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SUBJECT: PDC POLICY IMPACT CALCULATOR OVERVIEW

The Portland Development Commission (PDC) asked ECONorthwest to develop an Excel-based **Policy Impact Calculator** to allow staff to perform pro forma financial analysis of five prototype developments similar to real estate projects being undertaken by PDC and its partners.

The purpose of the tool is to help PDC and its partners understand potential financial impacts to PDC's development activities and to help PDC respond to the new policy environment.

It should be noted that the calculator is based on assumptions that may be unique to PDC properties and other private projects may vary in cost, size of lot, land price, and assumed FAR utilization. Specific policies that the calculator is being used to evaluate are:

1. New green building requirements proposed in the Central City 2035 plan, including LEED standards, bird-friendly, and ecoroof policies.
2. Changes to Parks and Recreation System Development Charges (SDCs) that went into effect July 1, 2016.
3. Introduction of a Construction Excise Tax (CET) that is effective as of August 1, 2016.[1]
4. Recently adopted inclusionary zoning (IZ) requirements that become effective February 1, 2017.

Each policy has been implemented or is currently under consideration in the City of Portland. The calculator reflects the most up-to-date policy formulations as of November 4, 2016.

The calculator does not account for policies for which policy proposals have not been made public, such as seismic building code requirements or Bureau of Transportation proposed transportation demand management or SDC changes. However, the calculator can be adjusted to reflect any new policy as policy proposals are developed.

[1] Portland Housing Bureau Construction Excise Tax Effective August 1, 2016. https://www.portlandoregon.gov/bds/article/582410

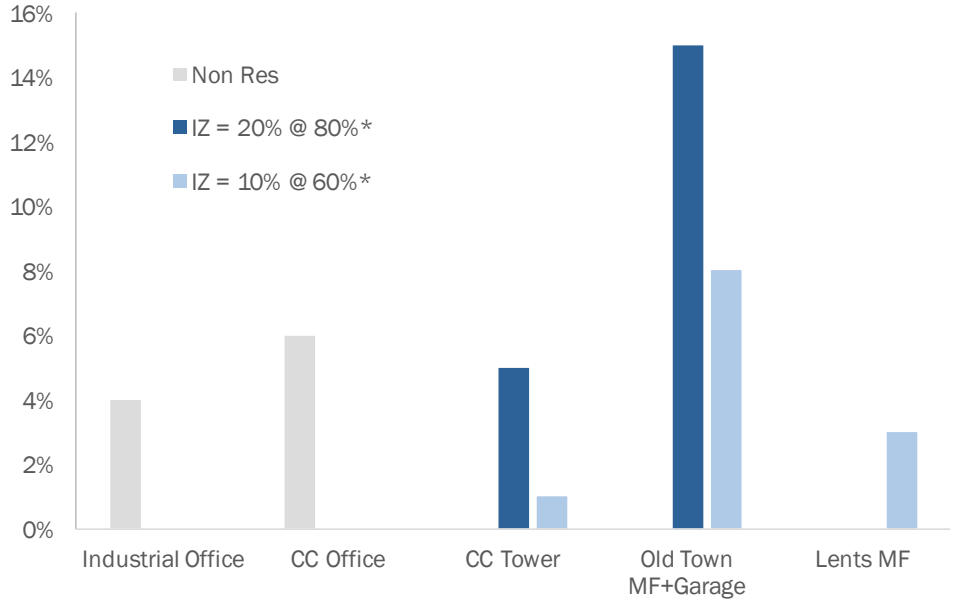
[2] Manufacturing/industrial rents in the industrial office prototype are assumed to be $12/SF per year. This was purposefully set lower than market rates to meet PDC's stated goals of industrial affordability.

