



County of Fairfax, Virginia

MEMORANDUM

SEP 17 2021

DATE:

TO: Board of Supervisors

FROM: Bryan J. Hill
County Executive

SUBJECT: Fairfax Green Initiatives #1 Board Matter: Action Item 2b – Resulting Recommendation: Establishment of a Voluntary Green Building Program

On February 5, 2019, the Board of Supervisors (Board) adopted the Fairfax Green Initiatives Board Matter, introduced by Supervisors Storck, Foust and (now Chairman) McKay. The Board Matter outlines energy-related initiatives for consideration and implementation. Of these initiatives, Land Development Services (LDS) had the lead role in item 2.b., which proposed the following:

"2. Refer to the Development Process Committee for discussion and consideration whether County staff should review and report back to the Committee on the costs and benefits of the following:"

"b. Building design and code changes, including the International Green Construction Code, that could inspire and expedite energy saving practices on all new construction and significant renovations."

Staff provided a response to the above initiative, including recommendations, via the March 24, 2021, Not in Package (NIP).

Subsequently, on April 13, 2021, the Board directed staff via the attached Board Matter to establish a voluntary program that publicly recognizes designers and contractors who build green in Fairfax County and to detail that program in a future NIP.

This document provides an update on the establishment and implementation of the new self-reporting, green building recognition program.

COMPLETION UPDATE

LDS established the new Green Building Recognition Program on September 10, 2021, acknowledging designers and contractors who voluntarily build green in Fairfax County. The program highlights the design, construction, and operation of new construction that reduces

Fairfax Green Initiatives #1 Board Matter: Action Item 2b – Resulting Recommendation:
Establishment of a Voluntary Green Building Program
Page 2 of 2

environmental impact to our community. The self-reporting program is geared towards new residential and commercial development. Projects are identified during the permitting process by the submitting designer/builder selecting the appropriate green building criteria found on the updated Building Plan Review Coversheet and included in their plan submission.

Qualifying criteria is as follows:

- Leadership in Energy and Environmental Design (LEED)
- EarthCraft
- Green Globes
- Living Building Challenge
- Net Zero Energy Building
- Passive House Institute US (PHIUS)
- National Green Building Standard
- International Green Construction Code (IgCC)
- International Energy Conservation Code (IECC) – No Virginia Amendments (**applies to residential construction only**)

The name of the identified designer, builder, Magisterial District, and project (if applicable) will be published on LDS' new [Building Green webpage](#). Staff encourages industry to share a photo of the completed project for inclusion on the webpage.

A [Notice to Industry](#) announcing the new program and webpage was subsequently issued.

If you have comments or questions regarding this memo, please contact Brandy L. Mueller, Environmental Compliance Coordinator, LDS, at 703-324-5175.

Attachment: September 13, 2021, Notice to Industry
April 13, 2021, Board Matter
March 24, 2021, NIP

cc: Rachel Flynn, Deputy County Executive
William D. Hicks, P.E., Director, Land Development Services (LDS)
Jay Riat, Building Official and Director, Building Division, LDS
Dan Willham, Deputy Building Official, Permitting and Code Administration (PACA), LDS
Kambiz Agazi, Environmental and Energy Coordinator, Office of Environmental and Energy Coordination
Brandy L. Mueller, Environmental Compliance Coordinator, LDS

New Voluntary Green Building Recognition Program

The Department of Land Development Services (LDS) has launched a Green Building Recognition Program to acknowledge designers and contractors who voluntarily build green in Fairfax County. The new program supports Fairfax County's environmental vision and recently adopted Green Initiatives. The program highlights the design, construction and operation of new construction that reduces environmental impact to our community.

The self-reporting program is geared towards new residential and commercial development. Projects are identified during the permitting process by the submitting designer/builder selecting the appropriate green building criteria found on the updated [Building Plan Review Coversheet](#).

Qualifying criteria includes the following:

- Leadership in Energy and Environmental Design (LEED)
- EarthCraft
- Green Globes
- Living Building Challenge
- Net Zero Energy Building
- Passive House Institute US (PHIUS)
- National Green Building Standard
- International Green Construction Code (IgCC)
- International Energy Conservation Code (IECC) – No Virginia Amendments (applies to residential construction only)

The name of the identified designer, builder, Magisterial District, and project name (if applicable) will be published on LDS' new [Building Green webpage](#) once the associated building permit is issued. The owner/developer's name will only be reported upon request.

We further encourage designers and builders to share a photo of the completed project for inclusion on the webpage by forwarding to LDS-WebContent@fairfaxcounty.gov and including the building permit number.

If you have any questions, please contact the Environmental Compliance Coordinator at 703-324-5175, TTY 711 or via email at LDSbuildinggreen@fairfaxcounty.gov. Learn more about Fairfax County [Green Business programs](#).



