



CITY OF PORTLAND
OFFICE OF SUSTAINABLE DEVELOPMENT

A BETTER FUTURE. A BETTER NOW.

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City of Portland Proposed High Performance Green Building Policy



Proposal for Public Comment

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I. Background

City of Portland's green building history

Climate change, rising energy prices and a fragile job market pose serious threats to Portland's ability to thrive, both today and in the future. Buildings are responsible for nearly half of Portland's greenhouse gas emissions, and Portland residents and businesses now spend \$750 million each year to heat, cool and power our buildings. This figure has almost doubled over the past ten years and will likely continue to rise sharply, stretching already tight household and business budgets.

Because buildings last for many decades, today's decisions will affect Portland for the next century or more. Each building represents an opportunity to strengthen Portland's future—or weaken it.

High performance green building presents one of the best solutions to improve environmental performance while strengthening the local economy and keeping buildings affordable in the long term. For more than a decade, the Portland development community has incorporated green building practices as part of a framework for improving energy and water efficiency, stormwater management, indoor environmental quality and materials selection. The resulting buildings are delivering financial savings to their occupants and owners while enhancing workplace productivity and personal health. However, green building is not yet standard practice in Portland. To reach important environmental and economic goals, new policies and actions must be implemented to accelerate the spread of high performance green building in new construction and renovation of existing building stock.

In 2000, the City of Portland Office of Sustainable Development (OSD) launched a program offering green building technical assistance, education and financial incentives to the development community and the general public. In 2001, Portland was one of the first cities in the United States to support the emergence of green buildings by adopting a policy requiring that any new City-owned buildings achieve the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Silver certification. In 2005, this requirement was raised to

LEED Gold, with additional requirements for energy performance, stormwater management, water conservation, ecoroof installation and construction and demolition waste recycling.

Recognizing the many benefits of green building, in 2007, Portland City Council directed OSD to develop policy options to improve the environmental performance of commercial and residential buildings community-wide. The resulting proposed High Performance Green Building Policy also addresses City Council's goal to identify steps to reduce greenhouse gas emissions 80 percent from 1990 levels by 2050.

Similarly, the Portland Development Commission (PDC) adopted a green building policy in 2001 and strengthened it in 2005 to require LEED Silver certification for new construction projects receiving PDC funding such as tax-increment financing or low-interest loans. PDC is currently in the process of revising its Green Affordable Housing policy in conjunction with this community-wide green building policy proposal.

Improving building performance is imperative

As prices for energy and other natural resources rise, achieving better performance in Portland's buildings and the sites they occupy is critical to keeping Portland's housing and commercial space affordable. Improving energy efficiency helps maintain affordability in several ways:

- An investment in energy-saving measures pays back in reduced utility bills for tenants and homeowners. For example, an Earth Advantage home is at least 15 percent more efficient than minimum state code, saving close to \$400 annually in energy bills for a typical home.
- The added initial cost of new energy-saving measures is partly offset by financial incentives from the Energy Trust of Oregon (ETO) and the Oregon Department of Energy (ODOE).
- Lower energy consumption reduces the impact on budgets from current and future rate increases. This allows more money to be available for other expenditures, keeping money circulating in the local economy, strengthening the business climate and adding local jobs.

High performance green building also reduces greenhouse gas emissions by increasing the energy efficiency of the building envelope, lighting and mechanical systems. In addition, occupants of green buildings typically experience direct health benefits from improvements to indoor environmental quality.

Carbon dioxide, the primary greenhouse gas contributing to climate change, is emitted directly

from buildings through natural gas and fuel oil combustion and indirectly through electricity use. Although the Pacific Northwest is home to considerable wind, hydropower and other carbon-free energy resources, well over half of the electricity consumed in Portland is produced by regional coal and natural gas power plants. As shown in Figure 1, nearly half of community-wide carbon dioxide emissions result from electricity, natural gas and fuel oil consumption in buildings, including 20 percent from residential buildings and 24 percent from commercial buildings.

