

**Uniform Statewide Building Code - Proposed Phase
Comments**



THE APARTMENT AND OFFICE BUILDING ASSOCIATION
OF METROPOLITAN WASHINGTON

THE VIRGINIA APARTMENT MANAGEMENT
ASSOCIATION



April 3, 2023

Mr. Brett Meringoff, Chairman
Virginia Board of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Chairman Meringoff,

On behalf of the Apartment and Office Building Association (AOBA) of Metropolitan Washington and the Virginia Apartment and Management Association (VAMA), I write to ask you and your colleagues on the Board of Housing and Community Development to stay the course and adopt the proposed regulations relative to the 2021 Uniform Statewide Building Code, Statewide Fire Prevention Code, Virginia Amusement Device Regulations and the Industrialized Building Safety Regulations.

Our two organizations, who together represent the owners and managers of roughly 172 million square feet of commercial office space and 630,000 residential rental units throughout the Commonwealth, applaud your action taken on December 12, and believe that those decisions struck a very fair compromise between life safety and reasonable development in the Commonwealth.

In particular, we again request that you oppose proposal #985 (B918.1-21) which, if approved, would place the entire expense of in-building emergency communication systems on the owner of the building. The current code places

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responsibility for design, installation of the cabling for the system and for providing space for the equipment on the owner, while making the locality responsible for the installation of any additional communication equipment required for the operation of the system; we believe that the code should remain unchanged in this respect. Approval of this proposal could cause an existing building owner to spend thousands of dollars to retrofit and upgrade to a new system if a new building is constructed that now blocks the signal to the preexisting building. If a locality chooses to upgrade technology due to advances such as 5G and beyond, the owner would have to pay for those upgrades; there are no limitations to the costs that could be placed on the property.

We also again request the Board to reject proposal #1169 (FP906.1-21), which would strike the exception for the installation of fire extinguishers in Groups A, B and E equipped with quick response sprinklers and would now require fire extinguishers regardless. This exact same proposal has been before the Board during the last four code cycles (2009, 2012, 2015, 2018) and is now back for the fifth time. Each time, the Board has rejected it based on a lack of data to support such a move as well as the potential for such a change to encourage building occupants to remain in a burning building and attempt to fight a fire rather than safely evacuating. In addition, this provision has worked very well in serving as an effective incentive for owners to utilize, sooner than they might have otherwise, the technology offered by quick response sprinklers to more quickly control and put out incipient or larger fires. Portable fire extinguishers in a fully sprinklered building are a significant building maintenance/operating cost issue for purchase, installation, annual maintenance, inspection costs, vandalism and theft. It simply isn't needed and we strongly urge the Board to, once again, deny this proposal.

Lastly, there were 21 Commercial Energy related proposals in this cycle. 18 of these were non-consensus during the workgroup meetings and our members are opposed to the changes that eliminate all previous State amendments in favor of adopting the 2021 International Energy Conservation Code, whether wholly or in part. We commend the Board for striking the correct balance between sustainable development and the need to conserve energy.

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Thank you again for your consideration of our comments and I look forward to speaking with you at the public hearing on May 8. Please do not hesitate to contact me with any questions.

Sincerely,

Steven Shapiro

Steven Shapiro

Cc: Board of Housing and Community Development
Cindy Davis, Division of Building and Fire Regulations, Department of Housing and Community Development

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May 9, 2023

Ms. Cindy Davis
Deputy Director of Building and Fire Regulations
Virginia Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, VA 23219

Via Email to kyle.flanders@dhcd.virginia.gov

Dear Deputy Director Davis,

The International Code Council (ICC) offers this letter in support of the finalization and adoption of the 2021 Uniform Statewide Building Code and Statewide Fire Prevention Code, based on the 2021 International Codes. Regarding the Industrialized Building Safety Regulations, we offer support of the first ever statewide adoption of the *ICC/MBI Standard 1200-2021: Standard for Off-Site Construction: Planning, Design, Fabrication, and Assembly* and *ICC/MBI Standard 1205-2021: Standard for Off-Site Construction: Inspection and Regulatory Compliance*; The Code Council commends the work of the State Building Code Office to ensure the health and wellbeing of the residents of the Commonwealth of Virginia through its commitment to adopting the most recent editions of codes and standards.

The application of strong building codes and standards plays a large part in ensuring Virginia's communities remain safe and strong for generations to come. The reality is, science and technology are constantly changing; and, as a result, the building community also needs to stay current with construction standards for the safety and economic benefit of Virginia.

The Commonwealth has been a leader in supporting innovation in design and construction while maintaining safety, resilience, and sustainability priorities. The regulation of off-site construction is a prime example. The Department has been a model for jurisdictions across the country. Many of the practices already deployed by the Department are reflected in the ICC/MBI 1200 and 1205 standards. Formally adopting these standards helps assure that the Commonwealth is incorporating best practices into its program and recognizes the important role of regulatory consistency in unlocking the efficiencies inherent in off-site construction.

The International Code Council is happy to have the Commonwealth of Virginia as a partner in the national pursuit of resilient and efficient construction. We are happy to offer assistance as needed by the Department as implementation proceeds.

Warmest regards,

A handwritten signature in blue ink that reads "Lisa Berger".

Lisa Berger
Government Relations Manager
International Code Council

Flanders, Kyle (DHCD)

From: Brooke <brookecloud22@gmail.com>
Sent: Thursday, April 6, 2023 1:45 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Fwd: Questions on Air Conditioning

Good afternoon

Is Air Conditioning part of the public comments on rules? Considering global warming is occurring and temps now reach the mid 80s in April, this rule about May 15- Oct 1 air conditioning is outdated and should be April 1- Nov 1.

It is possible to keep inside temps above 65 even when the outdoor temp is low 70s.

It's not safe for pets and persons to be in apartments where the internal temp is reaching mid 80s in April (with multiple fans going) with no solution for air conditioning .

Please forward this or direct me to the appropriate POC if this email is not correct.

Thanks
Brooke

----- Forwarded message -----

From: **Community Manager** <palazzocondo@gmail.com>
Date: Thu, Apr 6, 2023 at 1:14 PM
Subject: Questions on Air Conditioning
To: Community Manager <palazzocondo@gmail.com>

Management has had several people ask about the air conditioning being turned on.

Per Virginia State law, a building with rental units, must be able to supply heat until May 1, under normal winter conditions. No interior room may be below 65 degrees. If the Building supplies A/C it must be turned on by May 15. The heat has been turned off since Monday. The earliest the Building may legally turn on the AC is May 1.

If you are interested in the State making a change in the dates, that is done through Virginia's code update process. Which is done though the States online system [cdpVA](#). You will need to create an account.

Thank You,
Wil Whetzel CMCA AMS

Palazzo Condominium

Community Manager
703-231-1155

Flanders, Kyle (DHCD)

From: Flanders, Kyle (DHCD) <Kyle.Flanders@dhcd.virginia.gov>
Sent: Monday, April 17, 2023 3:49 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: FW: Air conditioning and heat code

From: Olamide <olamidegp@gmail.com>
Sent: Sunday, April 16, 2023 11:27 PM
To: DHCD-Director <Director@dhcd.virginia.gov>; Davis, Cindy (DHCD) <Cindy.Davis@dhcd.virginia.gov>; Powell, Sandra (DHCD) <Sandra.Powell@dhcd.virginia.gov>
Cc: Love, Amanda (DHCD) <Amanda.Love@dhcd.virginia.gov>; Weinstein, Todd (DHCD) <Todd.Weinstein@dhcd.virginia.gov>
Subject: Air conditioning and heat code

Dear VDHCD Staff,

I hope this note finds you well. I am a citizen of Virginia who lives in an apartment where the building controls the heat and air. As you know, it has been unseasonably warm as of recent, up to 88 degrees some days. We are advised by our property management company because of code they cannot turn the AC on until May 1st. The units are incredibly hot, and potentially unsafe. It's easy to feel dizzy when it is so warm. Additionally, for those of us with allergies, being forced to have the windows open for airflow allows pollen and other allergens to come into our homes. This situation is not good for my health, and I am sure the health of others. We all deserve a safe and healthy place to live. As many have mentioned even in the news - global warming is real, and now it is very hot in April, having the code be until May 1st seems outdated. What can regular citizens do to get this updated and ensure that we have a safe and comfortable home? In Arlington (where I live)- it is going to be 88 on Friday. I already pay higher rent and now will likely have to get a hotel.

Thanks in advance.

Best,

Olamide Goke-Pariola

Sent from my iPhone

Flanders, Kyle (DHCD)

From: Brown, Jeff (DHCD) <Jeff.Brown@dhcd.virginia.gov>
Sent: Wednesday, April 12, 2023 7:31 AM
To: Flanders, Kyle (DHCD)
Subject: FW: AC Mandate

From: Jaime Paige Pierce <jpaigepierce@gmail.com>
Sent: Friday, April 7, 2023 11:35 AM
To: Brown, Jeff (DHCD) <Jeff.Brown@dhcd.virginia.gov>
Subject: AC Mandate

Hi Jeff,

My name is Jaime Pierce. I am a resident of Crystal House in Arlington, VA. I am writing to urge Virginia's Department of Housing and Community Development to change the state's AC mandate. The current mandate is outdated considering climate change. My apartment already reached 84 degrees two days in April, and it's only the 7th day of the month. The mandate even says to maintain temperatures of not more than 77 degrees. Why should an 84-degree apartment be fine just because it occurred in April, not May? Please, please consider taking action to change the mandate below:

6. Section 602.4 Cooling supply. Every owner and operator of a Group R-2 apartment building who rents, leases, or lets one or more dwelling units, rooming units, or guestrooms on terms, either expressed or implied, to furnish cooling to the occupants thereof shall supply cooling during the period from May 15 to October 1 to maintain a temperature of not more than 77°F (25°F) in all habitable rooms. The code official may also consider modifications as provided in Section 104.5.2 when requested for unusual circumstances or may issue notice approving building owners to convert shared heating and cooling piping HVAC systems 14 calendar days before or after the established dates when extended periods of unusual temperatures merit modifying these dates.

--

Jaime Paige Pierce
Pronouns: she | her | hers
jpaigepierce@gmail.com

From: [Glen Besa](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Bring VA Code up to 2021 IECC standards or risk losing millions
Date: Monday, May 8, 2023 2:39:50 PM

To Members of the BHCD:

The BHCD needs to bring Virginia's building code up to 2021 IECC standards or risk jeopardizing tens of millions of dollars that Virginia would be eligible to receive under the [EPA Climate Pollution Reduction Grant program](#).

There is \$4.5 billion in grant funds that are to be disbursed by the EPA next year, and if Virginia has an out of date, inefficient code, then VA DEQ and our local governments will be handicapped in their ability to compete for these grants. Buildings are a major source of GHGs, and limiting the governments' ability to rein in these emissions through efficiency hurts our chances to secure these grants.

Before BHCD takes its lowest common denominator approach to setting the building code for the state of Virginia and all its local subdivisions, you had better check with VA DEQ which is the state lead on this EPA grant program.

I'll also add that to use "affordability" as a basis to set a code that seriously lags the 2021 IECC standards completely ignores the energy burden that an inefficient building imposes on the occupants for the life of the home. With the rising costs of energy, an inefficient house is not an affordable house.

Thank you,
Glen Besa

--

Glen Besa
North Chesterfield, VA
glenbesa@gmail.com
c-804-387-6001
Pronouns: he, him, his

Board of Housing and Community Development Meeting
December 12, 2022

My name is Keith Brower. I am the former Fire Chief and Fire Marshal from Loudoun County and I am writing in representation of myself. Although I am no longer a resident of Virginia, I still maintain significant personal interests in the Commonwealth.

At the past Board of Housing and Community Development meeting on October 3, 2022, Board of Housing members met to consider code proposals for the 2021 Virginia Code adoption process. I am writing to strongly object to the process that was used in this process.

The process that was utilized to update the fire and building codes through the Department of Housing and Community Development Board silenced the voices of the Virginia Fire Service and the many members of committees and subcommittees who spend countless days and hours participating in the code development process. By not allowing discussion, testimony and consideration on non-consensus code proposals, our voices were silenced. Many of these code proposals were extremely important to the safety of firefighters and the citizens of the Commonwealth.

Members of the Board of Housing and Community Development voted to bypass discussion and not allow the voice of Virginia's Fire Service to be heard surrounding the many common sense safety measures, many of which have dramatic life safety proposals. In a process where it only takes one person in a sub-workgroup for a code proposal to be considered non-consensus, this is hardly a collaborative process.

As board of housing members, you have an obligation to represent all the citizens in the Commonwealth of Virginia in advancing the life safety of our citizens and you failed in this process.

At a time when the United States Fire Administrator is calling for stronger building and fire prevention codes throughout America, this action to totally disallow debate is tone deaf, irresponsible, and counter to the moral and ethical values public bodies are charged to exemplify.

I urge you to reconsider your actions and take whatever means necessary to open the debate and deal formally with these proposals.

My name is Judy Gayer. I'm a resident of McLean, Virginia. Thank you for the opportunity to submit comments on this important matter. I'd like to briefly discuss the pros and cons of adopting the current (2021) version of the International Energy Conservation Code (IECC), with none of the weakening amendments included in the Board's proposed final rule.

There are several **pros** to upgrading Virginia's building code to satisfy the requirements of the current IECC.

One: As reported in a [2021 study](#) by the Pacific Northwest National Laboratory commissioned by the U.S. Department of Energy (the "2021 Study"), full compliance with the IECC would benefit building owners and occupants. Research demonstrates that buildings constructed to high efficiency standards *save more money for occupants over time* than they add to the upfront cost.

Two: As also reported in the [2021 Study](#), requiring full compliance with IECC would provide health, safety, air quality and climate benefits for all Virginians over the 70-year period that new buildings generally remain in use.

Three: Adopting the full IECC wouldn't prevent builders from continuing to make excellent profits. Builders already have to meet IECC requirements when they work across the river in [Maryland](#), and if they didn't make enough profit, they wouldn't continue to build there. It's also not an affordability issue for buyers or occupants because homes built in Maryland sell in the same price range as in Virginia, even though they are required to meet IECC standards.

Four: The Board is required by Virginia law to adopt energy efficiency standards "at least as stringent as" the latest IECC, unless it can show that the incremental construction costs would exceed the value of energy savings and other benefits over time. See [If the Board wants to avoid conforming to the full current IECC, it must demonstrate that in fact the value of energy savings and benefits are less than the added marginal cost.](#) I don't believe the Board could possibly do that. However, to my knowledge, the Board hasn't even tried to do that. That is a clear violation of law.

So on the pro side of adopting the full IECC we have greater affordability for building occupants, better health, reduced emissions, reduced contributions to climate change and legal compliance.

On the con side we have builders who object to paying more up front in construction costs, even though they have to incur those same expenses when they build across the river in Maryland, and even though the additional investment would be more than paid back in public benefit.

Buildings represent an enormous portion of all energy use and are a major contributor to climate change. Requiring builders to build homes that are energy efficient is a key part of any plan to address the climate crisis. Please reverse course and adopt the full 2021 IECC, with no weakening amendments.

Thank you for considering my comments.

From: [Natalie Pien](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Building Code Comments
Date: Monday, May 8, 2023 9:44:35 AM
Attachments: [image.png](#)
[image.png](#)
[image.png](#)

Hello. I submit the following written comments.

Board of Housing and Community Development
May 8, 2023 Public Input
Natalie Pien

Hello. My name is Natalie Pien. I live in Leesburg, VA and I am a member of the Sierra Club Great Falls Group. Thank you for the opportunity to share my thoughts.

I am concerned that the requirements of HB2227, approved on March 30, 2021, have not been met. The law states “That upon each publication by the International Code Council of a new version of the International Energy Conservation Code (IECC), the Board of Housing and Community Development (the Board) shall consider adopting amendments to the Uniform Statewide Building Code (Building Code) to address changes in the IECC relating to energy efficiency and conservation.”

The IECC is updated every three years. Virginia Energy Conservation Code has not been substantially updated since 2015. [According to the U.S. DOE](#), if the 2021 IECC were adopted:

1. consumers would achieve significant economic benefits:

Consumer Impact

Metric	Compared to the 2015 IECC with amendments
Life-cycle cost savings of the 2021 IECC	\$8,376
Net annual consumer cash flow in year 1 of the 2021 IECC ²	\$250
Annual (first year) energy cost savings of the 2021 IECC (\$) ³	\$413
Annual (first year) energy cost savings of the 2021 IECC (%) ⁴	17.9%

2. Statewide emissions would decrease significantly:

Statewide Impact - Emissions

Statewide Impact	First Year	30 Years Cumulative
Energy cost savings, \$	7,192,000	2,487,000,000
CO ₂ emission reduction, Metric tons	56,430	28,420,000
CH ₄ emissions reductions, Metric tons	3.10	1,559
N ₂ O emissions reductions, Metric tons	0.416	209
NOx emissions reductions, Metric tons	28.75	14,480
SOx emissions reductions, Metric tons	40.82	20,560

- 3.

Jobs would be created immediately and the cumulative impact over thirty years is significant:

Statewide Impact – Jobs Created

Statewide Impact	First Year	30 Years Cumulative
Jobs Created -- Reduction in Utility Bills	320	9,514
Jobs Created -- Construction Related Activities	546	16,240

Virginians deserve all these efficiency benefits, particularly the economic benefits. Economic benefits will address the energy burden experienced by Virginia’s low-income households, rural households, and people of color. [Energy burden](#) is “highest for low-income households, for rural households, and for people of color. In Virginia, low-income households spend, on average, 10.4 percent of their income on energy bills, while the average energy burden for higher income households is only 2.3 percent. Low-income homes are often less efficient and require costly repairs before they can be weatherized, making high bills unavoidable. Available energy assistance programs from the government or investor-owned utilities like Dominion Energy are unable to meet the need. Less than 12 percent of families living at or below 150 percent of the federal poverty level received assistance in Fiscal Year 2021.” Today, [neither government programs nor investor-owned utility programs are sufficient to alleviate this burden](#). Virginia’s building code must be improved to solve this equity problem.

Updating the Virginia Energy Efficiency code also translates into health benefits for each home. My husband and I have electrified our heating, cooking, and transportation. My husband is very hands on and hates to hire contractors. He has done the upgrades required for electrification himself, including:

1. Installing an EV Charger, saving [\\$1,800 contractor cost](#).
2. Replacing our gas cooktop with induction, saving \$1,300 contractor cost.
3. We did hire a contractor to install electric heat pumps to heat and cool our home.

Others are not so fortunate and since the code doesn’t require that homes be “electrification ready” these upgrades are cost prohibitive.

Because my husband and I have electrified our home, we enjoy better health by breathing cleaner air free from gas leaks & pollution from gas stoves. We have a cleaner conscience, too, knowing that our home is no longer powered by fossil gas. Our home does not create the demand for fossil fuels that it once did. The building code must be updated to reduce the demand for fossil fuels from all homes to create healthier homes and to reduce greenhouse gas emissions.

Today, I urge the Board to fulfill its HB2227 legal requirement to “assess the public health, safety, and welfare benefits of adopting standards that are at least as stringent as those contained in the IECC, including potential energy savings and air quality benefits over time compared to the cost of initial construction.” As stated earlier, these benefits have been well documented. It is way past time to update Virginia’s Energy Conservation Code.

Thank you for your serious consideration.

Natalie Pien
20644 Gleedsville Rd
Leesburg, VA 20175
703 963 3573

From: [Glenn Dean](#)
To: [Flanders, Kyle \(DHCD\)](#)
Subject: Comment for today's hearing
Date: Monday, May 8, 2023 8:43:15 AM

While I wish to participate and contribute for the duration of today's Public Hearing on the next code adoption cycle, as of this morning I'm not able to. I may only be able to call in for the first portion of the hearing. So please accept and convey this written comment to the Board. Thank you.

On the subject of residential fire sprinkler systems, in particular for single-family homes, given all the true and blatantly false rhetoric over the past cycles, I suggest the entirety of the Board direct and set up, through the Code and Standards Committee, the establishment of a balanced sub-committee for this upcoming cycle specific on residential sprinkler systems. By "balanced" I mean that it be comprised of members of the Board itself who are opposed to such systems, an equal number of Board members in support, and an equal number of Board members who know nothing about these systems, beyond the concept. These members should actively participate in the all the properly advertised meetings, but not to the exclusion of other Board members who wish to witness the debates firsthand, for the purpose of rooting out what is false and what is true about residential fire sprinkler systems. Based on the statutory language of § 36-99 of the Code of Virginia, stating in part, "The provisions of the Building Code and modifications thereof ***shall be*** such as to protect the health, safety and welfare of the residents of the Commonwealth, provided that buildings and structures ***should be*** permitted to be constructed, rehabilitated and maintained at the least possible cost consistent with recognized standards of health, safety, energy conservation and water conservation,..." (Emphasis added to hi-lite the legislative hierarchy of "shall" versus "should".) it is compulsory of the Board as a whole to give serious and unbiased consideration of this important and serious provision within the model code.

Thank you.

May 9, 2023

**To: Virginia Board of Housing and Community Development
Virginia Department of Housing and Community Development**

**From: Virginia Chapter of the Sierra Club
Faith Alliance for Climate Solutions
Climate Action Alliance of the Valley;
Climate & Clean Energy Working Group, Virginia Grassroots Coalition
Citizens' Climate Lobby - Fairfax County Chapter**

Re: Comments on Proposed Final Rule for 2021 Cycle to Update the USBC

These comments are submitted on behalf of **the Virginia Chapter of the Sierra Club, Faith Alliance for Climate Solutions, Climate Action Alliance for the Valley, and the Climate & Clean Energy Working Group, Virginia Grassroots Coalition, and Citizens' Climate Lobby – Fairfax County Chapter**.¹ Collectively, these organizations have more than 30,000 members who are residents of Virginia.

A. SUMMARY

The Proposed Final Rule (Virginia Register February 27, 2023, Vol. 39, Issue 14) is inconsistent with Virginia law and the evidence. The Board has long been directed by Virginia law to adopt building code standards that are based on national model codes and that minimize construction “consistent with recognized standards of health, safety, energy conservation and water conservation.” Virginia law was amended, in 2021 to clarify that energy efficiency standards are to be made “at least as stringent as” the latest International Energy Conservation Code (IECC), whenever the overall benefits, including the value of energy savings, air quality and other benefits, over time, exceed the incremental construction costs. The IECC’s standards are supported by the International Code Council’s lengthy and thorough development processes, by the record in these proceedings and by independent findings by the U.S. Department of Energy (DOE) and the Pacific Northwest National Laboratories (PNNL).

As confirmed by DOE and PNNL, full compliance with the IECC without weakening amendments benefits residents and the public by saving energy, reducing costs to building

¹ **Virginia Chapter of the Sierra Club** has over 20,000 members. The Sierra Club is a non-profit, membership organization dedicated to exploring, enjoying and protecting wild places; to promoting the responsible use of the Earth’s resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out those objectives.

Faith Alliance for Climate Solutions (FACS) is a non-profit organization with more than 185 faith communities and 3,600 faith-based activists in Virginia whose mission is to develop local solutions to climate change.

Climate Action Alliance of the Valley (CAAV) is an organization representing at least 1,000 residents of the Shenandoah Valley. CAAV’s mission is to limit the impact of humans on Earth’s climate and minimize the effects of inevitable climate change in order to protect the future for Earth and its inhabitants.

Virginia Grass Roots Coalition includes over 50 grass roots organizations with over 10,000 members. <https://reston-data-visualization-fairfaxcountygis.hub.arcgis.com/apps/reston-zoning-activity-data-hub/explore>

Citizen Climate Lobby – Fairfax County Chapter is a non-profit, nonpartisan grass roots organization for which reducing carbon pollution with building electrification and efficiency is part of the climate solution.

occupants and cutting harmful pollution. Both the 2021 IECC's commercial and residential provisions produce economic savings and air pollution reductions compared to the current 2018 IECC standards. The savings, air quality and other benefits are even greater when compared to earlier IECC codes, including those dated 2015, 2012, 2009 and 2006.

To be consistent with the law and the record, the final rule must adopt the 2021 IECC without weakening amendments, as well as certain additional energy-saving proposals that meet the applicable legal standards. Unfortunately, the proposed final rule would unreasonably preserve decade-old weakening amendments for the residential code 2021, reject new standards that meet statutory standards and add an extraordinary, unjustified weakening amendments to the commercial code to benefit builders of three broad categories of buildings (Categories Factory Group F, Storage Group S & Utility and Miscellaneous Group U (collectively referred herein to as Categories F, S and U). The proposal would leave parts of the residential code at the 2009 IECC level and roll parts of the commercial code back to 2006 levels. The proposed final rule is unsupported, arbitrary and unlawful.

Accordingly, the **proposed** final rule must be amended to adopt the full 2021 IECC without weakening amendments and to adopt several additional proposals discussed herein. The result would save energy, reduce pollution and reduce residents' costs, and otherwise serve the public health, safety and welfare.

It is important to note that Congress has recently enacted laws (e.g., the Inflation Reduction Act) to provide funds to states that adopt the IECC and to encourage builders, landlords and residents to increase their energy efficiency. These further shift the balance of benefits over costs and provide additional reasons to adopt energy saving standards "at least as stringent as" the latest IECC.

B. APPLICABLE LEGAL STANDARDS

As the Board recognized at the outset of these proceedings (NOIRA published November 22, 2021),

"The use of the newest available model codes and standards in the USBC assures that the statutory mandate is met to base the regulation on the latest editions of nationally recognized model codes to assure the protection of the health, safety and welfare of the residents of Virginia and that buildings and structures are constructed and maintained at the least possible cost."²

The NOIRA also acknowledged: "As the basis for Virginia's building code it is important to stay in sync with the national model codes."

² The NOIRA can be found at <https://townhall.virginia.gov/L/viewstage.cfm?stageid=9475> . The Board's notice of the January 10, 2021 public hearing describes its purpose as "a public hearing to receive comments on regulations prior to the adoption of proposed regulations. Another public hearing will be held after the adoption of proposed regulations." <https://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=34484>

The requirement to approve substantive standards consistent with national model codes, such as the ICC’s IECC, has long been part of Virginia law. Section 36-99A of the Virginia Code has long prescribed that the purposes of the USBC are to protect the public and implement recognized standards of energy conservation and water conservation:

“A. The Building Code shall prescribe building regulations to be complied with in the construction and rehabilitation of buildings and structures, and the equipment therein as defined in § [36-97](#),The provisions of the Building Code and modifications thereof *shall be such as to protect the health, safety and welfare of the residents of the Commonwealth, provided that buildings and structures should be permitted to be constructed, rehabilitated and maintained at the least possible cost consistent with recognized standards of health, safety, energy conservation and water conservation. . . .*”
(*Emphasis added.*)

The term “equipment” is defined by §36-97 to include “heating, electrical, ventilating, air-conditioning and refrigeration equipment . . . and other mechanical additions or installations.” Further, § 36-99.6:3. Regulation of HVAC facilities requires promulgation of standards for HVAC equipment:

“The Board shall promulgate regulations in accordance with the Administrative Process Act (§ [2.2-4000](#) et seq.) establishing standards for heating, ventilation, and air conditioning (HVAC) facilities in new, privately owned residential dwellings.”

Section 36.99C recognizes the value of performance-based options, as are provided by the IECC: “C. Where practical, the Code provisions shall be stated in terms of required level of performance, so as to facilitate the prompt acceptance of new building materials and methods.”

Because the USBC’s energy efficiency standards fell behind the IECC and were not brought in line with the IECC over a period of years, the 2021 General Assembly enacted VIRGINIA ACTS OF ASSEMBLY – 2021 SPECIAL SESSION I, CHAPTER 425, Section 1 (referred to herein as “H2227”) to remove any doubt about the legislative directions for adopting building code standards “consistent with” or even stronger than the IECC. It requires consideration of adopting energy efficiency standards “at least as stringent” as the latest IECC. And, it requires making the decision based on an assessment of “**the public health, safety, and welfare benefits of adopting standards that are at least as stringent as those contained in the IECC, including potential energy savings and air quality benefits over time compared to the cost of initial construction.**”

“Be it enacted by the General Assembly of Virginia:

1. § 1. *That upon each publication by the International Code Council of a new version of the International Energy Conservation Code (IECC), the Board of Housing and Community Development (the Board) shall consider adopting amendments to the Uniform Statewide Building Code (Building Code) to address changes in the IECC relating to energy efficiency and conservation. In doing so, the Board shall consider adopting Building Code standards that are at least as stringent as those contained in the new version of the IECC. For the purposes of this act,*

*a standard **shall** be deemed to be as stringent as one contained in the IECC if such standard would perform the same function as that contained in the IECC without using more energy than would be used under the IECC standard. In conducting its review, the Board **shall** assess the public health, safety, and welfare benefits of adopting standards that are at least as stringent as those contained in the IECC, including potential energy savings and air quality benefits over time **compared to** the cost of initial construction.” (Emphasis added.)³*

Reading these code sections together, weakening amendments to the latest IECC cannot lawfully be adopted or carried forward from one cycle to the next based upon builders’ preferences during work group processes. The statutory starting point is for Virginia’s USBC to be “consistent with” national codes generally and “at least as stringent as” the IECC, the burden of proof would be on opponents of adopting standards at least as stringent as the IECC. Non-weakening amendments to the IECC – i.e., amendments that provide an alternative procedure or means of compliance while remaining “consistent with” the IECC are permissible unless more stringent standards would save energy, reduce pollution, or otherwise protect the public health, safety and welfare.

C. THE BOARD DID NOT FOLLOW APPLICABLE LEGAL STANDARDS

Unfortunately, the Proposed Final Rule is arbitrary and inconsistent with legal standards and materials supporting proposals submitted during the Board’s work group process.

At its October 2022 meetings, with no substantive discussion of the law, evidence or merits, a divided Board voted, upon a single motion, to reject all proposed code amendments opposed by builders during the work group process – whether the proposals were to remove past weakening amendments or to be more stringent than the IECC. The movant cited the lack of “consensus” (unanimity) in informal work groups due to builder opposition, while ignoring support and evidence from numerous organizations, individuals and jurisdictions. Without any discussion, the Board majority then voted in favor of a proposal by a small group of warehouse builders to move efficiency standards *backwards* by 16 years to 2006 levels for commercial buildings in Categories F, S and U. It voted to make this change despite the applicable legal standards and despite the absence of “consensus” due to strong objections and evidence from the public. In effect, the supposed need for “consensus” was arbitrarily invoked or disregarded to grant builders’ wishes.⁴ There was no discussion or analysis of the relevant statutory factors for

³ IECC standards were adopted by the H2227 legislation because Virginia has long accepted the IECC as the appropriate model code for energy conservation. Though a national model code, the IECC recognizes regional climatic differences. The IECC has been thoroughly vetted by multi-year review process that involves builders, architects, material manufacturers, non-governmental organizations, trade associations, and governmental bodies around the country. DHCD officials have often participated in ICC development process. Further, as required by federal law, the benefits and costs of implementing the IECC have been analyzed by DOE and PNNL, which have found that each update since 2006 provides energy savings and other benefits that exceed the incremental costs of construction.