Kathy L. Smith
Board of Supervisors
4900 Stonecroft Boulevard
Chantilly, VA 20151



703-814-7100
sully@fairfaxcounty.gov
www.fairfaxcounty.gov/sully

Sully District

Board of Supervisors Meeting April 13, 2021

Joint Board Matter with Chairman McKay, Supervisor Storck, and Supervisor Foust

Seeking Adoption of the Current and Unedited Version of the International Energy Conservation Code, and Establishment of a Voluntary Fairfax County Program for Green Building

On February 5, 2019, the Board of Supervisors (Board) adopted the Fairfax Green Initiatives Board Matter, introduced by Supervisors Storck, Foust and (now Chairman) McKay. Of these initiatives, Land Development Services (LDS) has the lead role in item 2.b., which proposed the following:

"2. Refer to the Development Process Committee for discussion and consideration whether County staff should review and report back to the Committee on the costs and benefits of the following:"

"b. Building design and code changes, including the International Green Construction Code, that could inspire and expedite energy saving practices on all new construction and significant renovations."

In discussions with staff, it is apparent that the County does not currently have the delegated authority from the state necessary to adopt the International Green Construction Code (IgCC) as a requirement for construction. However, the Board can pursue this energy conservation goal in two complimentary mandates.

First, staff could work at the state-level to seek adoption of the current and unedited version of the International Energy Conservation Code (IECC) and the energy provisions of the International Residential Code (IRC) into the Virginia Uniform Statewide Building Code (USBC) during the 2021 code development cycle. The state has historically rolled back portions of residential energy conservation requirements to levels in the 2009 IECC and IRC. Second and in advance of the adoption of the current provisions of the IECC and IRC into the USBC, LDS staff could establish a voluntary program within 90-days that publicly recognizes designers and contractors who build green in Fairfax County. This could be established by providing a simple, self-reporting mechanism for applicants during the permitting process when submitted projects meet or exceed the national energy standards in the most recent IECC or IRC.

THEREFORE, Mr. Chairman, I MOVE THAT THE BOARD direct the Director of LDS to do the following:

Kathy L. Smith
Board of Supervisors
4900 Stonecroft Boulevard
Chantilly, VA 20151



703-814-7100
sully@fairfaxcounty.gov
www.fairfaxcounty.gov/sully

Sully District

1. Make every possible effort at the state-level to seek adoption of the current and unedited version of the IECC and the energy provisions of the IRC into the USBC during the 2021 code development cycle; and
2. Establish a voluntary program within 90-days that publicly recognizes designers and contractors who build green in Fairfax County. This program will be detailed to the Board in a future NIP.

New Voluntary Green Building Recognition Program

The Department of Land Development Services (LDS) has launched a Green Building Recognition Program to acknowledge designers and contractors who voluntarily build green in Fairfax County. The new program supports Fairfax County's environmental vision and recently adopted Green Initiatives. The program highlights the design, construction and operation of new construction that reduces environmental impact to our community.

The self-reporting program is geared towards new residential and commercial development. Projects are identified during the permitting process by the submitting designer/builder selecting the appropriate green building criteria found on the updated [Building Plan Review Coversheet](#).

Qualifying criteria includes the following:

- Leadership in Energy and Environmental Design (LEED)
- EarthCraft
- Green Globes
- Living Building Challenge
- Net Zero Energy Building
- Passive House Institute US (PHIUS)
- National Green Building Standard
- International Green Construction Code (IgCC)
- International Energy Conservation Code (IECC) – No Virginia Amendments (applies to residential construction only)

The name of the identified designer, builder, Magisterial District, and project name (if applicable) will be published on LDS' new [Building Green webpage](#) once the associated building permit is issued. The owner/developer's name will only be reported upon request.

We further encourage designers and builders to share a photo of the completed project for inclusion on the webpage by forwarding to LDS-WebContent@fairfaxcounty.gov and including the building permit number.

If you have any questions, please contact the Environmental Compliance Coordinator at 703-324-5175, TTY 711 or via email at LDSbuildinggreen@fairfaxcounty.gov. Learn more about Fairfax County [Green Business programs](#).





County of Fairfax, Virginia

MEMORANDUM

DATE: 2021 March 24 | 13:53:30 EDT

TO: Board of Supervisors

FROM: William D. Hicks, P.E., Director
Land Development Services

DS
WDH

SUBJECT: Fairfax Green Initiatives #1 Board Matter: Action Item 2b

On February 5, 2019, the Board of Supervisors (Board) adopted the Fairfax Green Initiatives Board Matter, introduced by Supervisors Storck, Foust and (now Chairman) McKay. The Board Matter outlines energy-related initiatives for consideration and implementation. Of these initiatives, Land Development Services (LDS) has the lead role in item 2.b., which proposed the following:

"2. Refer to the Development Process Committee for discussion and consideration whether County staff should review and report back to the Committee on the costs and benefits of the following:"

"b. Building design and code changes, including the International Green Construction Code, that could inspire and expedite energy saving practices on all new construction and significant renovations."