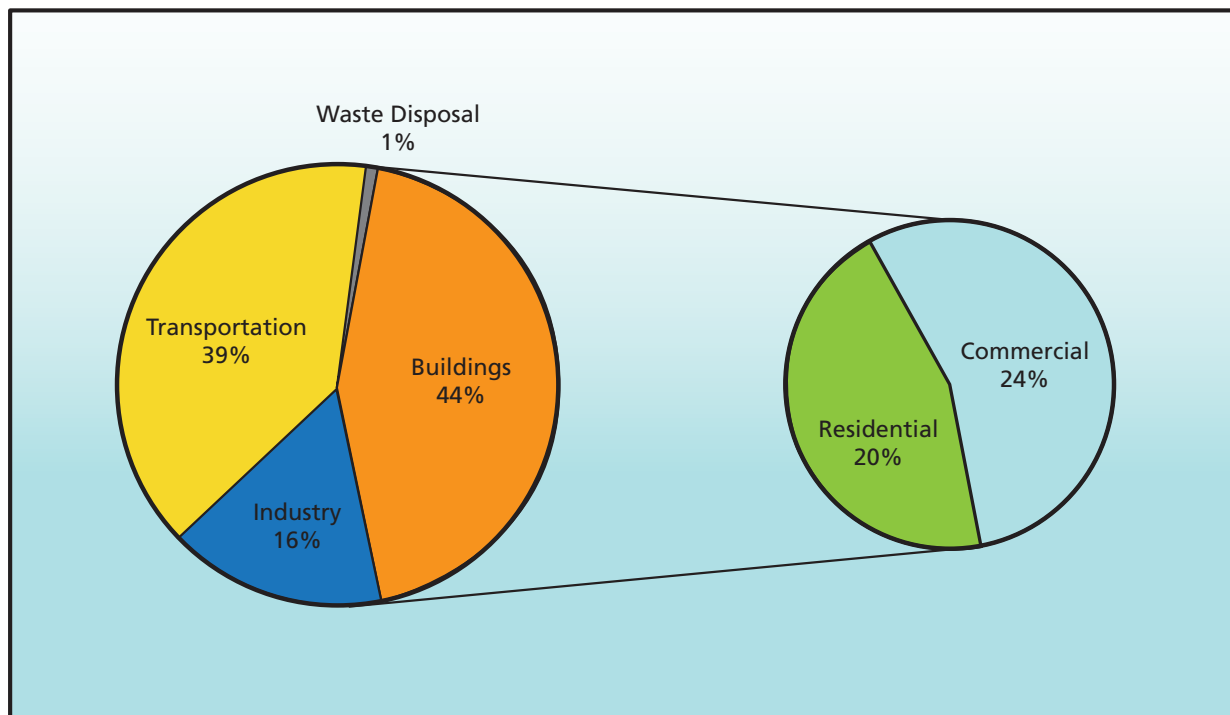


Figure 1. Sources of carbon dioxide emissions in Multnomah County, 2006.

Figure 2 shows the existing residential and commercial building stock square footage in Portland along with projected trends through 2050 based on the average growth of each building sector from 2000 through 2006 and an annual demolition rate of 0.5 percent. As demonstrated in Figures 1 and 2, achieving Portland's 2050 climate protection goal will require a green building policy that reduces carbon dioxide emissions from new and existing buildings in both the commercial and residential sectors. These efforts will be complemented by strategies to address transportation, land-use planning and waste reduction, among others.

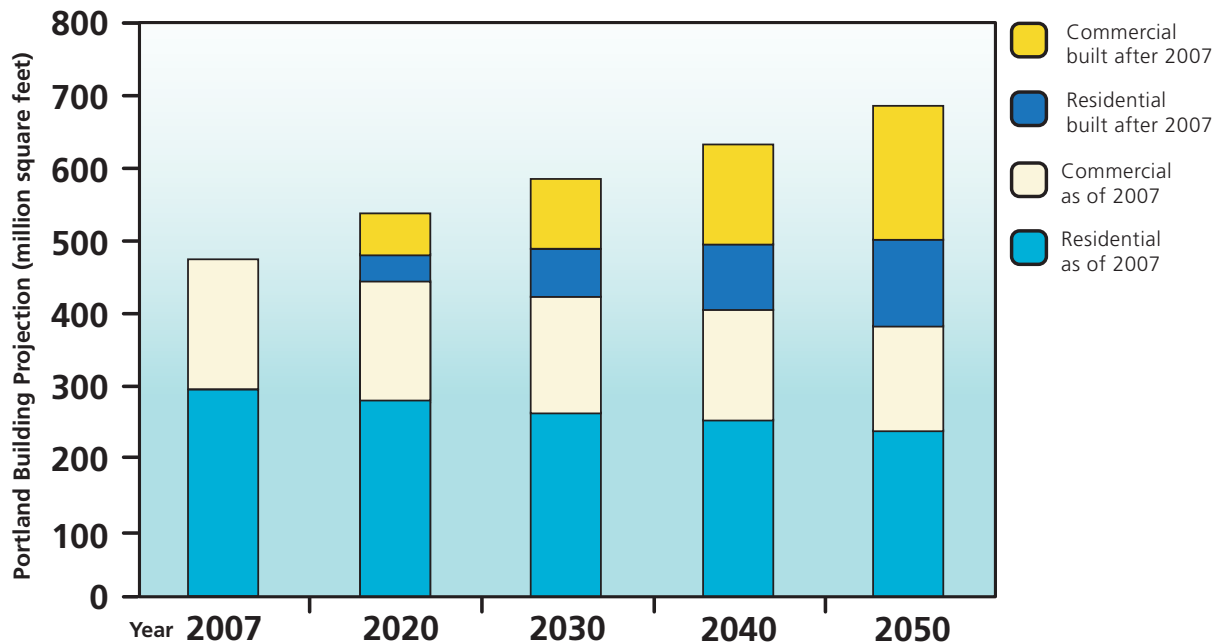


Figure 2. Commercial and residential building square footage projections through 2050.

II. Policy Development Process

In March 2007, Portland City Council adopted Resolution 36488 directing OSD to develop policy options to improve building environmental performance, including reducing oil and natural gas use and carbon dioxide emissions. Also in spring 2007, the Development Review Advisory Committee (DRAC) formed a subcommittee to make recommendations for expanding sustainable development practices in Portland, and the Portland City Council passed a resolution directing the Portland Development Commission (PDC) to update the City of Portland's affordable housing green building threshold and voluntary guidelines. Members of DRAC and PDC participated in OSD's policy development process. Likewise, OSD staff participated in DRAC and PDC green building processes.