⁴ For years, Virginia considered “consensus” (unanimity) in its informal work groups as a prerequisite for new *departures* from the IECC and for changing past Virginia amendments to the IECC. Requiring consensus to adopt a one-time weakening amendment to the IECC works to keep Virginia’s code “consistent with” the IECC, provided all interests are represented and eligible to vote. Unfortunately, requiring a “consensus” to remove past weakening amendments unreasonably perpetuates one-time concessions made in past work groups by granting builders a veto in work-group votes. Affording builders a veto over past weakening amendments effectively prevents Virginia’s building code from ever becoming “consistent with” or more stringent than the IECC even when residents and the

any of the Board's actionsThe Board directed Staff to write proposed final regulations based upon the Board's votes

After the Staff drafted a proposed final rule as directed, the Board voted, at its December meeting, to issue proposed final rules without substantive discussion of evidence in the record or the applicable legal standards for updating building codes.

Far from proposing standards “consistent with” or “at least as stringent as” the latest IECC, the Board’s final proposal would (a) leave Virginia’s residential energy efficiency standards stuck at 2009 standards for wall insulation and air leakage, (b) fail to adopt efficiency standards that were shown to provide benefits to residents and the public that exceed incremental construction costs, and (c) weaken the energy efficiency standards for commercial Categories F, S and U by moving them back to 2006 standards without any credible evidence. If the proposed final rule is adopted, Virginia would be four IECC cycles out of date with respect to critical efficiency standards for new residential construction and five IECC cycles out of date for critical efficiency standards applicable to over 120 types of buildings contained in building Categories F, S and U.⁵

The Proposed Final Rule would favor builders over the public, including evidence and arguments presented by groups supporting at least full IECC compliance, including citizen-based organizations that have more than 30,000 Virginia members; local jurisdictions (including Virginia’s largest county with approximately 14% of statewide population); an organization of Virginia physicians who are concerned about adverse health impacts to the public; and national organizations that have focused on energy efficiency standards and participated in IECC processes.

D. THE PROPOSED FINAL RULE WOULD HARM BOTH OCCUPANTS AND THE PUBLIC, HEALTH SAFETY AND WELFARE

public would benefit from adopting standards. That is why weakening amendments to Virginia’s adoption of the 2012 IECC still persists. The consensus “requirement” also empowers builders to veto any proposal that is more stringent than the IECC.

In this cycle, the proposed final rule would deviate from the past “consensus” practice in order to grant certain commercial builders a massive, unjustified weakening amendment over the strenuous objection of other work group participants. Once such a weakening amendment is adopted, the Board’s selective application of the “consensus” requirement empowers builders to forever block strengthening amendments to achieve IECC compliance through opposition in future work groups.

Passage of H2227 was needed to make Virginia’s code become at least as stringent as the IECC.based on evidence and legal standards, not builder votes in informal work groups. Unfortunately, it was ignored by the Board. As reflected in a Board member’s statement in Attachment A, the problems with the Board majorities use of “consensus” expectations is not limited to the area of energy efficiency.

⁵ In the most recent state scorecard published by the American Council for an Energy Efficient Economy (ACEEE), Virginia received only 3.5 out of 12 points for “Building energy efficiency policies” and 0 out of 3 possible points for “Appliance efficiency standards.” ACEEE, [2022 State Energy Efficiency Scorecard](#) (December 2022). The proposed final rule would further weaken Virginia’s rankings.

As discussed in the sections below and in CDPVA submissions, both building users and the public generally will benefit from implementation of energy efficiency standards at least as stringent as those set forth in the IECC. Improving energy efficiency in building structures and equipment is the best defense against higher ongoing energy costs to building occupants and against higher public costs, including environmental and health harms from air pollution and the fossil-fuel-driven climate crisis which is profoundly harming the U.S., Virginia and world and is accelerating. Failing to implement building standards “at least as stringent” as the latest IECC would lock-in energy waste, higher costs and ever worsening harms from air pollution and climate change. The harms would last for the 50-100 or more year expected lives of new buildings and the far longer duration that climate pollutants remain in the atmosphere and ocean. Two hundred year old buildings are still used in parts of the U.S.

Examples of the benefits from energy efficiency standards at least as stringent as the IECC include:

- **Energy and Cost savings:** Greater efficiency saves residents (whether owners or tenants) energy and money by reducing monthly energy bills for the lives of affected properties and by avoiding much more costly retrofits. Occupants of commercial buildings also benefit from savings attributable to IECC compliance. As repeatedly shown in independent analyses, the energy cost savings, over time, from IECC compliance exceed the incremental construction costs. The savings occur every year even considering the incremental impacts from construction costs. The cost savings will be potentially be greater over the next decade as a result of incentives provided by laws such as the Inflation Reduction Act.
- **Lower utility rates for all Virginians:** Reducing demand in peak and off-peak periods reduces utilities’ costs for new generation and for purchasing fuel and power in high-cost peak periods. Lower demand reduces upward pressures on rates for electricity and natural gas. That benefits all customers and Virginia’s economy. In addition, constructing more efficient buildings would, over time, reduce or eliminate the need for utilities to fund energy efficiency improvements for customers.⁶
- **Improved affordability.** As further discussed in Attachment B, and as recognized by DHCD and Virginia law, *affordability is a function of mortgages/rents and utility costs*, which are relevant throughout the lifecycle of a building, not just builders’ costs and prices. *These are the types of costs that DOE analyzes when it concludes that occupants will save money, year after year, over the lives of buildings, notwithstanding some incremental construction costs.* Not only do residents of more efficient dwellings save money, better energy efficiency reduces the impacts of widely varying fossil fuel costs and overall

⁶ Under Virginia law, Virginia’s largest utilities are required to spend over \$1 billion on energy efficiency improvements in the 10 years ending July 1, 2028. <https://lis.virginia.gov/cgi-bin/legp604.exe?181+ful+CHAP0296> In addition, pursuant to the Clean Energy and Community Flood Preparedness Act half the funds received by the Commonwealth from RGGI carbon dioxide auctions will go to energy efficiency. <https://lis.virginia.gov/cgi-bin/legp604.exe?201+ful+CHAP1280> Those are only two of the measures Virginia has devoted to energy efficiency.

increases of energy prices over time. Greater energy efficiency thus reduces risks of defaults on mortgages, rents and utility bills and the consequent harms to families, communities, and businesses. Buyers are not served by being sold new dwellings whose energy cost burdens jeopardize their occupants' economic security, stability, and comfort.⁷

- **Improved comfort and indoor air quality:** Better-insulated and less leaky envelopes and installing heat pumps improve indoor air quality and comfort for residents. In addition to reducing fuel combustion, these reduce transmission indoors of mold that can build up in walls.
- **Resiliency:** Tighter, better insulated buildings maintain occupancy comfort longer during outages. They also reduce risks of energy cost increases that can trigger mortgage and rent defaults.
- **Air Quality and Climate Mitigation and Resiliency:** As discussed more fully in Attachment C and in our proposals, reducing energy demand is critical to improving air quality, including mitigating rapidly growing climate damage to people's lives, health and property, public infrastructure, agriculture, lands and resources, oceans, and the economy. Approximately 35-40% of U.S. carbon emissions are attributable to building energy usage.⁸ Likewise, much of other forms of air pollution (e.g., SO₂, particulates, NO_x, CO, methane) are attributable to energy consumption in buildings either as electricity or as direct fossil fuel combustion.
 - The adverse health consequences of air pollution include asthma, cardiovascular harm, brain damage, and, in the case of heat-trapping gases, a growing frequency of heat illnesses.
 - Virginians around the state are increasingly threatened by storms, sea level rise, heat, diseases, economic and security disruptions, etc. Destruction of infrastructure and other man-made resources and to natural resources is also occurring.
 - Climate change is accelerating and the harms threaten to accelerate faster as feedback effects drive the world past "tipping points." Nor is there any quick turnaround: CO₂ will drive climate change for many centuries after it is emitted, as will some other greenhouse gases.
 - The growing danger of heat illness is increasingly restricting periods of outdoor living, work and sports.⁹

⁷ Buyers want more energy efficiency. Not only will they save during occupancy their home will be more valuable for resale. <https://myhome.freddiemac.com/blog/homeownership/20200825-selling-green-home>

⁸ "[B]uildings account for about 40% of all U.S. energy consumption and a similar proportion of greenhouse gas emissions. Most of these structures will be in use for decades, so reducing their energy use will not only ensure long-term cost savings for homeowners and businesses, but also must be a central component of any meaningful climate strategy." Alliance to Save Energy <https://www.ase.org/categories/buildings>

DOE has confirmed the large impact that buildings have on energy use and greenhouse gas emissions and energy waste: "America's 129 million residential and commercial buildings collectively cost well over [\\$400 billion](#) a year to heat, cool, light and power – accounting for 35% of U.S. carbon emissions, 40% of the nation's energy use, and 75% of electricity use. And yet, buildings waste at least 30% of the energy they consume."

<https://www.energy.gov/articles/secretary-granholm-announces-new-building-energy-codes-save-consumers-money-reduce-impacts>

⁹ See <https://www.virginiaclinicians.org/fact-sheets> ; <https://states.ms2ch.org/va/>

- **Enhanced economy.** A stock of more energy efficient buildings will make Virginia a more attractive and affordable place to start or grow a business and to raise families. Reducing energy dependence, costs and pollutants will strengthen Virginia’s economy, making it more competitive and less vulnerable to energy price and supply disruptions. Improving energy efficiency will also improve the profitability of companies that save energy, reduce future expenses for retrofits and fuel costs, reduce dependence on foreign energy sources and fluctuating energy prices, and reduce the damage to land, water and communities that results from fossil fuel energy production, transportation and distribution. Energy efficiency investments also create jobs as documented by DOE and others.
- **Reduced tax burdens.** Building more efficient, less polluting homes will reduce future costs to taxpayers by reducing subsidies needed for efficiency retrofits, reducing climate resiliency investments, and take advantage of federal tax incentives for efficiency.¹⁰
- **“Future-proofing.”** With the average building being used for 50-100 years and many individual buildings operating for more than 100 years, efficiency deficiencies will harm residents and the public for decades. Building highly efficient dwellings and other buildings is critical to protecting current and future generations. Building up the base of highly efficient buildings must begin with each new residential and commercial building. Retrofits are costly and unlikely to reach the efficiency levels that can be achieved in new construction.
- **State policies.** In addition to the statutory building code policy for efficiency standards “at least as stringent as” the latest IECC, saving total energy in buildings is needed to meet other state and local goals to reduce energy costs and to cut climate pollution and achieve net-zero climate pollution.
 - Cutting energy use and emissions is needed to implement Virginia's stated Clean Energy Policy (§ 45.2-1706.1. (Effective October 1, 2021), which supports decarbonization and energy efficiency. It states, among other things, that it is "**the policy of the Commonwealth to: ...8. Promote building and construction practices that reduce emissions associated with built environment, including energy efficiency targets, new building standards,** and transit-oriented and other sustainable development practices...." Greater energy efficiency benefits building occupants and the Commonwealth based on total energy savings regardless of fuel type.

¹⁰ The legacy of less efficient buildings has led to government expenditures of hundreds of millions of tax dollars (direct subsidies and tax breaks) to retrofit older dwellings to try to improve energy efficiency to reduce costs to residents and reduce pollution to everyone. Unfortunately, retrofit costs are much higher and unlikely to achieve the energy savings that can be achieved at lower costs during new construction. In addition, less efficient buildings contribute to greater tax expenditures on health care, storm clean-up, national security, and repair to climate damages to infrastructure and natural resources.

The Inflation Reduction Act (IRA) and other legislation offer tax credits and other financial incentives for builders, building occupants and government jurisdictions to improve energy efficiency. There are even grants to states that fully comply with the latest IECC.

- o Multiple local governments in Virginia have committed to achieve zero-net carbon goals in their communities, which will require rapid progress in buildings.
- **Proposed readiness requirements facilitate future energy-saving options.** Residents and the public would also benefit from installing basic equipment, such as conduits, that facilitate future options to shift easily, in the future, to more efficient appliances. With small construction costs, readiness requirements will save energy and costs over time, as well as improve air quality and resiliency. Retrofitting wiring after walls have been closed and finished creates a costly barrier to energy-saving, cost-saving and pollution-avoiding choices for building occupants.
- **Statewide standards.** The fact that the USBC is a uniform statewide standard means that local governments are prevented from adopting more energy efficient building standards. That makes it even more important for BHCD to adopt efficiency standards consistent with Virginia law.

E. INDEPENDENT DETERMINATIONS OF 2021 IECC BUILDING EFFICIENCY BENEFITS

1. IECC Determinations.

Use of national model codes, including the IECC, is the appropriate ground floor (not the ceiling) for efficiency measures in Virginia’s USBC for good reasons. **Each update of the IECC has gone through lengthy development involving study, debate, drafting and voting by experts, community leaders and a wide range of stakeholders in order to assure that the standards are viable and that the benefits and savings serve the public and residents will, in fact, exceed the incremental costs of construction.** The stakeholders consider new technical developments and options and past experience with existing codes.

2. DOE and PNNL Determinations of IECC Benefits

By law the U.S. Department of Energy is required to evaluate the IECC and ASHRAE (which the IECC recognizes as an alternative means of compliance). As shown in our CDPVA submissions, the **annual savings to residents from full IECC implementation (even considering incremental construction costs) have been repeatedly demonstrated by the U.S. Department of Energy (DOE) and Pacific Northwest National Laboratories (PNNL) with respect to the IECC’s for 2012, 2015, 2018 and 2021.** DOE/PNNL have also found that **there will be substantial net benefits to the public from full implementation of the 2021 IECC.** <https://www.energycodes.gov/determinations> ; <https://www.energycodes.gov/previous-determinations>

a. DOE/PNNL Residential Determinations

In July 2021, after an extensive technical and economic analysis of the impacts of the 2021 IECC updates, DOE published its formal determinations concerning the energy efficiency improvements that would result from adopting the 2021 IECC. DOE’s review of building code updates is required by law. <https://www.energycodes.gov/determinations>

“RESIDENTIAL: 2021 INTERNATIONAL ENERGY CONSERVATION CODE

“On July 28, 2021, [DOE issued a determination](#) that the 2021 International Energy Conservation Code (IECC) will improve energy efficiency in residential buildings. In support of this determination, DOE conducted a technical analysis evaluating the impacts of the updated code (relative to the 2018 IECC edition). DOE estimates national savings of approximately:

- 9.38 percent *site* energy savings
- 8.79 percent *source* energy savings
- 8.66 percent *energy cost* savings
- 8.66 percent *carbon emissions*”

This follows multiple prior findings that, as compared to each IECC since 2006 would save residents money. <https://www.energycodes.gov/previous-determinations>

In its July 2021 report on “Cost-Effectiveness of the 2021 IECC for Residential Buildings in Virginia” (PNNL-31627), PNNL summarizes its findings as follows:

“The 2021 IECC provides cost-effective levels of energy efficiency and performance for residential buildings in Virginia.

“Moving to the 2021 International Energy Conservation Code (IECC) is cost-effective for both single-family and low-rise multifamily residential buildings in Virginia. The 2021 IECC will provide statewide energy savings of 17.9% across all climate zones compared to the current state energy code. This equates to \$413 of annual utility bill savings for the average Virginia household. It will reduce statewide CO2 emissions over 30 years by 28,420,000 metric tons, equivalent to the annual CO2 emissions of 6,181,000 cars on the road (1 MMT CO2 = 217,480 cars driven/year). Updating the state energy code based on the 2021 IECC will also stimulate the creation of high-quality jobs across the state. Adopting the 2021 IECC in Virginia is expected to result in homes that are energy efficient, more affordable to own and operate, and based on current industry standards for health, comfort and resilience.

“The average expected statewide economic impact (per dwelling unit) of upgrading to the 2021 IECC is shown in the tables below based on cost-effectiveness and carbon metrics established by the U.S. Department of Energy.¹

Consumer Impact Metric

Compared to the 2015 IECC with amendments

Life-cycle cost savings of the 2021 IECC	\$8,376
Net annual consumer cash flow in year 1 of the 2021 IECC ²	\$250
Annual (first year) energy cost savings of the 2021 IECC (\$) ³	\$413
Annual (first year) energy cost savings of the 2021 IECC (%) ⁴	17.9%

1 A weighted average is calculated across building configurations and climate zones.

2 The annual cash flow is defined as the net difference between annual energy savings and annual cash outlays (mortgage payments, etc.), including all tax effects but excluding up-front costs (mortgage down payment, loan fees, etc.). First-year net cash flow is reported; subsequent years' cash flow will differ due to the effects of inflation and fuel price escalation, changing income tax effects as the mortgage interest payments decline, etc.

3 Annual energy savings is reported at time zero, before any inflation or price escalations are considered.

4 Annual energy savings is reported as a percentage of end uses regulated by the IECC (HVAC, water heating, and interior lighting).

PNNL found that aggregate energy cost savings for Virginia residents from adopting the full 2021 IECC would be \$7,192,000 in the first year and \$2,487,000,000 over 30 years. Virginia would achieve substantial pollution reductions and add jobs.

In an earlier report, “Virginia Energy and Cost Savings for New Single- and Multifamily Homes: 2012 IECC as compared to the 2009 Virginia Construction Code,” PNNL found savings applicable to Virginia. It stated:

“The 2012 International Energy Conservation Code (IECC) yields positive benefits for Virginia homeowners.

“Moving to the 2012 IECC from the current Virginia Construction Code is cost-effective over a 30-year life cycle. On average, Virginia homeowners will save \$5,836 with the 2012 IECC. Each year, the reduction to energy bills will significantly exceed increased mortgage costs. After accounting for up-front costs and additional costs financed in the mortgage, homeowners should see net positive cash flows (i.e., cumulative savings exceeding cumulative cash outlays) in 1 year for the 2012 IECC. Average annual energy savings are \$388 for the 2012 IECC.”

Unfortunately, Virginia did not adopt the full changes in the 2012 IECC and has remained at 2009 levels in key respects ever since. Benefits to residents were lost for a decade, and those benefits will be lost going forward based on the Proposed Final Rule and the Board’s consensus requirement for removing past weakening amendments.

b. DOE/PNNL Commercial Determinations

As required by law, DOE has also reviewed commercial code updates for many years to assess whether the updates would improve energy efficiency. Most recently, DOE found that implementing the last ASHRAE updates ANSI/ASHRAE/IES STANDARD 90.1-2019 would

save money relative to the incremental costs of construction.

<https://www.energycodes.gov/determinations>

“COMMERCIAL: ANSI/ASHRAE/IES STANDARD 90.1-2019

“On July 28, 2021, [DOE issued a determination](#)¹¹ that Standard 90.1-2019 will achieve greater energy efficiency in buildings subject to the code. DOE estimates national savings in commercial buildings of approximately:

- 4.7 percent *site* energy
- 4.3 percent *source* energy
- 4.3 percent *energy cost*
- 4.2 percent *carbon emissions*”

ASHRAE is important because it is an IECC compliance option for commercial builders. Thus, if the IECC’s standards were more costly or desirable than ASHRAE a builder could choose ASHRAE.

PNNL also published a *September 2022 analysis of the 2021 IECC commercial efficiency standards compared to the 2018 Commercial*.¹¹ It found “Overall, the 2021 edition of the IECC results in site energy savings of 12.1% at the aggregate national level compared to the 2018 IECC edition. In addition, on a national weighted average basis, the 2021 IECC is 6.5% *more* efficient for site energy use than Standard 90.1-2019.”

3. Proposed Standards More Stringent than IECC Standards Will Also Benefits Residents and the Public

As discussed more fully below in connection with specific proposals, installing more energy efficient HVAC equipment will save money both in construction and in residents’ occupancy costs. Installing inexpensive basic infrastructure equipment (*e.g.*, raceways or wiring) during construction in order to permit easy installation of energy-saving appliances, EV chargers and solar panels during initial construction also will also benefit residents and the public. Such basic “readiness” requirements will save residents money over time, far more than the very low costs of installing electrical conduits or wiring and reserving panel space when walls are being constructed. As climate impacts grow in Virginia and nationally, there will be increasing pressure to implement costly retrofits if readiness has not been built in. Retrofits are more costly than installing wires and conduits during initial construction when walls are open and trades are working anyway.

F. SPECIFIC PROPOSALS THAT THE FINAL RULE SHOULD ADOPT BASED ON THE FACTS AND APPLICABLE LEGAL STANDARDS

¹¹ PNNL-32816, **Energy and Energy Cost Savings Analysis of the 2021 IECC for Commercial Buildings** (September 2022). PNNL also compared the 2021 Commercial IECC to the ASHRAE 90.1-2019, finding a variety of similarities and differences depending on the technology and climate zone.

The proposed final regulations must be revised before they are finalized since they are incompatible with the law and the evidence. At a minimum, the proposed rule should be amended so that the Final rule incorporates the following proposals into the USBC.

In this cycle, the Virginia Chapter of the Sierra Club (via William Penniman) submitted a number of proposals through CDPVA to bring Virginia’s USBC into line with the 2021 IECC and to exceed the stringency of the 2021 IECC in some respects. (Some proposals were modified in response to work-group inputs.) The Responsible Energy Codes Alliance (RECA) and the New Building Institute (NBI) also submitted proposals to catch up to the 2021 IECC and, in some instances, to go beyond it.

As demonstrated in CDPVA submissions, presentations to the relevant workgroups and written public comments, the Sierra Club’s proposals would benefit residents and the public by saving residents energy and money, improving air quality and health outcomes, reducing health and climate harms, increasing resiliency and improving Virginia’s economic health. These proposals pass Virginia’s statutory tests, as do several energy-saving proposals by NBI. Unfortunately, in nearly all cases, these proposals were rejected because they were classified as “non-consensus” due to opposition by builders.

Because some of our proposals overlap, we will highlight ones that we believe are particularly important for incorporation into Virginia’s 2021 USBC update.

1. Full Adoption of 2021 IECC for New Construction.

Virginia can catch up to the 2021 IECC either by (a) simply adopting the language prescribed by the 2021 IECC to bring Virginia’s USBC into full compliance or (b) eliminating the principal weakening amendments that continue to haunt the USBC. These options are outlined below. At this point in time, Virginia has adopted the bulk of the terms of the 2108 IECC and *has proposed to implement the 2021 IECC for new residential construction with two major substantive exceptions.* Virginia’s two principal weakening amendments for efficiency in new construction that exist now and would continue under the proposed final rule are: (i) leaving wall insulation at the 2009 levels despite substantial IECC improvements in the 2012 and 2021 cycles and (ii) capping the air infiltration requirement at 5 Air Changes per Hour (ACH) rather than the IECC’s lower 3 ACH. Both should be updated to the 2021 level.

As discussed above, implementing the substance of the 2021 IECC would achieve energy and cost savings that have been documented for new residential construction by DOE and PNNL. Most relevant are the DOE/PNNL analyses for the 2012 and 2021 IECC updates. The 2012 update significantly improved wall insulation and air leakage limits compared to the 2009 standards (where Virginia remains), while the 2021 updated the wall insulation standards, which had not been updated since 2012. (Note that these analyses consider upfront and over-time costs and energy cost savings.¹² They do not consider the

¹² PNNL’s analysis considers costs of construction, down payment and other upfront costs, annual energy savings, annual mortgage increase, net annual cost of mortgage interest deductions, mortgage insurance, and property taxes, and net annual cash flow savings. The assumed “life-cycle” is based a typical 30-year mortgage. Use of the 2015 IECC with Virginia amendments rather than the 2018 IECC with Virginia amendments made sense

additional construction cost savings that would result from reducing the needed HVAC size as due to additional insulation.)

PNNL’s assessments for the benefits of full adoption were as follows for Virginia:

Virginia Average	Life-cycle Cost Savings	Annual Energy Savings	Net Annual Cashflow Savings (net cost of mortgage etc.)
Full 2021 IECC Savings	\$8,376	\$413	\$250
Full 2012 IECC Savings	\$5,836	\$388	\$272

Builders’ arguments about “affordability” are invalid for several reasons, as more fully discussed in Attachment B.

- By reducing residents’ occupancy costs (including utilities), the 2021 IECC’s energy efficiency requirements will keep housing more affordable for owner-occupants and tenants for decades, not just at a buyer’s closing date.
- Builders’ focus on initial construction costs is inconsistent with H2227 which requires a decision based on savings and other benefits over time compared to construction costs, not by just looking at construction costs.
- State and federal laws and policies define “affordability” in terms of occupancy costs, including mortgages, rents and utility costs.
- Insulation represents only a small component of total construction costs.¹³ Yet, unlike other housing construction costs, energy efficiency saves money for residents during many years of occupancy, making housing more affordable.
- Fewer than 10% of new dwellings are directed to low-income residents, yet all dwellings would be made less efficient more costly to live in regardless of the initial cost. That makes no sense for any residents, particularly given the public harms that result from continuing to waste energy.
- There are programs in Virginia to assist low-income residents with costs of downpayments, mortgages and rents and to subsidize builders’ construction of low-income housing.¹⁴
- Builders have choices to manage costs (*e.g.*, size, design, materials, appliances and locations) without cutting energy efficiency. Improved energy efficiency, cleaner indoor air, and greater comfort are added values that Virginia builders could use to market buildings constructed to 2021 IECC standards, rather than fight IECC compliance.

since PNNL’s analysis was done before Virginia’s 2018 cycle update took effect.

¹³ Insulation represents 0.017 of the cost of construction, according to a recently published survey. “How Much Does It Cost To Build A House In 2023?” <https://www.forbes.com/home-improvement/contractor/cost-to-build-a-house/>

¹⁴ See JLARC, *Report to the Governor and the General Assembly, Affordable Housing in Virginia 2021*.

Builders in other states, such as Maryland, have shown that they can comply with the IECC and continue to sell houses at a profit. There is no reason to believe that Virginia builders are less capable and, in fact, some Virginia builders successfully operate in Maryland. Forbes reports that it is less expensive to build a new house in Maryland than Virginia.¹⁵

a. Option 1: Adopt All the 2021 IECC Language for New Construction EC-C1301.1.1.1(2)-21 (Penniman/Sierra Club).

This proposes eliminating all Virginia-specific amendments to the 2021 IECC with respect to NEW residential and commercial construction. This proposal is simple, straightforward and assures full compliance. It would make Virginia’s USBC fully “consistent with” the latest IECC. It is supported by the positive benefit cost-analysis done by DOE/PNNL as summarized above. The energy and cost savings would exceed the incremental construction costs and provide benefits to residents and the public for the lifetime of the buildings. Retrofitting to achieve the IECC’s energy-saving benefits would be very costly and likely require an infusion of public funds through grants, tax incentives or otherwise. Compliance with the full IECC can be achieved, as demonstrated in Maryland, and it is feasible here.

b. Option 2: Eliminate Principal Weakening Amendments Regarding Wall Insulation and Air Leakage

This approach would require **adoption of two proposals** in order to make the Virginia residential code “consistent with” and “at least as stringent as” standards in the 2021IECC.”

i. Residential Wall insulation standards. REC-R402.1.2(2)-21 (Penniman/Sierra Club) or REC-R402.1.1(1)-21 (RECA)

The 2021 IECC standards for wall insulation should be adopted without weakening. After much deliberations, the IECC updated the wall insulation standards for new residential construction in the 2012 cycle and again in the 2021 cycle. DOE and PNNL found that both updates would benefit Virginians with lower energy costs, lower lifecycle costs, less air pollution, and more jobs. However, Virginia has been stuck for a decade on wall insulation standards for 2009. Adopting this proposal would bring Virginia in line with IECC wall insulation standards.¹⁶

Wall insulation is extremely important to a dwelling’s energy usage because walls define the principal surface area exposed to heat, cold and wind. Because it is extremely costly and difficult to retrofit walls, failure to adopt the IECC standards for new construction would mean that *the harms of wasted energy are likely to last for the lifetimes of new buildings or would require very large expenditures to accomplish the retrofits.* That would mean *decades of higher*

¹⁵ 17. <https://www.forbes.com/home-improvement/contractor/cost-to-build-a-house/>

¹⁶ The following table summarizes the 2009-2018 IECC changes in wood-frame wall R-values and U-factors for climate zone 4, which was the only climate zone then applicable up to Virginia, and the IECC’s wood-frame wall R-values and U-factors for all three climate zones (3, 4 and 5) applicable to Virginia under the 2021 IECC

energy costs to residents and greater harm to the public from air pollution, including climate pollution. DOE/PNNL found that both the public and the residents would benefit, including savings for residents exceeding incremental costs.

In its similar proposal to catch up to the 2021 IECC for wall insulation (**REC-R402.1.2 (1)-21**), RECA stated the following (emphasis added):

“Reason Statement: This proposal improves the comfort, efficiency, and resiliency of Virginia homes by improving the wall insulation requirements. It will also make Virginia’s energy code consistent with the 2021 IECC requirements for wall insulation. The U.S. DOE found the 2021 IECC to be cost-effective for Virginia (see https://www.energycodes.gov/sites/default/files/2021-07/VirginiaResidentialCostEffectiveness_2021.pdf), and improvements to the thermal building envelope are important to the long-term efficiency and cost-effectiveness of new buildings. **Using the U.S. Department of Energy methodology for reviewing code change proposals, and using BEopt modeling software, our analysis found that an improvement from R-15 to R-20+5 in wall insulation will result in a 13.1% improvement in efficiency, and a simple payback period of less than 5 years. Wall insulation is easiest (and most cost-effective) to install during construction. Given that there may only be limited opportunities to upgrade the walls in the future,** it is important to construct well-insulated walls from the very beginning. Better-insulated buildings are clearly an investment in Virginia’s energy future. We recommend maintaining consistency with the 2021 IECC requirements.”

Explaining the flexibility afforded to builders by the IECC, RECA’s Reason Statement also noted:

“The wall insulation R-values in the 2021 IECC do not require the use of any specific product and can be achieved with either 2X4 or 2X6 wall construction. The values in the prescriptive R-value table are only a few of many different options. For additional wall insulation options, builders can use one of several compliance paths, each of which provides multiple options and combinations for meeting the code requirements: The U-factor alternative table (R402.1.2)

IECC cycle	Virginia 2009-now (Zone 4)	IECC 2012-2018 (Zone 4)	IECC 2021 (Zones 3, 4 and 5)
R-Values	15 or 13+1	20 or 13+5	Zone 3: 13+5 or 0=15ci Zones 4 & 5: 30 or 20+5ci or 13+10ci or 20ci
U-Factors	0.079	0.060	Zone 3: 0.060 Zones 4 & 5: 0.045

The first R-Factor value is for cavity insulation, the second is for continuous insulation. Therefore, as an example, 13+5 means R-13 cavity insulation plus R-5 continuous insulation.