This document provides the following:

- 1) An overview of the International Green Construction Code (IgCC) and the International Energy Conservation Code (IECC).
- 2) Staff's recommendation for seeking adoption of the current version of the IECC and the energy provisions of the International Residential Code (IRC) into the Uniform Statewide Building Code (USBC).
- 3) The establishment and implementation of a self-reporting, green builder recognition program.

BACKGROUND AND RECOMMENDATIONS

The IgCC is the first national green model code. It provides a whole system approach to the design, construction, and operation of new and existing buildings, including natural resources, water and energy conservation, operations and maintenance, site sustainably, building materials and resources, indoor environmental quality, and other building components. The IgCC applies



Board of Supervisors
Page 2 of 3

to all occupancy types, except low-rise residential buildings under the IRC. Nearby jurisdictions such as the District of Columbia and Maryland, have successfully adopted the IgCC and only apply the regulations to commercial development, relying on the most current version of the IECC to ensure energy efficiency is achieved with residential construction and smaller commercial development.

The Board of Housing and Community Development (BHCD), under authority of the Commonwealth of Virginia, triennially adopts the USBC, which dictates building construction through the state. The USBC, codifies the minimum requirements, as well as the maximum regulatory authority, for residential and commercial construction throughout the state. While each locality can administer a local building permitting and inspection program, it does so exclusively through the USBC. Fairfax County does not currently have the delegated authority from the state necessary to adopt the IgCC as a requirement for construction in the county.

The Department of Housing and Community Development (DHCD), under its authority, stewards the Virginia code development process cycle, which builds upon the International Code Council's (ICC's) Codes and Standards to promulgate a code that meets Virginia's expectations. The code development process seeks subject matter expertise and consensus from the state's code officials. The current USBC derives from the 2015 versions of the ICC International Codes (I-Codes) and was adopted in September 2018. Currently, DCHD intends to adopt a new version of the USBC based on the 2018 I-Codes by fall 2021.

Staff from the Department of Land Development Services (LDS) and the Office of the Fire Marshal (OFM) actively participate in the code development hearings. Given the current progress of code hearings they do not believe that sufficient time or support exists to successfully champion inclusion of the IgCC into the version of the USBC to be adopted this fall. Regardless, much of the energy conservation goals of the Board Matter could be achieved for new development through full adoption of the current and unedited version of the ICC's International Energy Conservation Code (IECC), and the energy provisions of the International Residential Code (IRC) into the USBC. The IECC is a model code for the establishment of minimum design and construction requirements for energy efficiency for both new and renovated commercial and residential buildings, focusing on reductions in energy use and emissions over the life of the building. While the state adopts provisions into the USBC it has historically rolled back residential energy conservation requirements to levels in the 2009 IECC and IRC.

According to the U.S. Department of Energy's Achieving Energy Savings and Emission Reductions from Building Energy Codes: A Primer for State Planning (2015), buildings:

- 1) Consume greater than 40% energy used nationally per year;
- 2) Account for 70% electricity; and,
- 3) 39% carbon dioxide emissions.

Board of Supervisors
Page 3 of 3

Furthermore, the Energy Efficiency Code Coalition when considering the provisions of the 2012 IECC compared to those of the 2009 IECC offers that the incremental cost for a 2,400 square foot home built to the 2012 IECC range from \$1,452-\$2,303 per home (depending on foundation type) with an annual energy costs savings of \$196-\$368 per year. This results in a net positive cash flow within 15 months.

Based on the above and in further support of achieving the Board's energy conservation goals, LDS recommends the following actions to the Board:

- 1) Commission staff to actively seek adoption of the current and unedited version of the IECC and the energy provisions of the IRC into the USBC during the 2021 code development cycle; and,
 - 2) In advance of the adoption of the current provisions of the IECC and IRC into the USBC, the Board commission LDS staff to establish a voluntary program within 90-days that publicly recognizes designers and contractors who build green in Fairfax County. This could be established by providing a simple, self-reporting mechanism for applicants during the permitting process when submitted projects meet or exceed the national energy standards in the most recent IECC or IRC.

If you have comments or questions regarding this memo, please let me know.

cc: Rachel Flynn, Deputy County Executive
Brian Foley, Building Official and Director, Building Division, LDS
Dan Willham, Deputy Building Official, Permitting and Code Administration (PACA),
LDS
Kambiz Agazi, Environmental and Energy Coordinator, Office of Environmental and
Energy Coordination
Brandy L. Mueller, Environmental Compliance Coordinator, LDS