In November 2007, Portland City Commissioner Dan Saltzman proposed a preliminary framework for the High Performance Green Building Policy outlining options for new construction and existing buildings in the commercial and residential sectors. In January 2008, Commissioner Saltzman and Commissioner Randy Leonard invited community members to learn about two potential policy paths to advance green building in Portland. First, the Bureau of Development Services (BDS) announced a Technical Advisory Group (TAG) to explore a possible local amendment to the state building code that would incorporate green building practices.

The TAG continues to meet and will make recommendations that the City Council can propose to the State Building Codes Division for consideration, probably in early 2009. Second, OSD announced a series of stakeholder meetings for the continued development of the green building policy and invited participation from the public. From February through June 2008, OSD convened nine stakeholder committee meetings to review and explore draft options identified by the policy framework. These drafts were revised to create the current proposed High Performance Green Building Policy.

III. Policy Overview

The proposed High Performance Green Building Policy seeks to accomplish the following goals for buildings and the sites they occupy in the city of Portland:

- Reduce greenhouse gas emissions that cause climate change.
- Maximize energy efficiency and cost savings.
- Keep housing and commercial buildings affordable over time.
- Decrease consumption of potable water, especially during summer months.
- Increase on-site stormwater management.
- Reduce waste during construction and operation.
- Improve indoor environmental quality, occupant health and productivity.
- Increase the number of local living-wage jobs.

The proposed policy provides incentives and technical assistance for projects that incorporate advanced green building measures as summarized in Table 1 and described below:

- 1) For new commercial and multifamily construction projects, the policy proposes a green building “feebate”—a market-based instrument that combines a fee for conventional construction, a waiver option for moderate green improvements and a reward for high performance green building projects.
- 2) For new single-family residential construction, the policy proposes a performance target for a percentage of new homes that are built to green building standards. If the target is met, no new regulations will take effect; if the target is not met, a feebate similar to that for new commercial construction will come into effect.
- 3) For existing commercial buildings, the policy proposes disclosure of building performance in the areas of energy usage, water usage and stormwater management. The policy also includes incentives to improve environmental performance. The building performance measures would identify buildings that have the greatest potential to improve performance and could help prospective buyers and tenants make informed decisions.

- 4) Disclosure of building performance measures was also considered for existing single-family residential buildings, but the stakeholder meetings highlighted the need to develop much better financing options for homeowners than are currently available. As a result, no requirements are proposed for existing homes at this time, and instead OSD is exploring options including the development of a large-scale fund to accelerate green building upgrades to existing buildings.

	Commercial & Multifamily	Single-Family Residential
New	• Feebate	• Performance target • Feebate if not met
Existing	• Disclose building performance score	• Exploring financing and performance score

Table 1. High Performance Green Building Policy overview.

IV. New Commercial Construction Feebate

The proposed commercial green building feebate will apply to new construction of multifamily buildings greater than or equal to 5,000 gross square feet and commercial buildings greater than or equal to 20,000 gross square feet. Specific building types and permit occupancy classifications (defined by the 2007 Oregon Structural Specialty Code) covered by the feebate are as follows:

- Indoor public and private assembly buildings (A1, A2, A3).
- Hospitals, group homes and assisted living facilities (I1, I2, I3, I4, I5).
- Hotels and motels (R1).
- Multifamily residential homes (R1, R2, R4).
- Offices and businesses (B).
- Retail and wholesale stores (M).
- Schools and day-care facilities (E).

A “commercial” building designation is determined by BDS at the time of permit review and includes multifamily residences.

Industrial buildings and warehouses are not covered by the feebate since these building types are generally unoccupied or consume resources primarily through manufacturing processes rather than building operation.

The feebate will also apply to “major remodels,” defined as permitted alterations or additions in which:

- The project Permit Valuation of Work exceeds \$250,000,

AND at least one of the following is true:

- At the time of application, the Permit Valuation of Work is greater than or equal to the Real Market Value of the property as determined by the County Tax Assessor;
-or-
- A Change of Occupancy affects more than one-third of the building gross square footage;
-or-
- A conversion of more than 5,000 gross square feet from unheated to heated space;
-or-
- An addition of building gross square footage greater than or equal to the gross square footage of the existing building.

The proposed green building feebate for new commercial construction will be phased in according to the following time frame:

- Projects smaller than 50,000 gross square feet that have permits submitted after July 1, 2010.
- Projects greater than or equal to 50,000 gross square feet that have permits submitted after January 1, 2011.

Projects exempted from the feebate include new construction or additions that are less than 5,000 gross square feet for multifamily residences or 20,000 gross square feet for commercial buildings, initial tenant improvements in newly constructed buildings and permits that involve only site improvements. Projects will have the opportunity to appeal the policy requirements based on building occupancy or unusual circumstances.

