

## Sustainability Policy – Housing Policy & Development

This document includes the findings, policy goals and policy framework for creating a Sustainability Policy for City-funded one to three-unit new construction residential development projects in the City of Minneapolis. The policy may be applied to City-assisted housing activities, as approved by City Council over time.

### Findings and Policy Basis

This Sustainability Policy is a direct-action response to the [Sustainable Building Policy Resolution](#) approved by City Council on December 13, 2019 as part of the City's declaration of a climate emergency. There is overwhelming scientific consensus that climate change is a real and major threat to human civilization primarily caused by the combustion of fossil fuels. Climate change disproportionately impacts Black, Indigenous, People of Color and immigrant (BIPOC) communities and low-wealth communities. This policy aims to provide sustainable affordable housing which improves indoor and outdoor air quality, home comfort and reduces energy burden for its occupants. Buildings are the city's single largest source of greenhouse gas emissions contributing to climate change. They account for 71% of greenhouse gas emissions in Minneapolis because of the fossil gas that is used for heating most buildings in Minneapolis.

The [Minneapolis Climate Action Plan](#) was adopted in 2013 and provides a road map toward reducing greenhouse gas emissions (GHG) with targets of 15% by 2015 and 30% by 2025. In 2014, Minneapolis passed an 80% reduction goal by 2050 and formed the Clean Energy Partnership with Xcel Energy and CenterPoint Energy. Minneapolis has met its 2015 goal of a 15% reduction in emissions.

In conjunction with the City's Division of Sustainability, Minneapolis Community Planning and Economic Development (CPED) department completed a net-zero/passive house funding pilot as part of the [Minneapolis Homes](#) program. The City also contracted with [TE Studio, Ltd. DBA Intep - Integrated Planning](#) to assist with the development of a report to support the implementation of a Sustainability Policy. As the City evaluated methods toward reducing carbon emissions by 80% or more through these efforts, it became clear that increasing City sustainable design requirements is a critical component to achieving that goal under existing conditions.

Existing City programs require that projects comply with the [Enterprise Green Communities Criteria](#) with Minnesota Overlay as applied by [Minnesota Housing](#). The next step in efficiency standards is the [Department of Energy Zero Energy Ready Homes](#) (ZERH) program. The ZERH program provides an approximate 13% increase in energy efficiency over the existing City requirement of Green Communities. Per the Department of Energy (DOE), homes built through the ZERH program are 40-50% more energy efficient than a typical new home.

### Community Engagement

The recommendation for a Sustainability Policy, specifically in housing, has been a common theme expressed throughout various community engagement initiatives held by multiple City departments over the last three years. Through the [Minneapolis 2040](#), [Minneapolis Homes program engagements](#), and Community Environmental Organization outreach there was a consistent desire to develop affordable housing for residents in Minneapolis who have been historically most impacted by the negative implications of climate change. In addition, members of the [Energy Vision Advisory Commission](#), [Community Environmental Advisory Commission](#), and [Green Zone task forces](#) have expressed support for affordable, healthier, energy efficient and comfortable homes.

### Sustainability Policy Goal

The goal of the policy is to ensure that the City of Minneapolis meets the goals of greenhouse gas emissions reductions by 30% by 2025 and by 80% by 2050. The city would like all new buildings to be net zero energy and achieve carbon neutrality by 2030.

**Policy**

A Sustainability Policy provides a clear and uniform performance standard for one to three-unit development projects. It ensures that housing units built through the program are energy efficient and allows for increasing housing units in Minneapolis without significant additions to carbon emissions. The policy ensures high-quality homes are available to residents across all income levels and increases the resiliency of homes during extreme weather events. Beginning 2021, all one to three-unit housing developments funded through the Minneapolis Homes program will be required to comply with the ZERH standard.

