

# City of Vancouver

Consulting Services for the Empty  
Homes Tax Program

**Summary Report**

4 November 2016



**EY**

Building a better  
working world





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Attn: Patrice Impey  
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04 November 2016

**Re: Consulting Services for the Empty Homes Tax Program (PS20161557)**

Dear Mrs Impey:

We are pleased to provide you with EY's report on our engagement with the City of Vancouver (CoV) to provide a third party review and best practice advice on the proposed Empty Homes Tax (EHT) model that City's project team developed.

This report contains our real-time information and input provided to the City's core project team and senior management, details of the main documents reviewed and analysis completed, and advice and recommendations about the Empty Homes Tax Program. Specific technical audit approaches that, if disclosed, may impact the integrity of the audit program have not been included in this report. Our work was advisory in nature and performed for management of the CoV, as such we caution others who may read this report that it may not be suitable for their purposes.

On behalf of my team, I would like to thank your staff for their assistance and cooperation. Please do not hesitate to contact me if you need additional clarification on any part of this report.

Yours sincerely,

**Bill Kessels**  
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**Confidential and proprietary** - Disclosure of this proposal to third parties is prohibited. It is intended to be used solely for the purpose of evaluating whether or not to engage us to provide you with professional services. This proposal does not constitute an agreement between us or an offer to perform services -- a binding agreement between us shall exist only upon execution of a mutually agreed engagement letter or contract.

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## Disclaimer

- ▶ EY has relied upon unaudited financial information, CoV documentation, records, email communications, financial information provided by CoV, as well as information provided by other data sources and relevant associations and bodies. EY has not audited, reviewed or otherwise attempted to verify the accuracy or completeness of such information
- ▶ This report contains information and data that EY has not audited, reviewed or otherwise attempted to verify the accuracy or completeness of such information.
- ▶ Financial information referred to in this report was prepared based on estimates and assumptions. Readers are cautioned that since expected outcomes and projections are based upon assumptions about future events and conditions that are not readily and currently ascertainable, the actual result will vary from the projections, even if the assumptions materialize, and the variations could be material.
- ▶ Caution must be taken when considering the below analysis. The scenarios contemplated and discussed by the team are precisely that - a "what-if" analysis. The scenario provided in no way reflects the expected outcome given the level of unknowns regarding the EHT and the individual nature of consumer's behavioural response to the EHT.
- ▶ Unless otherwise stated all monetary amounts contained herein are expressed in Canadian Dollars.





# 1. Executive Summary

The City of Vancouver (CoV) is facing significant housing challenges. Among other things, it has one of the lowest rental availability rates in Canada.

On September 20, 2016 Council endorsed in principle an approach for implementing a City administered program to levy an annual tax on empty homes and directed staff to undertake public consultation on the emerging approach. Staff will be reporting back to Council in mid-November along with a draft by-law. Upon approval and enactment of the by-law, the empty home tax will be in effect starting January 2017.

Ernst & Young (EY) was engaged by CoV to provide a third party review and best practice advice on the proposed Empty Homes Tax (EHT) model that has been developed by the City's project team.

The objectives of this phase of the project are categorized into two core streams of work:

- ▶ Develop the taxation approach: ensuring that there is a solid foundation for both the tax and the tax rate.
- ▶ Develop an audit approach: use a risk based approach to identify the audit process to be used to validate compliance, to provide advice on the fines and penalties for those that do not comply, and to develop a risk framework with associated mitigation strategies.

EY considered all of the information provided concerning the appropriate tax approach and concludes that:

- ▶ Given the current state of knowledge, the chosen taxation approach is appropriate and allows for further adjustment in light of observed target owner responses following implementation of the EHT program.
- ▶ Any provision of tax discounts or exemptions designed to ensure that the tax is equitable and fair would have the unintended effect of incentivizing and risking an increase in the incidence of tax avoidance as well as an increase in associated administrative costs to the City.
- ▶ Other things equal, balancing the need to ensure that the tax is equitable and fair, the need to maximize the potential rental housing supply response to the tax, and the need to contain compliance burdens and costs, it is preferable to implement the EHT across the existing broad stock of empty homes rather than on a base made smaller by discounts or exemptions.
- ▶ Overall, we agree with the City's use of an initial flat EHT rate of 1%. In the absence of a more robust data set to conduct extensive modelling on, a rate of 1% appears to provide a reasonable starting point with likely favourable outcomes occurring under a range of hypothesized situations. This rate also allows for refinement and adjustment should it be required once the outcomes of the tax after its first year of implementation have been gauged and further data and evidence collected.

EY considered all of the information provided concerning the development of an audit approach and concludes that:

- ▶ CoV should adopt a risk based approach in developing its audit program. More resources and testing effort should be deployed to areas where the risk of non-compliance is higher.

- ▶ CoV should consider a combination of random (statistical) and judgemental (non-statistical) techniques during the first year of the audit program. As more information is gathered in the subsequent years (e.g. actual error rates based on testing) the sampling approach could be refined.
- ▶ We determined that no one piece of evidence required to support the owners' self-declaration met the sufficiency and appropriateness criteria and CoV should consider relying on more than one piece of evidence to support the self-declaration. We recommend at least three pieces of appropriate evidence to support the owners' principal residence self-declaration.
- ▶ There are significant risks to the core program objectives if CoV decides to implement a discount or exemption based on occupancy, (e.g. risk of revenue loss, and additional administrative cost to audit occupancy). In addition, there is increased administrative burden on home owners to keep detailed records and greater opportunity to falsify proof of occupancy.

## 2. Project background and scope

### 2.1 Project context

The City of Vancouver (CoV) is facing significant housing challenges. Among other things, it has one of the lowest rental availability rates in Canada. This situation results from an imbalance between current demand and supply of rental units, creating upward pressure on rents and availability and affordability issues for renters.<sup>1</sup>

With a view to encouraging fuller use and occupancy of the existing housing stock, on September 20, 2016 Council endorsed in principle an approach for implementing a City administered program to levy an annual tax on empty homes and directed staff to undertake public consultation on the emerging approach. Staff will be reporting back to Council in mid-November along with a draft by-law. Upon approval and enactment of the by-law, the empty home tax will be in effect starting January 2017.