The green building feebate is intended to increase building environmental performance while complementing existing financial incentives offered by ETO and ODOE for energy-saving measures and sustainable building. The proposed feebate would present developers of new commercial and multifamily buildings with three green building incentive options as displayed in Figure 3 and described as follows:

- 1) **Reward.** Receive a one-time reward payment from the City of Portland for projects that achieve a high performance green building standard and significantly improve energy performance beyond the current minimum Oregon requirements (Chapter 13 of the Oregon Structural Specialty Code). Proposed green building standards are shown on Tables 2 and 3. The reward is paid to the building owner by the City of Portland upon receipt of third-party verification (such as a copy of the USGBC Rating Certificate and Final LEED Review). The amount of the reward varies based on the level of environmental performance and the gross square footage of the building. Buildings of any size are eligible for rewards. Affordable housing projects are eligible to receive the first level of reward payment by achieving what otherwise is defined as the “waiver” level of performance. To receive higher reward levels, affordable housing projects will need to reach the same minimum requirements as other projects.

-or-

- 2) **Waiver.** Receive a fee waiver for projects that build to a green building standard and improve energy performance beyond the minimum Oregon code. Proposed green building standards are shown on Tables 2 and 3. To qualify for the waiver, project developers must document registration for the green building standard (such as a LEED Registration Number and Scorecard) when applying for a building permit followed by submitting third-party verification within one year after receiving a Certificate of Occupancy from BDS.

-or-

- 3) **Fee.** Pay a one-time fee to mitigate the greenhouse gas emissions and other environmental impacts for projects that are built to the minimum Oregon code. The fee will be based on the gross square footage of the building.

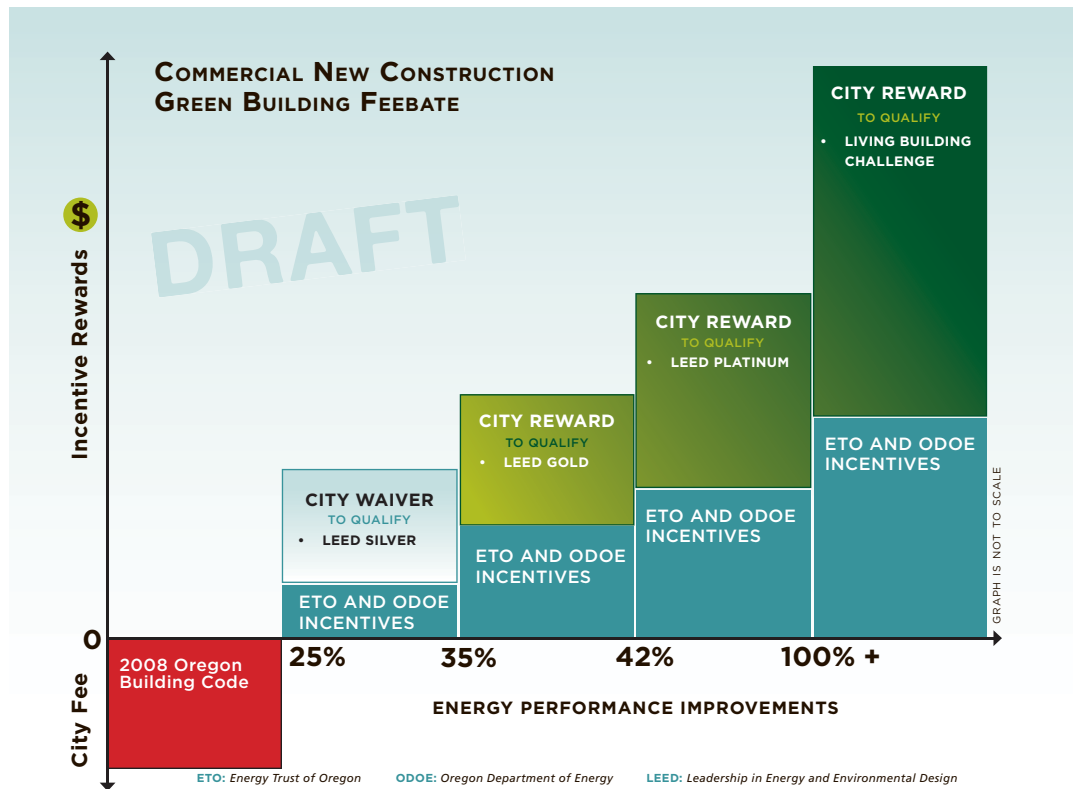


Figure 3. Proposed commercial new construction green building feebate.

The feebate is based on third-party certification programs established by Earth Advantage and the U.S. Green Building Council. Projects pursuing LEED certification must also achieve specific minimum point thresholds for energy and water efficiency credits:

- Design building envelope, lighting and mechanical systems to optimize energy performance (LEED EA1).
- Install on-site renewable energy (LEED EA2).
- Reduce landscaping irrigation (LEED WE1).
- Reduce building water use (LEED WE3).

Specific green building requirements are described in Table 2 for multifamily residential buildings and Table 3 for all other commercial building types covered by the feebate.

Applicable green building standards, energy efficiency thresholds and minimum environmental performance requirements will be reevaluated every three years in accordance with building code cycles to ensure that the feebate continuously reaches beyond the Oregon code.

PDC is proposing that multifamily rental housing projects that receive PDC loans and/or grants

in the amount of \$500,000 or more and which are a minimum of 50,000 square feet in size must meet the “waiver” level of performance. In addition, PDC-funded affordable projects must meet the following requirements to protect the health of vulnerable populations and other building occupants:

- a) Composite wood products shall not contain synthetic urea formaldehyde. These materials include hardwood plywood, particleboard, medium density fiberboard and thin medium density fiberboard.
- b) Polyvinyl chloride flooring shall not be installed.

