

1. Handout 1 - Developer Compliance For Carbon Impact Fee Rebate V4

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3. Handout 2 - Carbon Fund Size And Fee Analysis V5

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[2014-03-12 HANDOUT 2 - CARBON FUND SIZE AND FEE ANALYSIS V5.PDF](#)

HANDOUT 1: WATSONVILLE CARBON FUND
DOCUMENTATION PROCESS TO SHOW DEVELOPER VOLUNTARY COMPLIANCE FOR DEVELOPMENT FEES REBATE

New Construction¹	<p>City of Watsonville rebates the developer the carbon impact fee or a portion of development fees (TBD) for demonstrating compliance with voluntary measures. The rebate corresponds to the level (35%, 50% or 100%) of electricity demand reduction. Document compliance by:</p> <ol style="list-style-type: none"> 1. Establishing and providing documentation of average annual electricity demand using (a) solar contractor estimate (TBD) or (b) Title 24 Part 6 Energy Budget. 2. Providing on-site generation² such as solar PV to achieve 35%, 50%, or 100% of electricity demand from project. If energy efficiency measures are included in the addition scope, the estimated savings from those measures should be included in the Energy Budget and therefore deducted from the total project electricity demand. 3. Submitting (a) Title 24 Part 6 Energy Budget or certified solar contractor detailed estimate (TBD), (b) Developer Worksheet to show impact fee threshold calculation, and (c) electricity generation system permit application.
Additions³	<p>City of Watsonville rebates the developer the carbon impact fee or a portion of development fees (TBD) for demonstrating compliance with voluntary measures. The rebate corresponds to the level (35%, 50% or 100%) of electricity demand reduction. Document compliance by:</p> <ol style="list-style-type: none"> 1. Establishing average annual electricity demand using (a) at least one year of utility bills, (b) Title 24 Part 6 Energy Budget, or (c) For Non-Residential only, an Energy Benchmark Disclosure covering at least 1 year. 2. Calculating Energy Use Intensity (EUI) for building footprint⁴ (annual kWh/square foot). 3. Applying EUI to new addition, minor/major remodel square footage to calculate electricity demand for project. 4. Providing on-site generation² such as solar PV to achieve 35%, 50%, or 100% of electricity demand. If energy efficiency measures are included in the addition scope, the estimated savings from those measures should be included in the Energy Budget and therefore deducted from the total project electricity demand. 5. Submitting (a) Title 24 Part 6 Energy Budget or certified solar contractor detailed estimate (TBD), (b) Developer Worksheet to show impact fee threshold calculation, and (c) electricity generation system permit application.

Notes

¹ Certain building types require special attention: high rises and hotels/motels follow non-residential energy efficiency standards and voluntary tier measures. Health facilities have the option of achieving tiered status through either a prescriptive approach or a performance-based approach as specified in Title 24 Part 6 Chapter 5, Appendix A5.

² If developer does not have access to rooftop or suitable site in existing buildings for other on-site generation, they can be credited for off-site generation at another developer property; There will be a flexible option for industrial buildings to demonstrate compliance to encourage innovative technology implementation.

³ Alterations do not add new square footage and therefore there is no path to comply with this voluntary structure. Because alterations projects cannot attain rebates, we suggest a lower % fee on alteration project valuation than that for additions or new construction. Alterations account for a large portion of total development fees

⁴ Building footprint's square footage may be obtained from assessor's records, on the ground, or in recent construction plans or a recent Appraisal (3rd party). Source will be specified in ordinance and checklist.

Consider: Option 1: Rebate the Carbon Impact Fee OR Option 2: Rebate Carbon Impact Fee + 15% of Total Development Fees

Table 1 version 2: Effect of Rebate Options on Carbon Fund Size (based on 2013 data)

Carbon Fund Size less Projected Rebates				
Sum of 2013 Building Project Valuations	Estimated 2013 Development Fees	No Voluntary Compliance	<i>Option 1: If 10% of all development complies at 100% electricity demand reduction and are granted a full Carbon Impact fee rebate</i>	<i>Option 2: If 10% of all development complies at 100% electricity demand reduction and are granted a rebate = carbon impact fee + 15% of development fees</i>
\$11,556,723	\$799,761	\$75,666	\$68,099	\$56,103

Consider: Option 1: Rebate the Carbon Impact Fee OR Option 2: Rebate Carbon Impact Fee + 15% of Total Development Fees