### 2.2 Project objectives, scope and approach

Ernst & Young (EY) was engaged by CoV to provide a third party review and best practice advice on the proposed Empty Homes Tax (EHT) model that has been developed by the City's project team.

#### Objectives

The objectives of this phase of the project are categorized into two core streams of work:

- ▶ Develop the taxation approach: ensuring that there is a solid foundation for both the tax and the tax rate.
- ▶ Develop an audit approach: use a risk based approach to identify the audit process to be used to validate compliance, to provide advice on the fines and penalties for those that do not comply, and to develop a risk framework with associated mitigation strategies.

#### Scope and approach

We worked collaboratively with the City's core project team to meet its internal reporting deadlines and provide real time consultancy and advice on the implementation of the proposed taxation model for the EHT with specific regard to the tax base and rate, as well as audit approach and evidentiary requirements. To accomplish this objective, the core EY team was located at the COV premises and was available to the City's core project team (face-to-face) for the much of the engagement. We conducted daily progress meetings and provided input into relevant discussions as needed.

Our scope of work as agreed with the City's project manager was limited to the evaluation of the core option (no exemption for non-principal residence) and two other options based on occupancy (i.e. allow percentage exemption if the home is used for a portion of the year).

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<sup>1</sup> See *City of Vancouver, Administrative Report "Encouraging Homes for Renters: Emerging Approach on Empty Homes", September 13, 2016, pp 2-3.*

EY was engaged to prepare and provide this Summary Report that contains the advice given and addresses the requirements as outlined in the Statement of Work and Workplan.

## 2.3 This report

This report contains EY's review of the EHT Program, our key findings and our advice to the CoV.

The body of the report has two key sections to align with the scope of the project:

- ▶ Tax design - this section contains our review of, and advice pertaining to, all areas that cover the design of the tax approach itself and includes areas such as basis for taxation, review of proposed tax rate, and the expected tax base.
- ▶ Audit design - this section contains high level considerations related to the audit approach. Specific details which may compromise the integrity of the audit program have not been included.

## 3. Tax approach

### 3.1 Basis for taxation and determination of tax base

#### 3.1.1 Review the proposed tax approach and provide feedback based on best practices for similar taxation processes to ensure that the tax is equitable and fair

##### 3.1.1.1 Leading practice

The primary purpose of taxes is to raise revenue necessary to finance the provision of goods and services by governments. Depending on their design, however, certain taxes can also be used as an effective tool to change consumer behaviour, or to ensure consumers face the full “social cost” of their actions when their decisions have consequences that are not necessarily tangible, or that are included in the private cost of their actions.<sup>2</sup>

Regardless of whether taxes are intended to serve a general revenue purpose or a special purpose, they should be designed with certain principles in mind and judged against the following criteria:<sup>3</sup>

- ▶ equity
- ▶ efficiency
- ▶ compliance and administration costs
- ▶ visibility

EY has been mindful of these criteria in its provision of analysis and advice to the City of Vancouver in the two core streams of work (the tax approach and the audit approach) on the proposed EHT program and in terms of realizing its objectives.

The EHT program has two core objectives: (1) to incentivize a behavioural change by owners of empty homes that results in their properties being made available for rent, thereby increasing the supply of available rental properties; and (2) raising tax revenue that can be used by the City to increase the supply of affordable housing (British Columbia has revised the Vancouver Charter to provide legislative authority for the City to impose a vacancy tax with the provision that “*the city may use monies raised from a vacancy tax only for the purposes of initiatives respecting affordable housing and for the administration and collection of the vacancy tax*”).

Clearly, the first objective is the prime one and there is a tradeoff between the two objectives in that, at any given tax rate, to the degree the City achieves the former, it will by definition achieve less of the latter.

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<sup>2</sup> See Rosen, Wen, Snoddon, Dahlby and Smith, *Public Finance in Canada, 3<sup>rd</sup> Canadian Edition*, Toronto: McGraw-Hill Ryerson, 2008, Chapter Five, “Public Responses to Externalities”, pp 74-75. Part Five, “A Framework for Tax Analysis”.

<sup>3</sup> *Ibid*, “Criteria for Evaluating Taxes”, pp 45-47, and Kerr, McKenzie and Mintz, *Tax Policy in Canada*, Toronto: Canadian Tax Foundation, 2012, Chapter 2 “Tax Policy Objectives”.

### 3.1.1.2 Activities completed

In completing this activity, EY provided real time advice to the City's core team. In addition, EY reviewed a range of relevant documents to provide feedback and challenge where necessary. The documents reviewed and considered by the EY team included (though was not limited to):

- ▶ Administrative Report dated September 13, 2016 and submitted to the Vancouver City Council with subject *Encouraging Homes for Renters: Emerging Approach on Empty Homes*.
- ▶ Presentation provided by the City's core team to the Vancouver City Council dated September 20, 2016.
- ▶ The City of Vancouver draft Vacancy Tax By-Law (multiple reiterations reviewed and commented upon with the latest revision being provided on October 21, 2016 and EY providing verbal comment and feedback).
- ▶ The Vancouver Charter, as amended by adding Part XXX - Vacancy Tax  
[http://www.bclaws.ca/civix/document/LOC/complete/statreg/--%20V%20--/Vancouver%20Charter%20\[SBC%201953\]%20c.%2055/00\\_Act/vanch\\_31.xml#partXXX](http://www.bclaws.ca/civix/document/LOC/complete/statreg/--%20V%20--/Vancouver%20Charter%20[SBC%201953]%20c.%2055/00_Act/vanch_31.xml#partXXX)
- ▶ Supplementary material developed the City's core team (such as the *Declaration and Complaint Decision Tree* dated October 5, 2016).
- ▶ Ecotagious Housing Study (2016) *Stability in Vancouver's Housing Unit Occupancy*.