Feebate Option	Green Building Standards ¹	Minimum Requirements	Feebate ²
Reward³	Living Building Challenge	Net-zero energy and water documentation (1 year)	\$2.58 – \$5.15 per sf
	LEED New Construction 2.2 Or, for projects <50,000 square feet, Earth Advantage ⁴	Platinum certification, PLUS: EAc1 + EAc2: 10 points WEc1 + WEc3: 4 points	\$1.03 – \$2.06 per sf
	LEED New Construction 2.2 Or, for projects <50,000 square feet, Earth Advantage ⁴	Gold certification, PLUS: EAc1 + EAc2: 8 points WEc1 + WEc3: 3 points	\$0.51 – \$1.03 per sf
Waiver	LEED New Construction 2.2 Or, for projects <50,000 square feet, Earth Advantage ⁴	Silver certification, PLUS: EAc1 + EAc2: 5 points WEc1 + WEc3: 2 points	Not Applicable
Fee	None		(-) \$0.51 – \$1.03 per sf

Table 2. Proposed multifamily residential new construction green building standards and feebate specifications.

¹ LEED rating systems are currently in the process of being updated by the U.S. Green Building Council. Equivalent LEED 2009 points will be determined after the next version of LEED is released.

² A feebate range is provided here for comment; however, the level of the feebate will be established at a specific amount. The possible range presented here is based on average values for energy use in commercial buildings multiplied by measure life multiplied by dollars per ton of carbon. The low end of the range assumes a 15-year operational period for the building with a value of \$12 per metric ton of carbon dioxide. Since estimates vary considerably for measure life and for the appropriate valuation of carbon, the high end can be viewed as representing a measure life of 30 years or a carbon price of \$24 per metric ton or some combination of the two.

³ Affordable housing projects will also qualify for the reward if they achieve the minimum feebate waiver requirements. However, to receive higher reward levels, affordable housing projects will need to reach the same minimum requirements as other projects.

⁴ The Earth Advantage option provides a prescriptive alternate path to LEED certification and can be used to meet the green standards for multifamily residential projects less than 50,000 square feet.

Feebate Option	Green Building Standards ⁵	Minimum Requirements	Feebate ⁶
Reward	Living Building Challenge	Net-zero energy and water documentation (1 year)	\$8.65 – \$17.30 per sf
	LEED New Construction 2.2 Core and Shell 2.0 Schools Retail	Platinum certification, PLUS: EAc1 + EAc2 : 10 points WEc1 + WEc3: 4 points	\$3.46 – \$6.92 per sf
	LEED New Construction 2.2 Core and Shell 2.0 Schools Retail	Gold certification, PLUS: EAc1 + EAc2: 8 points WEc1 + WEc3: 3 points	\$1.73 – \$3.46 per sf
Waiver	LEED New Construction 2.2 Core and Shell 2.0 Schools Retail	Silver certification, PLUS: EAc1 + EAc2: 5 points WEc1 + WEc3: 2 points	Not Applicable
Fee	None		(-) \$1.73 – \$3.46 per sf

Table 3. Proposed commercial new construction green building standards and feebate specifications.

⁵ LEED rating systems are currently in the process of being updated by the U.S. Green Building Council. Equivalent LEED 2009 points will be determined after the next version of LEED is released.

⁶ A feebate range is provided for comment; however, the level of the feebate will be established at a specific amount. The possible range presented here is based on average values for energy use in commercial buildings multiplied by measure life multiplied by dollars per ton of carbon. The low end of the range presented here assumes a 15-year operational period for the building with a value of \$12 per metric ton of carbon dioxide. Since estimates vary considerably for measure life and for the appropriate valuation of carbon, the high end can be viewed as representing a measure life of 30 years or a carbon price of \$24 per metric ton or some combination of the two.

⁷ LEED NC 2.2 now accepts prescriptive options detailed by Advanced Buildings Core Performance as an alternate path to building simulation for up to five EAc1 points. This prescriptive path will also be acceptable for LEED NC 2009 certified projects less than 50,000 gross square feet.

V. New Residential Construction Feebate

A “residential” building designation is determined by BDS at the time of permit review and includes single-family detached homes, duplexes and rowhouses.

The proposed green building policy will accelerate the transition to green building as standard practice. Many area builders have expressed their commitment to building better-performing homes, and in the Portland home construction industry, two certification programs have gained traction as markers of exemplary environmental performance, Earth Advantage (EA) and LEED for Homes. With this policy, the City will work with area builders to continue to increase the prevalence of certified green homes and to achieve performance targets for the percentage of new homes built that achieve these standards. The proposed performance targets are as follows:

- In 2009, 20 percent of new homes certified as EA or LEED for Homes.
- In 2010, 30 percent of new homes certified as EA or LEED for Homes.
- In 2011, 40 percent of new homes certified as EA or LEED for Homes.

The City will annually monitor the percentage of EA or LEED for Homes projects to determine whether the policy’s performance targets are achieved. Verification of performance targets will be based on all new residential buildings greater than or equal to 1,200 square feet with an R3 permit occupancy classification (defined by the 2007 Oregon Structural Specialty Code).

