



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Gene Goforth** <Gene.Goforth.382898327@p2a.co>

Fri, Oct 16, 2020 at 4:35 PM

Reply-To: ggoforth@ffres.com

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

First, I ask that you oppose changes that would make it mandatory for existing buildings to comply with the latest model code energy efficiency requirements for new construction. Our industry supports energy efficiency, and property owners and managers continue to lead the way in adopting innovative technologies and approaches to cost-saving and protecting our environment. However, this proposed change would discourage renovation and rehabilitation projects by driving up costs and diverting funds to energy projects from other, more badly needed building priorities, at a time when property owners are facing tremendous uncertainty about when – or if – financial equilibrium might be restored to our industry. Moreover, it will drive up rent for struggling Virginia businesses and renters already facing extreme hardship resulting from the ongoing pandemic and economic shutdown.

Furthermore, the proposed change is contrary to the General Assembly's explicit legislative edict to regulate new and existing buildings separately, and not subject the latter to new code requirements. Existing buildings are to be regulated "at the least possible cost." Now is not the time to saddle them with costly energy efficiency mandates.

Second, I urge you to oppose radical changes to the USBC's in-building emergency communications systems (IBECs) provisions. The current code provisions on IBECs are the result of years of deliberation by a General Assembly task force, DHCD workgroups, and ultimately, the BHCD, which correctly allocated responsibilities between housing providers and localities. They should not be undone by adopting code change proposals submitted late in the process that have received little deliberation.

Many reasons for signal issues are beyond the control of the building owner, such as the natural terrain, the later erection of a new building or cell tower nearby that causes signal inadequacy, and wide variations in the emergency communications capabilities of fire departments. Additionally, no Virginia fire data was submitted to support the assertion that drastic changes in the current code are needed to protect building occupants and firefighters. Current code provisions on IBECs provide building code officials-- who have the responsibility for applying them-- with latitude to require or accept alternative "equivalent" equipment that is compatible for specific installations.

As Virginia's real estate industry deals with the uncertainties caused by the COVID-19 pandemic, we need steady leadership. We ask that the Board reject rushed regulatory changes that would have a severe impact on our industry as we navigate today's unprecedented challenges.

Regards,  
Gene Goforth  
[3811 Fairfax Dr](#)  
[Arlington, VA 22203](#)



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Jeffrey Gregory** <Jeffrey.Gregory.382923904@p2a.co>

Fri, Oct 16, 2020 at 4:56 PM

Reply-To: jgregory@msc-rents.com

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

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Regards,

Jeffrey Gregory

10128 Parkington Ct  
Manassas, VA 20109



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**LARRY YATES** <LARRY.YATES.359353480@p2a.co>

Fri, Oct 16, 2020 at 5:51 PM

Reply-To: yatesmanagement@gmail.com

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

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Regards,

LARRY YATES

[111 Devil's Backbone Overlook](#)

[Stephenson, VA 22656](#)



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Les Florance** <Les.Florance.383188487@p2a.co>

Sat, Oct 17, 2020 at 11:39 AM

Reply-To: lflorance@legend-mgt.com

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

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Regards,

Les Florance

1355 Beverly Rd

Mclean, VA 22101



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Casie Hoover** <Casie.Hoover.346053414@p2a.co>

Sat, Oct 17, 2020 at 11:45 AM

Reply-To: managermalibu@palms.net

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

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Regards,  
Casie Hoover  
[3713 Oak Creek Ct](#)  
[Virginia Beach, VA 23452](#)



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Clark Melillo** <Clark.Melillo.346757413@p2a.co>  
Reply-To: clark@kayapartments.com  
To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Mon, Oct 19, 2020 at 5:11 AM

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

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Regards,  
Clark Melillo  
[15446 Cross Keys Rd](#)  
[Haymarket, VA 20169](#)



Virginia Board of Housing and Community  
Development (VA BHCD)  
600 East Main Street, Suite 300  
Richmond, VA 23219

October 19th, 2020

## Introduction

Arc-Fault Circuit-Interrupter (AFCI) technology is a life-saving technology that has been an essential part of the National Electrical Code® (NEC®) since the 2002. Currently, the Commonwealth of Virginia amends the NEC® to only require AFCI protection in bedrooms for 1&2 family dwellings. There are two proposals before the VA BHCD pertaining to AFCI technology.



## What is an AFCI?



- AFCI devices operate by recognizing and de-energizing the circuit during the hazardous event of electricity flowing outside the normal path through the air or a foreign material. This phenomenon is known as “arcing.” Arcing is notorious for starting ignitions with damaged wiring.
- AFCI protection can be installed either via a receptacle (shown on the left) or in your home electrical panel with a circuit breaker (shown on the right.)



## What are the RTEs?

RTE and its Location	What is the Proposal?
<b>RTE3902.16(1)-18</b> <b>Non-Consensus Item</b> <b>Book #6, Tab #4, Page 165</b>	Will restore AFCI protection requirements to as published in the 2018 IRC.
<b>RTE3902.16(2)-18</b> <b>Consensus Item</b> <b>Book #6, Tab #1, Page 127</b>	Will restore AFCI protection requirements to as published in the 2018 IRC, but provides an exception for outlets required to be GFCI protected.