The Total UA Alternative (R402.1.5)
U.S. DOE’s REScheck software (www.energycodes.gov)
The Simulated Performance Alternative (R405)
The Energy Rating Index (R406)”

During the work group process, some builders stated—inaccurately—that complying with the wall standards would force them to switch from 2X4 to 2X6 construction. As noted above, the IECC explicitly provides that builders can comply with the IECC’s insulation standards in many ways, including a choice of 2X4 or 2X6 construction or various overall performance options, which allow more construction choices so long as total energy efficiency targets are achieved.

One builder asserted that his firm would have to modify its old plans to meet the wall insulation standards. However, that is not a valid argument. Builders need to modify their plans in some ways with every code cycle, with the evolution of building technology, and with changing customer demands.

ii. Air Leakage Standards. REC-R402.4-21 (Penniman/Sierra Club) See also REC-R402.4.1.2-21 (RECA)

The 2021 IECC air leakage standard must also be adopted to protect residents. Air leakage increases the volume of air that must be conditioned for heating, cooling and humidity, thereby wasting energy and raising energy costs. Air flow through walls can also bring mold into dwellings and gaps can allow entry of insects and other vermin, which is a specific concern of Virginia’s building code statute. As EPA explained, in *EnergyStar: A complete Thermal Enclosure System* (2017):

“The energy savings from comprehensive air sealing can quickly add up when you consider all the places hot or cool air can enter or escape from your home. Having a well-sealed home also means better air quality because dirt, pollen, pests, and moisture can’t get in as easily. In addition, good sealing practices help protect your home against mold and moisture damage that can be caused by condensation.”

For the over a decade, since 2012, the IECC’s prescribed air leakage standard for new residential dwellings in Virginia’s climate zone(s) has been 3.0 ACH50 (*i.e.*, 3.0 air changes per hour when blower-door tested at 50 Pascals). That remains the basic prescriptive requirement in the 2021 IECC. Unfortunately, Virginia’s air leakage standard remains at 5.0 ACH50, which reduce the overall efficiency of the dwelling. (Virginia finally replaced “visual inspections” with pressure testing in the 2018 code cycle, but that only eliminated easy violations of the standard.) Virginia’s USBC’s permitted leakage rate remains at 5.0, 67% higher than the IECC’s standard and does not require additional insulation to offset efficiency losses between 3.0 and 5.0 ACH.

The costs of compliance are low. The costs of materials to meet the 3.0 ACH standard are low (*e.g.*, tape, caulk and continuous air barriers some of which would be required anyway). **Meeting the 3 ACH test mainly requires careful planning and quality workmanship,**

including attention to filling gaps and cracks during construction before walls are closed. Appropriate contracting with framers and insulators can assure responsibility at all levels.

In its Reason Statement in support of its proposal to catch up to the 2021 IECC for air leakage (REC-R402.4.1.2-21), RECA described the estimated average cost and saving impacts as follows (emphasis added):

“This proposal includes a cost-effective incremental improvement from Virginia’s 2018 USBC by tightening the air leakage rate from 5.0 ACH50 to 3.0 ACH50. Based on an analysis of this code change using the U.S. Department of Energy’s methodology and using BEopt modeling software, we estimate that this improvement will achieve 9.2% lower energy costs, with a simple payback period of less than 2 years. Results will obviously vary based on the characteristics and size of the home, as well as how much additional work is necessary to achieve the lower leakage rates, but given the long-term benefits of a tighter envelope -- lower energy costs, more efficient system operation, better indoor air quality, etc. -- this improvement is well-justified.

Even the NAHB has acknowledged that the values of tight construction include “Heating and cooling savings” due to greater energy efficiency; “Reduced potential for moisture movement through the building thermal enclosure;” “Improved insulation effectiveness and reduced risk of ice dams;” “Reduced peak heating and cooling loads resulting in smaller HVAC equipment;” “Improved comfort (reduces drafts and noise);” “Improved indoor air quality (limits contaminants from garages, crawl spaces, attics and adjacent units;” and enhanced “durability.” NAHB, *“TechNote, Building Air Tightness: Code Compliance & Air Sealing Overview”*. (See Attachment D)

An ACH 3.0 is not unreasonable, which is why it has been in the IECC since 2012. Other model codes, such as PassiveHouse (0.6 ACH50), have leakage rates far below 3 ACH50.

In sum, whether achieved by Option 1 or the two steps in Option 2, both residents and the public would benefit from Virginia’s finally becoming “consistent with” and “at least as stringent as” the most current IECC. Residents will save energy and costs over the lifetimes of the dwellings and will obtain other benefits, including healthier and more comfortable dwellings, greater resiliency, and less vulnerability to energy price fluctuations that may tip them into defaulting on mortgages, rents and utility bills. Public benefits will also accrue to Virginians whether or not they buy a newly constructed house. Virginians have missed out on these benefits for a decade and should finally catch up, as required by the evidence and the law.

2. Additional Proposed Standards That Meet the Tests for Standards More Stringent than the IECC

There are a number of proposed measures submitted by Mr. Penniman and the Sierra Club, as well as by others, that go beyond the 2021 IECC but should be adopted under the applicable standards in Virginia law. Some of these proposals were addressed in IECC appendices, which have no impact unless incorporated into Virginia’s code since localities may

not adopt stretch codes. Some were deemed outside the scope of the IECC, but they are clearly within the scope of Virginia’s building code process. Others make sense whether or not ever considered by the IECC. In each case, the energy savings and other private and public benefits would exceed the incremental cost of construction.

Specifically, as detailed below, the Board should adopt standards we proposed, including proposals that address the following issues:

- a. HVAC – Heat Pump if going to install A/C anyway (R403.1.4(2)-21)
- b. EV readiness for
 - i. Residential (REC-R1104,2-21)
 - ii. Multifamily (EC405.10-21)
 - iii. Certain commercial and residential buildings (EC-405.11.1-21)
- c. Electric appliance readiness (REC-R404-21)
- d. Solar readiness (REC-R404.2-21)
- e. Net zero construction (EC407.6-21)

a. **Install heat pumps when air conditioning would be installed anyway. REC-R403.1.4(2)-21** (Penniman/Sierra Club)

The Board has a statutory responsibility to regulate heating and cooling systems,¹⁷ in addition to approving building code provisions that benefit residents with energy savings and other benefits that exceed the incremental cost of construction.

Consistent with those requirements, this proposal specifies that a heat pump shall be installed in new dwellings in which air conditioning would otherwise be installed, rather than installing a stand-alone air conditioner and separate heating system:

“R403.1.4 Heat Pumps for Cooling and Heating. An electric heat pump system shall be installed as the primary space cooling and heating system in any dwelling in which central, ducted air conditioning would otherwise be installed. A ductless heat pump system shall be installed to serve any portion of a dwelling in which a ductless heating or cooling system would otherwise be installed.”

As discussed below, this proposal will save money during both construction and operation of a new home. In view of its cost savings, energy savings, pollution reductions and other benefits, this proposal should clearly be adopted under the terms of H2227.

It is important to note that this proposal speaks only to the *primary* heating and cooling system; it does not limit the fuel or energy used for auxiliary or emergency heat. Either electric resistance or fossil fuel (“hybrid” system) could supplement or back-up the electric heat pump.

¹⁷ **Section 36-99.6:3, Regulation of HVAC facilities.** The Board shall promulgate regulations in accordance with the Administrative Process Act (§ 2.2-4000 et seq.) **establishing standards for heating, ventilation, and air conditioning (HVAC) facilities in new, privately owned residential dwellings.** There was consensus for approval of REC-R403.1.2-21, which provides that electric resistance heat shall not be used as the primary heat source if a heat pump can be used instead.

The proposal was written in terms of electric heat pumps because (1) they would easily substitute for electric air conditioners which are dominant in our region, (2) they are the most energy efficient of all the options (even more if geothermal), and (3) electrification of HVAC is the best for reducing greenhouse gases and other pollution.¹⁸ However, *so long as the primary heating and cooling is with a heat pump, we would have no objection to delete the word “electric” in the first sentence.*¹⁹ That would permit gas or propane fired heat pumps (also called “absorption” heat pumps) to be installed if desired.²⁰

The proposal is more “stringent” than the IECC, as defined by H2227, in part because the IECC does not address this issue. However, the **BHCD is required by Section 36-99.6:3 to set standards for HVAC systems, and H2227 provides the relevant standard for approval.** The proposal does not dictate the efficiency level of the heat pump (a matter left to federal regulations), only the choice to use a heat pump to reduce energy costs and improve indoor air quality. Thus, the proposal would not be preempted by federal regulations. Actually, the federal government is offering substantial incentives to encourage installation of heat pumps.

The proposal would save residents both energy and money and improve air quality both indoors and outdoors by reducing pollution. Heat pumps are inherently much more energy efficient than combustion or resistance heating, and the proposal applies only if air conditioning would be installed anyway so no additional duct work or wiring would be required. Thus, the proposal passes the tests in H2227 for adopting standards that are more stringent than the IECC because the energy savings and other benefits would exceed the incremental cost of construction.

Since the proposal is limited to new dwellings in which air conditioning would otherwise be installed, a builder can **reduce construction costs** by installing a single device for heating and cooling rather than installing separate cooling and heating systems plus investments in piping and/or storage tanks for combustion furnaces.

According to an independent 2023 survey²¹, **the average and range of costs for installing an electric heat pump or an electric heat pump with gas backup for cooling and heating is significantly lower than for installing A/C plus a gas furnace:**

Heat Pump and Air Handler System Cost	Dual-Fuel Heat Pump and Furnace System Cost	Furnace and AC split system cost
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¹⁸ See <https://www.sciencedirect.com/science/article/pii/S0301421522000386> (Residential heat pumps reduce carbon dioxide emissions by 38–53% over a gas furnace; Residential heat pumps reduce 20-Year global warming potential emissions by 53–67%; Energy efficient construction reduces overall emissions for heat pumps and furnaces.); <https://news.climate.columbia.edu/2019/01/15/heat-pumps-home-heating/> . See also Reason Statement.

¹⁹ Though less common and still requiring combustion, gas-fired and propane-fired heat pumps would also save energy compared to combustion heating and could be an option for builders if the Board is reluctant to limit eligibility to electric heat pumps. Gas-fired heat pumps use a different technology than electric heat pumps. They are more energy efficient than furnaces, but less efficient than electric heat pumps.

²⁰ <https://www.energy.gov/energysaver/heat-pump-systems>

²¹ https://www.forbes.com/home-improvement/hvac/new-hvac-system-cost/#hvac_system_costs_by_type_section

Average Cost \$6,000	Average Cost \$8,500	Average Cost \$9,600
Highest Cost \$8,700	Highest Cost \$11,000	Highest Cost \$13,000
Lowest Cost \$3,300	Lowest Cost \$6,000	Lowest Cost \$6,100

Forbes also states: “The [Department of Energy](#) notes that an average home will use 50% less energy each year on electricity to heat your home.”

Electric heat pumps are highly energy efficient for both heating and cooling in Virginia. Energy efficiency of electric heat pumps is up to 300% compared to resistance heat and even more energy efficient compared to combustion in a gas or propane furnace. Using the same basic technology as air conditioners, heat pumps provide both space cooling and heating. They provide heating and cooling using the same ducts that would be required for a central air conditioner. (Smaller heat pumps (*e.g.*, mini-splits) do not require ducts to provide both heating and cooling for rooms.) (Gas heat pumps are substantially less energy efficient than electric heat pumps but much more efficient than gas or propane furnaces. Because they operate with combustion, they are more polluting than electric heat pumps.)

Virginia’s climate is well-suited to heat pumps. But, even far to the north, modern heat pumps are capable of keeping houses warm when outdoor temperatures reach Zero F or below with supplemental heat needed only at temperatures far below freezing.²² As a result, heat pumps are becoming popular even along the northern tier of the Lower 48.²³

In addition to saving energy, electric heat pumps provide greater comfort and better-quality indoor air than any system that uses combustion for space heating. Combustion heating produces indoor and outdoor air pollution, as well as drier interior air. Indoor combustion units also pose fire hazards. (Neither combustion furnaces nor heat pumps will operate during power outages. In those periods, IECC level insulation and air leakage standards provide protection until power is restored.)

Importantly for the public, electric heat pumps reduce air pollution, climate harms and water pollution compared to combustion-based space heating. With Virginia’s electric system moving toward cleaner energy, the benefits are particularly great and growing for electric heat pumps since they emit no pollutants. Cooling and heating with electric heat pumps is vital for achieving the Commonwealth's and national goals for reducing GHG emissions.

Heat pumps are also eligible for significant federal financial incentive due to their energy savings and pollution reductions.

²² <http://wepowr.com/technology/ashp/cold-climates> (“These cold climate air source heat pumps are able to function at 100% efficiency at 5°F while still remaining functional down to -15° and below.”).

<https://sealed.com/resources/winter-heat-pump/> .

²³ “Heat pumps are defying Maine’s winters and oil industry pushback,” <https://www.washingtonpost.com/climate-environment/2023/02/07/maine-gas-industry-heat-pumps/> ;

“Heat pumps are now advanced enough to meet all your heating & cooling needs, even in our very cold New England winters and hot summers. They are at least three times more efficient at heating than systems that burn fossil fuels and provide whole home cooling so you can upgrade from your inefficient window AC or dated central cooling system.” <https://energy.ri.gov/heating-cooling/renewables/air-source-heat-pumps> . Heat pumps are even being used in Alaska.. <https://www.energy.gov/eere/buildings/articles/innovative-new-program-brings-heat-pumps-alaskan-homes>

For all these reasons, this proposal should be approved.

b. **Proposals for Electric Vehicle (EV) Readiness.**

EV readiness is important in new construction. Virginia’s building code should include basic electric infrastructure to support growing demand for EV charging, particularly at-home charging.²⁴ Approximately 80% of EV charging occurs in residential settings due to the convenience and lower costs of charging. Electric vehicle sales are growing rapidly with policies in place to shift new car sales to at least 50% by 2030 and with continued growth in the 5-10 years thereafter. Prices are coming down to make EVs more readily available to average buyers who can then benefit from EVs’ huge annual savings in fuel and maintenance costs compared to vehicles with internal combustion engines. Rebates available from the Federal government will help to accelerate the growth of EVs and the breadth of the public that buys them, but at-home charging remains important to EV adoption and cost savings.

- **The savings and other benefits to residents and the public over time far exceed the incremental costs of construction and thus meet the requirements for standards “at least as stringent” as the latest IECC. EVs dramatically reduce owners’ vehicle operating and maintenance costs—by up to \$1900 per year (before gas prices jumped)** according to reports cited in our supporting materials.²⁵ Those savings dwarf the incremental cost of installing basic infrastructure (raceways and electrical panel space) during initial construction. It is far more expensive and disruptive to add later.

- EVs are much more energy efficient and require far less maintenance than internal combustion engines, which saves energy and money compared to internal combustion vehicles.

- In Virginia, vehicles are the largest source of carbon dioxide pollution and a major source of other forms of pollution.

- EVs eliminate vehicles’ harmful air pollutants, including the hazards of fumes in garages that leak into houses (a matter the code addresses). Even considering electricity generation, **EVs reduce CO2 emissions by approximately 70% in Virginia compared to vehicles using internal combustion engines.** Thus, shifting to EVs will save energy and for residents and produce huge benefits to the public.

- The reduction of air pollution from vehicles is particularly significant to mitigating climate change since vehicle emissions are one of Virginia’s two largest sources of CO2.

- **According to a recent study, a U.S. transition to electric vehicles would save over 100,000 lives by 2050.** <https://www.theguardian.com/us-news/2022/mar/30/us-electric-vehicles-save-lives-public-health-costs-study>

²⁴ Virginia’s building code already has requirements for numbers, locations and types of electric wiring and outlets for general use and appliances, including in garages. This proposal is substantively similar and merely recognizes the rapidly growing need to service an important new piece of equipment for occupants—electric vehicles.

²⁵ See Consumer Reports, “EVs Offer Big Savings Over Traditional Gas-Powered Cars” (October 2020); <https://www.ucsusa.org/about/news/rural-communities-could-benefit-most-electric-vehicles> (up to \$1900/year savings for rural EV owners).

We support 3 separate proposals that are designed to address the distinctive EV charging issues for “residential,” multifamily and commercial construction.²⁶ Each differentiates between levels of readiness. In broad terms, “**EV Capable**” spaces would basically have raceways and panel space, without wiring or chargers; “**EV Ready**” would require a branch circuit from the panel to near the space; “**EVSE Installed**” would include an actual charger. *Even if nothing more were required, all garages and outdoor parking should be provided at least “EV Capable” infrastructure for each dwelling unit provided parking.*

i. Residential EV Readiness. REC-R1104.2-21 (Penniman/Sierra Club) This proposal for new residential structures would not require installation of chargers, only making it easy to add a charger when desired by the dwelling owner. In the case of dwellings with garages or carports, **EV Ready** infrastructure would include an EV ready a 208/240V branch circuit branch circuit from close to the parking to an electric panel with reserved capacity. As proposed, new construction would require one EV Ready parking space for each dwelling for which parking is provided. This should be sufficient to enable the resident to add a charger at the time the resident acquires an EV. Typical electric panels in new dwellings should have adequate the amperage to serve such a vehicle.

Depending on the distance from an appropriate point in the garage to the panel, the installation cost could be less than \$100 (*e.g.*, if the panel is in or close to the garage).²⁷ That location would be within the builder’s control. In any event, it is much cheaper to install the infrastructure during construction when walls are open and trades present. It would be much more costly and require opening and repairing walls if this is addressed later.

A builder representative indicated that some large-tract builders were unsure whether utilities would confirm, prior to starting construction, whether they could supply sufficient electric power for a rapid growth of chargers. While we doubt utilities would deny residents the ability to add EV charging as EV growth occurs over time, we offered to modify the proposal to limit a builder’s obligation to providing *either* an “EV Ready” *or* an “EV Capable” parking space for each dwelling (*i.e.*, either with a suitable conductor or just a raceway between the parking spot to an electrical panel with designated space) if a utility is unwilling to amend a commitment agreement to provide adequate additional electric service to large developments by the time a development is completed. Our suggested modification would reduce the builder’s costs, while still making it possible for a resident to install a branch circuit in an existing raceway, subject to any necessary utility approval. The Board is welcome to approve as filed or with the amendment.²⁸

ii. Multifamily Residential EV Charging. EC-405.10-21 (Penniman/Sierra Club)
See also EC-C405.13(3)-21 (NBI) and EC-C405.13(2)-21 (DHCD Staff)

This proposal would equip multifamily garages and outdoor parking areas with infrastructure needed to eventually provide EV charging units sufficient to serve each dwelling

²⁶ In the alternative, we would support EV readiness proposals submitted by NBI and the DHCD Staff at least to get some charging capabilities started.

²⁷ Depending upon distance between the panel and the point for a future charger, the cost of either a suitable conductor could be under \$100 based on retail prices at Home Depot or on Amazon.

²⁸ No safety or technical issues were raised with respect to residential construction.

unit desiring service. **It would require one or a few parking spaces that are “EVSE Installed” (i.e., with chargers), one or a few spaces that are “EV Ready” (i.e., with dedicated branch circuits) and “EV Capable” infrastructure (i.e., with raceways/conduits to suitable locations next to parking) to allow expansion as demand grows.** The numbers of each type would be based on a percentage of dwellings for which parking spaces are provided.

This proposal is important because multifamily residents, including low- and moderate-income residents, will need access to at-home EV charging in order to get the many benefits of acquiring and using an electric vehicle. The Reason Statement showed that residents and the public would benefit and that the costs of retrofitting would be much higher than during initial construction. Those higher retrofit costs would act as a barrier to eventual service, undermining efforts to provide broad, equitable access to EVs. The staging of infrastructure and actual chargers was intended to balance costs and benefits. The proposal is flexible to enable options to evolve, so that, for example, one “Level 3” charger might serve multiple vehicles rather than requiring “Level 2” chargers equal to the number of units, so long as adequate capacity is available for residents of each dwelling unit.

We note that proposals for multifamily residential EV charging readiness were also submitted by the DHCD Staff (**EC-C405.13(2)-21**) and by Ben Rabe/NBI (**EC-C405.13(3)-21**). As Staff explained, its proposal “was created by staff in response to a request from Delegates Reid and Bulova ... to “...make EV purchases a viable option for residents of multi-family dwelling units...”. The proposal is based on CEPI-1-21, submitted for the 2024 IECC.”

While we prefer the proposal submitted by Mr. Penniman/Sierra Club, we submit that adopting either of the other proposals would be better than delaying the start of multifamily EV charging until a future IECC cycle. Multifamily residents will be disadvantaged without EV charging linked to their dwelling units. The cost savings from EV usage are large and should not be denied to multifamily residents. Accordingly, one of the three should be adopted in this cycle. If desired, we would be glad to work with the parties to achieve a common proposal for this cycle.²⁹

²⁹ During work group meetings an issue was raised, in connection with a rejected proposal, about potential hazards in multifamily construction depending on where EV chargers are installed. The main concern appeared to relate to possible *installations deep in underground garages and above 75 feet in garages* for multifamily buildings. The proponent clarified that the concern did not apply to outdoor lots or above-ground garages with open-air ventilation or in single family garages. There was not an agreement on the scope of the risks since battery technology and charging practices have continued to evolve to reduce risks of fire. Many parking structures already have EV charging installed without incidents involving vehicles. Despite some sensational reports of specific incidents, EVs are reportedly substantially less likely to catch on fire than internal combustion engine vehicles, and manufacturers of EVs and batteries have been working to reduce the incidence of fire, still further. <https://www.zeta2030.org/insights/electric-vehicles-are-safe> Gas furnaces can be installed despite risks of fires and explosions.

We believe that our proposal for multifamily construction makes sense and should be adopted. There is no reason not to require at least the basic EV Ready and EV Capable infrastructure in new multifamily construction, *even if, initially, only for above-ground parking lots and structured parking and in the top floors below ground..* If contrary fire code standards were developed for some underground locations, they would supersede these requirements per the ordinary order or precedence. (If a study group is formed to address the concerns in greater detail. We believe that it is critical to include manufacturers of EVs and EV charging systems in those discussions,

iii. Other EV Charging in New Construction. EC-C405.11.1-21 (Penniman/Sierra Club)

This proposal addresses the need for charging infrastructure in some commercial and institutional settings, in which commuters and long-distance travelers will benefit from access to EV charging. The proposal focuses on new buildings with major employers (e.g., office manufacturing or process plants with more than 10 parking spaces); hotel, motel or extended stay facilities; and educational institutions if more than 10 parking spaces are provided for faculty and other employees). Each type of facility should be capable of providing EV charging.

As proposed, the percentage of spaces covered by infrastructure requirements would be less than for multifamily dwellings and tailored to the nature of the markets and the number of potential users. Only one or a few “EVSE Installed,” “EV Ready” or “EV Capable” spaces would be required as described in the proposal. The proposal strikes a balance based on types of business and numbers of commuters. The requirements do not apply to parking intended for vehicle inventory or storage, construction equipment, customers or farms. The proposal does not specify the type of chargers that are ultimately installed, beyond a few Level 2 chargers initially and the potential for additional chargers in the future.³⁰

c. Electrification Readiness for Appliances. REC-R404-21 (Penniman/Sierra Club)

This proposal would require installation of raceways (e.g., conduits) between the electric panel and combustion-fired appliances (e.g., cooking, hot water and dryers). The cost of installing an appropriately sized raceway to a point near a gas appliance and reserving and marking panel capacity is small and much lower when walls are open and trades present during construction.³¹ On the other hand, the benefits are great, as electric appliances will grow in importance during the lives of the buildings. Electrical appliances are important since they reduce total CO2 emissions and other pollution, including indoor air pollution compared to combustion-based appliances. They also eliminate hazards from gas leaks and explosions. (Even if the raceway was not used immediately for the size of line typically needed for a particular type of appliance (e.g, 220/240 volt) need not be idle since it could be used for the lower-voltage wiring needed for a gas appliance pending a future decision to pull a higher voltage wire.)

as well as representatives of consumers and environmental interests. We would be interested in participating.)

³⁰ In all likelihood, most of the parking would be outside, not in enclosed underground areas. At least parking in those types of areas should have some EV chargers and the potential to expand further with EV Ready and EV Capable spaces. Concerns raised regarding multifamily garages were not raised concerning parking for these commercial buildings. To the extent a “study group” is formed to address safety issues in underground parking, the group should include manufactures of EVs, batteries and EV charging systems, consumer and environmental representatives.

³¹ Fifty feet of 1-inch electric conduit would cost under \$100 at Home Depot’s retail pricing. An appropriate 6-3 conductor would be more per foot, but still inexpensive, particularly if within 20-30 feet of the panel and compared tp retrofit costs.

d. **Solar Readiness. REC-R404.2-21** (Penniman/Sierra Club)

This proposal is based on Appendix RB in the 2021 IECC. Since it is in the 2021 IECC it should be adopted in Virginia's USBC. However, if it remains in an appendix, it has zero impact since no localities in Virginia are free to implement an appendix. As a result, residents will not get the benefit of the standard and will face additional impediments to installing solar, saving energy costs and reducing air pollution that contributes to public harms.

Bringing Appendix RB into the code would thus benefit residents and the public. By making an electric raceway available from roof to the dwelling's electric panel, it will make it easier for a resident to add roof top solar even after walls have been closed and construction of a house has been concluded. The cost of a conduit from near the roof to the panel box is very low with 50 feet of one-inch conduit costing less than \$100 and much less conduit is likely to be needed. The cost of installing a raceway/conduit during construction is much lower than at a later date after walls and ceilings have been closed.

e. **Zero Energy Standards. EC-C407.6-21** (Penniman/Sierra Club)

The 2021 IECC adds two appendices specifying the requirements for "zero energy" construction: "Appendix CC Zero Energy Commercial Building Provisions" and "Appendix RC Zero Energy Residential Building Provisions". The appendices are new and will be incorporated as appendices into Virginia's 2021 building code update.

The purpose of this proposal is to activate standards set forth in these two IECC appendices by making them applicable and mandatory for any buildings constructed and sold or leased as being "zero energy" or "net zero energy" or equivalent labels.

This proposal would not increase construction costs to builders since it does not require builders to go beyond the generally applicable terms of the 2021 IECC. However, by setting minimum standards for "zero energy construction" consistent with the IECC, it protects building buyers, occupants and competing "zero energy" builders by assuring that buildings marketed as "zero energy" actually meet recognized "zero energy" energy conservation standards.

Zero energy buildings are hugely valuable for residents and landlords because they they drastically reduce costs of occupancy, over time, through a combination of enhanced energy efficiency and renewable energy. Such buildings are becoming increasingly popular, particularly since they cut both occupancy costs and pollution driving climate change and since they may be eligible for federal financial incentives.

If buyers or renters are told that a building is zero energy, the building should actually have been built to that standard and verified by a building inspector before final approval is given.

Zero energy housing will increase resiliency and provide additional benefits. Individual zero energy buildings and their occupants will be more resilient because they will (a) consume less energy, (b) produce zero-carbon renewable energy equal to or in excess of their energy

needs, (c) retain heat or cooling during periods of utility outages, (d) be more capable of self-supplying energy during periods of utility outages, and (e) less exposed to economic harm from fluctuating energy prices. These are large resiliency benefits for residents in zero energy dwellings and their lenders or landlords. This proposal will also increase resiliency for the public by reducing greenhouse gas emissions, reducing demands on utilities during critical supply and price periods and reducing risks of loan and lease defaults attributable to fluctuating energy prices.

Some builders complained that “truth in advertising” is not an appropriate function of building codes. We disagree. There are requirements for statements of energy efficiency measures in new dwellings, and there are distinctive code requirements for buildings built for a specific purpose. The whole purpose of the IECC Zero Energy appendices is to set standards to protect buyers and future occupants. That is reasonable, and Virginia would benefit from activating such standards as proposed.

G. The Final Rule Must Reject the Proposal to Rollback Energy Efficiency Requirements for Commercial Categories F, S and U. EC-C401.2-21-21/EC Appendix CB-21 (Benka)

The Proposed Final Rule proposes to implement a roll back of key energy efficiency standards for commercial Categories F, S and U, which collectively cover more than 120 different types of commercial buildings that can generally be described as warehouses, storage, greenhouses and utility buildings. No reason was given when the Board’s voted for this non-consensus proposal, and no credible justification was offered by the applicant or the Board in support of this unprecedented proposal to go backwards by more than 15 years for three broad categories of commercial buildings. Nor was any reason given for approving a weakening amendment to the IECC in the absence of a consensus to do so.

This extreme weakening amendment is contrary to Virginia law and must be rejected. It was strongly opposed by multiple work-group participants and by comments submitted in writing and orally during the work-group process.³² And, the proposal is contradicted by 15 years of successful implementation of updates for 2009, 2012, 2015 and 2018; by the adoption of national IECC standards for 2021. It is also contradicted by multiple updates of ASHRAE which is an alternative code option for commercial builders. As evidenced in uncontradicted submissions during the work group process, warehouse construction has been booming for years without any discernable harm from building codes.

As discussed below, the proposal is not supported by either applicable law or consensus or any evidence of need, costs, benefits or harms to building occupants or the public. By moving more than a decade backward from the latest national building code standards, the proposal

³² Mr. Penniman submitted public comments opposing the proposal through CDPVA. He and others spoke and voted in opposition during the working group process. As we spelled out, the proposed rollback was unsupported and would violate existing law, waste energy, harm the public and harm building users for the lives of the buildings.

would waste energy, raise occupancy costs, potentially harm employees, and harm the “health, safety and welfare” of the residents of Virginia both now and in the long run.

1. The Proponent has not provided credible support for its proposed rollback of code standards.

The supporting statement is very brief and conclusory. It does not provide any reasonable basis for rolling back conservation standards for any type of building.