The first three documents set out the City's proposed approach to the tax, referred to here as the Core Model, which under which the tax would not apply to an owner whose home: is the principal residence of the owner; is the principal residence of an "occupier" such as a family member or friend who occupies the residential property with the permission of the owner, but who is not a tenant or subtenant; is rented by the owner to a long-term tenant; or falls under one of several specified "defined exemptions".

In all other cases, the tax would apply. Registered owners of residential properties will be required to make an annual property status declaration in respect of each property that they own. This will determine the initial tax status of their property, subject to audit and verification by City tax staff.

A complaints and review process will be established by the City under which an owner can contest a decision to impose the tax on a property, and offences and penalties will be established for non-compliance with various provisions of the tax program.

### 3.1.1.3 Advice and Findings

The effectiveness of the EHT program will depend on a number of factors. These include how strongly taxpayers react to tax changes, how easy they are to enforce and whether there is a behavioural response or a change in the market to adapt to the new environment.

Furthermore, the design and ultimate impact of the EHT need to be considered in light of the interaction with other government initiatives recently implemented. This makes both any *ex ante* or *ex post* evaluation and attribution of the effectiveness the tax in isolation of these other initiatives somewhat more complicated.

Currently, the City is undergoing significant demographic changes and the housing market is in a state of flux increasing the difficulty of forecasting with a high degree of certainty expected outcomes of

individual initiatives. A full review and analysis on the implications of the EHT is outside the scope of Phase 1 of this project.

We have used available data and information to inform the design of the EHT program. Additional robust data and information would have been helpful (especially with regards to the total population of 'empty homes') but such data does not exist. Accordingly, we relied upon the combined use of the Ecotagious Study, 2011 Census data, and Metro Vancouver housing data.

## **Findings**

EY has considered all of the information provided and concludes that:

- ▶ Given the current state of knowledge, the chosen taxation approach is appropriate and allows for further adjustment in light of observed target owner responses following implementation of the EHT program.
- ▶ Any provision of tax discounts or exemptions designed to ensure that the tax is equitable and fair would have the unintended effect of incentivizing and risking an increase in the incidence of tax avoidance as well as an increase in associated administrative costs to the City.
- ▶ Other things equal, balancing the need to ensure that the tax is equitable and fair, the need to maximize the potential rental housing supply response to the tax, and the need to contain compliance burdens and costs, it is preferable to implement the EHT across the existing broad stock of empty homes rather than on a base made smaller by discounts or exemptions.

### **3.1.2 Review proposed exemption scenarios and identify unforeseen loopholes and unintended consequences**

#### **3.1.2.1 Leading practice**

To be effective, efficient and avoid unintended and undesirable effects, taxes are generally applied at a low rate on a broad base. Sometimes circumstances justify variable rates, discounts or exemptions that would have the effect of shrinking the base, lowering the effective rate or a combination of the two.

Tax discounts or exemptions can be provided in various forms, but the core characteristic they share is that they either reduce or eliminate certain taxpayers' obligation to pay tax provided they meet certain criteria.

The main benefit of including exemptions is to ensure that the tax is only borne by those intended by government or ease the financial burden of certain groups affected on an "ability to pay" basis.

Exemptions, however, can lead to negative consequences that include, but are not limited to:

- ▶ Increased likelihood of citizens "gaming the system" by modifying, manipulating or portraying their situation in a way that fits a given exemption category.
- ▶ Increased ability of taxpayers to engage in other tax avoidance practices.
- ▶ Imposition of a higher tax rate on the remaining taxpayers to retain the same level of revenue or the intended aggregate behavioural response on the reduced tax base.<sup>4</sup>

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<sup>4</sup> J-Intersect (2005) *Improving Tax Collection*. Available at: [http://www.jintersect.com/PDF/CAKE%20JI%20Improving%20Tax%20Collection\\_AC500013.pdf](http://www.jintersect.com/PDF/CAKE%20JI%20Improving%20Tax%20Collection_AC500013.pdf)

- ▶ Increased complexity of the tax itself, thereby increasing the difficulty in communicating the requirements to the community and affected parties when the program is launched, as well as potentially increasing the downstream audit resource costs to the City, compliance burdens on homeowners, complaints and consequential dispute resolution workload.

Due to the above, limiting or containing the number of exemptions is generally a sound approach to any tax policy provided the burden of the tax will not be borne by those unintended and issues of equity are not serious.

### 3.1.2.2 Activities completed

This component of our work required the provision of direct advice to the City's core team during meetings and ad hoc discussions throughout the duration of the engagement on the proposed exemptions. The exemptions identified and proposed by the City's core team at the time of writing included:

- ▶ Personal and health related exemptions which include:
  - Probate
  - Owner in care
- ▶ Status-of-house related exemptions which include:
  - Major renovations
  - Ownership change
- ▶ Housing type related exemptions which include:
  - Rental restrictions
- ▶ Work/study related exemptions which include:
  - Worker
  - Full time student

To provide real time advice and discuss the impacts and potential consequences of the exemptions, the EY team discussed the exemptions while considering the following key questions:

- ▶ What are the core objectives of the tax policy and what are the key goals and needs that it is intended to address?
- ▶ Will the exemption under consideration negatively impact or hinder the City's ability to meet the core objectives?
- ▶ What are the immediate and critical long-term implications of the proposed exemption for the targeted (i.e. empty) properties, other properties of similar uses and taxpayers or the community in general?
- ▶ Does, or how would, the exemption help to accomplish a community goal such as continued demand for Vancouver living and economic development in the City area?
- ▶ Is the exemption under consideration keeping with the community's values?