VIRGINIA FISCAL IMPACT AFCI PROTECTION OF DWELLING UNITS					
Equipment	Price	Quantity	Labor	Total	Fiscal Impact
Standard 20A Circuit Breaker	~\$5	3 per House	N/A	~\$15 per House	<b>\$225 per House</b>
AFCI 20A Circuit Breaker	~\$40	6 per House	N/A	~\$240 per House	

Here are a few more facts pertaining to this issue:

- In 1995, the Consumer Products Safety Commission (CPSC) conducted a study alongside Underwriters' Laboratories (UL) titled "Technology for Detecting and Monitoring Conditions That Could Cause Electrical Wiring System Fires" with the objective of reducing the rates of death, injury, and property loss from residential fires associated with electrical wiring systems. Thus, electrical manufacturers answered the call and developed the Arc-Fault Circuit-Interrupter (AFCI). The Commission estimated that, in 1990, there were **42,000 fires** involving home electrical wiring, resulting in **340 deaths, 1,370 injuries, and \$569 million in property losses**. The total annual cost to society was approximately **\$1.3 billion** according to a CPSC press released titled "Safety Commission Picks Home Electrical System Fires As 1995 Priority".
- The first requirement for AFCI technology for bedrooms circuits was introduced to the NEC® in 1999. The logic for the choice of protecting bedrooms first was to give the most common victims of house fires, sleeping residents, the added benefit of fire prevention protection. In 2008, living areas in dwellings such as family rooms and living rooms were added under the umbrella of AFCI protection. From there, AFCI technology expanded to kitchens and laundry areas in the 2014 NEC®.
- In the US Fire Administration (USFA) report from December 2018, Volume 19, Issue 8 titled "Residential Building Electrical Fires (2014-2016)", a **22% reduction nationally was recorded in residential electrical fires between 2006-2017**. This correlates with the expansion of better wiring device methods such as utilizing AFCI technology to protect branch circuits as NEC® required.
- According to the National Fire Incident Reporting System (NFIRS) 2018 data listed on the USFA website, **Virginia suffered 20.2 injuries** per 1000 fires where the **national average was 9.8 injuries** per 1000 fires. More specifically, **Virginia suffered 50.9 injuries** per 1000 residential structural fires compared to the **national average of 25.3 injuries** per 1000 residential structural fires.

As such, Eaton urges the Virginia BHCD to adopt **RTE3902.16(1)-18** to fully restore the language of the 2017 edition of the NEC® and the AFCI protection for dwelling units in this great Commonwealth.

Sincerely,

David Smith  
Codes & Standards Specialist  
Eaton Commercial & Residential Distribution Solutions  
Electrical Sector, Americas





Virginia Board of Housing and Community  
Development (VA BHCD)  
600 East Main Street, Suite 300  
Richmond, VA 23219

October 19th, 2020

Good Morning,

My name is David Smith and I'm speaking on behalf of Eaton as we encourage the Virginia BHCD to adopt the non-consensus item RTE3902.16(1)-18 located in Book #6 on Tab #4 at Page 165.

Eaton employs over 600 associates in five facilities across our Commonwealth all representing the Electrical Division within Eaton. Eaton develops, manufactures, and sells safe and reliable electrical equipment. These Virginians provide market leading solutions used in general construction, performing to the highest standards of safety and reliability. Many of these products are installed in homes, commercial buildings, industrial facilities, and utilities in the State and across the country.

I have submitted to Mr. Flanders an overview document the facts on "Arc-Fault Circuit-Interrupter" or "AFCI" technology and request Kyle to distribute this sheet to the entire BHCD. This fact sheet goes into detail on the history, fire statistics and cost impact of the proposed change to remove the amendment to the Virginia Code that currently reduces fire safety in residential homes. The current code requires AFCI technology only for bedrooms in this State where the 2017 edition of the National Electrical Code® includes living and laundry areas in dwelling units to be under the fire protection umbrella provided by AFCI technology.

You will find in this submitted document the following facts:

- In the US Fire Administration (USFA) report from December 2018, Volume 19, Issue 8 titled "Residential Building Electrical Fires (2014-2016)", a **22% reduction nationally was recorded in residential electrical fires between 2006-2017**. This correlates with the expansion of better wiring device methods such as utilizing AFCI technology to protect branch circuits as NEC® required.
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Thank you,

David Smith  
Codes & Standards Specialist  
Eaton Commercial & Residential Distribution Solutions  
Electrical Sector, Americas



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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**Virginia's energy code - voting to adopt the complete 2018 IECC**

1 message

**Sandra Leibowitz** <sandra@sustaindesign.net>

Mon, Oct 19, 2020 at 8:25 AM

To: "kyle.flanders@dhcd.virginia.gov" &lt;kyle.flanders@dhcd.virginia.gov&gt;

Good morning Mr. Flanders:

I understand that this morning, Virginia's Board of Housing and Community Development will consider a proposal to have Virginia's residential building energy code come into compliance with the "model" energy code, the 2018 International Energy Conservation Code (IECC). Please pass along my message to the Board prior to this morning's meeting:

To best support affordable housing in Virginia, please vote for adopting the complete 2018 IECC without any weakening amendments. Virginia has lagged behind the model code since 2012. We can't wait another year to get caught up.

The 2018 IECC has been demonstrated to reduce the total cost (mortgage + energy bills) of home-ownership, reduce the risk of mortgage default, grow quality jobs in the construction industry, and create homes with better air quality that can better withstand disasters. The energy code is a simple, fair process for making homes more affordable and responding to climate change at the same time. It's so much easier to build something right the first time! This is something truly good that can happen here and now in Virginia!

Rigorous energy codes are a win for

- housing affordability (increased predictability of monthly utility expenses and reduced total cost of housing)
- home buyers/renters of all kinds (comfort, savings, cost predictability, indoor air quality)
- local jobs (framing and insulating don't happen overseas, pressure testing is new work, quality takes time)
- the construction industry (increased value and quality of their product, more jobs, increased customer satisfaction)
- the mortgage industry (32% less risk of default (IMT/UNC report))
- energy policy (reduced system costs, grid stability, demand predictability)
- environmental policy (global warming, resource use)

Thank you very much for your consideration.