- In support of cutting back standards for dozens of types of buildings within the 3 broad categories Groups F, S and U, the proposal only offers two sketchy examples of two hypothetical buildings accompanied by a few generalized statements that *some* of the storage buildings are “not heated or cooled to normal heating and cooling temperatures” or are “vacant” some of the time or might have “open doors” part of the time. There are no details about the energy needs, costs, and characteristics of the more than 120 other types of buildings that would also get the efficiency rollback.
- Section 306 Factory Group F identifies over 50 types of factories; Section 311 Storage Group S lists over 60 types of storage facilities; and Section 312 Utility and Miscellaneous Group U identifies over a dozen categories. Some of the facilities store products (*e.g.*, food) that are temperature sensitive and require a great deal of energy (lessened only by energy efficiency) to achieve temperature goals. Other buildings involve manufacturing, greenhouses and other operations, which have still different energy and energy-efficiency profiles. Yet the proposal provides no details or analysis of any other types of buildings or their energy footprints, available technologies, employee and customer needs, compliance costs, energy cost savings, pollution reductions or other factors relevant to this extreme proposal.
- The proposal ignores Virginia’s successful implementation of higher conservation standards for more than a decade, and it does not address and quantify the wasted energy and lost savings from its proposal or lost public benefits from greater energy efficiency and pollution reductions, all of which are relevant to the Board’s determinations. The brief assertions about possible implementation problems (*e.g.*, more difficult, possibly less attractive) are too vague or irrelevant to support the extreme proposal. If the proposal was based on legitimate problems, they would have been raised in each cycle from 2009 through 2018.
 - In fact, the warehouse business has been booming in Virginia, as documented by Virginia Business.com See, for example, **“Need for speed: Developers race to build warehouses amid site shortage,”** <https://www.virginiabusiness.com/article/need-for-speed/> (Dec. 31, 2021) (“Geoff Poston [of Hampton Roads] likens the current market for building, buying and leasing warehouses and distribution centers to the mid-1800s California Gold Rush: Everybody wants in.” The problem is land, not demand or ability to construct.);
 - **“Making it rain: Increased e-commerce fuels wave of distribution centers,”** <https://www.virginiabusiness.com/article/making-it-rain/> (April 29, 2021) (“For

Hanover County Economic Development Director Linwood Thomas, things couldn't get much better. 'It's really been a perfect storm,' Thomas says. That storm — the good type — is a deluge of distribution centers and warehouses that have opened recently or are currently in the pipeline for the county of about 108,000 residents, located about 20 miles north of Richmond.... Over the past two years or so, Hanover has added about 1.5 million square feet of new space and about 80% of that has been leased. 'Then, we've got another almost 4 million square feet proposed in the next 24 months. These are tangible products that will put us over 5.5 million square feet of new space, which is huge,' says Thomas, noting that the new space will represent a nearly VASE% increase over the county's existing stock of 13.8 million square feet of industrial/warehouse space.”);

- o **“Industrial boom: Virginia continues to see more warehouses and distribution centers,”** <https://www.virginiabusiness.com/article/industrial-boom/> (July 27, 2018)(“While Hampton and Southwest Virginia area also benefiting, Richmond’s industrial warehouse market is currently undergoing a “golden age” in the distribution sector, according to a recent report from CBRE.”)
- The proposal provides little useful information while omitting critical information. For example, it fails to disclose the huge volume of air to be heated and cooled in the two illustrations of warehouses: roughly 2.5 million cubic feet for the 100,000 Sf warehouse, and 144,000 cubic feet for the 7500 SF warehouse. Even the building claiming to heat only 60 degrees (assuming that does not get raised after the building is inspected) would require a huge amount of energy to achieve and maintain the targeted 60 degrees. Nor does the proponent describe the huge, overall energy cost and use increases (waste), if efficiency standards are rolled back.
- The proposal also ignores the 2021 IECC’s flexibility provisions which exempt unheated and low-conditioned buildings. A large building could be subdivided into an exempt unheated portion and a separate heated portion if, for example, heating for an office or other work area is needed. It also ignores ASHRAE’ flexibility for low energy buildings.³³
- The proponent also fails to compare the impact of its proposed standards to the current or 2021 IECC, or to current ASHRAE standards, which the proposal is presumably also designed to circumvent.
- IECC and ASHRAE code provisions are built upon the hard work, expertise and negotiations of hundreds of industry and efficiency experts, architects, engineers, trade associations, environmental experts, government bodies and public review processes. Nothing in the IECC or ASHRAE standards was arbitrarily arrived at. As evidenced by the existing code’s low-energy building exemptions and performance alternatives (e.g., use of ASHRAE standards), building usage patterns and designs were considered by the IECC and ASHRAE when they drew up the standards.

³³ If modifications to specific exemption provisions were justifiable, they could be considered without rolling back all envelope standards to 2006 Virginia’s code for three broad categories covering more than 120 types of buildings that were not even discussed.

- DOE/PNNL have consistently found that ASHRAE and IECC standards save money for building users through energy savings compared to initial construction costs. https://www.energycodes.gov/sites/default/files/2021-07/Cost-effectiveness_of_ASHRAE_Standard_90-1-2019-Virginia.pdf; The U.S. Department of Energy (DOE) and its Pacific Northwest National Laboratory (PNNL), in 2022, completed their [analysis](#) of commercial provisions of the International Code Council’s [2021 International Energy Conservation Code \(IECC\)](#). As stated in PNNL’s report, “the 2021 edition of the IECC results in site energy savings of 12.1% at the aggregate national level compared to the 2018 IECC edition. In addition, on a national weighted average basis, the 2021 IECC is 6.5% more efficient for site energy use than Standard 90.1-2019.” The 2021 IECC also provides a nationally aggregated energy cost savings of 10.6% and greenhouse gas emissions savings of 10.2% as compared to the 2018 edition.
- The proponent implicitly assume that the two buildings’ initial heating and cooling needs and practices will never change. The supporting statement does not consider the impacts of future increases in energy usage or energy prices, which are likely to occur as climate change drives up ambient temperatures.
- The proponent provides no evidence on how the public, including building occupants, communities and residents of the Commonwealth – would be affected by exempting these three large categories of buildings from all energy conservation requirements. There is no discussion, for example, of pollution impacts or climate impacts, or impacts on resiliency if excess energy demands result from the proposal, or impacts on utility rates to all customers from removing all conservation requirements which might temper demand for high priced energy resources.
- Despite short-term appeals to builders of reducing construction costs, adopting the proposal would increase the risk that the buildings would become obsolete more quickly as energy operating costs go up for occupants. Lower rents and vacancies could follow just as they have for older office buildings in many areas.

In sum, the scanty illustrations of two possible warehouse are not nearly sufficient to exempt three broad categories of buildings.

To make matters worse, the Board’s flawed policy of automatically carrying forward weakening amendments to the IECC, absent a “consensus” that includes builders’ agreement, would extend forever this egregious backdating of the USBC to 2006 for a select group of buildings. Approval would also invite more builder proposals to weaken Virginia’s building code, potentially undercutting Virginia’s USBC for decades into the future.

2. The proposal violates Virginia law.

The p proposal in Appendix CB to rollback standards primarily for building envelopes to the level of the 2006 standards is contrary to law.

In support, the proponent cites HB1289, which directed the Board

“to consider during the next code development cycle, revising the Uniform Statewide Building Code...to provide an exemption from any requirements in the energy efficiency standards established pursuant to 13VAC5-63-264 of the Virginia Uniform Statewide

Building code and the 2018 Virginia Energy Conservation Code, and the subsequent amendments to the Virginia Uniform Statewide Building code and the 2018 Virginia Energy Conservation Code, for the following use and occupancy classifications pursuant to Chapter 3 of the 2018 Virginia Construction Code: (i) Section 306, Factory Group F; (ii) section 311, Storage Group S; and (iii) Section 312, Utility and Miscellaneous Group U.”³⁴

HB1289, however, is merely procedural. It directs the Board to consider a proposal for an exemption; but, unlike H2227 enacted in 2021, HB1289 did not alter the legal standards applicable to approval of building codes. Nor did it create any kind of presumption in favor of granting an exemption. In other words, the proponent bears a heavy burden of proof to meet the applicable legal standards, and the Board must undertake an analysis consistent with the law. In this regard, the Board must base its decision on 36-99 and H2227.

- Section 36-99A requires implementation of code provisions that “protect the health, safety and welfare of the residents of the Commonwealth,” that are “constructed, rehabilitated and maintained consistent with recognized standards of health, safety, energy conservation and water conservation” and that minimize costs “consistent with” applicable national standards.
- Pursuant to the 2021 legislation, H2227, the code is to be “at least stringent as” the latest IECC whenever the energy savings, pollution reductions and other benefits, over time, exceed the incremental cost of construction.
- If the General Assembly had wanted to see an exemption or rollback for three broad categories of buildings *without review under applicable laws*, it would have either have ordered an exemption or would have modified applicable legal standards. Since the legislature did not do so, its direction “to consider” is bound by otherwise applicable laws, which do not authorize a broad rollback to standards below the latest IECC.

In sum, incorporating Appendix CB-21 into the USBC would be arbitrary and inconsistent with the law. The applicant for this one-of-a-kind, special rollback of the USBC’s energy efficiency standards and the IECC’s 2021 update has not met the heavy burden of proof needed to support such special treatment to large categories of buildings. The proponent withdrew its initial proposal for an exemption and made no substantive effort to justify a rollback pursuant to the applicable legal standards. The proposal must be rejected.

H. Conclusion

³⁴ Mr. Benka’s initially submitted a proposal for an exemption from energy efficiency standards, which was subsequently withdrawn by the applicant and is not before the Board. It was replaced by the pending proposal for Appendix CB, which would rollback building envelope standards to 2006 for more than 120 different types of buildings.

DHCD Staff presented a proposal for an exemption without supporting data or arguments in favor of such an exemption. Its sole purpose was to assure, pursuant to HB 1289, that, *as a procedural matter*, the Board “considers” the idea of an exemption. The Staff did not advocate for or present support for adoption. The Staff’s non-consensus proposal was rejected by the relevant work group and by earlier votes of the Board so it is not included in the Proposed Final Rule. Nor should it be.

The undersigned urge the Board to amend the proposed final rule in order to adopt and implement updated building codes that are “at least as stringent as” the 2021 IECC, removing past weakening amendments and adopting further proposals discussed above.in Part F of these comments. Incorporating these proposals into the USBC would protect the health, safety and welfare of Virginians and comply with Virginia law. The Board must also reject the proposal for Appendix CB-21 fpr the reasons set forth herein.

Respectfully submitted,

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Rose Hendricks, Sarah Karush, Co-Chairs

Citizens' Climate Lobby - Fairfax County Chapter

ATTACHMENT A

BHCD Meeting Statement – December 12, 2022

Keith H. Johnson

I am here today as the sole representative of the Virginia Fire Services Board and as a representative of Virginia's Fire Service. As a member of this Board of Housing and Community Development, I wish to provide the following statement to be entered into the meeting minutes of the December 12, 2022, Board of Housing and Community Development Meeting.

At our past Board of Housing and Community Development meeting on October 3, 2022, Board of Housing members met to consider code proposals for the 2021 Virginia Code adoption process. Today, I am here representing the Virginia Fire Services Board to strongly object to the process that was used to get us to this point in the 2021 code process. As such, I and other members of the Virginia Fire Services Board who chose not to come, because quite frankly their voice doesn't matter, abstain from any vote, codifying the 2021 Uniform Statewide Building Code and the Statewide Fire Prevention Code as the process used, silenced the voices and work of Virginia's Fire Service. In the Commonwealth of Virginia, the Governor delegates substantial powers to boards and commissions to make decisions regarding some of Virginia's most crucial issues. The Board of Housing and Community Development oversees Virginia's codes including the Uniform Statewide Building Code and the Statewide Fire Prevention Code. As Fire Chief of Loudoun County and Chair of the Virginia Fire Services Board, I reside on the Board of Housing and Community Development to be the voice of Virginia's fire service and suggest and promulgate code improvements, to keep the residents and visitors in the Commonwealth of Virginia safe from fires and other emergencies. I am proud of my service on these boards, as any action we can take at the state level around the prevention of fires will indeed save lives and property and keep my fellow firefighters out of harm's way.

Unfortunately, the current process for amending the fire and building codes through the Department of Housing and Community Development Board is flawed and disrespectful to the 556 registered fire departments and over 10,000 firefighters across the Commonwealth who risk their lives each day. Industry and special interest groups which

do not represent the fire service have the vast majority of votes on this board and dominate meetings in an effort to keep their construction costs low by neglecting fire and life safety.

As the sole Fire Services representative on this board, I spent countless hours during the 2021 code process thoroughly researching and preparing my comments on each item that was to come before this board to include adding requirements around Carbon Monoxide detectors, requirements for residential sprinklers in townhouses, in-building communications, requirements for energy storage systems, and requirements for electrical vehicle charging stations which is a growing life safety issue in the Commonwealth of Virginia, and other extremely important life safety codes. Some of these proposals have been in the national model codes for years but are removed by the advocates of special interest groups during the Virginia Code process. Despite the prepared agenda allowing for discussion of these proposals, one member of the Board of Housing motioned to halt consideration and dialogue on 49 code proposals. Many of these 49 code proposals were extremely important to the fire service and the citizens of the Commonwealth. Workgroup members and safety advocates spent countless days and hours working together to reach a consensus, ultimately bringing these items before the Board for needed discussion and deliberation. But instead, members of this board, voted to bypass discussion and not allow the voice of Virginia's Fire Service to be heard surrounding the many common sense safety measures. And the Fire Service was not alone, many other proponents of code proposals were silenced, simply because you didn't want to sit through the testimony. If your reasoning was that these codes were considered "non-consensus", let me remind you that it only takes one person in a sub-workgroup for a code proposal to be considered non-consensus. With no opportunity for deliberation between the members of this board on these non-consensus items, that hardly represents a consensus process, where one person can force a life safety code proposal to not be voted upon.

This meeting and vote by this board was a watershed moment, but it was not unique. I ask each of you to reflect on your individual reason to vote to not allow even discussion on a life safety item, as only you can stand-up to you reason. As board members representing our profession or area of the Commonwealth, the decisions we make on this board quite literally can be the difference between life and death for someone involved in a residential fire, perhaps a member of one of our families. The process is broken, and the members of the Board of Housing and Community Development should show some respect for the men and women of the fire service, both career and volunteer, who walk into danger every day to save lives and protect the citizens of the Commonwealth of Virginia. You may have silenced the voice of Virginia's Fire Service on October 3rd, but I can assure you, we remain Fire Service Strong.

ATTACHMENT B

HOUSING AFFORDABILITY

Housing Affordability

Builders and some Board members like to talk about “affordability” with an exclusive focus on initial construction costs without regard to utility savings and other benefits from greater efficiency. However, that narrow view is invalid. It may allow builders to ignore the benefits of meeting all IECC energy efficiency standards, but it is inconsistent with Virginia law and policies and with residents’ interests. Improving energy efficiency is not a minor extravagance as some builders imply. Buyers are not well served by buying houses that they cannot afford to live in following the purchase. Nor are tenants well served by units with unduly high utility costs.

Importantly, DOE and PNNL show that full implementation of the latest IECC will save residents more money from reduced energy costs than the increase in mortgages and related costs. In effect, DOE’s and PNNL’s analysis of IECC’s net benefits directly addresses the issue of affordability as recognized by both DHCD and the Virginia Code. There is no excuse for diminishing energy efficiency below the IECC’s standards. It disserves all future residents.

a. Virginia Law

It is generally recognized in Virginia and elsewhere that housing “affordability” for residents *includes* utility costs, as well as mortgage or rental costs.

Virginia law defines “affordable” housing as including utility costs in at least two locations:

“§ 15.2-2201. Definitions.

As used in this chapter, unless the context requires a different meaning:

"Affordable housing" means, as a guideline, housing that is affordable to households with incomes at or below the area median income, **provided that the occupant pays no more than thirty percent of his gross income for gross housing costs, including utilities.**"

“§ 15.2-2305.1. Affordable housing dwelling unit ordinances.

“H. Notwithstanding any other provisions of this chapter, as used in this section, unless the context requires a different meaning:

"Affordable" means, as a guideline, housing that is affordable to households with incomes at or below the area median income, **provided that the occupant pays no more than 30 percent of his gross income for gross housing costs, including utilities.**”

As noted previously, Virginia law was amended by H2227, in 2021, to call for building code energy efficiency standards “at least as stringent as the IECC” based on a comparison of whether the energy savings and other benefits over time exceed the incremental cost of construction attributable to the IECC. *That standard clearly rejects the argument that initial construction costs are to be the basis for a decision without regard to energy cost savings and other benefits over time, i.e. after construction and sale.*

A 2021 JLARC report “Affordable Housing in Virginia,” which is cited by the home builders, defines “affordable housing” as relating to housing costs, including utility and mortgage or rental costs.

“Households are considered housing cost burdened when they spend more than 30 percent of their income on housing expenses (sidebar). **Housing cost burden constrains households’ budgets, making it difficult for households to afford other necessities and making eviction more likely. Research has found that households that are cost burdened spend less money on food, transportation, and health care than other households. As a result, cost burdened households are more likely to put off receiving needed medical care, experience food insecurity, and have difficulty paying other bills.** Low-income households naturally have less money to spend on housing, so the prevalence of cost burdened households is affected by the availability of relatively low-cost housing (sidebar). Incomes and housing costs vary by region, and, therefore, so do housing needs.”

[Sidebar]

“For renters, housing expenses include the rent plus the estimated cost of utilities (electricity, gas, water, sewer, and fuels).

“For homeowners, housing expenses include mortgage payments (including first and second mort gages, and home equity loans), real estate taxes, insurance, utilities, and homeowner association fees (if applicable).” (*Emphasis added.*)

DHCD’s website (<https://dmz1.dhcd.virginia.gov/HB854/part-1-affordability.html>) also recognizes that on-going utility costs are critical to defining the “affordability” of a dwelling:

“There are multiple ways of measuring housing affordability. One key metric is the U.S. Department of Housing and Urban Development’s (HUD) 30 percent rule. This is a simple ratio that states housing is affordable when an individual or family pays no more than 30 percent of their gross household income on regular housing costs, including rent or mortgage and basic utilities.

“If someone is paying more than 30 percent of gross household income on housing costs, then the household is *cost-burdened*. If an owner or renter spends more than 50 percent of gross income on housing, the household is *severely cost-burdened*.”

“Cost-burdened households have less to spend on other necessities such as groceries, healthcare, and transportation. When expenses stretch budgets to the breaking point, families and individuals make sacrifices to stay in their home that risk their health and well-being.”

Importantly, the DOE’s and PNNL’s analysis of net savings are directed at the same factors that are generally recognized to affect affordability: primarily mortgages, taxes and utilities.

b. Other Flaws in Builders’ Affordability Arguments

Builders’ exclusive focus on initial construction costs is wrong with respect to the generally recognized measures of affordability. It is also misleading in other ways.

- Energy efficiency is one of the few incremental construction costs that actually improves affordability. Unlike larger houses, fancier designs and added amenities which raise construction costs and mortgages, energy efficiency improvements “at least as stringent as those contained in the IECC” will save money relative to the impacts of construction costs on mortgages or rents.
- Energy efficiency built into housing at the outset will benefit both initial and future residents whether buyers or tenants, for decades. Incorporating efficiency measures at least as stringent as those contained in the IECC will also limit the need for costly retrofits. These benefits occur over time, making affordability last for many years.
- Like other code requirements, energy efficiency standards protect the health, safety and welfare of residents. The IECC’s standards are the product of years of work by committees and participants in the ICC’s code development process, which considers feasibility, costs and benefits.
- Energy efficiency measures are generally hidden behind walls, in attics or in appliances, and like many other code requirements are very technical. Buyers rely on stringent energy efficiency code standards for protection, just as they do for electrical, fire and structural safety. When builders say a dwelling “meets code,” most buyers assume that this means consistent with nationally recognized standards. Few buyers know that Virginia’s code has been weakened in key respects. It is important for Virginia’s efficiency code standards to be “at least as stringent as the IECC” so that buyers actually get the high level of protection they expect.
- While builders sometimes claim that buyers can choose greater efficiency, that only applies if the buyer is looking at contracting for a custom-built home, not in the type of homes that are potentially available to low- and moderate-income buyers.³⁵

³⁵ At the December 12, 2022 meeting, one member of the Board described the “affordability” problem in terms of a 3600 SF custom home for which bids exceeded \$1,000,000. That is not “affordability” as understood by Virginia or the Federal government. There are many ways to adjust the cost of such a project without sacrificing energy efficiency.

- Builders can make new-home sales prices more affordable without skimping on the efficiency measures that will make living in the dwelling more affordable. Builders can reduce their prices, for example, by adjusting the dwelling sizes, designs, easily-seen amenities, and lot locations and sizes, without sacrificing energy efficiency that will reduce total occupancy costs. In contrast to efficiency, builders' decisions to build larger houses, add fancier amenities or choose larger, more expensive lots add to **both** upfront and occupancy costs.
- The reality is that fewer than 10% of new dwellings are deemed to be “affordable” for lower income buyers. Yet, 100% of new residences would be built to weaker efficiency standards in the name of “helping” low income residents – with higher occupancy costs for residents at every home price level.
- If IECC-level efficiency standards are incorporated into Virginia’s code, then all builders will meet those standards and compete on an even-footing. New homes in Maryland, which requires full IECC compliance, are reportedly less costly to build.
- It does not serve low- and moderate-income residents to sell them housing if the future utility costs push them over the limit of what they can afford.
- Home purchases are made with mortgages that spread the building costs over time, more in line with the period in which utility costs/savings will be incurred. That is the reason, DOE and PNNL recognize lifecycle cost analysis as more appropriate than so-called “simple payback” estimates which pretend that savings are deferred for years.
- Builders often pick periods of rising input costs (e.g., lumber) to justify weaker standards. However, prices of inputs go down as well as up. Already, for example, wholesale lumber costs that rose during the pandemic have come back down to longer term averages. <https://tradingeconomics.com/commodity/lumber>
- Builders that work in Maryland and Virginia are already experienced in constructing to the full IECC standards. They have apparently concluded that both can be profitable, There is no reason to think that builders who work only in Virginia are less capable than builders who work in Maryland.
- Builders tend to discount the importance of efficiency investments because they are hidden, not flashy and not well understood by buyers. They think they can raise prices and profits with the flashier features, while the costs of inefficiency are borne by the buyer after the sale is made. However, buyers want greater efficiency and future savings, even if they do not grasp the details of U-Factors, R-Factors, and ACH50. If the USBC requires full IECC compliance, builders and realtors can and presumably will market the dwellings for the extra value, comfort and savings they are providing. In that environment, everyone wins.

ATTACHMENT C

Importance of Reducing CO2 and Other Pollutants That Harm The Health, Safety and Welfare of Residents of the Commonwealth

As confirmed by DOE’s Determinations, PNNL’s findings, other publications and other information submitted in these proceedings, building codes that reduce CO2 emissions and other air pollutants are critical to mitigating the harms to residents and the public from accelerating climate changes caused by human activity, especially heat trapping air pollutants. Buildings’ energy consumption is responsible for nearly 40% of Virginia’s carbon pollution. Carbon pollution will remain in the atmosphere for many centuries, trapping heat and worsening the climate for humans, the economy, our property and our natural heritage. Other air pollutants from combustion by occupants or their suppliers of electricity will also harm people’s health and welfare.

We cannot wait cycle after cycle, to meet or exceed the IECC, wasting energy and emitting avoidable air pollutants. The damage is bad already and will continue to grow if energy use is not reduced by greater energy efficiency. “Energy efficiency is critical to solving the climate crisis. In most cases, efficiency measures have proven to be the most cost-effective way to address climate change while reducing energy waste, saving money, and affordably expanding the use of renewable energy resources.” <https://www.aceee.org/topic/climate-change-policy>

A. DEQ’s Recent Findings Concerning Critical Importance of Reducing CO2 and Other Pollutants

In December 2022, Virginia’s Department of Environmental Quality published a Background Document³⁶ for a potential regulatory action in which it repeatedly concedes that state action to reduce CO2 and other pollution to combat climate change is “imperative” and “must be addressed” in order to protect the public health, safety and welfare. DEQ’s pronouncements underscore BHCD’s obligation to protect the “public health, safety and welfare” by adopting building codes that require constructing buildings at efficiency levels “at least as stringent as the IECC”—particularly since such protections would bring value beyond even the demonstrated net cost savings to residents from full IECC compliance.

In DEQ’s words:

“Reducing carbon emissions in order to reduce climate change impacts is indeed imperative to protecting public health and welfare.” (Response to comment 19)

“DEQ agrees with the commenters that that climate change represents a serious threat to Virginia's public health and welfare.” (Response to comment 4)

³⁶ **Agency Background Document**, prepared by DEQ for consideration by State Air Pollution Control Board of proposal to repeal regulation for emissions trading (December 7, 2022).

“The commenter’s concerns [about adverse health impacts from climate change and pollution] are acknowledged and shared. As discussed elsewhere, **these issues must be addressed....**” (Response to comment 10)

“DEQ acknowledges that **the impacts of carbon and other forms of pollution must be addressed to protect the public health and welfare....**” (Response to comment 12)

“**Energy efficiency programs and resiliency measures are indeed needed throughout the state. These programs are obviously costly and the money must be obtained one way or another...**” (Response to comment 7)

“**Energy efficiency and resiliency are indeed important concerns that must be addressed....**” (Response to comment 11)

“Resiliency and energy efficiency are indeed **essential for protecting public health and welfare throughout the states from the effects of carbon and other air pollution.**” (Response to comment 17)

“**[P]rograms to reduce carbon through direct emission reductions and energy efficiency, and to mitigate carbon pollution through resiliency projects, are important—and expensive.**” (Response to comment 26)

“**[T]he costs of any carbon reduction program will be borne by the state one way or another.**” (Response to comment 34)

B. The Harms from Climate Change Are Accelerating and Emissions from Buildings Are a Major Contributor

Hundreds of billions of dollars of damage now occur annually in the U.S. from climate change and the trend is worsening. CO₂ emissions heat the atmosphere and oceans for centuries and acidify oceans as well. Virginia is incurring growing damages and some areas face catastrophic damages if Virginia continues with business as usual. Reducing CO₂ emissions also will cut co-pollutants, such as particulates, NO_x and SO₂, which also harm human health. Energy efficiency is a critical step to reducing greenhouse gases and other pollutants.

Temperature increases driven by CO₂ and other GHGs are fundamentally altering weather patterns, oceans, and atmospheric patterns. But climate change is a global problem with broad effects, which are already occurring and are increasingly widespread and severe:

- **Heatwaves** that kill and sicken people and other species, devastate agriculture, and reduce times that workers, children and people generally can safely be active outdoors (*e.g.* in Virginia, South, Midwest, and West)
- **Storms** that kill people and cause massive property, business and agricultural damage such that billion-dollar storms are now a commonplace (*e.g.*, just within the past two years in Virginia, West Virginia, Kentucky, Tennessee, Georgia, Florida, Michigan, Mississippi, Louisiana, Texas, the mid-west and far-west, as well as every other populated continent)

- **Droughts** (*e.g.*, throughout the Western and Mid-western United States, Alaska, Europe, Asia, Africa, Australia) which are destroying crops, hydroelectric water sources, local and regional water supplies, and driving mass migrations of people, as well as food price inflation
- **Wildfires** (*e.g.*, throughout the Western United States, Alaska, Canada Europe, Asia, Australia) which kill people and wildlife, destroy homes, forests and grasslands, drive inflation of food and lumber, and compound GHG emissions with more CO₂ and particulate matter
- **Sea level rise** from melting glaciers and ice caps and from thermal expansion of oceans, which are a direct threat to Virginia's coastal and tidal communities that already face sunny-day flooding and are forecast to see **1-2 feet of sea level rise by 2050 and potentially 6-7.5 feet this century**, devastating communities and property in Virginia and elsewhere. Virginia's coastal and tidal communities are highly vulnerable. Salt water infiltration is also a growing problem as sea levels rise.
- **Warming of seas and inland water bodies**, which intensifies algae blooms, kills aquatic life and harms fisheries upon which the U.S., including Virginia, relies
- **Poisoning sea life through CO₂-driven acidification of oceans and inland water bodies** and their aquatic life and fisheries
- **Harming species and habitats** for wildlife and agricultural animals
- **Expanding the ranges of harmful insects and diseases**, which harm people, forests and agriculture in the U.S. and around the world
- **Food supply disruptions** from all of the forces above leading to higher prices, hunger and famine in many parts of the world
- **Economic disruptions** in the U.S. and around the world from all the factors identified above, raising prices, disrupting supply chains, increases malnutrition, drives human migrations, and increases international conflicts
- **National security and migration threats**, which the U.S. military and CIA recognize are accelerating for the U.S. and most other countries due to the disruptions that climate change is causing to water, agriculture and economic resources worldwide.

And, if that list was not bad enough,

- **these crises are already worse and are growing worse much faster than had previously been foreseen;**
- **rising temperatures are triggering “feedback” affects** that are accelerating climate change even faster and are leading to irreversible tipping points;
- **the direct and indirect economic, ecological and human harms from continued emissions of CO₂ will last for many centuries** (while methane has 87 times the heating impact of CO₂ over 20 years, and N₂O has still a stronger heat trapping impact per ton than over two hundreds of years); and
- **the centuries-long impacts of heat trapping chemicals mean that postponing reductions will require far steeper and disruptive reductions in the future and/or increasingly severe harms for generations to come.**

The trends are clear: **24 of the 25 hottest years on record have occurred in the last 25 years; 9 of the 10 hottest have occurred in the last 10 years; the last year below the 20th Century average was 46 years ago; and while warming has increased every decade since 1880, the rate of temperature increase has doubled since 1981.** <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature>; <https://www.noaa.gov/news/2022>

The harmful impacts from climate change are enormous and far outweigh the minor costs of efficiency investments and renewable energy that actually save money while reducing climate pollution. . This is illustrated by **the growth of billion-dollar (inflation-adjusted) weather events in the United States**, since 1980, as reported by the National Atmospheric and Oceanographic Administration (<https://www.ncei.noaa.gov/access/billions/>):

- **Total, direct costs exceed \$2.195 trillion (CPI-adjusted to 2022) just in the United States, since 1980.**
- **The number of such storms increased from 3.1/year in the 1980s to 20/year in the last 3 years. In the last 5 years, there have been 89 billion-dollar events, collectively costing \$600.3 billion and killing 1,751 people.**
- **“In 2022 [the third worst year], there were 18 weather/climate disaster events with losses exceeding \$1 billion each to affect the United States.... Overall, these events resulted in the deaths of 474 people and had significant economic effects on the areas impacted. The 1980–2022 annual average is 7.9 events (CPI-adjusted); the annual average for the most recent 5 years (2018–2022) is 17.8 events (CPI-adjusted).”**

Storms exacerbated by rising temperatures have killed people and severely harmed several parts of the Commonwealth, yet a truly massive hurricane has still not done to Virginia what has been done to states to the north and south (*e.g.*, Ian, Sandy, Katrina, Harvey). On our current trajectory, it is only a matter of time before Virginia is hit and then hit again. Rapidly changing weather patterns and rising seas are disrupting Virginia’s agriculture, coasts and species. Rising temperatures have already increased the frequency of heat illnesses in Virginia, as well as the need of businesses and schools to curtail or adjust outdoor activities, while temperatures plus storms threaten agriculture and infrastructure. Low-income residents are particularly vulnerable to climate impacts, including poorly insulated, sometimes un-airconditioned dwellings and disruptions of food and energy. Virginia’s natural heritage (forests, wildlife, fisheries, parklands) is also being harmed by climate change and its impacts.