Key Findings

As configured, the Policy Impact Calculator yielded the following findings:

- Many of the prototype projects examined in the Policy Impact Calculator were found to be already financially infeasible under today's conditions. Current market conditions are challenging for development in spite of rising rents and purchase prices. These conditions include relatively high construction costs, high land prices, and retracting capital markets.
- The prototype projects examined are not entirely representative of typical market rate development. The prototypes used were based on development program assumptions (number and mix of uses, density, parking) for potential PDC supported projects. These are understandably more aggressive than typically seen in private sector projects. PDC projects are expected to include public benefits, such as delivering development densities that may be higher than current markets support in a particular location.
    - For example, one prototype is based on high-density housing in Lents where such development is currently financially infeasible but meets public goals for Lents.
    - Other prototypes, based on PDC development objectives, include very high-density, mixed-use projects with shared parking in Central City locations where the current market supports lower density, single-use development.
- In general, the calculator shows that adding the costs related to IZ, new SDCs, CET and green building requirements further reduces the development feasibility of the prototypes. In particular, the burden of the policies falls heaviest on projects that are ineligible for the most robust IZ offsetting incentives. For example, commercial and industrial properties, which are typical in PDC's portfolio, are anticipated to shoulder the additional costs of CET, green building requirements, and increased SDC fees.
    - This may result in fewer locations where development is feasible and a reduction in the density of projects that are feasible to develop. This, in turn, may result in a reduction in the production of housing units and office space; and/or a need for higher rents. Figure 1 shows the rent increases needed for each prototype under the full policy framework, showing the differences between the two IZ policy formulations.

Figure 1: Incremental Change in the Rents Required to Make a Prototype Pencil as a Result of Combined Policy Changes



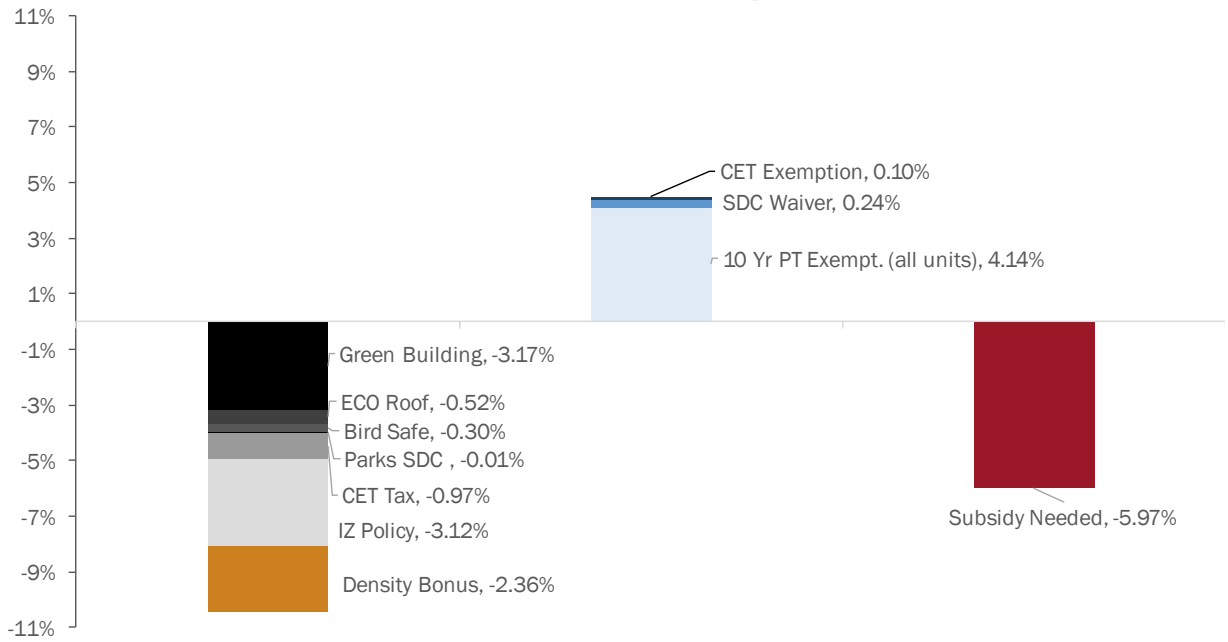
Source: Policy Impact Calculator, 1.7.16. Note: Includes all applicable policies.