- ▶ Is there an alternative to the exemption that would be more effective in accomplishing the tax objectives or community goals, or that would be more in keeping with established values and desired outcomes?
- ▶ What use of a property benefits the community and when does it become desirable for the City to intervene?
- ▶ Are there types of property usage where an exemption would be appropriate even if the benefit is more narrowly focused or the overall ability to meet the tax's objectives is reduced?
- ▶ What is its impact on the compliance and audit regime being considered and how easy will the exemption be to administer?
- ▶ What is the desired balance between owner and tenant interests, tax administration simplicity and risk to the overall success of the tax policy?

### 3.1.2.3 Advice and Findings

The EY team provided thoughts, leading practice commentary and advice on the identified exemptions and discussed the potential for negative or unintended consequences as well as potential loopholes that may arise and would impact the effectiveness of the EHT Program.

The EY team expressed concern with regards to the EHT not applying to a property declared by the owner as the principal residence of a non-home owner/other occupant. This option provides a potential avenue for owners to circumvent the tax by simply declaring a family member or close friend lives there. To meet the condition, the owner could require a friend or family member to change their residential address on some core pieces of identification or documentation.

#### Findings

EY has reflected on all information provided and considers that:

- ▶ The “defined exemptions” identified and proposed by the City are reasonable and adequate.
- ▶ The key questions outlined in Section 3.1.2.2 should be asked if any additional exemptions are considered.

## 3.2 Review of proposed tax rate

### 3.2.1 Provide recommendations regarding the tax rate that will achieve the Empty Homes Tax objectives and achieve compliance in line with taxation policy best practices

#### 3.2.1.1 Leading practice

The challenge in selecting an appropriate tax rate is twofold:

- ▶ On the one hand, to set it sufficiently high that it incentivizes a sufficient number of taxpayers to actually modify their behaviour in the way intended by renting out their vacant properties, or alternatively to raise sufficient tax revenue from those who would instead pay the tax to cover the costs of administration and also create additional affordable housing.

- ▶ On the other hand, not to set it so high that it triggers unintended and adverse compliance behaviour by other taxpayers or that it is considered by some affected citizens as a 'money-grab' by the City.

Based on research and other analysis completed by the Core team, a rate of 1% was selected as being appropriate, in part because at this rate, the effective tax rate aligns with the tax imposed on commercial properties. Any rate above this would risk a response by some owners to reclassify any empty properties from residential to commercial to avoid the tax.

### 3.2.1.2 Activities completed

Data required to undertake a complete quantitative assessment of the EHT does not exist. Consequently, the use of both scenario analysis and sensitivity testing were used to inform the decision making process.

The EY team built a high level scenario and sensitivity workbook that used a range of assumptions and inputs to hypothesize potential outcomes of the EHT.

Data available for use in the scenario analysis and sensitivity testing included the:

- ▶ 2014 Ecotagious Study
- ▶ 2011 Census data
- ▶ Metro Vancouver housing data

The tool was used to conduct a range of hypothesis testing and "what-if" analysis in real time with the Core team. We note that while a range of scenarios were posited and potential outcomes discussed, this report only contains what was deemed to be one of the optimal outcomes to provide a sense of what must occur in reality for the EHT to succeed in delivering its objectives.

The scenarios and sensitivity workbook were delivered to the City to provide the Core team with a tool to help them conduct additional scenario analysis and sensitivity testing as needed. A caveat is included in the Disclaimer page of this report as a reminder that the workbook is not a predictive behavioural model that can be relied upon to forecast a likely outcome. The outcomes from the workbook are "forced" outcomes, entirely predetermined by the assumptions that are fed into it.

### **Scenario analysis**

Based on the sources noted above, a range of assumptions were made and scenario analysis was completed. The assumptions used for the core analysis are provided in the table below.

A key point to note in considering the below assumptions is the inclusion of a "constructive" exemption. This assumption and its corresponding figure have been included as a way of building in a level of tax aversion or behavioural circumvention to the EHT program. Namely, one would anticipate that including a range of exemptions will provide avenues for home owners to avoid paying the tax through changing or manipulating their situation so that they can declare they fit into an exemption or other category (such as principal residence for a licensee). To be conservative and err on the side of caution, we have assumed a high "constructive" rate of 30% meaning that from the homes that are occupied for 10 or less months, nearly a third will construct a reason for declaring themselves exempt.

Variable	Assumption (strata)	Assumption (non-strata/SFD)
Tax rate	1%	1%
Homes that are occupied for 10 or less months per year	19,494	2,184
Homes that will be declared exempt due to:		
- Personal/health related reasons (probate, owner in care)		10%
- Status-of-house related reasons (major renovations, ownership change)		20%
- Housing type related reasons (rental restrictions)		5%
- Work/study related reasons (worker, full time student)		20%
- "Constructive" reasons (alter their situation/use of property to avoid the tax and declare they 'fit' into an exemption category)		30%
Average dwelling value	\$600,000	\$1,900,000

Another major component of the analysis is the assumed *behavioural response* rate. This behavioural response refers to the change in owner behaviour whereby due to the cost of the tax now incurred, the owner will shift their empty property onto the rental market.

It is critical to note that there is no available data or evidence to indicate the magnitude of this response rate at this point in time. Individual owners will reflect on their personal circumstance and the environment and context with which they are working within, and will make their decision based on this. As such, it is difficult to determine with precision the combined expected response rate of owners.

For the purposes of this scenario analysis, the behavioural response rate assumption is applied to the homes that do not fall under one of the following categories:

- ▶ Principal residence of an owner
- ▶ Principal residence of an occupant other than the owner
- ▶ Long term rental
- ▶ Home declared to fall under a defined exemption (such as probate, change in ownership etc.)