The Intergovernmental Panel on Climate Change has repeatedly reported, that CO₂ and other greenhouse gas emissions must be slashed dramatically in the next 10 years or the world will face catastrophic impacts from climate change. Its most recent report was issued in March 2023. <https://www.ipcc.ch/report/ar6/syr/>. The March 2023 Report underscores the harm to humans and natural resources from climate change, the rapidly growing dangers from continuing emissions of CO₂ and other greenhouse gases, and the urgent need to cut CO₂ emissions dramatically during this decade in order to avoid even more catastrophic harms to people and the planet. The March 2023 Report warns of the growing danger that, by crossing tipping points, the risks will spiral faster and become irreversible.

The IPCC's reports are in line with warnings from U.S. regulators and climate experts.³⁷

Growing climate disasters will particularly hurt low-income people and affordable housing. Pew, "Climate Change Is Making the Affordable Housing Crunch Worse," August 30, 2019 By: Teresa Wiltz <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2019/08/30/climate-change-is-making-the-affordable-housing-crunch-worse> Virginia's specific vulnerabilities are extreme. Massive sea level rise is foreseen for Virginia's coasts and along its rivers and wetlands. Sunny day and storm flooding are already occurring. Massive flooding has also occurred elsewhere in the state. A map and discussion of the range of flooding and accompanying description is quoted below. Communities are projecting to spend billions of dollars on resiliency investments to deal with lower- or mid-levels of sea rise, though they do not know where all the money will come from nor how they will cope with major storms and higher sea level rises.

Since new buildings are expected to last for 50-100 or more years, it will take a long time to replace older building stock with more energy efficient buildings. Delaying maximizing energy efficiency any longer will compound the crisis Virginia and the U.S. already face. Blocking or further delaying IECC progress on energy efficiency and renewable energy or rolling back standards will harm our children and generations beyond, hugely harming Virginia now and over time.

C. Virginia's Climate Vulnerabilities

While some people would like continue to push off action, we have run out of time. Continuing business-as-usual for building construction or, worse going backward, would be irresponsible and inconsistent with legislative directives. Virginia is vulnerable to climate shocks throughout the state and has already experienced many.

Virginia's communities and rural areas near the coast and tidal rivers are especially vulnerable. Norfolk and Virginia Beach illustrate the looming crisis.

Norfolk faces net sea level rise of up to 6.6 or even 7.5 feet by 2100.³⁸ It has no easy way to protect itself, particularly if businesses and people keep building near coasts and rivers and keep emitting CO2 and other greenhouse gases as they have in the past. Maximizing energy efficiency and switching to zero-energy power sources is essential to bring down the impacts and to keep them from continuing to rise far into the future..

³⁷ See U.S. Global Change Research Program, 4th National Climate Assessment, Volume 1: Climate Science Special Report, <https://science2017.globalchange.gov/>, Volume II: Impacts, Risks and Adaptations in the United States, <https://nca2018.globalchange.gov/> For Virginia specific impacts, see footnote 2.

³⁸ "Norfolk approves \$2.6B storm protection plan," Washington Post (April 27, 2023)(conceptual plans include walls 15 feet high, but uncertainty about feasibility of parts of plan or the funding); "For the fifth year in a row, Norfolk takes the top spot for sea-level rise on the East Coast," Virginia Pilot (April 5, 2023).

Norfolk recently announced a \$2.6 billion plan to try to mitigate the growing flood risks faced by its citizens. It does not have enough funding to pay for it, nor is the plan capable of dealing with the worst-case flooding. And, if the Governor has his way, a major source of funding to help pay for mitigating climate-driven flooding and increasing building energy efficiency (*i.e.*, participation in the Regional Greenhouse Gas Initiative) will disappear.

Virginia Beach faces problems similar to Norfolk, as summarized below:

“Sea Level Rise Projection Map – Virginia Beach

“by [Owen Mulhern](#) Jul 28th 2020 [https://earth.org/data_visualization/sea-level-rise-by-2100-virginia-beach/?gclid=EAIaIQobChMI8IK214jT_gIVy- jjBx1LoAjwEAMYASAAEgKMufD_BwE]

“Virginia Beach is a resort city with around 500 000 inhabitants. The economy is heavily reliant on its near-sea level installations, which are extremely vulnerable to sea level rise. Many homes are also exposed, driving officials to consider expensive flood protection plans, but will they be enough for the worst-case scenario?”

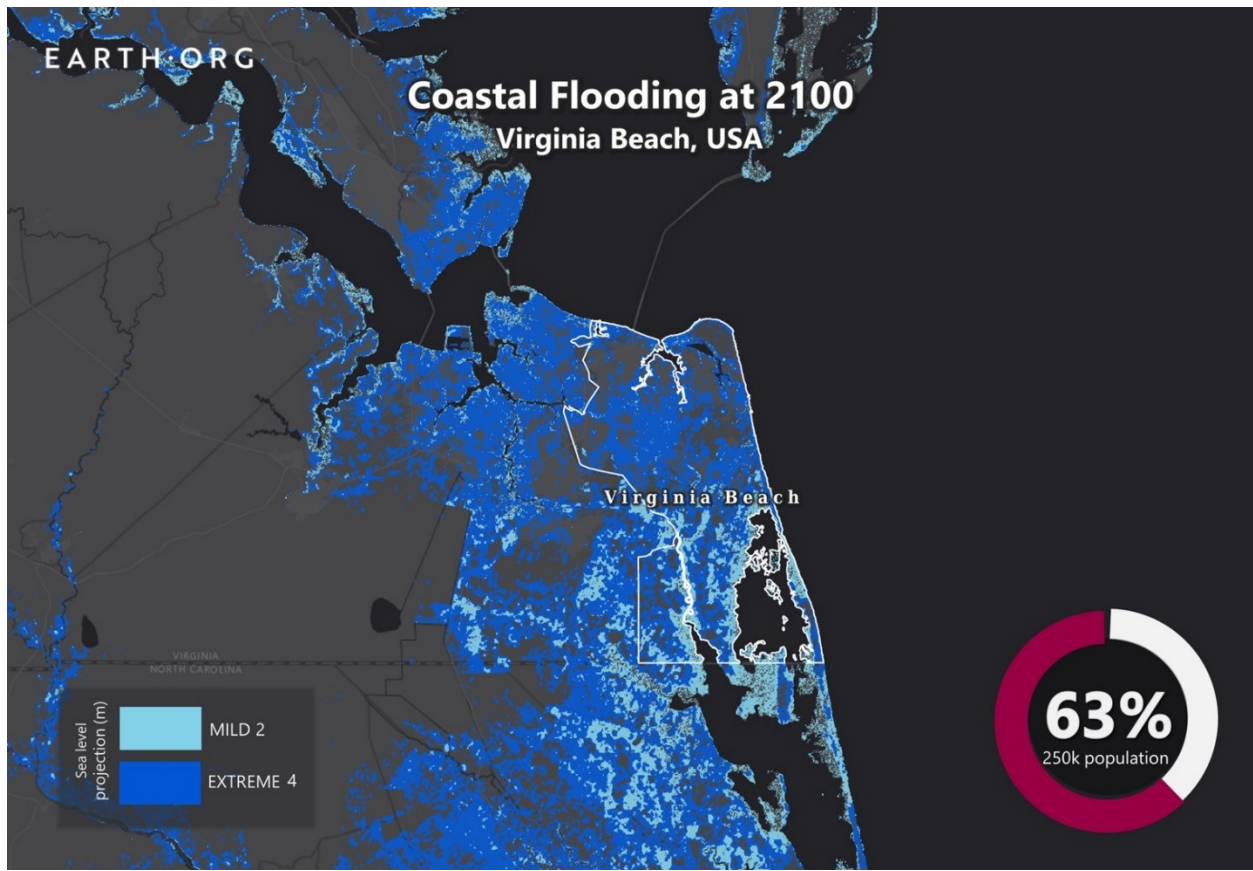
“Earth.Org has mapped coastal flooding at Virginia Beach under a high emissions scenario to help visualize the risk it is facing.

“Hundreds of houses and many roads are frequently flooded in Virginia Beach. In the last few years, tides have been noticeably higher, and officials are taking mitigation measures, passing a flood control program to safeguard this seaside community.

“The plan, dubbed Sea Level Wise, consists of developing engineered defenses, adapting structures, natural mitigation, and preparing the communities at risk. It is a multi-billion dollar project that will feature purchasing structures at risk and rebuilding in safer locations, new requirements for building ground floor elevation, and seawalls.

“There is a glaring issue. Critical infrastructure like hospitals will prepare for about a meter sea level rise, while non-critical building for half a meter. Unfortunately, a recent paper [published in Nature](#) estimates that, under high emissions scenarios, global sea levels could rise by an average of 1 to 2 meters by 2100.

“We all hope that the worst-case scenario does not materialize, and it is difficult to ask communities to invest accordingly, but recent news on the unexpectedly rapid ice loss of the Antarctic ice sheet is not reassuring. Earth.Org has modelled what flooding could look like in Virginia Beach by 2100 if we continue on our current course.



A 2021 report by the Virginia Academy of Science, Engineering, and Medicine (VASEM), summarized some of the major climate threats facing Virginia’ coastal areas.³⁹ The report was commissioned by HJ47/SJ47 (2020), in which “the Virginia General Assembly directed the Joint Commission on Technology and Science (JCOTS) to study the ‘safety, quality of life, and economic consequences of weather and climate-related events on coastal areas in Virginia.’”

The report’s warnings included the following:

“For Virginians living on the coast, the immediate consequences will be rising sea levels, more intense and frequent storms, and warmer and more variable local temperatures. These primary drivers translate into recurrent flooding, saltwater intrusion into drinking water, inundation of septic systems, and threats to public health, among other issues.

§ The most obvious immediate consequence of climate change for coastal

³⁹ Virginia Academy of Science, Engineering, and Medicine, “THE IMPACT OF CLIMATE CHANGE ON VIRGINIA’S COASTAL AREAS “ (June 2021). See also <https://www.virginiamercury.com/blog-va/report-says-climate-change-will-have-increasingly-disruptive-effect-on-coastal-va/>

Virginians is sea-level rise, fueled by melting ice sheets and glaciers and by thermal expansion of water, compounded in Virginia by land subsidence and the slowing of the Gulf Stream. The rate of relative sea-level rise in coastal Virginia, which combines both sea-level rise and land subsidence, is among the highest rates in the United States.

§ The additional energy trapped by greenhouse gases manifests itself in more frequent and intense weather events characterized by extreme rainfall and extreme winds. Between 1980 and 2020, Virginia was affected by 17 tropical cyclones, 30 severe storms, and 15 winter storms that *each* caused more than a billion dollars in damage across the United States.

§ The third consequence of a warmer atmosphere is increased variability in seasonal temperatures. Both maximum and minimum winter temperatures, especially in coastal regions, were higher in the period between 1986 and 2015 compared to a baseline average established between 1895 and 2000. This increased variability can have important consequences for agriculture and growing seasons, civil infrastructure lifespans, and human health, particularly for physically vulnerable populations and those who work in outside occupations such as landscaping and construction.”

The VASEM report continued:

“As an ensemble, current models show that changes in climate processes affecting Virginia’s coast will accelerate as the century progresses.

VIRGINIA ACADEMY OF SCIENCE, ENGINEERING, AND MEDICINE *vii*

§ Under the Intermediate-High Sea-Level Rise projection developed by the National Oceanic and Atmospheric Administration and adopted by the Commonwealth for planning purposes, there could be as much as 6.69 feet of

relative sea-level rise at Sewells Point in Norfolk between 2000 and 2100.

§ Modelers have shown nearly a doubling of the frequency of Category 4 and 5 storms by the end of the 21st century. The largest increase is projected to occur

in the Western Atlantic, north of 20°N, which crosses the Eastern Seaboard just south of Florida.

§ Even under optimistic projections about our ability in coming years to reduce

greenhouse gas emissions, historically unprecedented temperature increases and heat waves are projected for Virginia by the end of the 21st century.”

The VASEM report also discusses the current harms to urban and rural areas near Virginia’s coast, including harms to roads and other infrastructure, dwellings, septic systems, water supplies, agriculture and fisheries.

These are all real sources of current and future global-warming harms to Virginians. Since energy consumption in buildings and vehicles are among the major drivers of climate pollution, it is critical that energy efficiency be maximized so that pollution is minimized. Necessary steps include adopting USBC standards that maximize building energy efficiency, facilitating EV charging in parking for homes and businesses, and facilitating future installation of solar energy and electric appliances.

ATTACHMENT D

***NAHB, TechNote, Building Air Tightness:
Code Compliance & Air Sealing Overview***

TechNote

Building Air Tightness: Code Compliance & Air Sealing Overview

What is building air tightness?

Building air tightness describes the degree of air leakage into and out of the building's thermal enclosure which separates conditioned space from the outdoors. Air leakage [1a] is the uncontrolled flow through the thermal enclosure due to pressure imbalances caused by wind, stack effect, and mechanical equipment. Air leakage in a building should be minimized; this goal can be effectively and consistently achieved using an air sealing strategy (page 4).

Tighter buildings are intended to increase energy efficiency, durability, occupant comfort and indoor air quality. Houses have become considerably tighter over the past couple decades; however, the most recent energy codes mandate even more stringent air sealing and tightness testing requirements.

The building's air leakage rate is quantified by testing. The most common air tightness test is typically referred to as a "blower door" test (page 2). The test equipment consists of a calibrated fan, a panel to seal off the door, and a flow and pressure meter. For residential applications, the fan typically depressurizes the house to 50 Pascals at which point the air flow through the fan is recorded.

Potential Concerns with Tighter Houses

- Poor air quality due to "stale" air and indoor contaminants (such as formaldehyde, cleaning agents, and odors) that take longer to dissipate in a tighter house.
- Elevated indoor humidity that could lead to moisture accumulation and damage in the building.
- Increased risk for back-drafting of combustion appliances (caused by exhaust fans creating negative house pressures) that could lead to unsafe levels of carbon monoxide.

Benefits of Tight Houses (Reduced Air Leakage)

- Heating & cooling energy savings
- Reduced potential for moisture movement through the building thermal enclosure
- Improved insulation effectiveness and reduced risk of ice dams
- Reduced peak heating and cooling loads resulting in smaller HVAC equipment
- Improved comfort (reduces drafts and noise)
- Improved indoor air quality (limits contaminants from garages, crawl spaces, attics, and adjacent units)

Blower Door Test



Photo Provided by TEC

Blower Door Testing

Building tightness is measured by performing a blower door test [2, 3]. The most common method is a single-point depressurization test:

- Exterior windows and doors are closed, HVAC systems are off, and vents are generally left in a normal position.
- The house is depressurized to 50 Pascals (Pa) with respect to outdoors using a fan set up in a doorway.
- The fan air flow is measured in cubic feet per minute at 50 Pa (CFM50) using a pressure and flow meter.

- The air exchange rate is calculated in air changes per hour at 50 Pa (ACH50); $ACH50 = CFM50 \times 60 / \text{house volume}$.
- NOTE: For multifamily or attached housing, the leakage to outdoors will typically be less than total leakage. The adjacent unit(s) can be depressurized concurrently to measure leakage to outdoors. The difference represents leakage between units.

Alternate methods include multi-point tests (measured air flows at multiple pressures used to create a curve) or tests that include pressurization measurements. Building tightness can also be presented as leakage area normalized to the building surface area. Testing standards include RESNET, ASTM E-779 and ASTM E-1827 [4].

Certified Testing Professionals

The most recent energy codes require building tightness testing. The codes do not require specific qualifications for the individual performing the blower door test. The building code official may require testing to be conducted by an approved third party. Builders may consider hiring trained and certified individuals to perform the building tightness testing. Organizations such as: RESNET (HERS raters) [3]; BPI (Building Analysts) [5]; ENERGY STAR (contractors/raters) [6]; and State or local agency energy programs provide training and certifications to help ensure accurate results.

Understanding Air Barriers

- Air barriers control the movement of air, including entrained moisture and heat, through the building enclosure.
- Effective air barriers must be durable, continuous, air impermeable, and sealed to resist air flow and air pressure [7].
- Air barriers are required to restrict air flow through air permeable insulation (e.g., fiberglass) to maximize the installed R-value and minimize heat transfer.
- Because air carries water vapor, air barriers help reduce moisture flow and consequently moisture accumulation within walls and other building cavities; air leakage can be a greater source of moisture than vapor diffusion through building materials.
- The air barrier function can be performed by a single material [1b] or an assembly. Materials used as air barriers can perform other functions such as vapor barrier, bulk moisture barrier, wall sheathing, etc. Common construction materials such as exterior sheathing or drywall can function as an air barrier provided proper sealing of seams and penetrations.

2012 International Code Requirements

The 2012 International Residential Code (IRC) energy efficiency provisions (Chapter 11) are now identical to the residential energy efficiency requirements in the 2012 International Energy Conservation Code (IECC). The 2012 IRC mandates specific air sealing requirements, stricter building air leakage rates, and compliance inspection and testing in Section N1102.4 (IECC Section R402.4).

Section N1102.4.1.1 (R402.4.1.1) requires that components of the building thermal envelope listed in Table N1102.4.1.1 are installed in accordance with the manufacturer's instructions and the criteria listed in the table. The building code official may require that the compliance inspection be performed by an approved third party.

Table N1102.4.1.1 (R402.4.1.1) provides a comprehensive list of 16 components (such as air barriers, ceilings, walls, floors, framed cavities, and penetrations) and corresponding criteria with specific requirements (such as air barrier sealing and alignment with insulation, and the requirement for a continuous air barrier in the building envelope).

Section N1102.4.1.2 (R402.4.1.2) mandates testing and a verified maximum air leakage rate of 5 ACH50 in Climate Zones 1-2 and 3 ACH50 in Climate Zones 3-8. Testing must be conducted using a blower door at a pressure of 50 Pa (does not specify pressurization or depressurization). Basic steps to prepare the building are included. A written, and signed, report of the results must be provided to the building official. The building code official may require that testing be conducted by an approved third party.

NOTE: building tightness of 3 ACH50 or less represents less than 10% of existing buildings and will require special attention to meet the requirement, especially in attached dwelling units.

Other code considerations (2012 IRC/IECC): air leakage requirements are specified for fireplaces (**N1102.4.2/R402.4.2**), fenestration (**N1102.4.3/R402.4.3**), and recessed lighting (**N1102.4.4/R402.4.4**). Whole-house mechanical ventilation is generally required (**R303.4 & N1103.5/R403.5**). Leaky heating and cooling ducts outside the building thermal envelope also contribute to whole building leakage rates. Duct tightness testing is not required where ducts and air handlers are located entirely within the building thermal enclosure (**N1103.2.2/R403.2.2**).

The **2009 IRC Section N1102.4.2** (and **2009 IECC Section 402.4.2**) included a detailed mandatory air sealing checklist, but the builder had two compliance options: a testing option to verify an air leakage rate of less than 7 ACH50 (all climate zones) or a visual inspection option to verify installation based on the checklist (**Table N1102.4.2/402.4.2**).

Critical Areas for Air Sealing

Prioritize the air sealing locations – some are more critical than others. Building science research shows that the highest priority locations are at the ceiling plane, penetrations, and rim joist areas. Walls are also a priority, particularly at top and bottom plates and at attached garages. Some areas (such as wall sheathing vertical joints) require a lot of sealant but may result in a relatively modest reduction in leakage [8].

Example Critical Areas for Air Sealing

The red dashed line represents an example continuous air boundary.

Ceiling Plane (vented attics)

- Top plates
- Access panel
- Penetrations – bath fans, duct boots, electrical
- Framed cavities – above kitchen cabinets, soffits, & chases

Walls [1c]

- Bottom plate at deck/slab
- Penetrations
- Sheathing
- Windows & doors
- Garage-side drywall
- Knee-wall air barriers
- Behind tubs & stairs
- Framed cavities – within chases & bulkheads

Fireplaces

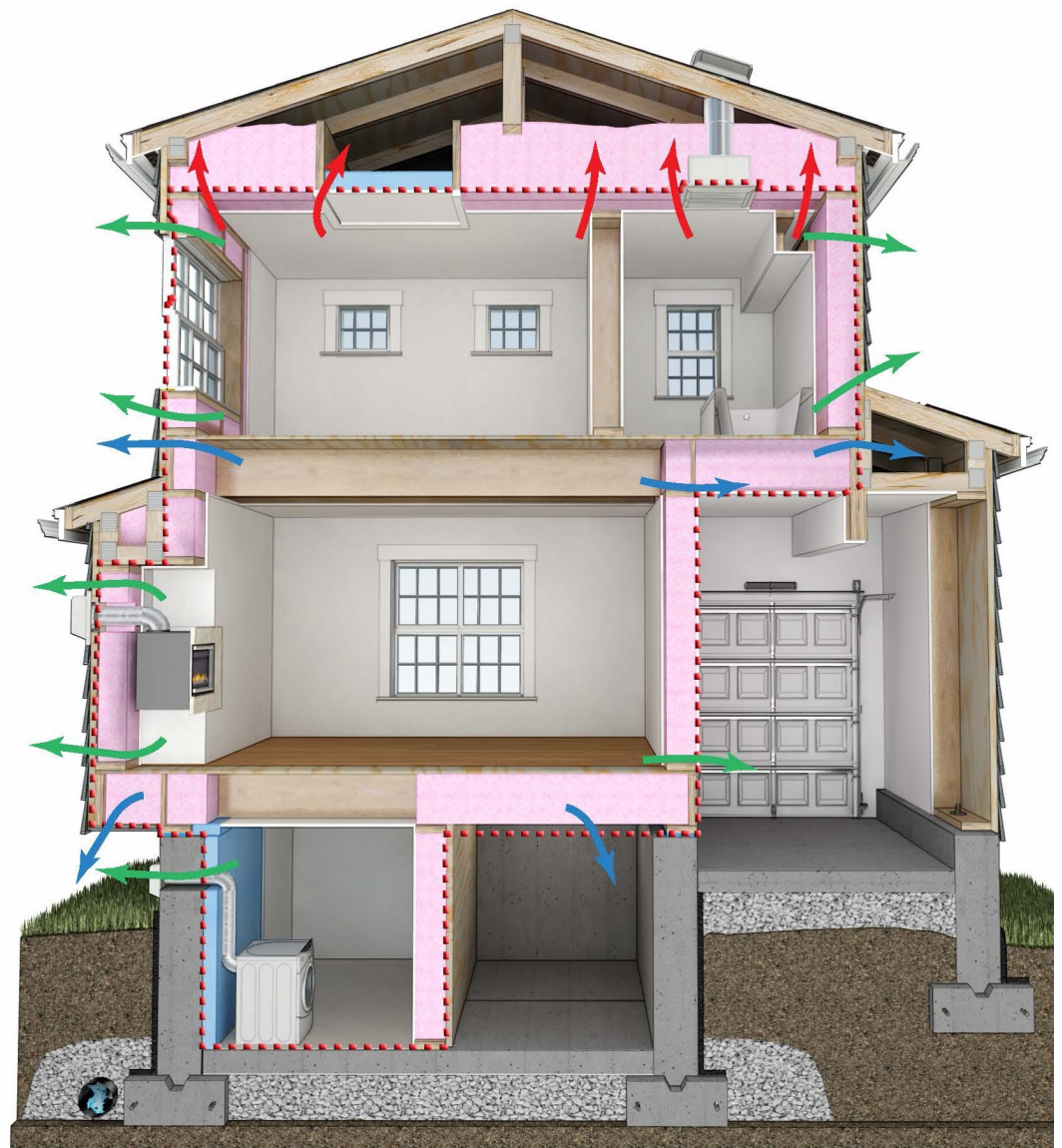
- Behind pre-fabricated fireplaces
- Around dampers & vents

Rim Joist Areas

- Rim board – joist cavity
- Sill plate at foundation
- Draft stops at garage & knee walls

Floors

- Cantilevered
- Above garages, vented crawl spaces, & unconditioned basements



Air Sealing Strategy

Develop a whole-house air sealing plan

1. Establish a specific house leakage goal to meet or exceed code (e.g., 2.5 ACH50).
2. Establish the continuous air boundary for the entire house. Avoid installing systems through the air boundary (e.g., HVAC systems not in conditioned space).
3. Prioritize the air sealing locations and efforts. Include all code requirements (See also ENERGY STAR air sealing resources [6].)
4. Conduct design review meetings with all affected trades and vendors. Include the testing partner if applicable (some may also be air sealing professionals). Evaluate available products, and select methods that are practical to install, cost-effective, and easily inspected for quality assurance. Establish trade partner scopes of work based on mutually agreed upon responsibilities and expectations.
5. Implement the plan – a thorough air sealing effort is critical for success. Quality inspections should allow for additional “touch-up” air sealing as required. Seal all large holes and focus on high priority areas.
6. Refine the plan as needed for optimum performance and cost.

Suggested techniques to achieve code compliance

- ✓ It is easier to air seal while the house is under construction rather than trying to seal after failing a tightness test. Testing prior to completion may identify leakage points that can be easily fixed.
- ✓ Perform blower door test prior to insulating the ceiling - this will allow easier access to air leakage points in the attic if the building does not meet the tightness requirement.
- ✓ When designing the house, avoid complex architectural designs that may be difficult to seal.

- ✓ Reduce the number of penetrations to the air barrier (e.g., recessed lights, speakers).
- ✓ Maintain continuity between air barrier materials.

Consider combustion safety, humidity control, and air quality

- ✓ When measures are taken to tighten a house (new or existing), ensure that combustion appliances vent properly. Install direct vent (outdoor air for combustion) or power vent appliances. If you install or leave natural draft or fan-assisted draft appliances, perform combustion safety testing and install make-up air as required in accordance with industry standards and manufacturer instructions. See Reference [2] for charts that show appliance depressurization limits (p. 54) and the inter-relationship between house tightness, exhaust fan operation, and house depressurization (p. 51).
- ✓ Effective mechanical ventilation is more important installing tight buildings to control humidity and maintain indoor air quality. The HVAC trade partner is responsible for (1) designing layouts and (2) installing ducts so that measured air flows meet design expectations for source-exhaust (kitchen, bath, and garage exhaust fans) and whole-house (fresh air) ventilation systems.

What if the house fails to meet the house leakage target?

- ✓ Search for leaks at the most likely and easily accessible areas, such as the ceiling plane from the attic, with the blower door operating as a diagnostic tool.
- ✓ Multifamily/townhouse – depressurize the adjacent unit(s), or an entire building, to isolate leakage to outdoors. Air sealing common walls is still important to minimize leakage between units to control sound and odor transfer.

References and Resources

- [1] Home Innovation Moisture Management Series (www.HomeInnovation.com/MoistureManagementVideos)
a. [Air Flow](#), b. [Housewraps](#), c. [Exterior Walls](#)
- [2] The Energy Conservatory (TEC) Minneapolis Blower Door Operation Manual. August 2012. www.energyconservatory.com
- [3] Residential Energy Services Network (RESNET) Chapter Eight RESNET Standard for Performance Testing and Work Scope. http://www.resnet.us/standards/RESNET_Mortgage_Industry_National_HERS_Standards.pdf
- [4] ASTM E779: Standard Test Method for Determining Air Leakage Rate by Fan Pressurization; and ASTM E1827: Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door. ASTM International.
- [5] Building Performance Institute (BPI) Technical Standards for the Building Analyst Professional, v1/4/12. <http://www.bpi.org/Standards/>
- [6] ENERGY STAR Certified Homes: National Program Requirements, Version 3 (Rev. 07); Thermal Enclosure Checklist, Version 3 (Rev. 07); Thermal Bypass Checklist Guide, Version 2.1 updated June 2008. www.energystar.gov
- [7] Lstiburek, J. (2006). BSD-104: Understanding Air Barriers. Somerville, MA: Building Science Corporation. www.buildingscience.com
- [8] Characterization of Air Leakage in Residential Structures, ICAA Convention & Trade Show, 4 October 2012, Dave Wolf, Ph.D., Owens Corning, Science & Technology. <http://www.insulate.org/2012ICAAConvention/airleakage.pdf>

May 8, 2023 BHCD Testimony Building Code
Board of Housing and Community Development Public Hearing
Glen Besa

I need to tell you that by not bringing Virginia UP TO CODE you may be handicapping state and local governments' ability to compete for tens of millions of dollars in grants under the EPA's new Climate Pollution Reduction Grant program because building efficiency is one of the most cost effective ways to cut climate pollution.

I'll conclude by playing this 90 second recording of climate activist Greta Thunberg speaking at the Sept 2019 UN Climate Action Summit. Her words are relevant to these proceedings.

PLAY:

"This is all wrong. I shouldn't be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope. How dare you!

"You have stolen my dreams and my childhood with your empty words. And yet I'm one of the lucky ones. People are suffering. People are dying. Entire ecosystems are collapsing. We are in the beginning of a mass extinction, and all you can talk about is money and fairy tales of eternal economic growth. How dare you!

"For more than 30 years, the science has been crystal clear. How dare you continue to look away and come here saying that you're doing enough, when the politics and solutions needed are still nowhere in sight.

"You say you hear us and that you understand the urgency. But no matter how sad and angry I am, I do not want to believe that. Because if you really understood the situation and still kept on failing to act, then you would be evil. And that I refuse to believe.

April 4, 2023

Kyle Flanders, Senior Policy Analyst
Department of Housing and Community Development
Board of Housing and Community Development
Richmond, VA 23219

Publiccomment_codedevelopment@dhcd.virginia.gov

Comments submitted electronically.

**Re: Virginia Uniform Statewide Building Code (USBC)
Proposed Adoption of the 2021 International Energy Conservation Code (IECC)
Warehouse Provisions**

Dear Mr. Flanders,

The Polyisocyanurate Insulation Manufacturers Association (PIMA) appreciates this opportunity to comment on Virginia's proposed adoption of the 2021 International Energy Conservation Code (IECC). We support Virginia's efforts to keep the state's building energy code updated to the latest version of the IECC; however, we are concerned with proposed changes that would significantly reduce the energy savings benefits for Virginia. PIMA urges the Board to **delete the weaker envelope provisions proposed for Group F, S, and U buildings under Appendix CD.**

As proposed, the USBC would allow several large and diverse building categories to be constructed to outdated thermal envelope requirements regardless of their heating and cooling loads. Storage (Warehouse), Factory, and Utility/Miscellaneous group buildings would be permitted to use a new Appendix CD that relies on insulation and fenestration requirements that are significantly weaker than what Virginia currently requires. These changes are unnecessary and without justification, and their adoption represents an illogical reading of the current law. Also, the public record indicates that a majority of the stakeholders participating in the Energy Sub Workgroup process were opposed to these non-consensus provisions and there was no discussion by the Board when they were adopted, which undermines the legitimacy of the code adoption process itself.

Appendix CD is Unnecessary: The changes are unnecessary since buildings without conditioned space and "low-energy" buildings are already exempted from the IECC for purposes of the envelope requirements. Also, under the ASHRAE 90.1 Standard (which is an alternative compliance path under the IECC), the envelope insulation requirements for "semiheated" spaces are already much less stringent than the base requirements.

Cost Effectiveness: The proponents reason statement addressed only the upfront cost savings and provided no information about the impact on building life-cycle costs. The requirements for these building categories have been in place for a long time. Therefore, an act to eliminate them should be verified by a complete life-cycle cost-benefit justification. We believe that these weaker requirements will sacrifice long-term performance for cheaper construction and will not provide any net benefit for Virginia.