Sincerely,

The logo for Sandra Leibowitz Consulting (sdc), with the letters "sdc" in a bold, lowercase, sans-serif font. The "s" is red, the "d" is green, and the "c" is red.

**Sandra Leibowitz**, AIA, LEED Fellow*Managing Principal*

**Sustainable Design Consulting, LLC**

[1421 Lombardy Alley](#)

[1st Floor](#)

[Richmond, VA 23219](#)

[o: 804-644-3880 x1101](#)

[c: 202-277-5687](#)

[sandra@sustaindesign.net](mailto:sandra@sustaindesign.net)

[www.sustaindesign.net](http://www.sustaindesign.net)



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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**Comments in support of E1301.1.1.1-18**

1 message

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**Narissa Turner** <narissa@vcnva.org>  
To: kyle.flanders@dhcd.virginia.gov

Mon, Oct 19, 2020 at 8:45 AM

Mr. Flanders,

Please transmit the following comments to Members of the Virginia Board of Housing and Community Development, for their meeting this morning.

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I write to express my support of the Board adopting the entirety of E1301.1.1.1-18 - This proposal would adopt the full 2018 IECC by eliminating outmoded exceptions. It would bring envelope efficiency standards and air leakage standards into compliance with the 2012-2018 IECC. Adoption would save residents energy and money continuously for 70+ years; reduce risks of evictions and utility shut-offs for low-income residents; increase resiliency; reduce harmful pollution; and help to meet Virginia's climate goals. Compliance costs are low and far less expensive than retrofits.

Furthermore, I would like to call special attention to:

RE402.1.2(6) Building envelope efficiency-This proposal would adopt just the envelope standards in the 2018 IECC and would be unnecessary if E1301.1.1.1-18 is adopted. According to an analysis by the Responsible Energy Codes Alliance (RECA) using Virginia-specific data and DOE's methodology, the incremental construction costs would be only 0.002 of average new home and be fully repaid in 6 years, on average. Both walls and ceilings are important. Updating wall insulation is particularly important: savings are 7.5 times greater than for ceiling insulation, have a 4.4-year payback, and retrofitting would require removing/replacing/refinishing walls at huge expense.

RE402.4.1.2(2) Limit Air Leakage/Infiltration-This proposal addresses a subset of the Full Adoption proposal and would be unnecessary if E1301.1.1.1-18 is adopted. This measure would require that blower door tests confirm that air leakage is at or below 3 air changes per hour (ACH), rather than the 5 ACH permitted by the existing USBC and the December 2019 proposal. Leaky houses are more costly to heat and cool, less resilient and less comfortable to live in. Materials (such as caulking and tape) to repair envelope leaks cost little when construction is undertaken. It is much more costly to locate and stop leakage later, which is a burden that builders should not impose on buyers.

RE407.1.1 Builder Choice of Additional Energy Efficiency Measure. This amendment is modeled on provision in the near-final 2021 IECC, but easier to meet. Builders would choose any one of four additional building efficiency measures: (1) envelope insulation equal to the 2021 IECC minimum envelope insulation (not the higher 2021 optional level); (2) an ERI score equal to the minimum 2021 IECC minimum (not the higher 2021 optional level); (3) more efficient HVAC equipment (per the 2021 IECC options), or (4) energy-saving water heaters (per the 2021 IECC options). It would improve energy savings by approximately 5-10%.

It is my hope that in lieu of adopting the entirety of 2018 IECC, that the Board find the above mentioned items necessary and beneficial in improving the safety and efficiency of our buildings.

Thank you,

Narissa Turner  
Climate & Clean Energy Policy Manager  
Virginia Conservation Network  
(804) 644-0283  
[narissa@vcnva.org](mailto:narissa@vcnva.org)





Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Harald Mangold** <Harald.Mangold.345943859@p2a.co>

Mon, Oct 19, 2020 at 9:03 AM

Reply-To: hmangold@scottmanagementinc.com

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

These new regulations and mandates would most certainly further erode affordable housing since the significant cost would most certainly have to be passed thru to the residents of these older and more affordable apartment buildings.

First, I ask that you oppose changes that would make it mandatory for existing buildings to comply with the latest model code energy efficiency requirements for new construction. Our industry supports energy efficiency, and property owners and managers continue to lead the way in adopting innovative technologies and approaches to cost-saving and protecting our environment. However, this proposed change would discourage renovation and rehabilitation projects by driving up costs and diverting funds to energy projects from other, more badly needed building priorities, at a time when property owners are facing tremendous uncertainty about when – or if – financial equilibrium might be restored to our industry. Moreover, it will drive up rent for struggling Virginia businesses and renters already facing extreme hardship resulting from the ongoing pandemic and economic shutdown.

Furthermore, the proposed change is contrary to the General Assembly's explicit legislative edict to regulate new and existing buildings separately, and not subject the latter to new code requirements. Existing buildings are to be regulated "at the least possible cost." Now is not the time to saddle them with costly energy efficiency mandates.

Second, I urge you to oppose radical changes to the USBC's in-building emergency communications systems (IBECs) provisions. The current code provisions on IBECs are the result of years of deliberation by a General Assembly task force, DHCD workgroups, and ultimately, the BHCD, which correctly allocated responsibilities between housing providers and localities. They should not be undone by adopting code change proposals submitted late in the process that have received little deliberation.