- The impact of IZ on Central City projects varies by the size of project.
    - For projects in higher density Central City zones, off-sets include a 10-year property tax exemption on all residential units (market rate and affordable) in the project. This benefit exceeds the additional cost of IZ requirements. This benefit is relatively greater for projects opting to provide 10% of units at 60% of Area Median Income (AMI).
    - For projects in lower density Central City Zones, off-sets include a 10-year property tax exemption only on the affordable residential units in the project, which may not offset the cost of IZ.
- Overall, the new policies could result in increases to construction and associated costs (soft, contingency, tax, and fees). As an example, we have provided a chart of the impacts to the Central City Mixed-Use Prototype. Figure 2 shows the costs allocated to each of the new policies as a percent of total project costs (including land).
    - Costs related to changes in Parks and Recreation SDCs and the new Affordable Housing CET could add 0.01% and 0.97% respectively to development costs, based on the calculator.
    - Costs related to the new Inclusionary Housing program could add about three percent to the development's costs, based on the calculator. To mitigate the costs, the IZ policy also provides offsetting incentives. The most valuable of the off-sets offered is a 10-year property tax exemption, which more than offsets the cost of providing the affordable units. The other offsets are relatively modest,

including SDC waivers, CET waivers, and a density bonus. In fact, the density bonus has a negative impact on the project's financial performance that is nearly equal to the cost impact of providing the affordable units. Whereas a private sector developer would choose not to take the density bonus, it is a PDC imperative to maximize jobs, sustainability, and, therefore, density of development on land under their purview.

- Green building requirements could add about three percent to development costs for the Central City Mixed-Use prototype, based on the calculator. The amount of additional cost depends on whether the project's developers were already planning to include green building features and seek LEED certification, as most Central City projects do today. The estimate does not include any savings related to reduced operation and maintenance costs, many of which have a longer payback period than the time frame used by financial underwriters to determine project feasibility. The Policy Impact Calculator did not and is not intended to evaluate this cost against the potential public need and benefit.

Figure 2: Impact of New Policies as a Percent of Total Project Costs (Including Land) - Central City Mixed-Use Prototype



Source: Policy Impact Calculator, 1.7.16

Calculator Configuration

ECONorthwest built the Policy Impact Calculator as a simple, flexible tool that can be adapted relatively quickly to test policy formulations across the five prototypes. Reflecting this, the model uses **unlevered return on cost** as its financial return metric, making the model insensitive to changes in financial markets or variations in developer equity that fall outside of PDC and its partners' control. While the model does not incorporate the actual complexity of the real estate development work carried out by PDC and its partners, it helps PDC understand the direction, relative magnitude, and interactive effects of City policies.

To understand the combined impact of new policies on development, PDC staff selected five prototypes that provide realistic representations of potential PDC investments in various Portland submarkets. The prototypes are shown in Table 1.

Table 1: Overview of Physical Assumptions by Prototype

	Industrial Office	Central City Office	Central City Mixed-Use	Old Town Multifamily + Garage	Lents Multifamily
Location	Inner SE	Central City	Central City	Old Town	Lents
Zone	IG1	CXd	EXd	CXd	CM3
IH Incentive Package Classification	N/A	N/A	Central City >5 FAR	Central City >5 FAR	MUZ
Primary Land Use (Tax Classification)	Commercial	Commercial	Multifamily	Multifamily	Multifamily
Total Building Height (Stories)	4 Stories	14 Stories	19 Stories	6 Stories	5 Stories
Ground Floor + Parking Podium Height (Stories)	0 Stories	1 Stories	4 Stories	3 Stories	1 Stories
Ground Floor Uses	Lobby, Retail, Industrial	Lobby, Retail	Lobby, Retail, Parking	Lobby, Retail, Parking	Lobby, Retail
Office Upper Stories	4 Stories	13 Stories	6 Stories	0 Stories	0 Stories
Residential Upper Stories	0 Stories	0 Stories	9 Stories	3 Stories	4 Stories
Residential Units	0 Units	0 Units	218 Units	79 Units	52 Units
Ground Floor Retail	Yes	Yes	Yes	Yes	Yes
Parking Type	Leased Offsite	Underground	Integrated	Integrated	Surface
Construction Type	Timber	Concrete & Steel	Concrete & Steel	Stick over Garage	Stick over Podium

Source: Policy Impact Calculator, 1.7.16

Table 2 summarizes the calculator's assumptions for development costs.