Footprint and Energy Usage of the Warehouse/Storage Building Category is Significant:

Groups F, S, and U represent a diverse and large subset of buildings and many of these are fully heated and cooled. For example, warehouses are now the largest category of new commercial building starts, representing 24% of new commercial construction between 2010 and 2018.¹ Also, 77% of warehouses are heated and 75% are cooled.² On average, warehouses tend to be less energy intensive than other buildings, but because of their total square footage the total energy used in warehouses is significant. Nationally, \$11.8 billion is spent each year on the energy used in warehouses.³

Virginia Law: HB 1289 (Chapter 407), enacted in 2022, directs the Board of Housing and Community Development (Board) “to consider” exempting these building categories “from any requirements in the” energy code, but did not require it, especially in this broad fashion. Also, relying on HB 1289 in this way completely ignores HB 2227 (Chapter 425) enacted in 2021, which directs the Board to consider adopting energy code requirements “at least as stringent as contained in the new version of the IECC.”

In summary, PIMA urges the Board and the Department to delete the weaker requirements for Group F, S, and U Buildings. Maintaining the current envelope requirements for these buildings is life-cycle cost effective and ensures low energy use. This will also result in superior construction and buildings that hold their value over a longer period.

About PIMA

PIMA is the trade association for North American manufacturers of rigid polyiso foam insulation – a product that is used in most low-slope commercial roofs as well as in commercial and residential walls. Polyiso insulation products and the raw materials used to manufacture polyiso are produced in over 50 manufacturing facilities across North America. The insulation industry overall employs over 13,000 workers in Virginia.⁴

Thank you for the opportunity to submit these comments. Please contact me should additional information be necessary (jkoscher@pima.org; (703) 224-2289).

Sincerely,



Justin Koscher
President

¹ U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey (CBECS), 2018 Survey Data, Table B9. <https://www.eia.gov/consumption/commercial/>

² Ibid., Table B22.

³ Ibid., Table C2.

⁴ The Contributions of Insulation to the U.S. Economy in 2020 (most recent data) available at: <https://www.americanchemistry.com/content/download/9396/file/contributions-of-insulation-to-US-2020.pdf>.

From: [Naomi L \(ledermannnaomi@gmail.com\)](mailto:Naomi.L(ledermannnaomi@gmail.com)) Sent You a Personal Message
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency.
Date: Tuesday, May 9, 2023 12:38:16 AM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more stringent energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Naomi L
117 E Severn Rd
Norfolk, VA 23505
ledermannnaomi@gmail.com
(540) 335-7931

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or (415) 977-5500.

From: [Rose Hendricks](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Public comment on IECC standards
Date: Monday, May 8, 2023 8:12:03 PM

Good morning, my name is Rose Hendricks. I'm a resident of Falls Church, a volunteer climate activist with Citizens' Climate Lobby, and I have spent the past two years working to reduce the carbon emissions and improve the efficiency of my own home, including installing solar panels, installing an electric vehicle charger, and replacing my gas stove with an induction cooktop. Each of these has been significantly more complicated and expensive than needed because the home's electric readiness was not considered when it was constructed in 2012. I strongly urge you to adopt the 2021 IECC building standards for the state of Virginia. As you know, HB2227 mandates that the board make the building code "consistent with" or "at least as stringent as" the IECC standards.

Adopting these standards will not only help Virginia reduce its carbon footprint and lower energy costs for homeowners and businesses, but it will also improve the comfort, health and safety of residents.

By adopting the 2021 IECC standards, Virginia will join a growing number of states and municipalities across the country that have recognized the importance of energy efficiency in reducing greenhouse gas emissions and mitigating the impacts of climate change. I urge you to adopt the 2021 IECC standards to build a more sustainable and resilient future for Virginia. Thank you.



May 8, 2023

Climate Action Alliance of the Valley Comments to BHCD on Final USBC Proposal

1. CAAV strongly urges the Board to meet its statutory obligations and adopt IECC standards without weakening amendments. Doing so will demonstrate its commitment to meeting its statutory obligation to “protect the health, safety and welfare of residents of the Commonwealth.” DHCD must confirm its public statement that “Virginia is a leader in building and fire code development, and stakeholder input is vital to Virginia’s code development process.” The proposal you are considering falls woefully short of what is needed.
2. CAAV endorses and concurs with Sierra Club’s recommendations.
3. As should be quite obvious, electric vehicles are rapidly becoming more popular. The [International Energy Agency’s annual Global EV Outlook](#) report released last week forecast that “EVs could make up more than a third of global car sales by 2030.” As Virginia and the US migrate to greater use of electricity to meet our transportation needs, improve our energy efficiency, and reduce our fossil fuel emissions, to remain competitive Virginia’s building codes must address this reality. They are far from doing so now and the proposal would take Virginia even further backwards.
4. All Virginians need to do their part in this transition. Virginia’s building industry and this Board cannot exempt themselves from doing so. Rather, they must be an integral part of the solutions starting now. The Inflation Reduction Act specifically gives local and state governments assistance to bring their building codes up to at least 2021 IECC and ASHRAE levels. Virginia should establish higher building standards; to do otherwise is short-sighted and disregards your responsibility.
5. Retrofitting to add an EV charger is much more expensive than including it in the initial construction. In 2023 it makes no sense not to have at least Level II charging readiness.

Respectfully submitted,

Joy Loving (Rockingham County VA, jal_1998@yahoo.com)

On behalf of

Climate Action Alliance of the Valley (climateactionallianceofthevalley.org; contactcaav@gmail.com)

Submitted Via Email

May 5, 2023

Cindy Davis
Director of Building and Fire Regulations
Virginia Department of Housing and Community Development
600 East Main Street, Suite #300
Richmond, VA 23219

RE: Supplemental RECA Comments Supporting the Adoption of the 2021 International Energy Conservation Code with No Weakening Amendments

Dear Director Davis,

The Responsible Energy Codes Alliance submits these comments in response to the Proposed Regulation updating the Uniform Statewide Building Code (USBC) published in the February 27, 2023 Virginia Register.¹ Although we generally support the Proposed Regulation to the extent that it adopts the 2021 International Energy Conservation Code (*IECC*) for residential and commercial buildings, we are concerned about three weakening amendments that leave cost-effective energy savings on the table and will leave Virginia's USBC short of the latest published model energy codes. We strongly recommend the following three changes to the Proposed Regulation:

- 1. Delete proposed Appendix CB, which is a substantial rollback of the current USBC;**
- 2. Adopt the full wall insulation requirements of the 2021 *IECC*; and**
- 3. Adopt the full air leakage testing requirements of the 2021 *IECC*.**

As we have noted in our previous letters and comments to the Board, the adoption of the complete, unamended 2021 *IECC* will provide energy efficiency, comfort, resiliency, and environmental benefits for the owners and occupants of buildings in Virginia. Adopting the 2021 *IECC* will help fulfill the General Assembly's direction to the Board of Housing and Community Development to "consider adopting Building Code standards that are at least as stringent as those contained in the new version of the *IECC*," including "potential energy savings and air quality benefits over time compared to the cost of initial construction."²

¹ 39 VA Register at 1856 (Feb. 17, 2023).

² See 2021 VA Acts ch. 425.

We believe the most sensible path forward is for the Board to adopt the 2021 *IECC* with no weakening amendments and help ensure a more secure future for the owners and occupants of Virginia's buildings. The following are three specific recommendations for additional changes before the Proposed Rule is finalized:

1. Delete proposed Appendix CD, which is a substantial rollback of the current USBC.

The Proposed Rule includes a new Appendix CD, which allows buildings in Occupancy Groups F, S, and U to comply with the 2006 *IECC* thermal envelope requirements rather than the current USBC requirements. This appendix is not part of the 2021 *IECC*, and is a significant reduction in efficiency in the current USBC. Appendix CD was the source of lengthy debate at several work group meetings and additional offline meetings among stakeholders. Efficiency stakeholders raised numerous concerns about the negative impact of such an appendix, and provided the proponents with potential amendments that could have reduced the negative impacts of the proposal (none of which were incorporated into the proposal). Although this proposal was reported from the Energy Subworkgroup as a non-consensus item, it was adopted by the Board at its August 3, 2022 Board meeting with no discussion or opportunity to seek input from stakeholders.

Given the likely negative impacts of such a huge code rollback, we respectfully request that the Board reconsider this action, or at a minimum, convene additional workgroup meetings to address stakeholder concerns. The following are some of the reasons why Appendix CD is so problematic:

- Appendix CD rolls back the *current* USBC requirements for buildings in the F, S, and U occupancy categories. Although these buildings are currently required to meet the thermal envelope requirements of the 2018 *IECC*, Appendix CD would allow the buildings to meet the 2006 *IECC* requirements for thermal envelope. This would erase over a decade of progress in energy conservation.
- Appendix CD, as written, creates numerous conflicts with the rest of the USBC, creating problems for building code officials and design professionals. Virginia stakeholders have worked together to improve building envelope provisions and fix inconsistencies in the code over the last 10-12 years, and this appendix eliminates much of that work.
 - It establishes fenestration and insulation requirements that are inadequate for Virginia's climate zones, which is problematic given the broad scope of Occupancy Types F, S, and U.
 - It substitutes definitions from a previous code that are inconsistent with definitions in the 2021 *IECC*, which will lead to confusion for code officials and design professionals.

- It establishes glazing area limitations that are different from the rest of the USBC and fenestration projection factor calculations that were eliminated from Virginia’s energy code years ago.
- It establishes different U-factor requirements for metal and non-metal fenestration—a distinction that was eliminated in the *IECC* 10 years ago because it created an incentive to install less-efficient fenestration.

To be clear, the 2021 *IECC* already offers several compliance alternatives for warehouses and other low-energy buildings. As proposed, Appendix CD is unnecessary, far too broad, and too big of a step backward in efficiency. If the Board intends to allow an exception for these occupancy types, it needs to be carefully studied and set at a more reasonable level. The current version proposed is not workable and establishes too many conflicts within the code.

Recommendation 1: Delete 3VAC5-63-264 Items 1 and 13 (Appendix CD and references)

2. Adopt the full wall insulation requirements of the 2021 *IECC* (Tables R402.1.2 and R402.1.4).

Virginia has applied a weaker wall insulation requirement than the *IECC* since the 2012 code update, reducing comfort and energy savings for homeowners. Insulating walls is far more cost-effective at construction than in a later retrofit, so it is important that the optimal level of insulation be installed from the beginning. The wall insulation requirements were improved in both the 2012 *IECC* (to R-20 or 13+5) and the 2021 *IECC* (R-20+5 or 13+10), meaning that the proposed requirement for wall insulation in Virginia (R-15 or 13+1) is now two code updates behind the national model code.

Both the 2012 *IECC* and the 2021 *IECC* were carefully analyzed by the U.S. Department of Energy and found to be cost-effective for Virginia. In fact, DOE found that the adoption of an unamended 2021 *IECC* (including the full insulation requirements) could save homeowners an average of 17.9% in annual energy costs, resulting in a net savings of \$8,376 over the first 30 years of the home’s useful life.³ Unlike some equipment and other components of the building, elements of the thermal envelope such as insulation will last many decades, providing long-term benefits for homeowners. We recommend eliminating this weakening amendment and adopting insulation requirements consistent with the 2021 *IECC*, or at a minimum, establishing a timeline for catching up with the national model code over the next few years.

³ See U.S. Dep’t of Energy, *Cost-Effectiveness of the 2021 IECC for Residential Buildings in Virginia*, at ii (July 2021), available at https://www.energycodes.gov/sites/default/files/2021-07/VirginiaResidentialCostEffectiveness_2021_0.pdf.

Recommendation 2: Delete 3VAC5-63-210 Items 67 and 68 and Delete 3VAC5-63-264 Items 15 and 16 (Revisions to wall insulation R-value/U-factor)

3. Adopt the full air leakage testing requirements of the 2021 IECC (Section R402.4.1.2).

In the 2018 USBC update, VA eliminated a long-standing weakening amendment and began requiring blower door testing in all new residential buildings. The maximum leakage rate, which was set at ≤ 5 ACH50, was a reasonable improvement over Virginia's previous codes, but still weaker than the full 2018 IECC requirement of ≤ 3 ACH50. The 2021 IECC requires new homes to be tested to ≤ 3.0 ACH50, but it now provides several new exceptions for smaller dwelling units and multifamily buildings that we believe will allow additional flexibility to help homebuilders achieve the improved efficiency. With Virginia's varying climate conditions, tighter envelopes provide significant energy savings, comfort, and health benefits for occupants during all seasons. We recommend that Virginia adopt the air tightness testing requirement as published in the 2021 IECC.

Recommendation 3: Delete 3VAC5-63-210 Items 71 and 72 and Delete 3VAC5-63-264 Items 20 and 21 (Revisions to air leakage testing requirements)

Conclusion

RECA's members and supporters have been involved in national energy code development and state-level adoption for decades, and we offer our assistance and experience as you work to implement the latest model codes for residential and commercial buildings in the Commonwealth. Please contact us if you have any questions or would like to discuss how RECA can be of assistance.

Sincerely,

Eric Lacey
RECA Chairman

RECA is a broad coalition of energy efficiency professionals, regional efficiency organizations, product and equipment manufacturers, trade associations, and environmental organizations with expertise in the development, adoption, and implementation of building energy codes nationwide. RECA is dedicated to improving the energy efficiency of homes throughout the U.S. through greater use of energy efficient practices and building products. It is administered by the Alliance to Save Energy, a non-profit coalition of business, government, environmental and consumer leaders that supports energy efficiency as a cost-effective energy resource under existing market conditions and advocates energy-efficiency policies that minimize costs to society and individual consumers. Below is a list of RECA Members that endorse these comments.

Air Barrier Association of America

Alliance to Save Energy

American Chemistry Council

American Council for an Energy-Efficient Economy

CertainTeed LLC

EPS Industry Alliance

Extruded Polystyrene Foam Association

Institute for Market Transformation

Johns Manville Corporation

Knauf Insulation

National Fenestration Rating Council

Natural Resources Defense Council

North American Insulation Manufacturers Association

Owens Corning

Polyisocyanurate Insulation Manufacturers Association

From: [Glen Besa](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Testimony on BHCD Building Code
Date: Monday, May 8, 2023 2:08:58 PM

May 8, 2023 BHCD Testimony Building Code
Board of Housing and Community Development Public Hearing
Glen Besa

I need to tell you that by not bringing Virginia UP TO CODE you may be handicapping state and local governments' ability to compete for tens of millions of dollars in grants under the EPA's new Climate Pollution Reduction Grant program because building efficiency is one of the most cost effective ways to cut climate pollution.

I'll conclude by playing this 90 second recording of climate activist Greta Thunberg speaking at the Sept 2019 UN Climate Action Summit. Her words are relevant to these proceedings.

Greta Thunberg:

"This is all wrong. I shouldn't be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope. How dare you!

"You have stolen my dreams and my childhood with your empty words. And yet I'm one of the lucky ones. People are suffering. People are dying. Entire ecosystems are collapsing. We are in the beginning of a mass extinction, and all you can talk about is money and fairy tales of eternal economic growth. How dare you!

"For more than 30 years, the science has been crystal clear. How dare you continue to look away and come here saying that you're doing enough, when the politics and solutions needed are still nowhere in sight.

"You say you hear us and that you understand the urgency. But no matter how sad and angry I am, I do not want to believe that. Because if you really understood the situation and still kept on failing to act, then you would be evil. And that I refuse to believe."

--

Glen Besa
4896 Burnham RD
North Chesterfield, VA 23234
glenbesa@gmail.com
c-804-387-6001
Pronouns: he, him, his

To: Board of Housing and Community Development
Re: Update of the Virginia Statewide Building Code
From: Lena Lewis, Energy and Climate Policy Manager, The Nature Conservancy Virginia Chapter
On Behalf of: The Nature Conservancy
and Generation180
Date: May 9, 2023

The Nature Conservancy and Generation180 thank the Board of Housing and Community Development for the opportunity to provide comments on the update of the Virginia Uniform State Building Code.

Contents:

- I. Introduction
- II. Amendment Request 1: (preferred) Adopt All the 2021 IECC Language for New Construction.
 - EC-C1301.1.1.1(2)-21
- III. Amendment Request 2: Adopt Stronger Residential Wall Insulation Standards.
 - REC-R402.1.1(1)-21
- IV. Amendment Request 3: (additional) Ensure Residents of Multifamily Housing Have Access to Affordable Electric Vehicle (EV) Chargers.
 - EC-C405.10-21
- V. Appendix: Data and Discussion on Adoption of Full 2021 IECC Code

I. Introduction

The Nature Conservancy is a global conservation organization. We have chapters in all 50 states and our work extends around the globe into 79 countries and territories. Our mission is to protect the lands and waters on which all life depends. Our two priorities are to tackle climate change and to protect biodiversity. As an organization that relies on a science-based, collaborative approach, we believe energy efficiency is a key component of the solution to climate change.

We also submit these comments on behalf of Generation180. Generation180 is a Virginia-based national non-profit organization working to inspire and equip individuals to take action on clean energy and working to make electric vehicles more accessible. Key to this is expanding charging options beyond single family homes.

The cleanest, cheapest energy is the energy never generated. The less energy Virginia consumes, the easier it is for Virginia to meet energy demand with clean energy, and the less land will be converted to energy generation projects. Energy efficiency improves grid reliability and resiliency, lowering costs for all electricity customers.¹ Energy efficiency reduces all of the negative impacts of energy generation on nature and people, while saving households money on energy bills. It is a win for people and for nature.

For all these reasons, The Nature Conservancy Virginia Chapter has for the first time initiated efforts to understand and evaluate building codes. We recognize that our comments are coming at the end of the process. We submit, however, that our perspective in viewing the proposal with fresh eyes is one that is worth considering.

We understand that the practice of the Board of Housing and Community Development is to not consider amendments that did not reach full consensus in working groups. Because it takes only one voice of dissent to reach a designation of “non-consensus,” it’s too easy for an individual’s opinion to override an amendment that might be in the Commonwealth’s and in the public’s best interest. We therefore urge you to carefully consider the amendments we highlight below.

In addition, we applaud the Act passed in 2021 (HB2227-Kory),² which states:

§ 1. That upon each publication by the International Code Council of a new version of the International Energy Conservation Code (IECC), the Board of Housing and Community Development (the Board) shall consider adopting amendments to the Uniform Statewide Building Code (Building Code) to address changes in the IECC relating to energy efficiency and conservation. In doing so, the Board shall consider adopting Building Code standards that are at least as stringent as those contained in the new version of the IECC. For the purposes of this act, a standard shall be deemed to be as stringent as one contained in the IECC if such standard would perform the same function as that contained in the IECC without using more energy than would be used under the IECC standard. *In conducting its review, the Board shall assess the public health, safety, and welfare benefits of adopting standards that are at least as stringent as those contained in the IECC, including potential energy savings and air quality benefits over time compared to the cost of initial construction.* [Emphasis added]

As the legislation states, and as we will discuss below, the energy conservation portion of the USBC should not be assessed only by its impact to the cost of initial construction. Rather, a more holistic analysis of the impact on the life-cycle cost, consumer cash flow, and the simple payback period will favor the adoption of the 2021 IECC. We will also specifically address the importance of lowering the energy costs of low- and moderate-income housing through higher energy efficiency standards.

In particular, we ask you to consider for adoption the following amendments:

- II. **Amendment Request 1: Adopt All the 2021 IECC Language for New Construction.**
- **EC-C1301.1.1.1(2)-21** (Penniman/Sierra Club)

Analysis by the Department of Energy (DOE) and Pacific Northwest National Laboratories show that residential buildings meeting the 2021 IECC code would save money for residents in energy cost savings and lifecycle cost saving and would have a positive consumer cash flow for Virginians within 2 years.³ Because of the long-term and near-term savings for homeowners and residents, we request that the Board consider adopting the full 2021 IECC language for new construction.

A more detailed discussion of the data and our request is in the Appendix.

- III. **Amendment Request 2: Adopt Stronger Residential Wall Insulation Standards.**
- **REC-R402.1.1(1)-21** (Baker & Lacey/Responsible Energy Codes Alliance (RECA))

If the Board does not adopt the full 2021 IECC, we recommend that at least the Board adopt the 2021 IECC standard for wall insulation. This standard is important because it will save residents substantial money over the lifetime of the mortgage and when compared to the cost of retrofitting. Walls are typically the largest surface of a building coming in contact with the outside. Requiring them to be well

insulated makes a huge difference in the amount of energy saved in heating and cooling the building, leading to reduced energy bills and increased comfort. This can result in financial savings not only on energy bills but also on the size of the HVAC system installed. Furthermore, wall insulation is extremely difficult and expensive to retrofit. If the opportunity is not taken to insulate walls well from the start, the building is likely locked into its full lifetime of 70+ years of wasting energy, losing thousands of dollars for its inhabitants, many times more than the cost of adding the insulation from the start.

“Using the U.S. Department of Energy methodology for reviewing code change proposals, and using BEopt modeling software,” explains RECA in their Reason Statement, “our analysis found that an improvement from R-15 to R-20+5 in wall insulation will result in a **13.1% improvement in efficiency, and a simple payback period of less than 5 years.**”⁴ [Emphasis added.] RECA further explains “the wall insulation R-values in the 2021 IECC do not require the use of any specific product and can be achieved with either 2X4 or 2X6 wall construction.”

A 13% improvement in efficiency and a simple payback period of less than 5 years is something to celebrate. Instead, some have said that the focus should be on retrofitting old homes rather than raising efficiency standards for new homes. We believe the answer should be that both old and new homes need to be the focus. Today’s new homes will be tomorrow’s old homes. It is our responsibility today to ensure that future residents do not waste energy because of today’s lax requirements. Once improved technology is safe, readily available, and cost-effective for saving energy, the energy conservation code should require it. It’s time to upgrade the wall insulation standard to match the 2021 IECC.

IV. **Amendment Request 3: Ensure Residents of Multifamily Housing Have Access to Affordable Electric Vehicle Chargers.**

- **EC-C405.10-21** (Penniman/Sierra Club).
- Alternatively, **EC-C405.13(2)-21** (DHCD Staff on behalf of Delegates Bullova and Reid)

Residents’ views of energy are evolving to include not only electricity used within the home, but to consider all their energy to support their needs. This includes transportation fuel. There is already precedence for building electricity to be used outside the home: residents charge their phones and laptops in their homes for use offsite. The same is becoming normal for fueling automobiles. Building codes must keep up to support the best forward-looking practices allowing homes to be part of an affordable transition to electric vehicles (EVs). Even if today’s residents are mostly driving gas-powered cars, the next residents will likely be driving EVs.

Dominion Energy expects the number of EVs in Virginia to double by the end of next year and then double again by 2026.⁵ S&P Global Mobility forecasts 40% of passenger car sales in the United States to be EVs by 2030.⁶ Virginia’s buildings – particularly the parking lots of multifamily residential buildings – should be built with the anticipation that they will be filled with EVs that need to be charged overnight.

The transition to electric vehicles will bring many benefits to Virginians, including savings on total energy and transportation costs. The average EV driver pays \$1.22 to drive the same distance a conventional car could go on a gallon of gasoline.⁷ Already, an electric vehicle will save the typical driver \$6,000 to \$10,000 over the life of the vehicle, compared to owning a comparable gas-powered vehicle.⁸ A major

transition to vehicle electrification will reduce rates of asthma and premature deaths.⁹ On-road vehicle emissions cause roughly 750 premature deaths in Virginia annually.¹⁰ The faster we transition to electric vehicles, the faster this number decreases. Additionally, in Virginia, the carbon dioxide emitted to fuel an electric vehicle is 83% less than the carbon dioxide emitted by a gas-powered car.¹¹

Electric vehicles are charged at home 80% of the time on average.¹² Charging at home is much less expensive than charging at a commercial charger. Keeping the cost of installing EV chargers as low as possible is essential to residents’ ability to reap the financial benefits of driving an EV. However, installing EV chargers at multiunit residential buildings takes planning to be affordable.

The average American drives only 29 miles a day, far less than the range of an EV battery.¹³ City dwellers are ideal candidates to drive EVs but are also more likely to live in multifamily housing. This means that adding EV charging ability to multifamily housing is essential to supporting the transition to electric vehicles, and to ensure that people living in apartments and condominiums have the option to drive EVs.

As with many building features, adding in EV charging capabilities is much less expensive when the building is built and before the parking lot pavement is poured than doing so as a retrofit. An analysis of data from the electric utility PG&E shows that the cost of installing EV chargers in a multifamily building is 4 to 12 times more expensive as a retrofit than as when the building is built.¹⁴

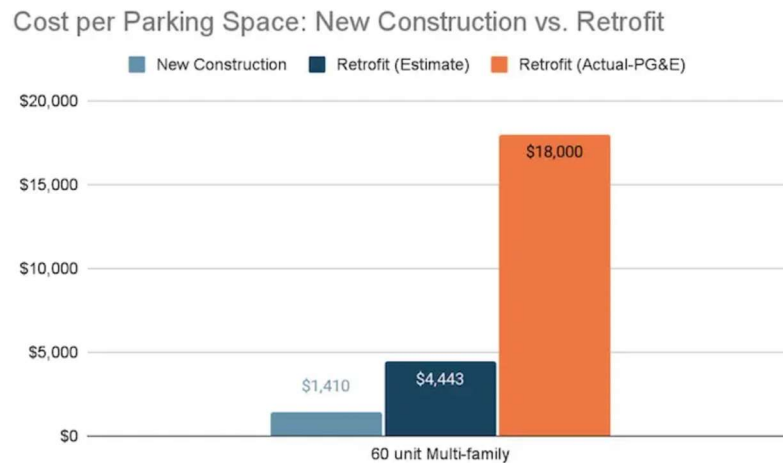


Fig. 1 – EV infrastructure cost comparisons show actual retrofit costs in California are substantially higher than estimated, and exponentially higher than installing infrastructure at the time of new construction. Costs include wiring, switch gear, conduit, trenching, and secondary transformer, permitting etc..

EC-C405.10-21 has three main requirements for parking spaces of multifamily residential buildings not covered by R404.2 (N1104.2):

- 1) **Electric Vehicle Supply Equipment (EVSE) Installed Spaces** Greater of 1 or 15% of total number of dwelling units:
 - these spaces have the whole EV charger installed and are ready to charge EVs.
- 2) **EV Ready Spaces** Greater of 1 or 15% of total number of dwelling units:

- these spaces have the electric wiring running right up to the parking space ready for a level 2 EV charger to be plugged in at a later date.
- 3) **EV Capable Spaces** Total number of dwelling units minus the sum of (EVSE Installed and EV Ready spaces):
- these spaces have the conduit running up to the parking space and proper branch circuit and electric panel capacity in place.
 - This will allow for the wiring to be put in at a later date without having to break up the pavement or upgrade the electric panel. The result is a lower overall cost of installing a level 2 EV charger at a later date than if the groundwork were not built in.

The EV capable spaces are the most important part of this code amendment. They are an easy investment that will allow for the gradual and smooth transition to EVs for tenants at lowest cost and least disruption. If only one part of this amendment were to be implemented now, the EV capable portion equivalent to 1 space per dwelling would be the most important to implement first.

Requiring EV capable parking in low-income multifamily housing is critical for ensuring that all residents have access to the financial savings that EVs provide. Almost 90% of people living between 100% to 200% of the federal poverty level, and 80% of people living below the poverty level have access to a car.¹⁵ As more used EVs come on the market, they will be eligible for the \$4,000 federal tax credit. While it might be hard to envision low-income households driving EVs now, it will become normal in the near future if everyone does their part to remove barriers.

We acknowledge the hesitation that some workgroup members feel about the fire safety of EV chargers in underground garages. We do not know of any real-world cases of this occurring, but we'd suggest that for now the code could apply only to ground-level and above-ground garages while the issue is explored further.

We understand that adding EV chargers to the USBC involves a different way of thinking about buildings than has been required in the past. We ask the Board to embark on this new thought process now. This transformation of the automobile is already upon us.

Thank you for your consideration of these comments.

V. Appendix: Data and Discussion on Adoption of Full 2021 IECC Code

Analysis by the Department of Energy (DOE) shows that the residential buildings meeting the 2021 IECC code would meet the following average savings compared to those meeting the 2018 IECC code:¹⁶

9.38% of site energy use intensity

8.66% of energy cost savings

8.66% of carbon emissions reduction

Virginia's 2018 USBC did not adopt the full 2018 IECC, so the energy and cost savings would be even greater for residents if Virginia were to adopt the full 2021 IECC. The difference in energy savings is

greater between the 2021 and 2018 IECCs than between the previous three years. The saved energy of the 2018 IECC over the 2015 IECC is only:

- 1.68% of annual site energy use intensity
- 1.97 %of annual energy cost.

This shows a major opportunity to save energy for residents by adopting the full 2021 IECC this year.

The savings on energy bills is significant compared to the incremental cost of construction. The Pacific Northwest National Laboratory (PNNL) analyzed the cost effectiveness of the 2021 IECC for residential buildings compared to Virginia’s 2015 USBC.¹⁷ This Cost-Effectiveness analysis is very illuminating because it calculates the “life-cycle cost,” a full accounting over a 30-year period of the cost savings, considering energy savings, the initial investment financed through increased mortgage costs, tax impacts, and residual values of energy efficiency measures. As shown in the table below, the average Virginian homeowner would have a net savings of \$8,376 by owning a house built to 2021 IECC standards instead of 2015 Virginia USBC standards.

Table 1. Life-Cycle Cost Savings of the 2021 IECC compared to the 2015 IECC with amendments

Climate Zone	Life-Cycle Cost Savings (\$)
3A	7,222
4A	8,675
5A	8,780
State Average	8,376

Note: Warm-humid climate zones are labeled "WH"

Source: PNNL Cost-Effectiveness of the 2021 IECC for Residential Buildings in Virginia

Recognizing that not everyone can wait decades for investments to pay off, the PNNL Cost-Effectiveness Analysis also measures “consumer cash flow,” the net annual cost outlay, which the homeowner would want to be positive (i.e., difference between annual energy cost savings and increased annual costs for mortgage payments, etc.). Their results show that the consumer cash flow would take 1-2 years to be positive.

Table 2. Consumer Cash Flow from Compliance with the 2021 IECC Compared to the 2015 IECC with amendments

	Cost/Benefit	3A	4A	5A	State Average
A	Incremental down payment and other first costs	\$214	\$486	\$373	\$429
B	Annual energy savings (year one)	\$339	\$448	\$426	\$426
C	Annual mortgage increase	\$74	\$168	\$129	\$148
D	Net annual cost of mortgage interest deductions, mortgage insurance, and property taxes (year one)	\$14	\$31	\$24	\$27
E	= Net annual cash flow savings (year one) [B-(C+D)]	\$252	\$250	\$274	\$250
F	= Years to positive savings, including up-front cost impacts [A/E]	1	2	2	2

Note: Item D includes mortgage interest deductions, mortgage insurance, and property taxes for the first year. Deductions can partially or completely offset insurance and tax costs. As such, the "net" result appears relatively small or is sometimes even negative.