Many reasons for signal issues are beyond the control of the building owner, such as the natural terrain, the later erection of a new building or cell tower nearby that causes signal inadequacy, and wide variations in the emergency communications capabilities of fire departments. Additionally, no Virginia fire data was submitted to support the assertion that drastic changes in the current code are needed to protect building occupants and firefighters. Current code provisions on IBECs provide building code officials-- who have the responsibility for applying them-- with latitude to require or accept alternative "equivalent" equipment that is compatible for specific installations.

As Virginia's real estate industry deals with the uncertainties caused by the COVID-19 pandemic, we need steady leadership. We ask that the Board reject rushed regulatory changes that would have a severe impact on our industry as we navigate today's unprecedented challenges.

Regards,  
Harald Mangold  
[300 N Lee St](#)  
[Alexandria, VA 22314](#)



Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Greg White** <Greg.White.384099755@p2a.co>  
Reply-To: greg.white@copt.com  
To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Tue, Oct 20, 2020 at 10:09 AM

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

First, I ask that you oppose changes that would make it mandatory for existing buildings to comply with the latest model code energy efficiency requirements for new construction. Our industry supports energy efficiency, and property owners and managers continue to lead the way in adopting innovative technologies and approaches to cost-saving and protecting our environment. However, this proposed change would discourage renovation and rehabilitation projects by driving up costs and diverting funds to energy projects from other, more badly needed building priorities, at a time when property owners are facing tremendous uncertainty about when – or if – financial equilibrium might be restored to our industry. Moreover, it will drive up rent for struggling Virginia businesses and renters already facing extreme hardship resulting from the ongoing pandemic and economic shutdown.

Furthermore, the proposed change is contrary to the General Assembly's explicit legislative edict to regulate new and existing buildings separately, and not subject the latter to new code requirements. Existing buildings are to be regulated "at the least possible cost." Now is not the time to saddle them with costly energy efficiency mandates.

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Regards,  
Greg White  
13454 Sunrise Valley Dr  
Herndon, VA 20171





Flanders, Kyle &lt;kyle.flanders@dhcd.virginia.gov&gt;

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## Please Oppose Harmful Code Changes

1 message

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**Laurie Shade** <Laurie.Shade.383910709@p2a.co>

Mon, Oct 19, 2020 at 1:56 PM

Reply-To: lshade@legend-mgt.com

To: Kyle Flanders <kyle.flanders@dhcd.virginia.gov>

Dear Chairman Abbasi and Members of the Board,

I am a proud member of Virginia's real estate industry, and I am writing today to voice my opposition to certain proposed changes to the Uniform Statewide Building Code (USBC) and Statewide Fire Prevention Code (SFPC). As the Commonwealth continues to cope with the enormous societal and economic impacts of the COVID-19 pandemic, our industry can ill-afford being saddled with costly new regulatory mandates.

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Furthermore, the proposed change is contrary to the General Assembly's explicit legislative edict to regulate new and existing buildings separately, and not subject the latter to new code requirements. Existing buildings are to be regulated "at the least possible cost." Now is not the time to saddle them with costly energy efficiency mandates.

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Many reasons for signal issues are beyond the control of the building owner, such as the natural terrain, the later erection of a new building or cell tower nearby that causes signal inadequacy, and wide variations in the emergency communications capabilities of fire departments. Additionally, no Virginia fire data was submitted to support the assertion that drastic changes in the current code are needed to protect building occupants and firefighters. Current code provisions on IBECs provide building code officials-- who have the responsibility for applying them-- with latitude to require or accept alternative "equivalent" equipment that is compatible for specific installations.

As Virginia's real estate industry deals with the uncertainties caused by the COVID-19 pandemic, we need steady leadership. We ask that the Board reject rushed regulatory changes that would have a severe impact on our industry as we navigate today's unprecedented challenges.

Regards,  
Laurie Shade  
[1355 Beverly Rd](#)  
[McLean, VA 22101](#)



NATIONAL ELEVATOR INDUSTRY, INC.

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SETTING STANDARDS IN MOTION

November 13, 2020

Kyle T. Flanders  
Senior Policy Analyst  
Virginia Department of Housing and Community Development  
Policy Office  
600 E. Main St. Suite 300  
Richmond, VA 23219  
[kyle.flanders@dhcd.virginia.gov](mailto:kyle.flanders@dhcd.virginia.gov)

Re: Conflict Between the 2018 International Building Code (IBC) and ASME A17.1/CSA B44

Mr. Flanders,

The National Elevator Industry Inc. (“NEII”) is concerned because there is a conflict between the 2018 IBC (and state or local codes based on same) and ASME A17.1/CSA B44 Safety Code for Elevators and Escalators (“A17.1”). NEII is a strong supporter of the model code process and supports adoption of the 2018 IBC by Virginia with minimal or no deviations. However, we strongly recommend a modification to IBC 2018 to eliminate a conflict between the codes.

Specifically, IBC Requirement 3001.2 mandates an elevator emergency communication system for the deaf, hard of hearing and speech impaired. NEII supports the intent of this code change, but the actual code language in the IBC is vague, unenforceable, and conflicts with the technical requirements for emergency communication in A17.1, Requirement 2.27.1. This will create an ongoing issue for the life of the elevator. Because the provisions in IBC include neither technical criteria nor a reference to another standard containing such criteria, the result will be a wide variety of communication systems and, ultimately, a disservice to the people who need to use these systems. IBC, Requirement 1009.8, also requires a two-way communication system for areas of refuge on an accessible route, but the new requirements were not added to that section, even though that communication means is needed in a true emergency. This difference in the two requirements has caused confusion in the field as well.