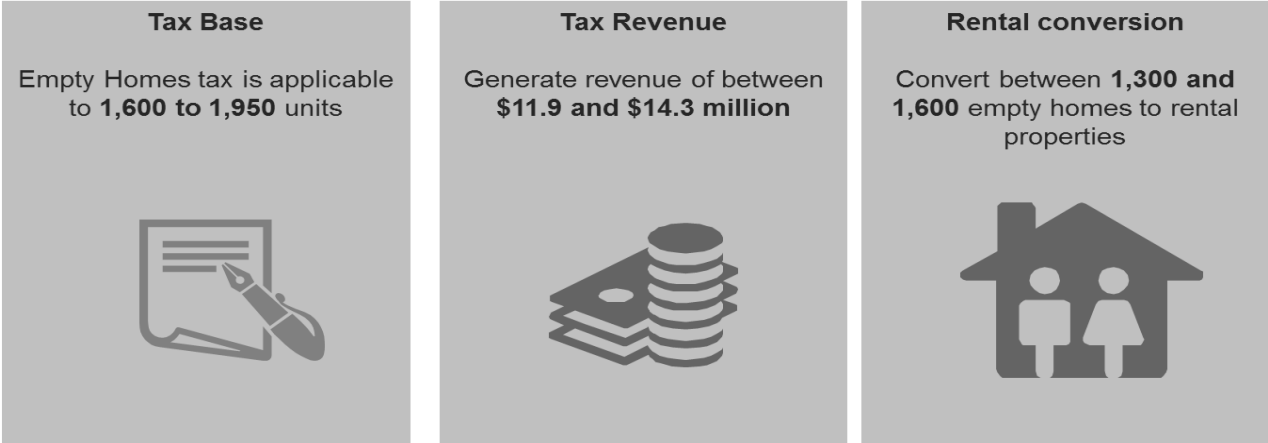
### Optimal Scenario

Based on the assumptions outlined above, EY generated an optimal "what-if" scenario to indicate the circumstances that would need to arise to meet the City's core objectives of the tax program of:

- ▶ Attaining revenue of at least \$5 million to cover costs but not more than \$15 million to avoid the perception of a 'money grab'.
- ▶ To convert at least 1,000 empty homes to rental properties (we note though that the ideal goal of the City is to attain conversion of between 2,000 to 4,000 properties as it is believed this will increase the rental vacancy rate to a more acceptable level).

To achieve this optimal result, the prior assumptions would need to hold and a **behavioural response rate of a minimum of 40% would need to result**. Thus under this situation, at least 2 in 5 owners who would bear the tax would now need to deem renting their property as the more attractive option.

Based on the figures and assumptions discussed above, and assuming a behavioural response of 40% to 50%, the City could expect the following outcomes:



**Sensitivity testing**

To provide an indication of the sensitivity of the expected outcomes, we completed two rounds of sensitivity testing on two of the key variables:

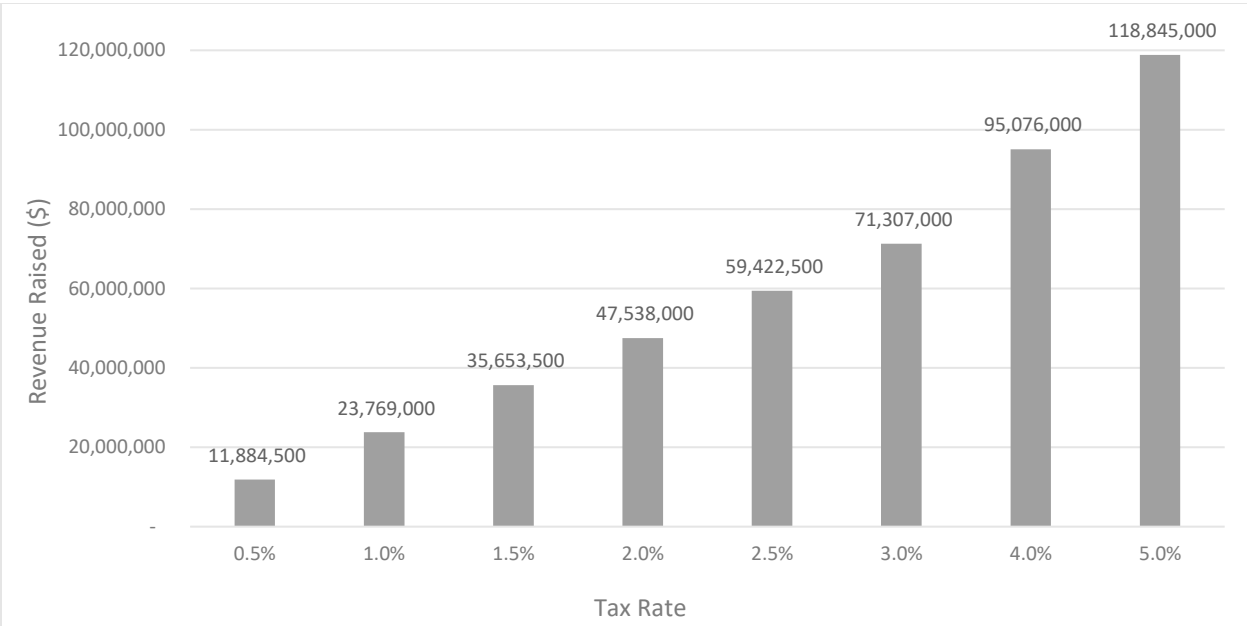
- ▶ the tax rate itself
- ▶ the behavioural response rate

**Tax rate sensitivity testing**

The tax rate is fundamental to the success of the EHT program. Too low and the City’s objectives won’t be met; too high and the City will suffer community backlash and increase the risk of tax evasion and thus cost of compliance activities. To help inform the discussion of the right tax rate, the team conducted some sensitivity testing to gather a sense of the potential implications of lowering or raising the tax rate from 1%.

Firstly, the tax rate was varied with the assumption of a 0% behavioural response rate to remove this dynamic of the analysis. All other assumptions as outlined in the prior assumptions table continue to hold. This results in the number of home owners incurring the EHT of 3,252 for all tax rates. The results are shown in the graph below.

We see that as the tax rate increases, the revenue raised increases substantially. We note however, that this is an unrealistic example of what may occur as we would expect that as the tax rate increases, home owners would seek out other avenues to reduce their tax bill or avoid the tax through actions such as falsely declaring or changing the homes situation to be able to fall within one of the exemption categories. Thus we would anticipate that the assumed number of homes incurring the EHT (i.e. the 3,252) would fall as the tax rate increases.