Source: PNNL Cost-Effectiveness of the 2021 IECC for Residential Buildings in Virginia

We point out these cost-effectiveness benefits because we have read from the working group notes that an objection to adopting the full 2021 IECC and some of its specific components is that it would increase the upfront cost of construction. The objection was then made that housing is already too expensive for many Virginians and making housing more energy efficient by increasing the cost of construction would put home ownership or even renter-ship out of reach. We would like to take space here to explain why affordable housing absolutely requires high standards of energy efficiency, and why people at all levels of income deserve and depend on the state government to uphold those standards.

The Joint Legislative and Review Commission (JLARC) reported on Affordable Housing in Virginia emphasized that there is a shortage of affordable housing in Virginia, particularly affordable rental units.¹⁸ It's critical to remember that "affordable housing" means housing that is affordable to households with incomes at or below the area median income, provided that the occupant pays no more than thirty percent of their gross income for gross housing costs, *including utilities*.¹⁹ The definition of affordable housing has affordable utilities built into it. The best, least-cost way to make utilities affordable is to build the home to use utilities efficiently from the start. If a tenant cannot afford to pay the energy bill because the energy efficiency standards are weak, then the tenant cannot afford to stay in that dwelling. Housing with high energy bills that tenants cannot afford does not qualify as affordable housing, no matter how cheap the rent is.

Though some might argue the JLARC report's statement that, "Rising home prices mean that down payments and closing costs can be over \$10,000 on even moderately priced homes," is a reason against raising energy efficiency standards, we disagree. It is a false assumption that adopting the full 2021 IECC would increase closing costs. Homebuilders make numerous decisions about the variables put into building a home and make tradeoffs in order to meet budgets and other constraints and still remain profitable.

The JLARC report made 18 recommendations to increase affordable housing availability and reduce upfront costs of homeownership, many of which were excellent financial suggestions, but none of the recommendations was to restrict adoption of higher energy efficiency standards or any other building code standard.

If new housing for low-to-moderate (LMI) income households is not built to the latest 2021 IECC standards, those new houses will be added to the queue of housing that needs to be retrofitted in the future, potentially using government funds. Requiring LMI homes to have low utility costs from the start is something the state can do to help the state and federal government pay less to retrofit LMI homes in the future.

¹ American Council for an Energy Efficient Economy (2018) "Keeping the Lights On: Energy Efficiency and Electric System Reliability" <https://www.aceee.org/research-report/u1809>

² HB2227 Kory (2021) <https://lis.virginia.gov/cgi-bin/legp604.exe?212+sum+HB2227>

³ Pacific Northwest National Laboratory (2021) "Energy Savings Analysis: 2021 IECC for Residential Buildings" https://www.energycodes.gov/sites/default/files/2021-07/2021_IECC_Final_Determination_AnalysisTSD.pdf

Pacific Northwest National Laboratory (2021) "Cost-Effectiveness of the 2021 IECC for Residential Buildings in Virginia" https://www.energycodes.gov/sites/default/files/2021-07/VirginiaResidentialCostEffectiveness_2021_0.pdf

⁴ Energy Sub-Workgroup Meeting Documents (May 12, 2022) Pdf page 12

<https://www.dhcd.virginia.gov/sites/default/files/Docx/code-development/energy-sub-workgroup-meeting-documents-5-12-2022.pdf>

⁵ Richmond Times Dispatch (May, 2023) "Dominion sees rapid growth for electric vehicles in Virginia"

https://richmond.com/news/state-and-regional/govt-and-politics/dominion-sees-rapid-growth-for-electric-vehicles-in-virginia/article_c94bd5e2-e8f5-11ed-b20e-079f4cd2e6cc.html

⁶ US Bureau of Labor Statistics, (Feb, 2023) "Charging into the future: the transition to electric vehicles"

<https://www.bls.gov/opub/btn/volume-12/charging-into-the-future-the-transition-to-electric-vehicles.htm#:~:text=S%26P%20Global%20Mobility%20forecasts%20electric,surpassing%2050%20percent%20by%202030.>

⁷ Saving Money with Electric Vehicles <https://www.energy.gov/energysaver/articles/saving-money-electric-vehicles>

⁸ Consumer Reports 2020 <https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-TCO-Overall-Fact-Sheet-FINAL-3.pdf>

⁹ American Lung Association "The Road to Clean Air: Benefits of a National Transition to Electric Vehicles"

<https://www.lung.org/getmedia/99cc945c-47f2-4ba9-ba59-14c311ca332a/electric-vehicle-report.pdf>

¹⁰ Harvard School of Public Health (2020) "Transportation, Equity, Climate, and Health"

<https://cdn1.sph.harvard.edu/wp-content/uploads/sites/2343/2020/10/TRECHPrelimResultsSlides.pdf> slide 18

¹¹ Department of Energy https://afdc.energy.gov/vehicles/electric_emissions.html

¹² Canary Media (2022) "5 charts that shed new light on how people charge EVs at home"

<https://www.canarymedia.com/articles/ev-charging/5-charts-that-shed-new-light-on-how-people-charge-evs-at-home>

¹³ Bureau of Transportation Statistics <https://www.bts.gov/statistical-products/surveys/national-household-travel-survey-daily-travel-quick-facts>

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- ¹⁴ Climate Xchange (2020) “Narrowing the Divide Addressing Inequities in California’s Electric Vehicle Infrastructure” <https://climate-xchange.org/2021/10/07/narrowing-the-divide-addressing-inequities-in-californias-electric-vehicle-infrastructure/>
- ¹⁵ American Council for an Energy Efficient Economy (2021) “Siting Electric Vehicle Supply Equipment with Equity in Mind” <https://www.aceee.org/white-paper/2021/04/siting-electric-vehicle-supply-equipment-evse-equity-mind>
- ¹⁶ Pacific Northwest National Laboratory (2021) “Energy Savings Analysis: 2021 IECC for Residential Buildings” https://www.energycodes.gov/sites/default/files/2021-07/2021_IECC_Final_Determination_AnalysisTSD.pdf
- ¹⁷ Pacific Northwest National Laboratory (2021) “Cost-Effectiveness of the 2021 IECC for Residential Buildings in Virginia” https://www.energycodes.gov/sites/default/files/2021-07/VirginiaResidentialCostEffectiveness_2021_0.pdf
- ¹⁸ JLARC (2021) “Affordable Housing in Virginia” <http://jlarc.virginia.gov/pdfs/reports/Rpt559.pdf>
- ¹⁹ § 15.2-2201. Definitions. <https://law.lis.virginia.gov/vacode/title15.2/chapter22/section15.2-2201/>

To: The Board of Housing and Community Development

From: Michael Trauberman, Resident, City of Falls Church

RE: Proposed Regulation for the Virginia Uniform Statewide Building Code (USBC - 13VAC5-63)

I am writing to express my opposition to the Board's proposed update to the Uniform Statewide Building Code (USBC). I strongly urge the Board to revise its proposed regulation for new construction as follows:

- Adopt the 2021 International Energy Conservation Code (IECC) without weakening amendments for new construction (EC-C1301.1.1.1(2)-21).
- Future-proof for residential electrification by incorporating those proposals relating to heat pumps, and readiness for electric vehicles, household appliances, and solar panels (R403.1.4(2)-21, REC-R1104.2-21, REC-R404-21, and REC-R404.2-21).

Adopt the 2021 IECC without weakening amendments for new construction

Virginia law H2227 states "...the Board shall assess the public health, safety, and welfare benefits of adopting standards that are at least as stringent as those contained in the IECC, including potential energy savings and air quality benefits over time compared to the cost of initial construction."

Unfortunately, it appears that the required assessment under H2227 has not been conducted, and the Board's proposal for the USBC contradicts the overwhelming data and evidence supporting adoption of the 2021 IECC. Rigorous studies by the Pacific Northwest National Laboratory (operated by Battelle for the US Department of Energy) and ICF International (a consulting firm working with many Virginia jurisdictions on their energy plans) confirm that the energy cost savings over time from the 2021 IECC will outweigh the initial costs of construction. Moreover, the life cycle cost savings resulting from the 2021 IECC will make housing more affordable.

Beyond the financial benefits, the 2021 IECC will provide important health, safety, and welfare advantages, including a healthier living environment, increased resilience, and reduced greenhouse gas emissions. These findings are supported by the numerous comments to the Board and the working groups from local government building and sustainability officials, medical professionals, architects, and other experts.

While opponents of the 2021 IECC do raise arguments, a closer examination reveals their lack of validity. For example, the Home Builders Association of Virginia (HBAV) submitted a document citing the American Council for an Energy-Efficient Economy (ACEEE) State Energy Efficiency Scorecard. The HBAV document stated, "Virginia receives a near-perfect score for residential code stringency and perfect score for commercial code stringency." However, according to the 2022 ACEEE scorecard, Virginia was awarded only 1 out of 2 points (50%) for residential code stringency, 1.5 out of 2 points (75%) for commercial code stringency, and a mere 3.5 out of 12 points (29%) for building energy efficiency policies. These scores do not support claims of perfection or near-perfection but do indicate the need for significant energy efficiency improvements to the USBC.

Future-proof for residential electrification

Considering Virginia's imminent shift towards an electric future, it is crucial to future-proof residential buildings by ensuring that they are electric-ready via the USBC. The upfront costs of implementing such measures are significantly lower than the expenses that would be incurred for retrofitting at a later date.

In conclusion, I strongly urge the Board to reconsider its proposal for the USBC by incorporating the 2021 IECC without weakening amendments for new construction. I also urge approval of the proposals aimed at the installation of electric heat pumps, and readiness for electric vehicles, household appliances, and solar panels.

Thank you for your time and consideration.



Dear Members of the Board of Housing and Community Development:

On behalf of the Virginia Energy Efficiency Council (VAEEC), I am writing in support of the draft Uniform Statewide Building Code (USBC). The draft USBC is the culmination of discussions among various stakeholders, including energy efficiency advocates, homebuilders, code officials and fire officials, under the guidance of the Department of Housing and Community Development (DHCD).

The VAEEC and our members have been actively engaged in this process for several code update cycles. As the voice for the energy efficiency industry in the Commonwealth, our goal is to ensure that energy efficiency is an integral part of Virginia's clean energy economy. In partnership with over 100 members, which include fortune 500 companies, small businesses, nonprofits, local governments, state agencies, utilities and individuals, we are working to support programs and policies that advance Virginia's energy efficiency industry.

Over the last several updates, the DHCD Board has seen the value of incorporating strong energy efficiency measures in the USBC. Some of those measures include increased window efficiency, increased insulation requirements for ceilings, reducing the air leakage threshold for newly-installed ductwork in conditioned spaces, and requiring mechanical testing to measure air leakage from both ductwork and the thermal envelope of the building itself.

The current draft USBC continues to make some progress on energy efficiency as well. The current draft USBC includes most of the energy efficiency requirements from the 2021 International Energy Conservation Code (IECC), including increased window efficacy, requiring ductwork testing in unconditioned spaces, and once again increasing the R-value of ceiling insulation.

However, the current draft USBC is missing two critical provisions that would align with the 2021 IECC model code – improved R-value for wall insulation, and enhanced building tightness to reduce the number of air changes per hour, both of which have been part of the IECC since 2012.

[A recent report](#) from the American Council for an Energy-Efficient Economy (ACEEE) found that adopting these amendments could result in a 17.8% reduction in energy costs for homeowners. The Responsible Energy Codes Alliance, which submitted [a proposal](#) to align wall insulation R-values with the 2021 IECC, determined that this change would improve efficiency by 13%, which is the single largest energy efficiency improvement of any standalone proposal. In other words, the DHCD Board is leaving significant energy savings on the table for homeowners when it comes to energy efficiency requirements in the draft USBC.

In that same report by ACEEE, Virginia ranked sixth as one of the best positioned states to take advantage of new federal funding from the Bipartisan Infrastructure Law and the Inflation

Reduction Act to improve its energy codes. Over the next five years, the federal laws will provide \$1.2M towards codes training and enforcement. This is an opportunity to...

In addition to climate funding at the federal level, energy efficiency is also at the core of robust climate laws at the state level as well. The Virginia Clean Economy Act of 2020 set Virginia on a path to becoming carbon-free by 2045 and established energy-saving goals for the state's electric utilities through 2025, which has caused an explosion in utility energy efficiency offerings for customers. Virginia's participation in the Regional Greenhouse Gas Initiative (RGGI), has been a huge success in making low-income housing more energy-efficient and will generate tens of millions of dollars annually, over the next several decades.

With the recent passage of these strong state and federal policies, tackling carbon emissions is clearly a top priority for Virginia and the nation. Nationwide, buildings account for 40% of energy consumption, therefore these policies cannot succeed without improved building codes.

Bringing the USBC up to current IECC standards and utilizing federal funds to enhance training opportunities and code enforcement can help Virginia achieve up to 20% in residential energy cost-savings. Increased training and codes enforcement will also provide an additional 5-10% on energy cost savings in new commercial buildings as well.

Increased energy efficiency requirements in the USBC means more homes are being built with enhanced cost-saving benefits, which is something everyone should be able to support.

Respectfully,

A handwritten signature in black ink that reads "Chelsea Harnish". The signature is written in a cursive, slightly stylized font.

Chelsea Harnish

Executive Director

Virginia Energy Efficiency Council

Chelsea@vaeec.org

From: [Gina M. D'Andrea Weatherup](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Written copy of comments in support of updating the Uniform Statewide Building Code
Date: Monday, May 8, 2023 4:18:23 PM

Hello! I was able to speak in this morning's meeting; thank you for allowing for the virtual option. Below is a copy of the comments I made verbally today.

Good morning. My name is Gina D'Andrea Weatherup. I am a small business owner, a parent, a homeowner in Fairfax County, and a volunteer with Citizens Climate Lobby. I'm here to give you a brief personal story.

I just recently purchased my first all-electric vehicle, or EV. I have been so happy to drive it and to show it off to friends and family!

I read about EVs and talked with EV owners for over a year before making this purchase. We ultimately made the decision to buy based on the availability of my chosen vehicle. As a result, we made the purchase before adding any charging capabilities to our home.

Three weeks after purchasing my EV, and after multiple times driving the mile to plug in my car and finding all the chargers taken, I realized the enormous inconvenience it is to have to add one more errand which requires planning, and has no guarantee of success. As I said, I run a business, own a home, parent, and volunteer. I have enough to do, and should have a plug in my home. I now know that, separate from purchasing the actual plug, it will cost \$1,500 just to run the extra wiring. And I'm lucky enough to be in a home whose electric panel does not need to be expanded.

New homes are being built near me all the time. They ought to have the capability of at-home charging stations built in. It is far cheaper and quicker to install the required wiring or a conduit and space on the circuit box that supports EV charging during construction than it is to retrofit.

Electric vehicles are not going away. The cheapest way to ensure that people can easily charge their transportation is to build buildings that are pre-wired for charging stations - both homes and businesses. It is 2023. Please require new residences to be built to make EV charging a normal part of our lives.

Thank you for your time.

Gina D Weatherup
13915 Leeton Cir, Chantilly, VA 20151

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This is my personal email. I also run Chantilly Mediation and Facilitation - [check it out!](#) I help leaders create happier workplaces. Or, [connect with me on LinkedIn](#).

From: [Ivy Main](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Written testimony to the BHCD on the building code
Date: Monday, May 8, 2023 11:51:26 AM

Thank you for allowing me to speak today. Below is the testimony I submitted orally.

My name is Ivy Main. I live in McLean, Virginia. I support adoption of the full 2021 IECC.

After my husband and I moved into our house, we had a home energy audit done, which found significant air leakage and other weatherization failures. We spent thousands of dollars on retrofits, but the house is still leaky because it wasn't tightly built in the first place. These failures have cost us thousands of dollars more over the years we've lived here in higher energy bills, the house still feels drafty, and air quality suffered because the gas furnace ran more often.

I was pleased the General Assembly passed a law in 2021 requiring the Board to "assess the public health, safety, and welfare benefits of adopting standards that are at least as stringent as those contained in the IECC, including potential energy savings and air quality benefits over time compared to the cost of initial construction." Adopting the full IECC will prevent others from going through what I did, and save homeowners far more money over time than the incremental cost of building to a higher standard.

Given these savings and air quality benefits, the BHCD does not have the option to disregard the IECC. It's clear from the law that the Board must adopt the efficiency measures of the full IECC. Because the savings over time from adopting the full model code exceed the marginal cost of meeting the higher standards, the Board cannot legally adopt a lesser standard.

Thank you.

Ivy Main
1331 Merchant Lane
McLean, VA 22101



FIRE DEPARTMENT
Fire Chief's Office

2100 Clarendon Boulevard, Suite 400, Arlington, VA 22201
TEL 703-228-3362 FAX 703-228-7097 www.arlingtonva.us

December 9, 2022

Virginia Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, VA 23219

Board of Housing and Community Development Members,

At the past Board of Housing and Community Development meeting on October 3, 2022, Board of Housing members met to consider code proposals for the 2021 Virginia Code adoption process. The process that was utilized to update the fire and building codes through the Department of Housing and Community Development Board did not take Virginia's fire service voices and interests into account. There were many members of committees and subcommittees who spend countless days and hours participating in the code development process. By not allowing discussion, testimony, and consideration on non-consensus code proposals, the public process to consider fire prevention and risk reduction is compromised and not effective. Many of these code proposals were extremely important to the fire service and the citizens of the Commonwealth, such as:


1. Requiring sprinklers in townhouses
2. Strengthening code requirements for energy storage systems and electric vehicle charging stations
3. Removal of fire extinguishers in certain occupancy classes
4. Egress safety hardware for use in public buildings

Members of the Board of Housing and Community Development voted to bypass discussion and not allow the fire service to advocate for many commonsense safety measures and life safety proposals. In a process where it only takes one person in a sub-workgroup for a code proposal to be considered non-consensus, this is hardly a collaborative process. Board members have an obligation to represent all the citizens in the Commonwealth of Virginia in advancing life safety. Please reconsider the process and include the code proposals from the fire service.

Respectfully,



David Povlitz, Chief
Arlington County Fire Department



Matthew Cobb, Chief Fire Marshal
Arlington County Fire Department

cc: Mark Schwartz, Arlington County Manager
Aaron Miller, Arlington Deputy County Manager

Flanders, Kyle (DHCD)

From: Glass, Robert S. <Robert.Glass@daikincomfort.com>
Sent: Tuesday, May 9, 2023 5:20 PM
To: Publiccomment_codedevelopment (DHCD)
Cc: Koban, Mary E; andrew@asklein.com; Samantha Slater; Helen Walter-Terrinoni; Johnston, Philip (DAA)
Subject: Comments Regarding Virginia Uniform Statewide Building Code (USBC - 13VAC5-63)

Follow Up Flag: Follow up
Flag Status: Flagged

These comments support the verbal comments that were made during the Public hearing conducted on May 8, 2023 by Mary Koban, Andrew Klein and myself.

First of all, I echo the comments made by Mary Koban in regards to updates to the Building Code that need to be made to allow for storage, warehousing and manufacturing of products utilizing A2L refrigerants. This includes updates to the Maximum Allowable Quantities, and other updates which Mary Koban will outline based on the Fire Code proposals that she submitted during the code development process. These proposals should also have been submitted to the Building Code, but were not. These are critical to ensure that manufacturers, distributors and dealers are able to stock and sell new A2L equipped products in VA.

In addition, in reviewing the information published in the Virginia Register (Vil. 39 Issue 14 dated February 27, 2023), there are some additions/changes that need to be made to properly support the move to A2L refrigerants including:

- In section M1411.1.1 (page 1897). UL/CSA 60335-2-89 needs to be added as this is the standard used by refrigeration equipment for safety certification. Section should read “M1411.1 Refrigeration system listing. Refrigeration systems using Group A2L refrigerants shall be listed and labeled to UL 60335-2-40/CAN/CSA C22.2 No. 60335-2-40 or UL 60335-2-89/CAN/CSA C22.2 No. 60335-2-89. Refrigeration systems using Group A1 refrigerants shall be listed or labeled to UL 60335-2-40/CAN/CSA C22.2 No. 60335-2-40, UL 60335-2-89/CAN/CSA C22.2 No. 60335-2-89 or UL 1995/CSA C22.2 No. 236.”
- Chapter 44 of the IRC - Referenced Standards should have UL60335-2-40-2019/CAN/CSA C22.2 No. 60335-2-40-19 updated to the 2022 edition which has been approved by ICC for the 2024 IRC (Group B Code Development). This would then be UL60335-2-40-20192022/CAN/CSA C22.2 No. 60335-2-40-1922. See page 1907.
- Chapter 44 referenced standards should update ASHRAE 34-2019 to ASHRAE 34-2022 as approved by ICC for the 2024 IRC. There are new A2L refrigerants listed in ASHRAE 34-2022 that are not addressed in ASHRAE 34-2019. Not shown in the proposed draft.
- Chapter 15 of the IMC – Referenced Standards (page 1947) should have UL/CSA 60335-2-40-2019 updated to UL/CSA 60335-2-40-20192022. This has been approved by ICC for the 2024 IMC.
- Chapter 15 of the IMC – Referenced Standards (not shown) should have ASHRAE 15-2019 updated to ASHRAE 15-20192022. This has been approved by ICC for the 2024 IMC.
- Chapter 15 of the IMC – Referenced Standards (not shown) should have ASHRAE 34-2019 updated to ASHRAE 34-20192022. This has been approved by ICC for the 2024 IMC.
- Documents Incorporated by Reference (page 2025) ASHRAE 34-2019 should be updated to ASHRAE 34-20192022. This has been approved by ICC for 2024 I-Codes.
- Documents Incorporated by Reference (page 2028)UL/CSA 60335-2-40-2019 should be updated to UL/CSA 60335-2-40-20192022. This has been approved by ICC for the 2024 I-Codes.

- Documents Incorporated by Reference (page 2028)) UL 207-2009 should be updated to UL 207, Refrigerant-containing Components and Accessories, Nonelectrical – with revisions through ~~June 2014~~January 2020. This has been approved by ICC for the 2024 IMC.

We support the proposed deletion of E902.17 from the Residential Code (page 1906) and 210.8(F) from the Electric Code (page 1937) as these sections have created havoc with HVAC equipment and GFCIs. NFPA neglected to coordinate with HVAC manufacturers when they added these new requirements in the 2020 NEC and states which have adopted the 2020 NEC have either (1) deleted this requirement, (2) modified it so it does not affect HVAC equipment or (3) delayed the effective date until 9/1/2026 (in accordance with TIA 20-19).

The updates to ASHRAE 15 to the 2022 edition is necessary because installation requirements for equipment using A2L refrigerants has been updated with new requirements not addressed in the 2019 edition. The updates to UL/CSA 60335-2-40 to the 2022 edition is necessary because Computer Room Air Conditioners (CRAC) using A2L refrigerants are NOT addressed in any other safety standard than the 2022 edition of UL/CSA 60335-2-40. In addition, certification requirements have been updated for many products using A2L refrigerants in the 2022 edition.

These amendments will allow the residents of the Commonwealth of Virginia to have access to new equipment using the new A2L refrigerants as the industry moves to these new refrigerants in accordance with the AIM Act phasedown of higher Global Warming Potential (GWP) refrigerants. EPA has mandated a 10% reduction of current high GWP refrigerants (like the common R-410A) in 2022, but this phasedown increases to 40% in 2024. Manufacturers have to move to these new Low GWP refrigerants sooner than later to avoid supply chain issues with air conditioning and refrigeration equipment.

Please let me know if you have any questions or need any additional information. Jim Cika from ICC is more than willing to assist the committee in any manner to ensure that the VA Building Codes are effectively updated to allow for the transition to new A2L refrigerants.

Regards,

Robert

Robert Glass

Manager, State Regulatory Affairs

DAIKIN COMFORT TECHNOLOGIES NORTH AMERICA, INC.

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12680 Lock 15 Road | Tuscaloosa, AL 35406

<https://northamerica-daikin.com>

Flanders, Kyle (DHCD)

From: Monique Hanis <monique.hanis@gmail.com>
Sent: Monday, May 8, 2023 11:46 AM
To: Publiccomment_codedevelopment (DHCD)
Subject: Please Strengthen Virginia's Building Code

Follow Up Flag: Follow up
Flag Status: Flagged

I am a 33-year resident (and taxpayer!) of Virginia, and have renovated and repaired two homes over the last 32 years with my husband as we raised our family here in Arlington. Both of our adult children have chosen to stay in the area, one as a renter with her partner and one with his wife as a new homeowner.

From our first-hand experience, we know it is **much more cost-effective to implement strong energy efficient measures while building or adding an addition** than it is when renovating or repairing afterwards.

For this reason, **I urge the BHCD to strengthen building codes to make Virginia a leader, particularly in energy efficiency.** I see three good reasons for setting stronger across-the-board building codes and energy efficiency standards for all buildings – homes, commercial properties, schools and other public buildings.

First, we can **derive the greatest long-term energy savings** impact for all Virginians – whether for renters, for homeowners, for customers of Virginia-based businesses, and for all of us who pay taxes to maintain our public buildings.

Second, by **creating a level playing field for builders and contractors we can improve our buildings of all types when they are being built or renovated**, rather than making thicker insulation, efficient lighting systems, and better heating & cooling systems an optional afterthought, that I've learned first-hand is **always more expensive to improve later.**

Third, it will **make Virginia a more competitive building market leader**, support our economy, and the building industry.

Bottomline, I feel it's the **right action to take now for all Virginians and their children and families, that will pay back for decades to come.**

Thank you for your consideration and for hearing me out.

Sincerely,
Monique

Monique Hanis
6226 23rd Street North
Arlington, VA 22205
Cell: 202-236-8220

Comment for BHCD

Hearing

May 8, 10am

From:

Dr. Frederick Kringgold

Former Associate Dean for

Research and Extension

College of Architecture

and Urban Studies

Former Director of

Disaster Risk Reduction

Program

Virginia Tech

Four points:

- 1. Added wall and ceiling insulation will reduce energy costs for the Home owner over the 70+ year life time of the structure.**
- 2. Reduced air infiltration i will improve the efficiency of heating and cooling and occupant comfort and health over the life of the dwelling**

3. The insulation and air change requirements of the current International Energy Conservation Code will significantly contribute to the reduction of Greenhouse Gas Emissions and future damage due to the impact of Climate Change including, extreme temperature variations, extreme precipitation and wind.

Reliable science has projected that such climate extremes are expected within the life time of new buildings and that failure to reduce GHG emissions will increase climate related damage for homeowners and the Commonwealth.

4. Home builders should consider the wisdom of meeting the current demand by home

**buyers for improved
comfort and safety for
their families.**

Commenter: Rebecca Quinn, RCQuinn Consulting on behalf of FEMA Building Science

PETITION FEMA-1. 13VAC5-63-130. Section 113 Inspections.

Comments: Because the Virginia USBC uses the same administrative procedures to administer all codes, we recommend parity with the IBC and IRC (Sec. R109.1.3 and R109.1.6.1), by referencing both Section 1612 (building) **and Section R322 (residential)**, as applicable. If both are not referenced, it can be misinterpreted that documentation required by Sec. R322 is not required to be submitted **at the times specified**. If not included here, permittees could submit whenever they chose.

REQUEST REVISION TO ADD changes to Section 113 H. and I., as follows to add in two places the phrase "or Section R322, as applicable," (shown using bold underline):

H. 113.3.2 Lowest floor elevation. In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in Section ~~4612.5~~ 1612.4, **or Section R322, as applicable**, shall be submitted to the building official.

I. 113.3.3 Flood hazard documentation. If located in a flood hazard area, documentation of the elevation of the lowest floor as required in Section ~~4612.5~~ 1612.4, **or Section R322, as applicable**, shall be submitted to the building official prior to the final inspection.

CommentID: [216792](#)

5/1/23 5:00 pm

Commenter: Rebecca Quinn, RCQuinn Consulting on behalf of FEMA Building Science

PETITION FEMA-2. 13VAC5-63-210, Item R (amendments to the IRC), item 38. Located at the bottom of page

Comments: There is confusion between "design flood elevation" (which is the water elevation) and the "elevation required in Sec. R322.3.2" which is where the minimum elevation of the lowest horizontal structural member relative to the water is specified. FEMA deliberately changed to "required elevation" in the 2018 IRC (and Virginia picked up those changes in its 2018 edition). FEMA previously comments to use phrasing that matches the IRC.

REQUEST REVISION TO DELETE, shown without underline for clarity. Remove the words "design flood" as shown with bold Strike-through.

R322.3.6 Enclosed areas below required elevation. Enclosed areas lower than the ~~design flood~~ elevation required in Section R322.3.2 are prohibited in Coastal A Zones and Coastal High Hazard Areas.

CommentID: [216794](#)

5/1/23 5:02 pm

Commenter: Rebecca Quinn, RCQuinn Consulting on behalf of FEMA Building Science

PETITION FEMA-3. 13VAC5-63-210, Item R (amendments to the IRC), item 38. Located at the bottom of page

Comments: There is confusion between "design flood elevation" (which is the water elevation) and the "elevation required in Sec. R322.3.2" which is where the

minimum elevation of the lowest horizontal structural member relative to the water is specified. FEMA deliberately changed to “required elevation” in the 2018 IRC (and Virginia picked up those changes in its 2018 edition). FEMA previously comments to use phrasing that matches the IRC. Citing “design flood” could mean a tank is lower than the dwelling it serves.

REQUEST REVISION TO DELETE shown without underline for clarity. Remove the words “design flood” as shown with bold strike-through.

R322.3.10 Tanks. Underground tanks are prohibited in Coastal A Zones or Coastal High Hazard Areas. Aboveground tanks shall be installed at or above the ~~design flood~~ elevation required in Section R322.3.2. Where elevated on platforms, the platforms shall be cantilevered from or knee braced to the building or shall be supported on foundations that conform to the requirements of Section R322.3.

CommentID: [216795](#)

5/9/23 9:23 am

Commenter: Lisa Berger, International Code Council

Support of the Code Adoption

Dear Deputy Director Davis,

The International Code Council (ICC) offers this letter in support of the finalization and adoption of the 2021 Uniform Statewide Building Code and Statewide Fire Prevention Code, based on the 2021 International Codes. Regarding the Industrialized Building Safety Regulations, we offer support of the first-ever statewide adoption of the ICC/MBI Standard 1200-2021: Standard for Off-Site Construction: Planning, Design, Fabrication, and Assembly and ICC/MBI Standard 1205-2021: Standard for Off-Site Construction: Inspection and Regulatory Compliance; The Code Council commends the work of the State Building Code Office to ensure the health and wellbeing of the residents of the Commonwealth of Virginia through its commitment to adopting the most recent editions of codes and standards.