Table 2: Cost Summary by Prototype

		Central City Office	Central City Mixed-Use	Old Town Multifamily + Garage	Lents Multifamily
Land Price ($/sqft)	$73.38	$242.40	$350.00	$200.00	$30.00
Total Hard Cost per Above Grade Square Foot ($/sqft)	$281.90	$317.53	$222.65	$163.66	$191.65
Total Project Cost (Including Market-rate Land) per Above Grade Square Foot ($/sqft)	$401.58	$436.68	$321.31	$251.20	$279.12
Total Project Cost (Excluding Land) per Above Grade Square Foot ($/sqft)	$374.06	$401.97	$287.87	$222.99	$266.62

Source: Policy Impact Calculator, 1.7.16

In all scenarios, the Policy Impact Calculator uses the same 2016 market assumptions. Construction costs, market demand, land prices, and other variables represent the realities in middle to late 2016. By holding these inputs constant and only varying policy inputs, the calculator can isolate the impacts of various policies.

To the extent possible, assumptions used in other recent City of Portland policy analyses were incorporated into the Policy Impact Calculator so that apples to apples comparisons can be made to other analyses. For example, the Portland Housing Bureau's recent analysis for the proposed Inclusionary Housing policy relied on assumptions about development supply and demand. These were incorporated into the Policy Impact Calculator where appropriate, including unit sizes (square feet), unit mix (percent of units by number of bedrooms), construction hard costs, tenant improvement costs, soft costs, contingency costs, market rents, vacancy rates, CAP rates, and return on cost requirements.

The full set of assumptions and their relevant sources can be found in the Policy Impact Calculator's 'Calculator' workbook sheet, which is included in the attached Excel file.

Performance in the Early 2016 Policy Context

The baseline of the Policy Impact Calculator is the financial performance of the development prototypes under the early 2016 policy context (prior to new Parks SDCs) with 2016 market assumptions. At the request of PDC, the model produces results that describe **what rents would have to be for the prototypes to be feasible** and **what land purchase subsidy would have to be granted to a developer to attract investment**. Modeled rents are presented as a percentage of the existing rents in the locations where the prototypes are assumed to be situated in Portland.

Land purchase subsidies represent the difference between present market value of land in the vicinity and the residual land value of the prototype developments.

Again, the impact of policies recently implemented or currently under discussion are not included in the baseline results presented in Table 3.

Table 3: Baseline Performance under early 2016 Policy Regime

	Industrial Office[2]	Central City Office	Central City Mixed-Use	Old Town Multifamily + Garage	Lents Multifamily
Assumed NNN Office Rent	$25 /SF/Yr**	$30 /SF/Yr*	$33 /SF/Yr**	N/A	N/A
Assumed Residential Rent	N/A	N/A	$3.25 /SF/Month**	$2.25 /SF/Month**	$1.25 /SF/Month*
Rents Must Be X% of IZ Analysis Market Rents* for Project to Pencil	162%	163%	133%	173%	218%
Office Rents Must Be $X Greater Than Market to Pencil	$15.49 /SF/Yr	$18.93 /SF/Yr	$11.03 /SF/Yr	-	-
Residential Rents Must Be $X Greater Than Market to Pencil	-	-	$1.09 /SF/Month	$1.65 /SF/Month	$1.48 /SF/Month
Residual Land Value of Base Project	$(10,304,092)	$(38,141,011)	$(24,866,977)	$(10,772,915)	$(8,430,315)
Residual Land Value of Base Project per Sq Ft of Land	$(343.47)	$(953.53)	$(621.67)	$(538.65)	$(421.52)
Land Purchase Subsidy Required for Project to Pencil	$12,505,442	$47,650,513	$39,549,477	$14,051,665	$9,030,315
Land Purchase Subsidy Required for Project to Pencil per Sq Ft of Land	$416.85	$1,191.26	$988.74	$702.58	$451.52

Source: Policy Impact Calculator, 1.7.16
*PDC provided these assumptions based on similar PDC project comparables.
**Assumed rents were taken from the Portland Housing Bureau's 2016 analysis of Inclusionary Zoning.

None of the prototypes pencil under the early 2016 policy context and all would require a subsidy or infeasible above market rents to attract real estate investment. The prototypes reflect projects underway or proposed in various Portland submarkets, and construction prices and land prices have risen considerably in recent years while market demand has not kept pace.