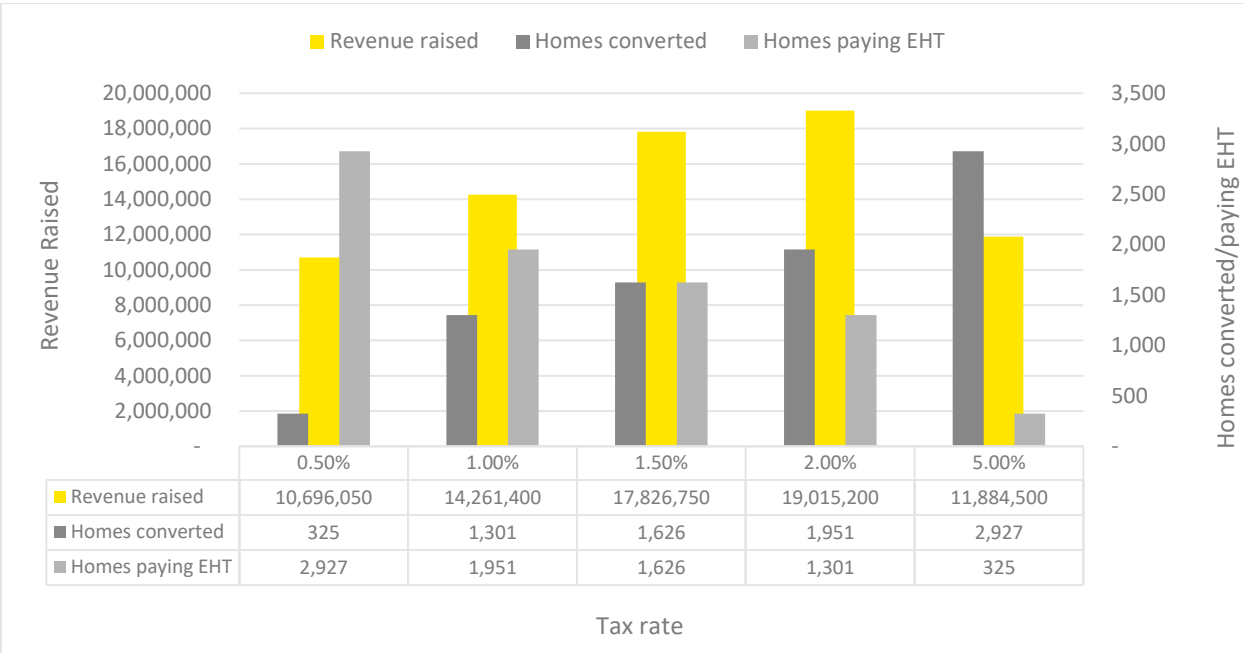


Secondly, as the above analysis does not provide a realistic picture of home owners responding to the tax, sensitivity testing was completed with an overlay, or inclusion of, some hypothetical behavioural response rates. All assumptions as outlined in the prior assumptions table continue to hold with the exception of the behavioural response rate whereby we varied the response rate in line with the tax rate. Namely, it would be expected that as the tax rate (and thus tax borne by home owners) increases, the incentive for converting their property to a rental intensifies and the number of properties incurring the EHT reduces.

Consequently, the following assumptions were applied to this round of sensitivity testing:

Tax rate	Average tax per Empty Home	Behavioural response rate
0.5%	\$6,250	10%
1% ( <i>Optimal Scenario</i> )	\$12,500	40%
1.5%	\$18,750	50%
2%	\$25,000	60%
5%	\$62,500	90%

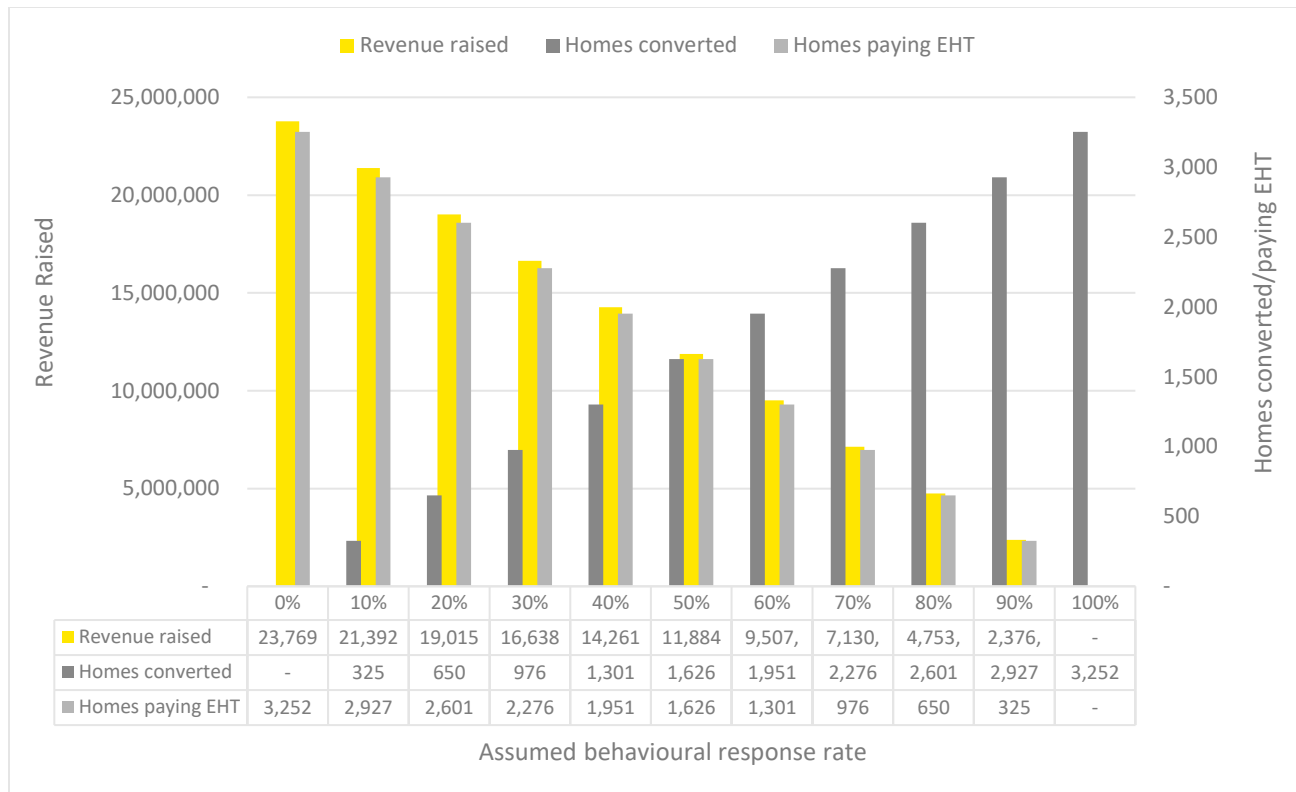
The results of this analysis are highlighted in the graph below. We see that under the assumptions used, the revenue continues to increase in line with an increase in the tax rate. At the high rate of 5% however, the revenue drops due to the assumption that 9 out of 10 home owners will convert their property to a rental due to significantly higher EHT bill of an average \$62,500.