NEII members worked very closely with the American Society of Mechanical Engineers (ASME) Emergency Operations Committee to develop technical requirements for a communication system that would meet the intent of the IBC code change. It is important to remember that the emergency communication system in the elevator is provided to request help for an elevator entrapment, not to connect to the 911 system; therefore, the amount of information that needs to be shared is minimal. The requirements in A17.1-2019/B44-19 were developed for consistency with the guidelines in the Americans with Disabilities Act Title III - the regulation specifically for effective communication with the deaf, hard of hearing and speech impaired. The new requirements have been published in the 2019 edition of A17.1 Requirement 2.27.1 and provide clear guidance to manufacturers and code authorities to ensure new systems will meet the needs of the deaf, hard of hearing, and speech impaired users. The conflict exists when the building code is based on the 2018 IBC in conjunction with the 2016 or earlier edition of A17.1. Elevator inspectors will inspect the elevator communication system based on the requirements in A17.1. When conducting periodic inspections and tests (typically annually), your inspectors will look to the elevator code in effect when the elevator was installed or modernized (as marked on the data plate) and not to the building code in effect at that time.

In order to eliminate the conflict, NEII encourages Virginia to consider the following code language to replace Requirement 3001.2 of the 2018 IBC when adopting the new IBC 2018 version:

**3001.2 Emergency elevator communication systems.**      The elevator emergency communication system shall

1. be installed in accordance with the provisions of ASME A17.1/CSA B44 and NFPA 72,
2. be available twenty-four hours a day, seven days a week, as a live interactive system.

IBC Section 3001 defines the scope and reference standards for elevator Emergency Communication design requirements. This NEII proposal to amend Section 3001.2 retains the base requirement for the system in the 2018 IBC but references the technical requirements included in the A17.1/B44 model elevator code. The NEII recommendation requires the system to comply with A17.1; thereby, providing direct reference to technical requirements and allowing the building code to align with the edition of A17.1 adopted in the jurisdiction because the year is not included. This would allow the A17.1-2019 changes to be brought in when a jurisdiction adopts that edition of the code. This also eliminates any confusion that might result when inspecting elevators installed to an earlier edition of A17.1 because the communication system would match the edition of the elevator code. NEII submitted a proposal IBC to correct this conflict for the 2021 IBC. That proposal was not incorporated directly but the language in 3001.2 was modified and ASME A17.1-2019/CSA B44-19 was included as the referenced edition.

In situations where your jurisdiction has already adopted a building code based on the 2018 IBC and changes were not made to Requirement 3001.2, there may be other solutions to address the conflict. IBC section 104.1, along with sections 104.10 and 104.11, in the IBC code allow for modifications or alternatives on a case by case basis. These rules could be applied to this situation to eliminate the conflict. For this scenario, NEII recommends that the jurisdiction publishes a guideline to let elevator manufacturers, installers and building owners know the A17.1-2019 requirements are going to be enforced in the jurisdiction.

NEII is committed to public and elevator personnel safety and is ready to support the State of Virginia in reviewing the latest version of the code and assisting in the adoption process. NEII and representatives from its member companies are available to meet with you and other key stakeholders to assist your jurisdiction in a review of the most recent edition of A17.1 and facilitate your efforts to update the portions of the code related to elevators. We support updating the state building codes but feel it is vital to amend the requirements for the communication system to ensure it serves those who need it most. We look forward to hearing from you and are available to assist you in this effort.

For additional information, please contact:

Kevin Brinkman  
NEII® Vice President, Codes & Safety  
[klbrinkman@neii.org](mailto:klbrinkman@neii.org)  
Tel: 703-589-9814

*NEII® is the premier national trade association representing the interest of firms that install, maintain and/or manufacture elevators, escalators, moving walks and other building transportation products. The NEII membership includes the top elevator companies in the United States, if not the world, and reports more than eighty percent of the work hours for the industry. Member companies include: Otis Elevator Company, Schindler Elevator Corp., ThyssenKrupp Elevator Corporation, KONE, Inc., and many other companies. Safety for the riding public and industry personnel is a top priority for the industry and the NEII member companies.*

December 10, 2020

To: Board of Housing and Community Development

Re: December 14 Meeting on Building Codes

From: Virginia Chapter of the Sierra Club, Faith Alliance for Climate Solutions, Climate Action Alliance of the Valley, Climate & Clean Energy Working Group of the Virginia Grassroots Coalition

We understand that, at its December 14 meeting, the Board will consider and vote on the recommendations made by its Codes and Standards Committee (Committee) at its October 19 meeting.

We urge the Board to reject the Committee's recommendations pertaining to the energy-related proposals that we supported. The reasons for adopting those proposals were spelled out in the written comments we jointly submitted dated June 25, September 14 and September 21, plus comments separately submitted by FACS and the information about the enormous benefits of home-charged electric vehicles which was submitted by Susan Stillman on October 14. The proposals we supported, including full adoption of the 2018 IECC, were also supported by numerous oral comments made at the Board's June 26 and October 19 meetings and by written comments submitted by many Virginia residents prior to the Board's June 26 meeting.

We incorporate those comments by reference and limit these comments to a few specific proposals and to certain issues that came up in the October 19 meeting of the Codes and Standards Committee. While all of our proposals would "protect the health, safety and welfare of residents of Virginia" and should be adopted, the Board should, at a minimum, adopt the full IECC, including its standards for envelope insulation and air infiltration/leakage, per E1301.1.1, RE402.1.2(6) and RE402.4.1.2(2). It should also require new construction of garages and other onsite parking to include the electrical capacity (wiring and panel space) or raceways to facilitate future wiring in multifamily dwellings as outlined in E405.10.