If market share performance targets are not achieved during any given year of the policy, a residential green building feebate will become effective six months later that will apply to new home construction projects greater than or equal to 1,200 square feet. New construction projects smaller than 1,200 square feet and additions or alterations to existing homes will be exempt from the green building fee but are eligible for reward payments. Projects will have the opportunity to appeal the policy requirements based on building occupancy or unusual circumstances.

The residential green building feebate is intended to increase building environmental performance while complementing existing financial incentives offered by ETO and ODOE. Should the feebate take effect, builders of new homes would have three options as displayed in Figure 4 and described as follows:

- 1) Reward. Receive a one-time reward payment from the City of Portland for projects that build to a high performance green building standard with third-party verification and significantly improve energy performance beyond the minimum Oregon requirements (Chapter 13 of the Oregon Structural Specialty Code), as described in Table 4. The

amount of the reward varies based on the level of environmental performance and is a fixed dollar figure per home (i.e., it does not vary with the size of the home). A reward is paid to the homeowner by the City of Portland upon receipt of third-party verification (such as a copy of the USGBC Rating Certificate and Final LEED Review). Homes smaller than 1,200 square feet are also eligible for rewards.

-or-

- 2) Waiver. Receive a fee waiver for projects that build to a green building standard and improve energy performance beyond the minimum Oregon code, as described in Table 3. To qualify for the waiver, home builders must document registration for the green building standard (such as an EA Points Worksheet or LEED Scorecard) when applying for a building permit followed by submitting third-party verification within one year after receiving a Certificate of Occupancy from BDS.

-or-

- 3) Fee. Pay a one-time fee to mitigate the environmental impacts for projects that build to the minimum Oregon code. The fee will vary based on the square footage of the home and only apply to new construction greater than or equal to 1,200 square feet.

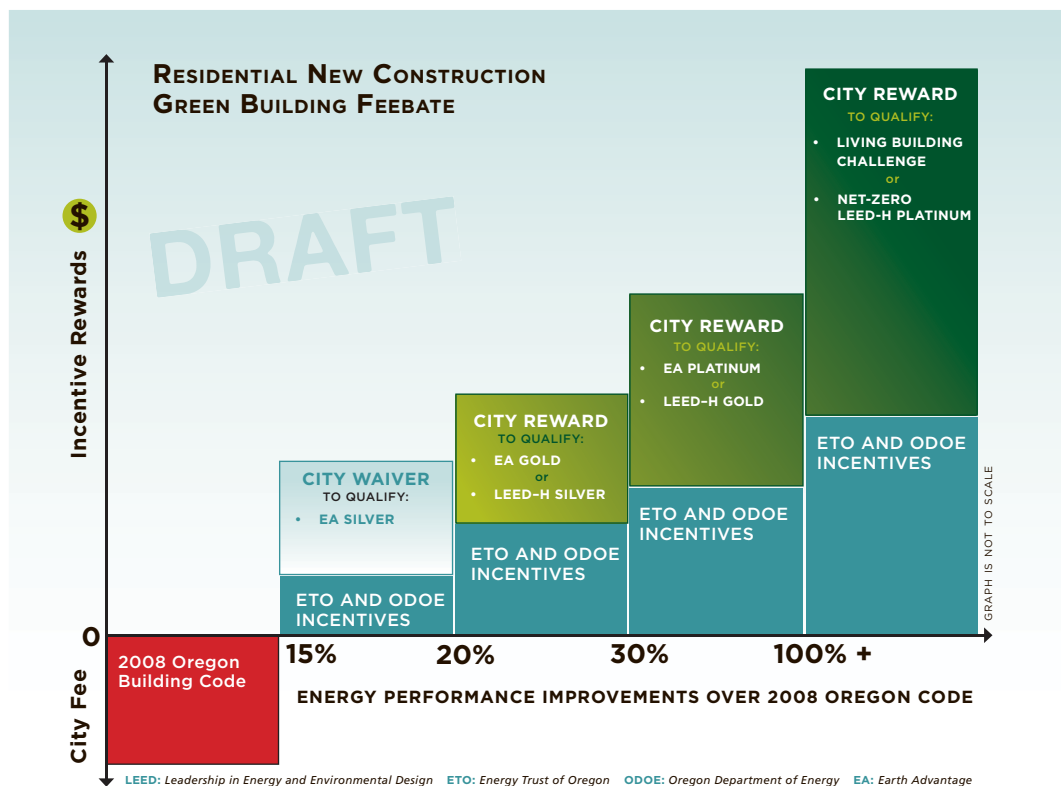


Figure 4. Proposed residential new construction green building feebate.

In addition to achieving third-party certification, projects must meet minimum energy performance requirements as shown in Table 4, such as a minimum Home Energy Rating System (HERS) score, NW Energy Star Homes certification, or Oregon High Performance Homes (HPH) Business Energy Tax Credit qualification.

To enable progressive green building market transformation, the residential performance targets, applicable green building standards, feebate thresholds and minimum environmental performance requirements will be evaluated and reset every three years in accordance with building code cycles.