[2] Manufacturing/industrial rents in the industrial office prototype are assumed to be $12/SF per year. This was purposefully set lower than market rates to meet PDC's stated goals of industrial affordability.

Projects that are under construction or recently occupied were underwritten some time ago when construction prices and land prices were lower and the anticipated rise in demand was steeper. In addition, PDC often invests in projects where a baseline subsidy is anticipated to accomplish the community's desired outcomes.

2017 Policy Context

The following cost assumptions were included in the Policy Calculator to understand each policy's relative market and development feasibility impact:

- **Green building requirements** ($5,000 application cost; 3.5% increase in total project hard costs; can be varied by user)
- **Ecoroof requirements** ($6/sq ft hard cost; structural cost equal to 0.5% increase in total project hard cost; can be varied by user)
- **Bird-friendly design requirements** (0.33% hard cost increase; can be varied by user)
- **Parks SDC fee schedule changes** implemented in 2016
- **Construction excise taxes** (1% of hard costs and land costs; can be turned off to reflect current baseline; can be reduced to reflect IZ abatement)
- **Inclusionary housing unit set-aside requirement** (magnitude of requirement can be varied by user) and target depth of affordability (target AMI can be varied by user) with the model currently testing two policy specifications: 10% of units at 60% of AMI and 20% of units at 80% of AMI.
- **Central City Industrial Density Bonus** (offers an additional two square feet of industrial office floor area for every square foot of ground floor industrial floor area)
- **Inclusionary housing offsetting incentives:**
    - Density bonuses
    - Bureau of Environmental Services SDC Fee abatement (magnitude of abatement can be varied by user)
    - Transportation SDC fee abatement (magnitude of abatement can be varied by user)
    - Parks SDC Fee abatement (assumes recently implemented fee structure; magnitude of abatement can be varied by user)
    - Water SDC Fee abatement (magnitude of abatement can be varied by user)
    - Property tax exemption (magnitude of abatement can be varied by user)
    - CET exemption (magnitude of abatement can be varied by user)

Table 4 shows the policy changes as they apply to the five prototypes.

Table 4: Applicable 2017 Policy Context Changes by Prototype

	Industrial Office	Central City Office	Central City Mixed-Use	Old Town Multifamily + Garage	Lents Multifamily
Green Building	Yes	Yes	Yes	Yes	-
Ecoroof	Yes	Yes	Yes	Yes	-
Bird-friendly	Yes	Yes	Yes	Yes	-
New Parks SDC Fees	Yes	Yes	Yes	Yes	Yes
CET Tax	Yes	Yes	Yes	Yes	Yes
Central City Manufacturing Density Bonus	Yes	-	-	-	-
IH policy (% set-aside, % AMI)	-	-	Yes	Yes	Yes
Density bonus	-	-	Yes	Yes - Unused	Yes
SDC Fee Waivers (100% on Aff. Units for 10%@60% AMI only)	-	-	Yes	Yes	Yes
10 Year Property Tax Exemption on Affordable Units	-	-	-	-	Yes
10 Year Property Tax Exemption on All Units	-	-	Yes	Yes	-
CET Exemption on Affordable Units	-	-	Yes	Yes	Yes

Source: Policy Impact Calculator, 1.7.16

Individual Policy Impacts

To assess the impact of policies, the calculator compares the financial performance of the prototypes under the early 2016 policy context to the financial performance of the prototypes under policies already enacted in 2016 or proposed for implementation in 2017, both incorporating recent 2016 market assumptions. The individual policy impacts vary greatly, as shown in Tables 5 and 6. For example, while the Central City Mixed-Use prototype has the greatest negative impact on the residual land value from the green building requirement and the IZ policy, the new parks SDC fees has a relatively small impact. The 10-year tax abatement has the greatest possible impact, while the SDC fee waivers and the CET exemption on affordable units have a much smaller impact. Table 5 shows the impact of the policies as a percent of residual land value.