### **1. The Committee evidenced a misunderstanding of the Board's legal obligations**

Virginia law is clear that the purpose of the building code is to "protect the health, safety and welfare of residents of the Commonwealth." Desires to minimizing construction costs cannot override consistency with recognized standards, including standards for "energy conservation":

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, including provisions necessary to prevent overcrowding, rodent or insect infestation, and garbage accumulation; and barrier-free provisions for the physically handicapped and aged.

Despite the clear statutory standards, Committee members voting against our proposals emphasized builders' potential costs, members' perceived role to "balance" builder and resident interests regardless of IECC standards, and the lack of consensus (due to builder opposition) for the proposals in the work groups.<sup>1</sup> No one disputed that Virginia's residents will benefit from greater envelope efficiency as required by the IECC standards have required since 2012. Nor could they since it is undisputed that greater wall insulation, for example, will *save money and increase comfort for all residents who live in the dwellings over the next 70 or more years that the buildings are likely to be occupied*. As outlined in comments and in presentations to the work groups, analyses by DOE and others have shown that the savings to residents begin immediately even after considering the small increases in mortgage costs attributable to the added insulation. Further, even if there were higher initial costs, the law's purpose of protecting "residents of the Commonwealth" is not limited to the first buyer—it applies to all future residents and all of them will be harmed by this deviation from the IECC's recognized standards for envelope efficiency.

Contrary to remarks made during the meeting, the Board does not have the authority to engage in general balancing of interests between builders and residents. That is a legislative function, and the legislature has clearly struck the balance in favor of consumer protection, including "energy conservation" standards. By law, the Board's primary function is to adopt and enforce recognized standards from nationally recognized organizations that promulgate model codes, such as the IECC, without amendments that weaken protections for residents. The goal of minimizing construction costs is limited by the requirement that Virginia's code be "consistent with recognized standards of health, safety, energy conservation and water conservation." To the extent the Board has discretion, it is obligated to consider and promote other legislative goals, including the energy objectives and policies adopted by the General Assembly and Governor in 2020. This statutory guidance advances Virginians' health, safety and welfare, just as the building code is required to do. Furthermore, the Board may not defer decisions to so-called work groups, where builders have the power to label any proposal "non-consensus."

Nor does the Board meet its legal obligations to residents of the Commonwealth by continuing to kick energy conservation issues down the road pending unanimous agreement in work group discussions.<sup>2</sup> Virginia's Energy Efficiency Roadmap (DMME, December 2017)

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<sup>1</sup> These themes were summarized near the outset of the Committee's afternoon meeting and in later comments by Mr. Gregory, who made most of the motions for disapproval of energy efficiency proposals. He conceded that many of the non-consensus energy proposals had merits, but that wasn't enough. He saw the Board's job as one of balancing interests of builders and residents (even if the results were inconsistent with recognized standards or raised residents' costs). In his view, work group opposition meant more time was needed for consideration in a future cycle, and the building code shouldn't adopt even good measures if a different technological solution might someday be developed. His comments gave no particular weight to IECC standards. Like most members, he opposed all non-consensus energy conservation proposals even if they had low costs and high benefits to residents.

<sup>2</sup> Deferring to lack of builder agreement in work groups allows builders to talk indefinitely, stacking the deck against implementing the IECC's protections. Compromises are deformed by the expectation (based on experience) that the Board will rarely adopt any "non-consensus" proposals to catch up from previous code-weakening amendments, particularly ones relating to efficiency. The resulting deals – which we and many other public commenters opposed – make small progress, leaving protection for Virginia residents many years behind

stated that, although other parts of the ICC codes for residential and commercial construction had been adopted, “Amendments to the 2012 International Energy Conservation Code (IECC) by the state’s codes officials, however, render it essentially equivalent to the 2009 version.” tThe 2017 Roadmap correctly predicted that the Board would again reject IECC compliance measures in the 2015 cycle (despite residents’ loss of large energy and cost savings), but it held out hope for the 2018 cycle. Now, we are in the 2018 cycle and hearing essentially the same pleas to kick important energy conservation measures off into the future again because there wasn’t consensus to adopt the standards and builders were worried about costs. **Unfortunately, it is apparent that Virginia will continue in this manner until the Board fulfills its obligations to adopt the IECC standards without weakening amendments.** The importance of these issues is underscored by the fact that the 2017 Roadmap’s first recommendation to significantly increase energy efficiency in the Commonwealth was to update building codes to meet national standards:

“RECOMMENDATION #1: UPDATE STATEWIDE BUILDING ENERGY CODES TO REFLECT CURRENT TECHNOLOGY AND NATIONAL STANDARDS.”

The time has come for the Board to adopt the IECC without weakening amendments.

## **2. The Committee’s decisions to reject proposals based on IECC standards were invalid.**

Instead of protecting residents consistent with the IECC since 2012, the Committee’s decisions on these issues was driven primarily by possible builder costs and design adjustments, “non-consensus” due to builder opposition in work groups, and a general opposition to building codes setting efficiency standards. No one questioned the energy and utility savings that residents would receive from better wall insulation and tighter envelopes. (As one opponent of higher wall insulation stated, “All things being equal, is this a good thing? Hell yes, but we can’t do everything.”) Such rationales are plainly inconsistent with the statutory standards the Board is obligated to implement in order to protect all residents (both initial and future residents) without diminishment from recognized standards in model codes.