Feebate Option	Green Building Standards	Minimum Requirements	Feebate ⁸
Reward ⁹	LEED for Homes Platinum, or Living Building Challenge	HERS 0, or Net-zero energy documentation (1 year)	\$10,000 per home
	EA Platinum, or LEED for Homes Gold	HERS 60, or Oregon HPH	\$2,570 – 5,140 per home
	EA Gold, or LEED for Homes Silver	HERS 70	\$1,285 – 2,570 per home
Waiver	EA Silver	HERS 75, or NW Energy Star Homes	Not Applicable
Fee	None		(-) \$0.51 – 1.03 per sf

Table 4. Proposed residential new construction green building feebate specifications.

⁸ A feebate range is provided here for comment; however, the level of the feebate will be established at a specific amount. The possible range presented here is based on average values for energy use in residential buildings multiplied by measure life multiplied by dollars per ton of carbon. The low end of the fee range presented here assumes a 15-year operational period for the building with a value of \$12 per metric ton of carbon dioxide. Since estimates vary considerably for measure life and for the appropriate valuation of carbon, the high end can be viewed as representing a measure life of 30 years or a carbon price of \$24 per metric ton or some combination of the two.

⁹ The reward for qualifying homes will be a flat amount based on a typical home size of 2,500 square feet.

VI. New Construction Green Building Funds

Fees collected by the City of Portland through the implementation of the new construction portions of the policy would create separate self-sustaining, revenue-neutral commercial and residential green building funds that will be used to pay for feebate rewards, technical assistance, project recognition and green building education programs. The green building funds may also support green affordable housing grants and additional financial or technical assistance with the permitting processes related to green building. Green building fees would be dedicated to programs to improve environmental performance of buildings and reduce greenhouse gas emissions. Allocation of the commercial and residential green building funds would be determined with oversight from a City-appointed citizen advisory board (either existing or newly created).

VII. Existing Commercial Building Performance Measures

A “commercial” building designation is determined by Bureau of Planning zoning classifications and BDS occupancy classifications including multifamily residences.

Industrial buildings are not required to disclose building performance measures since these building types are generally unoccupied or consume resources primarily through manufacturing processes rather than building operation. However, disclosure of on-site stormwater management still applies to industrial buildings.

To encourage green renovations and on-site stormwater management for existing commercial and multifamily buildings, the policy proposes to require disclosure of environmental performance measures using the U.S. Environmental Protection Agency (EPA) Energy Star Portfolio Manager tool. As part of building performance disclosure, owners or managers of commercial buildings greater than or equal to 20,000 gross square feet must report:

- 1) Building Performance. Participate in the EPA Energy Star Portfolio Manager program, including reporting building characteristics, energy use during the previous 12 months, water consumption levels and indoor environmental quality. If the building is occupied by tenants without accessible energy and water use consumption data (such as triple net leases), the building owner or manager must provide formal requests for utility bill summaries with guidance from OSD. Accuracy of the information provided about the building must be verified by a professional engineer in accordance with EPA requirements for Energy Star certification.

- 2) Stormwater Management. Disclose whether the building qualifies for the City of Portland's Clean River Rewards (CRR) stormwater utility discount program and indicate the extent of stormwater managed on-site. With CRR, Portland ratepayers managing stormwater from a building and site can receive up to a 100% discount for the on-site stormwater management charges, depending on the extent that stormwater is managed on site.

Building performance measures, including Energy Star ratings (as applicable), energy use intensities, carbon dioxide emissions, water consumption rates and other relevant metrics, will be disclosed to OSD through the submittal of an EPA Energy Star Portfolio Manager Statement of Energy Performance or online reporting (http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager). Building owners or managers may choose to voluntarily disclose building performance measures through a public online resource, such as Portland Maps. Public disclosure of building performance could help prospective buyers and tenants make informed decisions.

An Energy Star rating provides a climate-normalized ranking of building energy performance, from 1 to 100, based on a U.S. Department of Energy survey of nationwide commercial building stock. The following building types are currently eligible for an Energy Star rating:

- Bank/Financial Institutions.
- Hospitals.
- Hotels and Motels.
- K-12 Schools.
- Medical Offices.
- Offices.
- Residential Halls/Dormitories.
- Retail Stores.
- Supermarkets.
- Warehouses.

In addition to the EPA Energy Star Portfolio Manager building performance measures, all qualifying buildings that are not registered for the CRR program must fill out and submit the appropriate program form to BES. If a building site does not qualify for the CRR program, this information will also be disclosed.

Disclosure of EPA Energy Star building performance measures and CRR reporting will be phased in as shown in Table 5. Building performance measures must be updated at least once every three years, including third-party verification. All new construction projects covered by the proposed feebate must also participate in disclosure of environmental performance measures within three years after receiving a Certificate of Occupancy. Building owners or managers will

have the opportunity to appeal the policy requirements based on unusual circumstances. EPA Energy Star ratings can identify buildings that have the highest potential for improvement. Owners or managers of buildings eligible for Energy Star ratings that do not achieve a minimum rating of 30 will be contacted by OSD to identify strategies, financing options and incentives to reduce energy use within three years as specified in Table 5. Buildings that do not achieve either a rating of at least 30 or a 15 percent reduction in energy use within three years will be subject to a fine assessed at \$0.01/gross square foot for every point below the EPA Energy Star rating threshold. A fine may be assessed once every three years.