Table 2 version 2: Analysis of Rebate Options on Solar PV Payback Period

		Total Development Fees			Simple Payback Period (Years)		
Typical Building and example projects	Adding New Carbon Impact Fee % Varies depending on project type/subtype	No Voluntary Compliance With no voluntary program compliance and no rebate	Option 1: Carbon Impact Fee Rebated <i>If Carbon Impact fee is fully rebated for 100% reduction in energy usage</i>	Option 2: Carbon Impact Fee + 15% of Total Development Fees Rebated <i>If carbon impact fee + 15% of total development fees are rebated for a 100% reduction in energy usage</i>	No Voluntary Compliance	Option 1: Carbon Impact Fee Rebated	Option 2: Carbon Impact Fee +15% of Total Development Fees Rebated
Industrial (typical) New 15,000 SF prefab metal building	1.00%	\$81,782	\$72,754	\$60,487	11.5	10.9	10.1
Commercial (typical) New 1,200 SF + remodel new service station New 10,150 SF retail commercial shell New 46,230 SF storage building New 4,730 SF retail building	1.00% 1.00% 1.00% 1.00%	\$28,718 \$60,923 \$147,550 \$42,492	\$26,634 \$49,388 \$124,550 \$37,115	\$22,327 \$40,249 \$102,418 \$30,742	11.8 11.4 11.4 11.5	10.9 11.0 11.1 11.0	9.0 10.7 10.9 10.5
MFR (typical) New 2 story apartment bldg Subdivision (Sudden Street 2013)	1.00% 1.00%	\$119,917 \$24,834	\$115,089 \$23,328	\$97,101 \$19,603	<i>need square footage to determine</i>		
SFR (typical) New 1,358 SF townhome 339 SF addition	1.00% 0.75%	\$31,047 \$1,614	\$29,491 \$1,342	\$24,834 \$1,100	11.7 12.3	11.2 12.1	9.8 11.8

HANDOUT 2: CARBON FUND SIZE & FEE ANALYSIS

Table 1: Example Projects - Existing Development Fees & New Carbon Impact Fee

EXAMPLE PROJECTS	Existing Development Fees on Typical & Example Building Projects			New Carbon Impact Fee	
	Project Valuation	Total Fees	fees as a % of valuation	1% of valuation*	% increase over current fees
Industrial New 15,000 SF prefab metal building	\$ 902,850	\$ 72,754	8.1%	\$ 9,029	11.0%
Commercial New 1,200 SF + remodel for new service station New 10,150 SF retail commercial shell New 46,230 SF storage building New 4,730 SF retail building	\$ 208,321 \$ 1,153,548 \$ 2,300,000 \$ 537,664	\$ 26,634 \$ 49,388 \$ 124,550 \$ 37,115	12.8% 4.3% 5.4% 6.9%	\$ 2,083 \$ 11,535 \$ 23,000 \$ 5,377	7.3% 18.9% 15.6% 12.7%
MFR New 2 story apartment bldg New Subdivision (Sudden Street 2013)	\$ 482,777 \$ 150,613	\$ 115,089 \$ 23,328	23.8% 15.5%	\$ 4,828 \$ 1,506	4.0% 6.1%
SFR New 1,358 SF townhome 339 SF addition *	\$ 155,605 \$ 36,320	\$ 29,491 \$ 1,342	19.0% 3.7%	\$ 1,556 \$ 272	5.0% 16.9%

*Note that New Carbon Impact Fee as a percent of valuation is proposed to be 1% for all new construction and 0.75% for additions

HANDOUT 2: CARBON FUND SIZE & FEE ANALYSIS

Table 2: Building Type Totals - Estimated Watsonville Carbon Fund Size for 2013

Building Type & Subtype	Number of Projects	Sum of Project Valuations for each Bldg Subtype	Proportion of Annual Valuation for all Projects	Development Fees as % of Example Project Valuation*	Estimated Total Development Fees	Carbon Impact Fee's Proposed % of Valuation	Estimated 2013 Carbon Fund Size (excluding voluntary compliance rebates)
INDUSTRIAL	0	0	0.0%	8.1%	\$ -	1%	0
COMMERCIAL							
new	2	\$ 1,691,213	14.6%	7.4%	\$ 124,304	1%	\$ 16,912
addition	4	\$ 225,402	2.0%	5.0%	\$ 11,270	0.75%	\$ 1,691
alteration (no addition)*	51	\$ 4,701,650	40.7%	5.0%	\$ 235,083	0.50%	\$ 23,508
MFR							
new	2	\$ 531,127	4.6%	19.7%	\$ 104,366	1%	\$ 5,311
addition	0	\$ -	0.0%	5.0%	\$ -	0.75%	\$ -
alteration	10	\$ 1,926,920	16.7%	5.0%	\$ 96,346	0.50%	\$ 9,635
SFD							
new	6	\$ 892,921	7.7%	19.0%	\$ 169,655	1%	\$ 8,929
addition (+accessory)	23	\$ 697,074	6.0%	3.7%	\$ 25,792	0.75%	\$ 5,228
alteration	32	\$ 890,416	7.7%	3.7%	\$ 32,945	0.50%	\$ 4,452
SUM	130	\$ 11,556,723	100.0%		\$ 799,761		\$ 75,666

*Development fees as a % of Sum of Project Valuations:

Percentages for new industrial and SFR are based on a single example project for each building type

Percentages for new commercial and MFR are based on the average of percentages for example projects in each building type

Percentage for SFR additions is based on a single example project; SFR alterations are assumed to have the same

Percentage for commercial and MFR additions and alterations is assumed to be 5%

Note: Per S. Merriam, alterations pay no impact fees currently.

Source: Watsonville 2013 permit data