Moreover, some opposition was based on factually inaccurate premises. Members opposing adoption of the IECC’s wall insulation requirements, for example, cited increased costs and modest design changes associated with “requiring” 2X6 studs. However, the IECC does not require 2X6 construction. It explicitly gives builders the choice to use 2X6 studs with R20 insulation (either increasing exterior dimensions or decreasing interior dimensions by 2”) OR 2X4 studs with R13+5 insulation OR a different technology mix satisfying the specified U-factor measurement OR the whole-house Energy Rating Index approach. Many builders may choose the 2X6 with R20 approach, but the IECC offers other options. In addition, evidence submitted by us and others showed that the costs of complying with the wall standards are modest and fully

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recognized standards. One “deal” provides for blower door tests, which will stop non-compliance with a weak 5 ACH standard, but leaves the leakage rate much weaker than the IECC. Another finally gets builders to agree to more ceiling insulation, but it deprives residents of the much more important wall insulation which saves 7.5 times as much energy and is prohibitively expensive to retrofit unless walls are going to be reopened anyway.



paid for from savings.<sup>3</sup> Some builder members of the Committee said that they had been using 6” studs for years, so it couldn’t be that big a deal.

Tightening building air sealing to test at 3 (versus 5) air changes per hour (a.k.a. “3 ACH” or “3 ACH50”) is also important to residents who will save money, experience greater comfort and a healthier home. Every additional air change requires additional heating and conditioning of air in the dwelling, and greater air to flow through walls and ceilings increases the risks that moisture will be captured inside walls and insulation increasing the risks of mold and deterioration. In the Committee meeting, a concern was expressed about humidity and possible moisture and mold. However, while indoor humidity can be an issue in buildings (regardless of the tightness of construction) during periods in which spaces are not being heated or cooled, it is not a valid reason for refusing to implement the IECC’s long-established standards for 3 ACH. Nor was this issue raised by builders either in the work groups where we presented these proposals or in written comments in the package before the Board.

**There is a broad consensus among recognized standards that tighter sealing of walls protects the health, safety and welfare of residents. The ICC has required 3 ACH in Climate Zones 3-8 since 2012.** If moisture were a significant, unaddressed issue, it has had multiple cycles to return to 5 ACH; however, it has not done so even in the more humid Climate Zone 3. To the contrary, the IECC designates the air leakage standard as “Mandatory.” To address indoor air issues, the IECC has long required whole-house mechanical ventilation for buildings that test at less than 5 ACH and has modified the envelope barrier standards. DOE has even tighter standards (2.5 ACH50 for Climate Zone 4) for its Zero-Energy program, and Passive House standards call for 0.6 ACH50.<sup>4</sup> The National Association of Home Builders has also recognized many benefits from minimizing air leakage.<sup>5</sup> And, EPA encourages tighter sealing of walls to reduce air infiltration (including infiltration of humid air), reduce energy waste, reduce the risks of indoor air pollution, reduce humidity and mold in walls, and reduce risks of

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<sup>3</sup> Even if the costs were large, DOE and others have shown that affordability is improved by the energy savings that exceed the costs. and the NAHB has reported that buyers are willing to pay 2-3% more for a new house that provides greater energy efficiency. See 2017 Virginia Roadmap.

<sup>4</sup> <https://basc.pnnl.gov/information/infiltration-meets-ach50-requirements> ;  
<http://passivehousebuildings.com/books/phc-2019/five-principles-of-passive-house-design-and-construction/>

<sup>5</sup> See NAHB, et al., “TechNote – Building Tightness Code Compliance & Air Sealing Overview”, which (a) states “Air leakage in a building should be minimized;” (b) identifies benefits to residents including ““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)” and (c) suggests a possible construction strategy with a goal of 2.5 ACH – stricter than the IECC. See also NAHB, et al., “TechNote – Whole-House Mechanical Ventilation Code: Safety and Performance Considerations,” which explains that this addresses tighter envelope leakage standards and “Provides a consistent supply of outdoor air for improved indoor air quality and occupant comfort; Improves control over the amount and source of outdoor air; Dilutes indoor contaminants, such as formaldehyde, cleaning agents, odors, and allergens, which now take longer to dissipate in a tighter house; Helps control relative humidity and reduce moisture accumulation during the heating or temperate seasons; Meets new 2012 IRC building code and many energy and green program requirements.”

infiltration by insects and rodents—another specific concern in Virginia’s building code, which we cited. As EPA has stated:

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.<sup>6</sup>

As noted above, air infiltration through building envelopes increases the risks of moisture being trapped in the walls and of pollutants being drawn into the house. Higher air flow through envelopes also wastes energy since heating and air conditioning must recondition the air every time the air moves in and out. Humidity is a seasonal issue (mitigated by air conditioning), while leakage through building envelopes is a year-round issue. Tightly sealing envelopes reduces those risks, and supplementing indoor ventilation with whole-house mechanical ventilation is the generally recognized solution to indoor air issues. The IECC requires whole-house mechanical ventilation for all buildings with a tested infiltration/leakage rate of less than 5 ACH. If additional measures, such as energy recovery ventilation (ERV), “balanced ventilation,” dehumidification systems or EPA’s broader indoor air quality standards, are deemed desirable by the Board to address indoor humidity concerns, they can be added to supplement the 3 ACH standard without allowing more leaky houses to be built while awaiting the next code cycle to run its course in 2024 or 2025. Virginia’s residents are entitled to protection without further delay.

In short, there are no legally valid reasons for the Board’s failing to adopt the full 2018 IECC, including the IECC’s specific measures for envelope insulation and for 3 ACH.

### **3. Members of the Committee retroactively changed the procedural rules to the disadvantage of Virginia’s residents**

Several members of the Committee worried that the energy conservation proposals we supported were “late” and had not been presented to the Energy Sub-workgroup” for debate and consideration. We were advised to come back in the next cycle so we can present proposals to the energy sub-work group.