**Behavioural response rate sensitivity testing**

Given the lack of knowledge or evidence as to the behavioural response of home owners under an EHT, the team completed sensitivity testing on the behavioural response rate to ascertain the impact to revenue and conversion under varying assumptions. The output of this testing is illustrated in the graph below.

It shows that under one extreme with no behavioural response (i.e. no conversion of properties onto the rental market) 3,252 home owners would pay the EHT with expected revenue of just under \$24 million resulting. At the other end of the spectrum, it shows that with a 90% response rate 325 home owners would be bearing the EHT with expected revenue of just over \$2 million.



### 3.2.1.3 Findings

#### Findings

EY has reflected on all information provided, conducted a range of scenario/hypothesis analysis and sensitivity testing, and considers that:

- ▶ Overall, we agree with the City's use of an initial flat EHT rate of 1%. In the absence of a more robust data set to conduct extensive modelling on, a rate of 1% appears to provide a reasonable starting point with likely favourable outcomes occurring under a range of hypothesized situations. This rate also allows for refinement and adjustment should it be required once the outcomes of the tax after its first year of implementation have been gauged and further data and evidence collected.
- ▶ Increasing the tax rate from 1% could have the positive impact of increasing revenues and garnering higher levels of conversion of empty properties onto the rental market. It also however, has a likelihood of negative impacts of higher levels of consumer backlash, provides greater incentive for home owners to try and game the system and avoid the EHT, and would most likely require a higher cost to the City for its compliance and audit and dispute resolution regimes.
- ▶ Lowering the tax rate from 1% would have the potential benefits of being more favourable from the home owners perspective, be seen by the community as less of a 'money-grab' by the City, and lower the risk of tax evasion/avoidance. The downside of a tax rate of less than 1% however, is that it would reduce the probability of any significant behavioural response from

home owners and thus the conversion of empty homes onto the rental market will suffer with the potential repercussion of the City being unsuccessful in meeting its conversion objective.

### 3.3 Review of non-principal residence discount based on occupancy

#### 3.3.1 Review of proposed approach to treatment of non-principal residence homes and assess risks and impact to program

##### 3.3.1.1 Activities completed

This component required the provision of significant direct advice to the City's core team during meetings and ad hoc discussions throughout the duration of the engagement on the proposed non-principal residence (NPR) discount based on a minimum four-month period of occupancy during the applicable reference period. To support the Core team in their development of a recommendation to Council of a NPR discount, the EY team:

- ▶ Reviewed the NPR homes discount approach identified by the Core team.
- ▶ Identified and raised any potential impacts not considered by the Core team.
- ▶ Conducted high level heat mapping and analysis of impacts to the audit regime (further discussed in Section 4: Audit Approach).
- ▶ Completed high level scenario analysis using the Optimal Scenario for the Core Model as the base case.

##### Real time advice

To provide real time advice and discuss the impacts and potential consequences of the NPR discount, the EY team raised and discussed the proposal in light of the following lines of questioning:

- ▶ What are the core objectives of the tax policy and how would the NPR discount either hinder or excel these objectives?
- ▶ What are the immediate impacts of the NPR discount?
- ▶ Critically, what are the long-term implications of the NPR discount?
- ▶ Does, or how would, the discount help to accomplish the overall community goal of increasing rentals, reducing empty homes, and increasing housing affordability?
- ▶ Is there an alternative to the discount that would be more effective in accomplishing the tax objectives?
- ▶ Is the NPR discount actually enforceable? What is the ability of the City to enforce compliance and how would it do so?
- ▶ What audit requirements would be necessitated to gain compliance and how hard would it be to instigate a time-based occupancy discount?



### High level scenario modelling: Optimal Scenario - Option NPR Discount

The EY team generated a potential scenario should Option NPR Discount rather than the Core Model, as set out in section 3.1 of this report, be chosen. Under Option NPR Discount, home owners are eligible to claim a 50% discount should their NPR property be occupied for more than 4 months of the year.

Based on the results of the Ecotagious study, we have assumed that 83% of the owners who would be subject to the tax will claim this NPR discount and will claim they use their property for a minimum 4 months per year.

The results of this scenario are provided in the table below and show that compared to the Core Model, and assuming a behavioural response rate of 40%:

- ▶ Expected revenue declines by nearly \$6 million.
- ▶ Homes subject to the full EHT fall to around 300 while over 1,600 will claim the NPR discount and thus receive the 50% reduction on their EHT bill.