Table 5: Individual Policy Impacts ($/sq ft of Residual Land Value)[3]

	Industrial Office	Central City Office	Central City Mixed-Use	Old Town Multifamily+ Garage	Lents Multifamily
Green Building	$(47.67)	$(143.00)	$(193.67)	$(31.67)	
Ecoroof	$(11.00)	$(26.67)	$(32.00)	$(6.33)	
Bird-friendly	$(4.33)	$(13.33)	$(18.33)	$(3.00)	
New Parks SDC Fees	$(2.33)	$(6.33)	$(0.67)	$1.00	$2.67
CET Tax	$(14.33)	$(42.67)	$(59.33)	$(9.67)	$(5.67)
Central City Manufacturing Density Bonus	$(91.00)				
IZ policy (10% set-aside, 60% AMI)			$(191.00)	$(25.00)	
Density bonus			$(144.67)		$(57.33)
SDC Fee Waivers (100% on Aff. Units for 10@60 only)			$14.67	$4.33	$3.67
10 Year Property Tax Exemption on Affordable Units					$4.33
10 Year Property Tax Exemption on All Units			$253.33	$62.67	
CET Exemption on Affordable Units			$4.00	$0.67	$0.67

Source: Policy Impact Calculator, 1.7.17

Table 6 shows the impact of the policies on residual land value and as a percent of total cost.

[3] All values approximate, considers independent policy impact calculated from the bonus case or base case when no bonus taken

Table 6: Individual Policy Impacts on Residual Land Value, Total Cost and Percent of Project Cost[4]

	Industrial Office		Central City Office		Central City Mixed-Use		Old Town MF+ Garage		Lents Multifamily	
	Total Cost	$ Proj. Cost	Total Cost	$ Proj. Cost	Total Cost	$ Proj. Cost	Total Cost	$ Proj. Cost	Total Cost	$ Proj. Cost
Green Building[5,6] *> Low Est. (1.5%)* *> High Est. (6.0%)*	$(1.4 M) *$(610K)* *$(2.4M)*	-4.5% *-1.9%* *-7.6%*	$(4.3M) *$(1.8M)* *$(7.3M)*	-3.6% *-1.5%* *-6.1%*	$(5.8M) *$(2.5M)* *$(9.9M)*	-3.2% *-1.3%* *-5.3%*	$(950K) *$(410K)* *$(1.6K)*	-3.1% *-1.3%* *-5.1%*		
Ecoroof	$(330K)	-1.0%	$(800K)	-0.7%	$(960K)	-0.5%	$(190K)	-0.6%		
Bird-friendly	$(130K)	-0.4%	$(400K)	-0.3%	$(550K)	-0.3%	$(90K)	-0.3%		
New Parks SDC	$(70K)	-0.2%	$(190K)	-0.2%	$(20K)	0.0%	$30K	0.1%	$80K	0.5%
CET Tax	$(430K)	-1.3%	$(1.3M)	-1.1%	$(1.8M)	-1.0%	$(290K)	-0.9%	$(170K)	-1.1%
CC Manuf. Density Bonus	$(2.7M)	-8.5%								
IZ policy (10% @ 60% AMI)					$(5.7M)	-3.1%	$(750K)	-2.4%		0.0%
Density bonus					$(4.3M)	-2.4%			$(1.7M)	-11.0%
SDC Fee Waivers (100% on Aff. Units for 10% @ 60% only)					$440K	0.2%	$130	0.4%	$110K	0.7%
10 Yr PT Exemption (Affd. Units)									$130K	0.8%
10 Yr PT Exemption (All Units)					$7.6M	4.1%	$1.9M	6.0%		
CET Exemption on Affordable Units					$120K	0.1%	$20K	0.1%	$20K	0.1%

Source: Policy Impact Calculator, 1.7.17

Impact of Density Bonus

Notably, the density bonuses have a negative impact on residual land values and development feasibility. The model considers the application of density bonuses in the results of three of the prototypes – Industrial Office, **Central City Mixed-Use,** and **Lents Multifamily** – which are described in Table 5 and Table 6**.**

For these prototypes, we applied the bonuses in spite of the detrimental impact that the bonus units had on financial feasibility. In all instances, the baseline projects would yield a negative land residual and require substantial financial subsidies to attract investment. Building more unprofitable housing units and/or office space only yields greater losses and, therefore, more

[4] All values approximate, considers independent policy impact calculated from the bonus case or base case when no bonus taken

[5] BPS estimates of green building costs vary between 1.5% and 6% of hard costs. Our analysis used 3.5% as our primary estimate. Both low and high estimates are also provided in this chart. Further, both ecoroof and Bird Safe building design costs may be counted toward green building certification. Therefore, the high estimate of green building would potentially double count those costs.