That claim clearly affected votes even though it was both unfair and inaccurate. First, all the proposals that we submitted and supported were timely submitted in accordance with the schedule published for submission of all proposals. To denigrate timely proposals for not having been submitted months earlier unlawfully changes the published rules of procedure after the fact. It clearly violates the public’s rights to be informed of the rules for submitting proposals and to have their proposals fairly heard according to published procedures and statutory standards.

Second, all of our proposals were presented by us to two different work groups (twice to one work group). We answered objections and questions and modified some proposals when

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<sup>6</sup> EnergyStar: A complete Thermal Enclosure System (2017).

suggestions were made. Home builders blocked consensus, citing costs (or sometimes nothing) and without making suggestions for improvements to our proposals or ways to achieve consistency with the IECC's substantive goals in a better manner. No substantive analysis was presented by the builders. Nor did they include us in negotiations leading to partial solutions.

Third, all our proposals concerning building envelopes and air infiltration/leakage had been submitted much earlier by other proponents and had been considered and blocked by builders, in whole or in part, in the energy sub-work group and in the larger work groups. Thus, even if the energy sub-work group had some legal status (which it does not), it had the opportunity to consider the substance of the proposals. Had DHCD or anyone else thought that a purpose would have been served by another meeting of that sub-work group, such a meeting could have been scheduled by the staff. Obviously, the staff and builders felt that it was sufficient for the proposals to be considered by the two relevant work groups.

Fourth, residents of the Commonwealth will be harmed by delaying for another 3-4 years implementation of code proposals that are consistent with recognized standards for energy conservation and have been supported by earlier national code standards dating back to 2012. The continued excuses for delays are particularly harmful because the Board's deference to builder opposition means that non-compliance with recognized standards will likely continue the next time also.

#### **4. Other issues**

We made several other proposals that deserve to be adopted now, and all should be. However, we mention one—electric vehicle readiness (E405.10) because it is so cheap to implement, it has the potential to save residents so much money, and it helps all Virginians by reducing carbon and other pollution. It simply would require installation of the wiring and panel capacity to serve one charger with 220/240 40Amp energy (but not the charger) in a garage or close to other provided parking for single family dwellings. It would require wiring and panel capacity for two future chargers in a multifamily garage or dedicated parking lot plus raceways and panel space to handle wire for future chargers for at least 20% of the provided parking spaces as demand grows. As Committee members recognized, roughing in wiring and raceways during construction of garage or other provided parking is much cheaper when the buildings are being constructed and potentially prohibitively expensive later.<sup>7</sup>

In exchange for this planning measure, residents will have the potential to save \$1,000 or more annually in fuel and maintenance costs with home-charged EVs.<sup>8</sup> The building owner will

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<sup>7</sup> As we spelled out in our supporting materials (without contradiction) it is a small investment compared to future costs and savings. When installing the wiring in a single-family garage during new construction when walls are open and workmen present, for example, the materials cost would be less than \$50-\$100 depending on the location of the electric panel (the former assuming the electric panel is in the garage and the latter assuming a 30' wire of suitable capacity to the panel).

<sup>8</sup> See Consumer Reports, "EVs Offer Big Savings Over Traditional Gas-Powered Cars" (October 2020) attached to memo from Susan Stillman to BHCD via Kyle Flanders (October 14, 2020) in Additional-Final-Phase-Comments circulated to the Board beginning p. 56. See also <https://www.ucsusa.org/about/news/rural-communities-could->

be able to choose the type of charger to be added and when to do it, but the cost of installing chargers will be much lower and the need for electric wiring to charge EVs is unquestionable.

Despite some comments by Committee members, there can be no doubt about the potential growth of the EV market over the 70+ years the buildings are in place. All major vehicle manufacturers have committed billions of dollars to expanding electric vehicle production (in some cases, committing to only producing electric vehicles within a few years); growth forecasts are substantial; EV and battery prices are dropping; and demand will grow as residents discover they can save roughly \$1,000 annually on fuel and maintenance costs.<sup>9</sup> Indeed, the issue is particularly important for multifamily construction, since retrofitting will be even more costly and those costs will be cited by building owners as grounds for not investing later in charging infrastructure. It is unfair to multifamily residents, including low-income residents, to be locked out of the EV savings because building codes failed to require such a simple measure to prepare for growing EV demand. It is also unfair to all Virginians that air pollution, including carbon pollution, will remain elevated by unnecessarily extending residents' reliance on fossil fuel vehicles.

Respectfully submitted.

*William H. Penniman*

Kate Addleson, Director  
William Penniman, Sustainability Chair  
**Virginia Chapter of the Sierra Club**  
100 W Franklin St, Mezzanine  
Richmond, VA 23220  
Phone: 804-225-9113

Eric Goplerud, Chair  
**Faith Alliance for Climate Solutions**

Jo Anne St. Clair, Chair  
**Climate Action Alliance of the Valley**

Sharon Shutler, Co-Chair  
**Climate & Clean Energy Working Group, Virginia Grassroots Coalition**

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[benefit-most-electric-vehicles \(up to \\$1900/year savings for rural EV owners\); https://augustafreepress.com/deq-launches-clean-air-communities-program-aimed-at-driving-investment-in-electric-vehicle](https://augustafreepress.com/deq-launches-clean-air-communities-program-aimed-at-driving-investment-in-electric-vehicle)

<sup>9</sup> One committee member who questioned future demand and technologies said that he is building a multi-family project with EV chargers for nearly 50% of the parking spaces, which undercuts doubts about viability or future demand.