue to annual costs (inc. foregone revenue) multiplier up to 3.6 (TY29/30), compared to 1.26 in TY 27/28.

Total foregone revenue of $79.3M, or approximately $7.9M annually. This revenue could cover the costs of the program.

Notes
- Some numbers may not add up due to rounding.

Scenario 2 | Financial Analysis

DRAFT

Tax rate raised from 1% to 3%

Average Annual Gross Revenue is $32.8M in the first five years of the tax (same as Scenario 1)

CAGR of Gross Revenue (TY29/30 – TY36/37) is 3.00%

Scenario 2	Tax Year											Cumulative Total
	TY26/27F	TY27/28F	TY28/29F	TY29/30F	TY30/31F	TY31/32F	TY32/33F	TY33/34F	TY34/35F	TY35/36F	TY36/37F	
Gross Revenue from Tax & Penalties	-	$14.1M	$14.6M	$43.6M	$45.2M	$46.7M	$48.3M	$50.0M	$51.7M	$53.5M	$55.4M	**$423.1M**
Implementation Costs	($2.3M)	-	-	-	-	-	-	-	-	-	-	**($2.3M)**
Operating Costs	-	($4.5M)	($4.6M)	($4.8M)	($4.9M)	($5.0M)	($5.1M)	($5.3M)	($5.4M)	($5.6M)	($5.7M)	**($50.9M)**
Foregone Revenue	-	-	-	-	-	-	-	-	-	-	-	**-**
Annual Net Financial Impact	($2.3M)	$9.6M	$10.0M	$38.9M	$40.3M	$41.7M	$43.2M	$44.7M	$46.3M	$47.9M	$49.6M	**$369.9M**
Cumulative Net Financial Impact	($2.3M)	$7.2M	$17.2M	$56.1M	$96.4M	$138.1M	$181.3M	$226.0M	$272.3M	$320.2M	$369.9M	

Payback in Year 1 of Tax

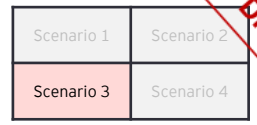
In this scenario, the TY29/30 annual revenue to costs multiplier is 9.1 compared to 5.6 in Scenario 1. This is due to the removal of the unfavourable impact of $6.9M of foregone revenue.

Further, increasing the tax rate from 1% to 3% in this scenario results in the multiplier increasing from 3.1 to 9.1

In this scenario – there is no foregone revenue – which results in an additional $79.3M compared to Scenario 1.

Notes
- Some numbers may not add up due to rounding.

Scenario 3 | Financial Analysis



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Tax rate raised from 1% to 3%

Average Annual Gross Revenue is $47M in the first five years of the tax. This means that the additional 2 exemptions included in Bill 46 equate to approximately $14.3M annually.

CAGR of Gross Revenue (TY29/30 – TY36/37) is 3.00%

Scenario 3	Tax Year											Cumulative Total
	TY26/27F	TY27/28F	TY28/29F	TY29/30F	TY30/31F	TY31/32F	TY32/33F	TY33/34F	TY34/35F	TY35/36F	TY36/37F	
Gross Revenue from Tax & Penalties	-	$20.8M	$21.5M	$62.0M	$64.1M	$66.3M	$68.6M	$71.0M	$73.4M	$75.9M	$78.5M	**$602.2M**
Implementation Costs	($2.3M)	-	-	-	-	-	-	-	-	-	-	**($2.3M)**
Operating Costs	-	($4.5M)	($4.6M)	($4.8M)	($4.9M)	($5.0M)	($5.1M)	($5.3M)	($5.4M)	($5.6M)	($5.7M)	**($50.9M)**
Foregone Revenue	-	($9.3M)	($9.6M)	($10.0M)	($10.4M)	($10.8M)	($11.2M)	($11.6M)	($12.1M)	($12.5M)	($13.0M)	**($110.5M)**
Annual Net Financial Impact	($2.3M)	$7.0M	$7.3M	$47.2M	$48.9M	$50.5M	$52.3M	$54.0M	$55.9M	$57.8M	$59.8M	**$438.5M**
Cumulative Net Financial Impact	($2.3M)	$4.7M	$12.0M	$59.2M	$108.1M	$158.6M	$210.9M	$265.0M	$320.9M	$378.7M	$438.5M	

Payback in Year 1 of Tax

Raising the tax rate to 3% brings the annual revenue to costs (inc. foregone revenue) multiplier up to 4.2 (TY 29/30), compared to 1.5 in TY 27/28.

By comparison, in Scenario 1 for TY 29/30 the annual revenue to costs multiplier is 3.6.

Total foregone revenue of $110.5M, or approximately $11M annually. This is higher than in Scenario 1 (total foregone revenue of $79.3M), because in this case there are fewer exemptions, i.e. fewer cases whereby an empty unit can qualify for an exemption from the tax. This results in more empty units being classified as "Res E", and less revenue levied through Res or Res A property taxes.

Notes
- Some numbers may not add up due to rounding.

Scenario 4 | Financial Analysis

Scenario 1	Scenario 2
Scenario 3	Scenario 4

DRAFT

Tax rate raised from 1% to 3%

Average Annual Gross Revenue is $47M in the first five years of the tax (same as Scenario 3)

CAGR of Gross Revenue (TY29/30 – TY36/37) is 3.00%

Scenario 4	Tax Year											Cumulative Total
	TY26/27F	TY27/28F	TY28/29F	TY29/30F	TY30/31F	TY31/32F	TY32/33F	TY33/34F	TY34/35F	TY35/36F	TY36/37F	
Gross Revenue from Tax & Penalties	-	$20.8M	$21.5M	$62.0M	$64.1M	$66.3M	$68.6M	$71.0M	$73.4M	$75.9M	$78.5M	**$602.2M**
Implementation Costs	($2.3M)	-	-	-	-	-	-	-	-	-	-	**($2.3M)**
Operating Costs	-	($4.5M)	($4.6M)	($4.8M)	($4.9M)	($5.0M)	($5.1M)	($5.3M)	($5.4M)	($5.6M)	($5.7M)	**($50.9M)**
Foregone Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Annual Net Financial Impact	($2.3M)	$16.3M	$16.9M	$57.2M	$59.3M	$61.3M	$63.5M	$65.7M	$68.0M	$70.3M	$72.8M	**$549.0 M**
Cumulative Net Financial Impact	($2.3M)	$14.0M	$30.9M	$88.1M	$147.4M	$208.7M	$272.2M	$337.9M	$405.8M	$476.2M	$549.0M	

Payback in Year 1 of Tax

This scenario has the most favourable revenue to costs multiplier due to the reduction in number of exemptions, as well as the removal of the foregone revenue.

The annual revenue to costs multiplier is 12.9 in TY 29/30 (3% tax rate). At 1% the multiplier is 4.6 (TY 27/28)

In this Scenario, there is no foregone revenue, resulting in an additional $110.5M of revenue compared to Scenario 3, over the 10-year period.

Notes
- Some numbers may not add up due to rounding.