[6] Potential savings from grants and subsidies may not be reflected in BPS's cost impact estimates for the Green Building requirement.

negative land residuals and greater need for financial subsidies. Table 7 shows the assumptions we used for these prototypes.

Table 7: Denser Development Project Assumptions

	Industrial Office	Central City Mixed-Use	Lents Multifamily
Change in form (bonus taken)?	Yes	Yes	Yes
Total Building Height (Stories)	5 stories (+1)	25 Stories (+6)	6 Stories (+1)
Ground Floor/Podium Height (Stories)	0 stories	5 Stories (+1)	1 Stories
Ground Floor Uses	Lobby, Retail, Industrial	Lobby, Retail, Parking	Lobby, Retail
Office Upper Stories	5 stories (+1)	6 Stories	0 Stories
Residential Upper Stories	0 Stories	14 Stories (+5)	5 Stories (+1)
Additional Residential Units	0 Units	120 Units	13 Units
Ground Floor Retail	Yes	Yes	Yes
Parking Type	Leased Offsite	Integrated	Surface
Construction Type	Timber	Concrete & Steel	Stick over Podium

Source: Policy Impact Calculator, 1.7.16

Had the density bonus not been applied to the Industrial Office prototype, the less-dense project would have required fewer subsidies than the project considered in the calculator, which included the bonus. In the case of the Central City Mixed-Use prototype, a "4 over 1" podium-style development in the same location would perform considerably better than the baseline tower and bonus-enhanced tower that we modeled.[7] The Lents Multifamily development would have performed better than the baseline had the density bonus not been applied in the comparative analysis. Without additional subsidies, a profit-seeking developer would not take the density bonuses offered, preferring instead to deliver lower-density alternatives.

Notably, a density bonus was not applied in the Old Town Multifamily+Garage prototype. For this prototype, the use of the density bonus triggers more costly construction methods due to the height of the structure. A concrete tower would require either a height variance or costly underground parking to accommodate the parking garage needs foreseen by PDC in Old Town.

Yet, it is the PDC's mission to maximize development in these locations, including delivering the maximum community benefits, like the number of affordable housing units. Thus, the Policy Impact Calculator incorporates density bonuses in the policy evaluations on these two occasions.

[7] Podium land residual is approximately $(2)M [Assuming CC IZ >5 FAR incentives apply even when <5 FAR used]

Combined Policy Impacts

Ultimately, the combined policy impacts on all five prototypes were negative. Table 8 shows the combined impacts. For the residential prototypes impacted by the inclusionary housing policy, we found a smaller negative impact under the optional inclusionary policy of 10% of units at 60% of AMI and a larger negative impact under the minimum mandated policy of 20% of units at 80% of AMI. This analysis is included in the attached full Policy Impact Calculator.

Table 8: Performance under 2017 Policy Context Relative to Early 2016 Policy Context Using 2016 Market Assumptions

	Industrial Office	Central City Office	Central City Mixed-Use	Old Town Multifamily + Garage	Lents Multifamily
Non-Residential*					
Change In Rent Required to Pencil as a Result of Policy Impacts	4%	6%	*Dependent on IZ*	-	-
Incremental Rent ($/sq ft) Required to Pencil	$1.43 /SF/Yr	$2.74 /SF/Yr	*Dependent on IZ*	-	-
Change in Residual Land Value	-46%	-18%	*Dependent on IZ*	-	-
Change in Land Purchase Subsidy Required to Pencil	38%	14%	*Dependent on IZ*	-	-
Combined Impacts w IZ = 20% @ 80%*					
Affordable Residential Units	-	-	68 Units	16 Units	N/A
Change In Rent Required to Pencil as a Result of Policy Impacts	-	-	5%	15%	N/A (1)
Incremental Market-Unit Rent Required to Pencil ($/sq ft)	-	-	$0.22 /SF/Month	$0.58 /SF/Month	N/A (1)
Change in Residual Land Value	-	-	-54%	-4%	N/A (1)
Change in Land Purchase Subsidy Required to Pencil	-	-	40%	8%	N/A (1)
Land Purchase Subsidy Required to Pencil per Affordable Unit	-	-	$230,013	$68,382	N/A (1)
Combined Impacts w IZ = 10% @ 60%*					
Affordable Residential Units	-	-	34 Units	8 Units	7 Units
Change In Rent Required to Pencil as a Result of Policy Impacts	-	-	1%	8%	3%
Incremental Market-Unit Rent Required to Pencil ($/sq ft)	-	-	$0.06 /SF/Month	$0.32 /SF/Month	$0.08 /SF/Month
Change in Residual Land Value	-	-	-42%	-4%	-19%
Change in Land Purchase Subsidy Required to Pencil	-	-	31%	7%	18%
Land Purchase Subsidy Required to Pencil per Affordable Unit	-	-	$365,537	$129,566	$231,368