The application of strong building codes and standards plays a large part in ensuring Virginia’s communities remain safe and strong for generations to come. The reality is, science and technology are constantly changing; and, as a result, the building community also needs to stay current with construction standards for the safety and economic benefit of Virginia.

The Commonwealth has been a leader in supporting innovation in design and construction while maintaining safety, resilience, and sustainability priorities. The regulation of off-site construction is a prime example. The Department has been a model for jurisdictions across the country. Many of the practices already deployed by the Department are reflected in the ICC/MBI 1200 and 1205 standards. Formally adopting these standards helps assure that the Commonwealth is incorporating best practices into its program and recognizes the important role of regulatory consistency in unlocking the efficiencies inherent in off-site construction.

The International Code Council is happy to have the Commonwealth of Virginia as a partner in the national pursuit of resilient and efficient construction. We are happy to offer assistance as needed by the Department as implementation proceeds.

Warmest regards,
Lisa Berger
Government Relations Manager
International Code Council

CommentID: [216903](#)

From: [Larry Olson \(passngr6863@gmail.com\) Sent You a Personal Message](mailto:passngr6863@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:31:29 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more stringent energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Larry Olson
16297 Wolf Creek Rd
Montpelier, VA 23192
passngr6863@gmail.com
(804) 883-7257

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Naomi L \(ledermannannaomi@gmail.com\)](mailto:Naomi.L(ledermannannaomi@gmail.com)) Sent You a Personal Message
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency.
Date: Tuesday, May 9, 2023 12:38:16 AM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Naomi L
117 E Severn Rd
Norfolk, VA 23505
ledermannannaomi@gmail.com
(540) 335-7931

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or (415) 977-5500.

From: [Steven Urquhart \(srurquhart@aol.com\) Sent You a Personal Message](mailto:srurquhart@aol.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:31:31 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Steven Urquhart
1801 Warrington Rd SW
Roanoke, VA 24015
srurquhart@aol.com
(540) 355-6119

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Ivy Main \(eifionamain@gmail.com\) Sent You a Personal Message](mailto:eifionamain@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:32:15 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Ivy Main
1331 Merchant Ln
Mc Lean, VA 22101
eifionamain@gmail.com
(703) 448-7618

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Greg Singleton \(jgsingle@yahoo.com\) Sent You a Personal Message](mailto:jgsingle@yahoo.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:32:22 PM

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Greg Singleton
7760 Northedge Ct
Springfield, VA 22153
jgsingle@yahoo.com
(703) 455-4701

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Michelle Peters \(michelleltop@gmail.com\) Sent You a Personal Message](mailto:michelleltop@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:33:09 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Michelle Peters
236 George Wythe Ln
Williamsburg, VA 23188
michelleltop@gmail.com
(314) 873-8306

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Yvonne Parrotte \(yparrotte@aol.com\) Sent You a Personal Message](mailto:yparrotte@aol.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:33:11 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Yvonne Parrotte
11319 Woodbrook Ln
Reston, VA 20194
yparrotte@aol.com
(703) 362-9567

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [pat_holbrook \(subbyholbrook@hotmail.com\)](mailto:pat_holbrook(subbyholbrook@hotmail.com)) Sent You a Personal Message
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 12:33:42 PM

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

pat holbrook
403 McCarty Rd
Clintwood, VA 24228
subbyholbrook@hotmail.com
(276) 926-2352

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Ben Samuels (bsamuels3791@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:34 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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Thank you for your consideration of my comment.

Sincerely,

Ben Samuels
1662 Parkcrest Cir Apt 301
Reston, VA 20190
bsamuels3791@gmail.com
(630) 881-2795

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Michael Carter (avndoc@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:34 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Michael Carter
6830 Silver Ln
Annandale, VA 22003
avndoc@gmail.com
(703) 642-2740

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Pamela Wood (horsmom@ntelos.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:34 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Pamela Wood
1514 Simmons Gap Rd
Dyke, VA 22935
horsmom@ntelos.net
(434) 960-2915

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Daniel Plaza (dpzip@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:35 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Daniel Plaza
11453 Hollow Timber Ct
Reston, VA 20194
dpzip@yahoo.com
(703) 620-4494

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Melinda Bashen (mbashen@me.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:36 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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Thank you for your consideration of my comment.

Sincerely,

Melinda Bashen
2226 Lofty Heights Pl
Reston, VA 20191
mbashen@me.com
(571) 313-5132

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Marcia Geyer (marciageyer2@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:36 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Marcia Geyer
420 Afton Pond Ct Apt 5220
Charlottesville, VA 22902
marciageyer2@gmail.com
(434) 980-6660

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Glenn Ayres (glenn_ayres@hotmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:36 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more strident energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Glenn Ayres
12000 Calie Ct.
Fairfax, VA 22033
glenn_ayres@hotmail.com
(571) 446-7912

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Michele Fried (michele.fried@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:36 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Michele Fried
750 N Glebe Rd Apt 479
Arlington, VA 22203
michele.fried@gmail.com
(410) 458-6246

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Bill Staley (ws9811@earthlink.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:39 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Bill Staley
21930 Greentree Ter
Sterling, VA 20164
ws9811@earthlink.net
(808) 268-9836

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Lynda West (llwestva@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:47 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Lynda West
6341 Crosswoods Dr
Falls Church, VA 22044
llwestva@gmail.com
(703) 975-2646

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Caroline Corum (carolinecorum@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:46 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Caroline Corum
5122 N Carlin Springs Rd
Arlington, VA 22203
carolinecorum@yahoo.com
(425) 635-0971

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Catherine Carver (ccarver37@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:43 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Catherine Carver
13520 Union Village Cir
Clifton, VA 20124
ccarver37@gmail.com
(703) 655-5069

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: John Petze (jpetze@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:48 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

John Petze
1411 Darley Row
Keswick, VA 22947
jpetze@gmail.com
(804) 229-3674

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Hersha Evans (hnurhle@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:49 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Hersha Evans
55 Griggs St
Christiansburg, VA 24073
hnurhle@yahoo.com
(540) 381-0474

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Flanders, Kyle (DHCD)

From: Cynthia Howell (cynthia_howell@hotmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:50 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Cynthia Howell
20200 Center Brook Sq
Sterling, VA 20165
cynthia_howell@hotmail.com
(571) 434-1234

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Glenn Secor (gasecor@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:52 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Glenn Secor
165 Amick Rd
Louisa, VA 23093
gasecor@yahoo.com
(540) 967-2628

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Flanders, Kyle (DHCD)

From: Cathleen Robertson (juvenile_rn@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:53 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Cathleen Robertson
3460 Condor Ln
Woodbridge, VA 22192
juvenile_rn@yahoo.com
(703) 490-2502

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Flanders, Kyle (DHCD)

From: Linda Voss (inklings2002@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:53 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Linda Voss
1303 N Ode St Apt 224
Arlington, VA 22209
inklings2002@gmail.com
(703) 524-3554

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Karma Castleberry (kcastleb@radford.edu) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:54 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Karma Castleberry
100 5th St
Radford, VA 24141
kcastleb@radford.edu
(540) 239-8875

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Mary Hard (marykschmotzer@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:56 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Mary Hard
201 Waller Mill Rd
Williamsburg, VA 23185
marykschmotzer@yahoo.com
(757) 345-0324

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Steven Vogel (steven.j.vogel@earthlink.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:58 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Steven Vogel
449 Hampton Ct
Falls Church, VA 22046
steven.j.vogel@earthlink.net
(999) 999-9999

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Angela Callis (angelabreen2002@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:00 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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Thank you for your consideration of my comment.

Sincerely,

Angela Callis
21 Winston Ave
Newport News, VA 23601
angelabreen2002@yahoo.com
(757) 817-8872

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Lynda Majors (ljmajors@usa.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:01 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more strident energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Lynda Majors
2620 Mount Tabor Rd
Blacksburg, VA 24060
ljmajors@usa.net
(540) 552-8914

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Betty Byrne Ware (bettybware1@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:06 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Betty Byrne Ware
2 Paxton Rd
Richmond, VA 23226
bettybware1@gmail.com
(804) 421-0330

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Sandra Tarpinian (shoptarp@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:07 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Sandra Tarpinian
105 Great Falls St
Falls Church, VA 22046
shoptarp@gmail.com
(571) 275-8800

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Terrance Grogan (terrymgrogan@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:08 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Terrance Grogan
1263 Wedgewood Manor Way
Reston, VA 20194
terrymgrogan@gmail.com
(703) 963-5835

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Paul Stipe \(stipepj@aol.com\) Sent You a Personal Message](mailto:stipepj@aol.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:10:07 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Paul Stipe
3609 Deerberry Ct
Fairfax, VA 22033
stipepj@aol.com
(571) 528-9383

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [David Copper \(davecinthewoods@gmail.com\) Sent You a Personal Message](mailto:davecinthewoods@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:12:55 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

David Copper
1603 Ridgeway Dr
Staunton, VA 24401
davecinthewoods@gmail.com
(540) 448-7461

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Mary Finley-Bosh \(geoyapti@gmail.com\) Sent You a Personal Message](mailto:geoyapti@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:13:47 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Mary Finley-Bosh
2113 Jarman Ln
North Chesterfield, VA 23235
geoyapti@gmail.com
(804) 432-0858

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Michael Sobel \(mksobel@msn.com\)](mailto:mksobel@msn.com) Sent You a Personal Message
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:16:30 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Michael Sobel
10224 Waxcomb Pl
Mechanicsville, VA 23116
mksobel@msn.com
(843) 422-4589

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Penelope Dimartino \(pdimotennis@gmail.com\) Sent You a Personal Message](mailto:pdimotennis@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:20:26 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Penelope Dimartino
302 Victoria Way
Richmond, VA 23238
pdimotennis@gmail.com
(504) 250-7059

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Robert and Pam Jiranek \(pjiranek@comcast.net\) Sent You a Personal Message](mailto:pjiranek@comcast.net)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:21:37 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Robert and Pam Jiranek
400 Forest Ridge Rd
Earlysville, VA 22936
pjiranek@comcast.net
(434) 202-1724

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Bronwyn Hubbard \(clique.chik@gmail.com\) Sent You a Personal Message](mailto:clique.chik@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:22:29 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Bronwyn Hubbard
121 Oak Meadow Ln
Blacksburg, VA 24060
clique.chik@gmail.com
(540) 449-2143

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Karl Hohenstein \(waterbear50@ymail.com\) Sent You a Personal Message](#)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:22:40 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Karl Hohenstein
2516 Commonwealth Dr
Charlottesville, VA 22901
waterbear50@ymail.com
(434) 974-7956

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Steve Knockemus \(steveknockemus@hotmail.com\) Sent You a Personal Message](mailto:steveknockemus@hotmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:23:06 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Steve Knockemus
1423 Claremont Ave
Richmond, VA 23227
steveknockemus@hotmail.com
(804) 282-4191

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Diana Lahey \(dlahey@cox.net\) Sent You a Personal Message](mailto:dlahey@cox.net)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:27:55 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Diana Lahey
9205 White Chimney Ln
Great Falls, VA 22066
dlahey@cox.net
(703) 759-5175

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Peter Edmonds \(cpedmonds@comcast.net\)](mailto:cpedmonds@comcast.net) Sent You a Personal Message
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:31:28 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Peter Edmonds
2510 Juniper Ln
Maidens, VA 23102
cpedmonds@comcast.net
(804) 556-6177

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Patricia Kadar \(pakadar@verizon.net\) Sent You a Personal Message](mailto:pakadar@verizon.net)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:34:43 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more stringent energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Patricia Kadar
3017 Kenbury Rd
Richmond, VA 23235
pakadar@verizon.net
(804) 272-8332

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [McKenna Dunbar \(mocokono@gmail.com\) Sent You a Personal Message](mailto:mocokono@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:37:00 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

McKenna Dunbar
2 W Marshall St, Apt 619
Richmond, VA 23173
mocokono@gmail.com
(202) 430-4709

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Ronald Karpick \(lungone@msn.com\)](mailto:lungone@msn.com) Sent You a Personal Message
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 1:41:43 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Ronald Karpick
3440 S Jefferson St Apt 437
Falls Church, VA 22041
lungone@msn.com
(703) 578-7399

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Emile Derek Boyle (liveride@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:46 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Emile Derek Boyle
9688 Woodhenge Ct
Burke, VA 22015
liveride@yahoo.com
(703) 451-5114

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Bobby Harbuck (bobby_warrior23@hotmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:47 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Bobby Harbuck
204 Overlook Dr
Chilhowie, VA 24319
bobby_warrior23@hotmail.com
(276) 274-7834

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Virginia Merrill (virginia.merrill@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:47 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Virginia Merrill
436 Heritage Ct
Charlottesville, VA 22903
virginia.merrill@gmail.com
(703) 209-3647

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: James Richman (creatednova@comcast.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:49 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

James Richman
505 South St
Winchester, VA 22601
creatednova@comcast.net
(540) 664-6094

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Laura Lavertu (lelavertu@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:57 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Laura Lavertu
5901 Mount Eagle Dr Apt 509
Alexandria, VA 22303
lelavertu@gmail.com
(571) 205-9519

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Flanders, Kyle (DHCD)

From: Deborah Williams (bluemedicine100@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:14 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Deborah Williams
8701 Osborne Tpke
Richmond, VA 23231
bluemedicine100@gmail.com
(804) 338-8682

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Angela Bowers (jacksonsforever@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:17 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Angela Bowers
3234 Verdun Ave
Norfolk, VA 23509
jacksonsforever@yahoo.com
(757) 998-3124

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Ronald Field (rhfield@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:17 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Ronald Field
6028 Telegraph Rd
Alexandria, VA 22310
rhfield@verizon.net
(703) 919-5966

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Rodney Mullins (rodster.5978@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:26 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Rodney Mullins
PO Box 2409
Wise, VA 24293
rodster.5978@gmail.com
(276) 220-5864

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Bill Howe \(wmhowe@yahoo.com\) Sent You a Personal Message](mailto:wmhowe@yahoo.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency
Date: Tuesday, May 9, 2023 2:27:03 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Bill Howe
2090 Tailor Dr
Rockingham, VA 22801
wmhowe@yahoo.com
(201) 983-3474

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Catherine Harvey (csharvey@aol.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:36 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Catherine Harvey
12206 Woodvale Ct
Herndon, VA 20170
csharvey@aol.com
(703) 437-4337

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Lois Lommel (lolo2636@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:38 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Lois Lommel
2636 Traymore Rd
North Chesterfield, VA 23235
lolo2636@verizon.net
(555) 555-5555

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Lynette Broughman (broughmanlynette@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:40 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Lynette Broughman
400 Pleasure Point Dr
Goodview, VA 24095
broughmanlynette@gmail.com
(540) 512-8061

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Jack Wall (jwall@wallresidences.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:47 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more strident energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Jack Wall
288 Yarrow Way SE
Floyd, VA 24091
jwall@wallresidences.com
(540) 392-4381

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Danika Hyssong (danikahyssong@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:49 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Danika Hyssong
34 S Ingram St
Alexandria, VA 22304
danikahyssong@yahoo.com
(615) 594-2948

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Jim Vedda (vedda@cox.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:51 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Jim Vedda
5853 Governors Hill Dr
Alexandria, VA 22310
vedda@cox.net
(703) 505-3610

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Ruth Woollett (rgwoollett@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 2:53 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Ruth Woollett
3711 14th St N
Arlington, VA 22201
rgwoollett@yahoo.com
(703) 401-2811

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Flanders, Kyle (DHCD)

From: William Welkowitz (bwelkowitz@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:01 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

William Welkowitz
1600 S Eads St Apt 526N
Arlington, VA 22202
bwelkowitz@gmail.com
(818) 439-4978

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Michael Carvellas (mikecarvellas2020@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:12 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Michael Carvellas
12066 Greywing Sq Apt C2
Reston, VA 20191
mikecarvellas2020@gmail.com
(571) 446-9904

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Linnea Morgan (emlinnea@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:14 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Linnea Morgan
605 W 19 St
Richmond, VA 23221
emlinnea@gmail.com
(540) 454-6425

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Flanders, Kyle (DHCD)

From: William Snow (wsnowparis@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:18 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

William Snow
209 Trent Trail Ct
Front Royal, VA 22630
wsnowparis@yahoo.com
(540) 878-3923

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Ted Hochstadt (tedbh@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:32 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Ted Hochstadt
1723 Olney Rd
Falls Church, VA 22043
tedbh@yahoo.com
(703) 356-2423

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Flanders, Kyle (DHCD)

From: Robert Shippee (rsoxbob@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:36 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Robert Shippee
13000 Trinity Ct
Richmond, VA 23233
rsoxbob@gmail.com
(804) 325-9788

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Flanders, Kyle (DHCD)

From: Marvin Wingfield (marvick2@comcast.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 3:37 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Marvin Wingfield
4701 Doyle Ter
Lynchburg, VA 24503
marvick2@comcast.net
(434) 384-5645

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Flanders, Kyle (DHCD)

From: Dean Amel (dean.amel@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:00 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Dean Amel
3013 4th St N
Arlington, VA 22201
dean.amel@verizon.net
(571) 327-9799

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Flanders, Kyle (DHCD)

From: Therese Weldon (castle713@aol.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:00 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Therese Weldon
1200 Salisbury Dr
Midlothian, VA 23113
castle713@aol.com
(804) 379-8187

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Flanders, Kyle (DHCD)

From: Barbara Oleksa-Reiss (theatredesigns@aol.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:06 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Barbara Oleksa-Reiss
58 Provence Dr Apt 104
Stuarts Draft, VA 24477
theatredesigns@aol.com
(540) 460-0994

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: William Wright (bwright71@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:09 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

William Wright
5921 Castle Rock Rd
Roanoke, VA 24018
bwright71@verizon.net
(540) 772-1470

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Sarah Barber (sdbarber1@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:30 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more strident energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Sarah Barber
7012 Ridge Dr
Alexandria, VA 22306
sdbarber1@verizon.net
(703) 765-8052

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Leslie Silkworth (lsilkworth@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:38 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Leslie Silkworth
2201 Wilson Blvd Apt 509
Arlington, VA 22201
lsilkworth@gmail.com
(571) 426-0073

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Lenny Bankester (lennybankester@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:44 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Lenny Bankester
4205 Cordell St
Annandale, VA 22003
lennybankester@yahoo.com
(703) 256-4267

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Gianluigi Ciovati (gigion@netscape.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:45 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Gianluigi Ciovati
113 Nathan Pl
Yorktown, VA 23692
gigion@netscape.net
(757) 833-6101

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Cheryl Pearson (cnspearson1@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:55 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Cheryl Pearson
2601 Warm Hearth Dr Apt 202
Blacksburg, VA 24060
cnspearson1@gmail.com
(978) 399-4869

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Heidi Jones (ernstwrite@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:02 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Heidi Jones
1615 Rose Hill Dr
Charlottesville, VA 22903
ernstwrite@yahoo.com
(434) 987-3125

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Eliot Singer (eliot18@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:12 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Eliot Singer
280 Riverbend Dr Apt 4E
Charlottesville, VA 22911
eliot18@gmail.com
(839) 529-6501

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Chris Anderson (amtuneshop@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:27 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Chris Anderson
PO Box 56546
Virginia Beach, VA 23456
amtuneshop@gmail.com
(703) 758-9193

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Richard Beville (rick_beville@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:37 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Richard Beville
496 Buffalo Bend Rd
Glasgow, VA 24555
rick_beville@yahoo.com
(540) 463-5050

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Jaime Turgeon (jaime.turgeon@me.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:42 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Jaime Turgeon
3906 Glazebrook Dr
Fredericksburg, VA 22407
jaime.turgeon@me.com
(540) 786-4780

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Steve Napoliello (jalanjalan@hotmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:50 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Steve Napoliello
9618 Mercedes Dr
Manassas, VA 20110
jalanjalan@hotmail.com
(730) 862-1578

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Linda Schneider (dogsin@earthlink.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 5:57 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Linda Schneider
808 26th St S
Arlington, VA 22202
dogsin@earthlink.net
(703) 684-8181

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Leah Bush (forensicmd1@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 6:13 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Leah Bush
8451 Chestnut Hills Rd
New Kent, VA 23124
forensicmd1@yahoo.com
(757) 831-8588

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Donna Kittrell (d.kittrell@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 6:53 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Donna Kittrell
9541 Fostern Ln
Manassas, VA 20112
d.kittrell@yahoo.com
(703) 530-8168

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Sally Tucker (stucker@centurylink.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 6:54 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Sally Tucker
1171 Pounding Creek Rd
Charlottesville, VA 22903
stucker@centurylink.net
(434) 823-6888

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Melissa Lee (lxacres@earthlink.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 7:34 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Melissa Lee
11415 Blackwelltown Rd
Midland, VA 22728
lxacres@earthlink.net
(540) 940-0971

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: David Dooley (checkitagain@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 7:43 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

David Dooley
13439 Orangewood Dr
Woodbridge, VA 22193
checkitagain@yahoo.com
(703) 670-6659

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Rachel Meltzer (rachel_meltzer@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 7:49 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Rachel Meltzer
3000 Washington Blvd
Arlington, VA 22201
rachel_meltzer@yahoo.com
(212) 665-7965

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Travis Allen (travisallen2000@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 7:55 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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Thank you for your consideration of my comment.

Sincerely,

Travis Allen
3655 US Highway 211 E
Luray, VA 22835
travisallen2000@yahoo.com
(608) 575-0994

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Flanders, Kyle (DHCD)

From: Shirley Napps (sen.dartmouth@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 8:08 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Shirley Napps
1346 Briery Creek Rd
Scottsville, VA 24590
sen.dartmouth@gmail.com
(444) 555-6666

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Flanders, Kyle (DHCD)

From: Louan Fisher (louanfc@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 8:19 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Louan Fisher
11 Barrett St
Palmyra, VA 22963
louanfc@gmail.com
(434) 960-8257

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Gretchen Dudley (bud_mary1@verizon.net) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 8:42 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Gretchen Dudley
5909 Winnbrook Dr
Roanoke, VA 24018
bud_mary1@verizon.net
(540) 525-7211

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Mary Mabe (mgmabe@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 8:57 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Mary Mabe
37330 Doubloon Dr
Greenbackville, VA 23356
mgmabe@gmail.com
(443) 517-7359

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Flanders, Kyle (DHCD)

From: Mike Boito (laneteam@hotmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:05 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Mike Boito
1003A N Daniel St
Arlington, VA 22201
laneteam@hotmail.com
(703) 943-9015

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Flanders, Kyle (DHCD)

From: Barbara Brothers (barbarabroth@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:07 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Barbara Brothers
206 Crossing Ln
Staunton, VA 24401
barbarabroth@gmail.com
(540) 255-4032

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Deborah Wooten (debwooten@earthlink.net) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:14 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Deborah Wooten
13194 Fair Oaks Ln
Ashland, VA 23005
debwooten@earthlink.net
(804) 798-4288

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Flanders, Kyle (DHCD)

From: Charlotte Shnaider (charsing@comcast.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:20 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Charlotte Shnaider
30 Oak Ln
Staunton, VA 24401
charsing@comcast.net
(540) 886-0517

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Flanders, Kyle (DHCD)

From: Bruce Slater (bhslater@hotmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:42 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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Thank you for your consideration of my comment.

Sincerely,

Bruce Slater
4603 Monument Ave
Richmond, VA 23230
bhslater@hotmail.com
(804) 564-3685

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Flanders, Kyle (DHCD)

From: T Denby (k355@bellsouth.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:51 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

T Denby
1404 Braemar Creek
Williamsburg, VA 23188
k355@bellsouth.net
(757) 229-5768

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Ginger Thompson (k355@bellsouth.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:51 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Ginger Thompson
1404 Braemar Crk
Williamsburg, VA 23188
k355@bellsouth.net
(757) 229-5768

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Flanders, Kyle (DHCD)

From: Russ Hopley (russhopler@cox.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 9:55 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Russ Hopley
13112 Pelfrey Ln
Fairfax, VA 22033
russhopler@cox.net
(703) 508-6528

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Flanders, Kyle (DHCD)

From: Julie Ferrari (magicdogs123@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 10:11 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Julie Ferrari
427 Camp Meeting Rd
Pearisburg, VA 24134
magicdogs123@yahoo.com
(540) 921-0030

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Amy Golden (agolden711@hotmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 10:18 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Amy Golden
323 N Underwood St
FALLS CHURCH, VA 22046
agolden711@hotmail.com
(703) 598-6621

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Roy Yamamoto (riyamamoto@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 10:50 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Roy Yamamoto
3809 Candlebrook Ct
Richmond, VA 23233
riyamamoto@verizon.net
(804) 364-0426

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Ira Birnbaum (birnbaumva@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 11:03 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Ira Birnbaum
3600 Druid Ln
Annandale, VA 22003
birnbaumva@yahoo.com
(703) 876-6726

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Susan Judge (sivjudge@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 11:16 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Susan Judge
905 Summerwind Rd
Virginia Beach, VA 23454
sivjudge@gmail.com
(210) 792-7552

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: David Warner (ghost.concolors@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 11:46 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

David Warner
8337 Cherokee Rd
Richmond, VA 23235
ghost.concolors@yahoo.com
(434) 760-0901

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Timothy Cywinski (tim.cywinski@sierraclub.org) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:37 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Timothy Cywinski
1609 Wentbridge Rd
Richmond, VA 23227
tim.cywinski@sierraclub.org
(540) 272-5358

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Stephen Sizemore (sgsizemore1@gmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:38 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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Thank you for your consideration of my comment.

Sincerely,

Stephen Sizemore
627 Baltimore Ave
Bedford, VA 24523
sgsizemore1@gmail.com
(919) 338-2534

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Flanders, Kyle (DHCD)

From: John Kasper (jkcr3435@aol.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:39 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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Thank you for your consideration of my comment.

Sincerely,

John Kasper
3435 Holly Rd
Annandale, VA 22003
jkcr3435@aol.com
(703) 849-8199

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Flanders, Kyle (DHCD)

From: Becky Daiss (beckydaiss@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:39 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Becky Daiss
1276 N Wayne St
Arlington, VA 22201
beckydaiss@verizon.net
(703) 528-9538

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Flanders, Kyle (DHCD)

From: Raymond Nuesch (renuesch@hotmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:40 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

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Thank you for your consideration of my comment.

Sincerely,

Raymond Nuesch
4555 Catterton Rd
Free Union, VA 22940
renuesch@hotmail.com
(434) 973-5992

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Flanders, Kyle (DHCD)

From: Michele Vanhoesen (michelevh8@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:40 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Michele Vanhoesen
9327 Sarah Shelton Ln
Mechanicsville, VA 23116
michelevh8@yahoo.com
(845) 452-3314

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Charles Clusen (cmclusen@gmail.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:43 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Charles Clusen
4761 24th Rd N
Arlington, VA 22207
cmclusen@gmail.com
(703) 522-8991

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Lori Rottenberg (guapix2@hotmail.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 12:43 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Lori Rottenberg
1821 N Jefferson St
Arlington, VA 22205
guapix2@hotmail.com
(703) 536-4231

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Marjorie Leach-Parker (mleachparker@yahoo.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 4:20 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Marjorie Leach-Parker
2061 Lyndora Rd
Virginia Bch, VA 23464
mleachparker@yahoo.com
(757) 581-6365

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Nicole Reungoat (nicole.reungoat@outlook.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 7:12 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Nicole Reungoat
1720 Elmart Ln
North Chesterfield, VA 23235
nicole.reungoat@outlook.com
(717) 999-3903

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Elliot Daniels (elliott_daniels@comcast.net) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:37 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

A broad collection of public and private experts produced the model 2021 IECC construction code. If fully implemented by Virginia, it would reduce pollution and yield substantial savings in energy costs which would continue for decades. The cost savings and other benefits of more strident energy efficiency codes have been documented by the U.S. Department of Energy.

As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Elliot Daniels
4633 28th Rd S Apt A
Arlington, VA 22206
elliott_daniels@comcast.net
(703) 998-7889

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Cheryl Vosburg (begreen2@verizon.net) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:25 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Cheryl Vosburg
6018 Bonneau Rd
Richmond, VA 23227
begreen2@verizon.net
(804) 262-5978

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Margaret Janosz (mjanosz@wi.rr.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:22 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Margaret Janosz
2804 Cistern Cir
Chesapeake, VA 23323
mjanosz@wi.rr.com
(262) 308-4455

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Mary Ann Mcfarland (maryannmcfarland@me.com) Sent You a Personal Message <kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:19 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Mary Ann Mcfarland
1098 Pelham Dr
Keswick, VA 22947
maryannmcfarland@me.com
(434) 970-1050

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

Flanders, Kyle (DHCD)

From: Nicole Chang (namaestri@yahoo.com) Sent You a Personal Message
<kwautomail@phone2action.com>
Sent: Tuesday, May 9, 2023 1:15 PM
To: Publiccomment_codedevelopment (DHCD)
Subject: Comment: Please Update Virginia?s Uniform Building Codes to Standards For Energy Efficiency

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board?s failure to update Virginia?s Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be ?at least as stringent as? the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Nicole Chang
1788 N Pierce St Apt 1814
Arlington, VA 22209
namaestri@yahoo.com
(415) 913-7865

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club Virginia Chapter. If you need more information, please contact Tim Cywinski at Sierra Club Virginia Chapter at tim.cywinski@sierraclub.org or (804) 225-9113.

From: [Monica Adkins \(monica.adkins1942@gmail.com\) Sent You a Personal Message](mailto:monica.adkins1942@gmail.com)
To: [Publiccomment_codedevelopment \(DHCD\)](#)
Subject: Please Update Virginia's Uniform Building Codes to Standards For Energy Efficiency.
Date: Monday, May 8, 2023 7:34:24 PM

Dear Board of Housing and Community Development Members,

I write today to express my concerns with the Board's failure to update Virginia's Uniform Building Codes to standards guided by energy efficiency.

Virginia law, since 2021, requires that the Board of Housing and Community Development (BHCD) building code process consider the benefits and costs of adopting the current International Energy Efficiency Code (IECC). Evaluation of these beneficial construction techniques in compliance with Virginia law did not occur. This means that homes built in Virginia will continue to be less energy efficient so the occupant pays higher utility bills month after month and year after year. This needs to change. The BHCD needs to prioritize the benefits to the homeowners and renters over cutting costs for the builder community.

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As directed by Virginia law, the statewide building code should be "at least as stringent as" the International Energy Conservation Code (IECC) since the energy savings, pollution reductions and other benefits from greater efficiency exceed the added cost of construction.

I humbly request that BHCD members seek to approve uniform building codes standards that reflect the 2021 IECC guidelines as directed by state law.

Thank you for your consideration of my comment.

Sincerely,

Monica Adkins
4339 Garst Mill Rd Apt C
Roanoke, VA 24018
monica.adkins1942@gmail.com
(540) 494-5669

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or (415) 977-5500.