	Strata	Non-strata/SFD	Total
Homes converted to rental	1,170	131	1,301
Homes subject to full EHT	302	34	336
Homes subject to discounted EHT	1,453	163	1,615
Revenue raised	\$6,168,600	\$2,188,500	\$8,357,200
Revenue impact compared to Core Model	(\$4,358,100)	(\$1,546,100)	(\$5,904,200)

#### 3.3.1.2 Advice and Findings

##### Findings

EY has reflected on all information provided, conducted a range of discussions, think tank sessions and scenario/hypothesis analysis, and considers that the inclusion of a NPR discount would:

- ▶ Increase the likelihood of home owners attempting to game the system or change/manipulate their situation to fit into this category
- ▶ Increase the cost to the City of a compliance and audit regime due to the increased documentary evidence required and likely response of owners attempting to fit into this class of discount
- ▶ Decrease the likelihood of obtaining property conversion onto the rental market
- ▶ Increase the risk of the program and its chances of success

- ▶ Compare favourably with the community and home owners and reduce negative sentiment of the EHT within the community.

Overall, the decision of whether to include a NPR discount is dependent on the Council's preferred balance between the level of risk and ultimate success in meeting EHT objectives in comparison to the desire to ease the burden on the community and appease certain home owners within the Vancouver area.

## 4. Audit concepts

### 4.1 Audit process and substantiating evidence

#### 4.1.1 Develop an audit process aligned to the level of risk for the expected types of exemptions and possible scenarios

What we did:

- ▶ Develop audit framework (high level) that contains:
  - Sampling methodology
  - Evidence requirements
- ▶ Reviewed COV developed audit timeframe and provide comments
- ▶ Provide advice on provisions contained in the draft By-Law to implement an effective audit program

##### 4.1.1.1 Leading practice

###### **Audit strategy**

CoV should develop and implement an audit strategy that is aligned with the following:

- ▶ Overarching strategy and objectives of the Empty Home Tax program
- ▶ Stakeholder expectations - internal and external
- ▶ An assessment of program risks

Audit has a broad range of stakeholders interested in and impacted by the results of their work. Ensuring that Audit has clarity of purpose and this is fully understood and supported among all stakeholder classes is an absolute requirement for meeting expectations.

An audit operating framework should include the following elements:

- ▶ Core delivery methodology
  - Establishing engagement protocol activities to facilitate the alignment of audit services with management's expectations.

- Developing an audit plan to provide Audit practitioners with a comprehensive approach to planning and executing audits. The plan should be refreshed and re-evaluated as the risk environment changes and more information is gathered on compliance with the program.
- Executing a fully embedded data analytics strategy to drive efficient and impactful results.
- Allocate greater time and effort in execution to high risk areas (e.g. exemptions).
- Communicating results is the process to share conclusions of work performed with the stakeholders (Including the public) in such a way that creates the desired organizational impact.
- ▶ People processes
  - Developing a resource and deployment strategy.
  - Defining competency plans and training thereby matching skills audit needs.
  - Sharing knowledge gathered from other audits performed, other agencies to drive maximum impact and evaluation of results.
- ▶ Support processes
  - Quality assurance and continuous improvement processes that drive a positive impact on audit coverage and efficiency.
  - Project management of the audit process including tracking of financial and operational progress, and appropriate prioritization of issues.
  - A Key Performance Indicators (KPIs) scorecard for audits that contains a range of quantitative and qualitative measures, with the most important being those which demonstrate compliance and return on investment.

### Sampling Methodology

The purpose of audit sampling is to draw inferences of a population from the results of a sample. This process requires professional judgment in selecting sampling techniques. The effectiveness of the audit sampling approach dictates the quality of results and findings, increasing both risk coverage and the efficiency of audits.

The typical components of a sampling methodology include:

- ▶ Population size
- ▶ Sample selection techniques
  - Judgmental (non-statistical)
  - Random (statistical)
  - Haphazard
- ▶ Sample selection sizes
- ▶ Confidence limits and error rates

The population is the most important component of sampling and the population should be assessed for completeness and accuracy. The reasons for omitting any specific elements of the population should be explained and documented. Once the population is selected and confirmed, the appropriate sample selection technique must be determined. The most common sample selection techniques are as follows:

- ▶ Judgmental (non-statistical) - Sampling based off the auditor’s professional judgment; meant to focus and confirm a condition that is reasonably thought to exist. Appropriate when professional judgment and prior information can be utilized to select higher risk samples.
- ▶ Random (statistical) - Sample selection is not governed by predetermined considerations; every unit in the population has an equal chance of being selected. Appropriate when there is little variance between items in populations.
- ▶ Haphazard - Items are selected without conscious bias; however, every unit in the population does not have an equal chance of being selected.

The following table provides some of the advantages and disadvantages of the each sampling method.

	Judgmental (non-statistical)	Random (statistical)	Haphazard
Advantages	<ul style="list-style-type: none"> <li>▶ It allows the Audit Team to select items which they consider to be of special audit interest/higher risk.</li> <li>▶ Can be simplified through the use of analytics</li> </ul>	<ul style="list-style-type: none"> <li>▶ It is appropriate for the selection of samples for statistical sampling work.</li> <li>▶ It is representative of the population as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>▶ It allows the Audit Team to select items without any special reason for including items in or omitting items from the sample ('close your eyes and point' method).</li> <li>▶ If a sample is spread throughout the population and is free of bias, it can be expected to represent a population, but not beyond doubt.</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>▶ It is subjective.</li> <li>▶ It does not allow reliable conclusions to be drawn on the population as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>▶ The Audit Team needs to know the population upfront.</li> <li>▶ Without leveraging auditor judgment of sample selections, random selections may not be representative of the highest risk areas.</li> </ul>	<ul style="list-style-type: none"> <li>▶ It isn't statistically valid as it has an element of human bias.</li> <li>▶ Every unit in the population does not have an equal chance of being selected</li> <li>▶ Effectively documenting judgmental or random sample selection so</li> </ul>

			that an independent reviewer can identify that it is not haphazard.
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