Source: Policy Impact Calculator, 1.7.16 (1) 80% AMI > Market. *all values relative to performance under early 2016 policy context.

Notably, the policy impacts vary considerably across the prototypes. For example, the Old Town project sees a minor combined impact under the inclusionary housing policy of 10% of units at 60% of AMI. The incentives offset the financial impact of affordable housing AND the policies related to the Central City Plan. This is not the case in other locations.

On the other hand, the Lents Multifamily project sees a 19% reduction in the residual land value, which would require a 18% greater land purchase subsidy compared to the base case. The Industrial Office and Central City Office exhibited similar policy impact magnitudes. The Central City Mixed-Use project sees much greater impacts, resulting in a 42% decrease in the residual land value of the project and a 31% increase in the land purchase subsidy required to offset the combined policy impacts.

Model Caveats

There are several caveats that PDC staff should consider when using the Policy Impact Calculator:

- **This calculator assumes that developers will make a good faith effort to build LEED certifiable products.** The 2016 green building policy does not currently require LEED certification, only proof of submission of an application. Thus, the policy may not encourage developers to incur any additional green building costs.
- **The ecoroof and bird-friendly building components can be counted toward LEED certification**. We assumed that the green building policy costs in the model were 3.5% of hard costs excluding the ecoroof and bird-friendly costs. Per City of Portland analyses, an ecoroof would increase total hard costs by 0.5% plus $6 per square foot of ecoroof area. Also, bird-friendly improvements would have an incremental 0.33% impact on total hard costs. Combined, the total impact of these elements reflects a middle-ground LEED cost assumption, based on the high and low cost impacts estimated by policymakers.[8]
- **Results are based on prototypes reflecting recent PDC experience and may not reflect development proposals that are actually put forward.** Ultimately, the scale and scope of the prototypes analyzed in the calculator drive the results. Any change to the prototypes could change the outcomes.
- **All of the calculations rest on assumptions within the model**. In many instances, we used values in the model that reflect prior City of Portland studies or other ongoing policy discussions. For example, residential unit mixes, unit sizes, hard costs, soft costs, contingencies, market rents, vacancy rates, operating costs, and investor return thresholds all reflect the values used in ongoing City of Portland studies of inclusionary zoning. Likewise, parking requirements, building form, and land use restrictions reflect

[8] "Although not required by this standard, the incremental first cost of attaining LEED Gold certification often ranges from 2% to 6% of total (soft and hard) construction costs." (City of Portland, "Projected Costs of New Central City 2035 Regulations"; July 2016; p.3)

the latest proposals from PDC, the Bureau of Planning and Sustainability, and others. These include the draft *Central City 2035 Plan*, the Mixed-Use Zones policies, and the *Broadway Corridor Plan*. Whenever a prior policy study does not offer a workable input, the model's assumptions reflect PDC's actual experience in the field. For example, land prices were based on recent transactions in the geographies, including, but not limited to, transactions involving PDC. The source of each value is listed in a designated column within the calculator.

The model is a "living" tool designed for quick modification and easy sensitivity testing. We foresee that PDC will likely need additional updates to the model to ensure it represents the latest policy proposals and current market information.

Please let our team at ECO know if you have any questions regarding the Policy Impact Calculator and its function.

Thank you,

Ian Carlton, Project Director