Sustainability Policy																										
<b>Application</b>	This policy applies to all one to three-unit residential new construction projects financed through the Minneapolis Homes program of the City of Minneapolis.																									
<b>Existing Standard</b>	<a href="#">Enterprise Green Communities Criteria</a> with Minnesota Overlay																									
<b>Minimum Efficiency Standard</b>	<a href="#">Department of Energy Zero Energy Ready Homes (ZERH) Program</a>																									
<b>ZERH Program Requirements</b>	<p>The ZERH program requirements are in addition to the existing Enterprise Green Communities criteria with Minnesota Overlay. Where ZERH program requirements are lower than existing standards for building and energy codes, the higher standard will be implemented.</p> <p>DOE Zero Energy Ready Homes must meet all <a href="#">DOE Zero Energy Ready Home National Program Requirements (Rev. 07)</a> including, but not limited to:</p> <ul style="list-style-type: none"> <li>Comply with <a href="#">ENERGY STAR for Homes Program Requirements and Inspection Checklists</a> for:               <ul style="list-style-type: none"> <li>Thermal enclosure</li> <li>HVAC quality installation (contractor and HERS rater)                   <ul style="list-style-type: none"> <li><a href="#">Exceptions for QA-Credentialed HVAC Contractor</a> (December 2016)</li> <li><a href="#">DOE Zero Energy Ready Home "Hardship" Waiver</a> (May 2018)</li> </ul> </li> <li>Water management</li> <li>The target home/size adjustment factor used by ENERGY STAR</li> </ul> </li> <li>Feature energy-efficient appliances and fixtures that are ENERGY STAR qualified</li> <li>Use high-performance windows that meet ENERGY STAR v5.0 and v6.0 specifications (depending on climate zone). The required U and solar heat gain coefficient (SHGC) values are shown below, effective 8/22/2016.</li> </ul> <table border="1" data-bbox="391 1220 1479 1528"> <thead> <tr> <th rowspan="2">ENERGY STAR Window Specs Required for DOE Zero Energy Ready Home Projects<sup>1</sup></th> <th colspan="2">Hot Climates IECC CZ 1-2</th> <th colspan="2">Mixed Climates IECC CZ 3-4 except Marine</th> <th colspan="2">Cold Climates IECC CZ 5-8 and 4 Marine<sup>2</sup></th> </tr> <tr> <th>U-Value</th> <th>SHGC</th> <th>U-value</th> <th>SHGC</th> <th>U-Value</th> <th>SHGC</th> </tr> </thead> <tbody> <tr> <td></td> <td rowspan="2">0.40</td> <td rowspan="2">0.25</td> <td>[CZ 3] 0.30</td> <td>[CZ 3] 0.25</td> <td rowspan="2">0.30</td> <td rowspan="2">Any ≥0.35</td> </tr> <tr> <td></td> <td>[CZ 4] 0.30</td> <td>[CZ 4] 0.40</td> <td>0.32</td> <td>≥0.40</td> </tr> </tbody> </table> <p>1. DOE Zero Energy Ready Home offers multiple compliance paths including area weighting and allowances for passive solar design. See the National Program Requirements, Exhibit 1 with footnotes, for details.</p> <p>2. These U &amp; SHGC values are based on the ENERGY STAR v5.0 Window Specifications. DOE ZERH will review the feasibility of adopting ENERGY STAR v6.0 Window Specifications, which entail lower U values, periodically. Any program update to require the v6.0 window specs will be announced with a minimum 1-year phase-in.</p> <ul style="list-style-type: none"> <li>Meet 2020 International Energy Conservation Code levels for insulation.</li> <li>Follow the latest proven research recommendations by installing ducts in conditioned space or in an optimized location as defined in the program specs.</li> <li>Conserve water and energy through either an efficient hot water distribution system or the</li> </ul>	ENERGY STAR Window Specs Required for DOE Zero Energy Ready Home Projects <sup>1</sup>	Hot Climates IECC CZ 1-2		Mixed Climates IECC CZ 3-4 except Marine		Cold Climates IECC CZ 5-8 and 4 Marine <sup>2</sup>		U-Value	SHGC	U-value	SHGC	U-Value	SHGC		0.40	0.25	[CZ 3] 0.30	[CZ 3] 0.25	0.30	Any ≥0.35		[CZ 4] 0.30	[CZ 4] 0.40	0.32	≥0.40
ENERGY STAR Window Specs Required for DOE Zero Energy Ready Home Projects <sup>1</sup>	Hot Climates IECC CZ 1-2		Mixed Climates IECC CZ 3-4 except Marine		Cold Climates IECC CZ 5-8 and 4 Marine <sup>2</sup>																					
	U-Value	SHGC	U-value	SHGC	U-Value	SHGC																				
	0.40	0.25	[CZ 3] 0.30	[CZ 3] 0.25	0.30	Any ≥0.35																				
			[CZ 4] 0.30	[CZ 4] 0.40			0.32	≥0.40																		

	<p>use of a high-efficiency water heater and fixtures. (Use the <a href="#">WaterSense Excel tool</a> for estimating the stored volume in hot water distribution systems.)</p> <ul style="list-style-type: none"> <li>• Provide comprehensive indoor air quality through full certification in EPA's <a href="#">Indoor airPLUS</a> program.</li> <li>• Accomplish savings on the cost of future solar PV installations by following the PV-Ready <a href="#">checklist</a> for climates with significant solar insolation. This checklist references EPA's <a href="#">solar electric guide</a>. (Note that the solar-hot water provisions of the checklist are no longer mandatory and can be found below with encouraged items.)</li> </ul>
<b>Timeline</b>	The Zero Energy Ready Homes program requirement for one to three-unit projects will be applicable to all Minneapolis Homes Financing projects starting in the year 2021.
<b>HERS Rater</b>	Every Minneapolis Homes Financing project will require a Home Energy Rating System (HERS) rater, who is certified by an accredited Rating Provider, to inspect and test a home in order to evaluate each of the minimum rated features and complete a Home Energy Rating according to the RESNET Standards. Every project will have an initial energy modeling report completed before construction and a final energy audit completed by the HERS rater.
<b>Waiver</b>	The requirements of the policy may be waived, in whole or in part, by the CPED Director after consideration of the advantages and disadvantages of a waiver, and upon demonstration of a compelling public purpose by the developer.
<b>Additional "Stretch" Standards</b>	<p>The Minneapolis Homes Financing program will continue encouraging development beyond policy minimums through financial and scoring incentives in the funding application process.</p> <p>Developers are encouraged to build homes to Net Zero or <a href="#">Passive Home (PHIUS)</a> standards. Additional financial incentives for sustainably certified homes may exist from local utilities. Please visit <a href="#">Xcel Energy</a> or <a href="#">Centerpoint Energy</a> for more information.</p>
<b>Policy Evaluation</b>	CPED will continue to evaluate the effects of the minimum standards and make recommended changes when necessary. This policy will be reviewed no less frequently than every five years from the time the policy is enacted by City Council.