A building's Energy Star rating will be assumed to be zero if disclosure requests for building performance measures are not received by OSD, resulting in a fine of \$0.30/gross square foot. Building owners or managers will have the opportunity to appeal the fine with OSD based on unusual circumstances. To minimize the occurrence of fines, OSD will provide technical assistance and explore energy efficiency financing options including the development of a large-scale fund to accelerate green building upgrades to existing buildings. Any fines collected by the City of Portland will be restricted to funding technical assistance and outreach programs for existing buildings.

Building Size (gross square feet)	Disclosure Date	Performance Improvement Date
Greater than 100,000	January 1, 2011	January 1, 2014
Between 50,000 and 100,000	January 1, 2012	January 1, 2015
Greater than or equal to 20,000 and less than 50,000	January 1, 2013	January 1, 2016

Table 5. Proposed timeline for disclosure of environmental performance measures.

Buildings that achieve a green building third-party certification, including EPA Energy Star, Green Globes, LEED Existing Buildings Operation and Maintenance, or a BetterBricks Office Energy Showdown award will be eligible for project recognition on the OSD Web site. In addition, starting in 2011, OSD will annually recognize and award existing buildings and building operators demonstrating the greatest environmental performance and improvement in efficiency, and achieving at least 75 percent through the CRR stormwater discount incentive program, or an increase in the CRR discount. These buildings will also receive recognition on the BES Web site.

VIII. Institutions with Approved Master Plans

Institutions with City-approved multi-year master plans may elect to achieve portfolio-wide performance improvements to new and existing buildings that meet the performance objectives of the policy in lieu of the proposed green building feebate for new construction projects. These performance commitments will be integrated into master plans and considered as part of the routine master plan review process.

IX. Existing Residential

The proposed policy does not include new requirements for existing residential buildings at this time. Improving the environmental performance of existing homes, however, is essential to achieving the City's climate protection, energy and economic goals. To address this, OSD is currently developing financing options that make energy and environmental upgrades easy and affordable to homeowners. Financing options will consider the needs of low-income homeowners to help mitigate the effects of future energy cost increases.

OSD is also evaluating emerging models from other cities, including Berkeley, California, the Cambridge Energy Alliance from Cambridge, Massachusetts, and the Palm Desert Energy Independence Program. Legislation may be introduced in the 2009 Oregon legislature to enable local or state government to establish funding for large-scale energy retrofits, and the City will continue to partner with others to identify the most promising options.

Existing homes are the largest category of residential energy use and greenhouse gas emissions. Conservation measures are needed to reduce emissions, save on energy costs and offset future cost increases for electricity, natural gas and fuel oil. An effective policy will address upgrading houses for better performance and empowering homeowners to effectively manage energy use.

In order to upgrade energy performance, homes require individual evaluation to identify performance improvement measures appropriate to its particular needs. This strategy depends on availability of a commonly accepted evaluation method. Currently, EA and ETO are piloting an Energy Performance Score (EPS) program. The EPS is expected to provide a simple score that summarizes a home's current and potential performance, and it will likely also produce a set of recommendations for cost-effective upgrade measures. OSD will track the progress of the EPS to determine its rate of acceptance in the market and the number of homes that are upgraded. This information will guide the City in determining whether an incentive or mandate to require an EPS should be considered to accelerate home improvements.

OSD will report to City Council by January 2010 with recommendations for further action.

X. Green Building Technical Assistance and Education

To support implementation of the High Performance Green Building Policy, the City will expand existing green building technical assistance programs and support new programs including:

1. Green building specialists in the Development Services Center to assist permit applicants in meeting the policy goals.
2. Training on LEED and green building design, engineering and construction.
3. Workshops to assist owners and managers of existing buildings with Energy Star Portfolio Manager reporting.
4. BES Clean River Rewards program assistance in registering for the stormwater discount incentive and ideas for possible increase in the percent discount for on-site stormwater managed.

OSD will also work with buyers, tenants, developers, builders, financial and real estate professionals, trade unions, appraisers, other building industry professionals and City specialists to significantly expand awareness of project requirements, green building benefits, and continuous management of building environmental performance.

XI. Monitoring, Evaluation and Adaptive Management

OSD will establish baselines and performance parameters to measure annual progress toward the City's green building goals, including targets set by the City's climate protection strategy and the Architecture 2030 Challenge that requires all new construction to be "carbon-neutral" by 2030. Progress toward goals will be monitored and annual performance reports will be issued, including recommendations for improvement and broadening community awareness. In accordance with building code cycles, specific policy parameters and green building performance criteria will be updated through an administrative process every three years.

XII. Public Participation and Next Steps

We invite you to participate in the green building policy process by reviewing the proposed High Performance Green Building Policy and submitting your comments online at **www.portlandonline.com/osd/gbpolicy**. Comments received by January 20, 2009 will be considered in the next version of this policy in preparation for City Council consideration.

By engaging members of the public and stakeholders with diverse interests, OSD seeks to craft a fair, effective, community-wide green building policy. Upon adoption of the policy, City staff will conduct an administrative rules process that will include specific submittal requirements for the new construction feebate and existing building performance disclosure.

