Diversified Reporting Services, Inc. 1 RPTS GONZALEZ 2 3 HIF143030 4 5 GREEN BUILDING POLICIES: 6 JEOPARDIZING THE AMERICAN DREAM OF HOMEOWNERSHIP 7 WEDNESDAY, MAY 22, 2024 8 House of Representatives, 9 Subcommittee on Energy, Climate, and Grid Security, 10 Committee on Energy and Commerce, 11 Washington, D.C. 12 13 The subcommittee met, pursuant to call, at 2:00 p.m. in 14 Room 2123, Rayburn House Office Building, Hon. Jeff Duncan 15 [chairman of the subcommittee], presiding. 16 17 Representatives Duncan, Latta, Guthrie, Present: 18 Griffith, Bucshon, Walberg, Palmer, Lesko, Pence, Weber, 19 Allen, Balderson, Pfluger, Rodgers (ex officio); DeGette, 20 Peters, Fletcher, Matsui, Tonko, Veasey, Schrier, Castor, 21

22 Cardenas, and Pallone (ex officio).

24 Staff Present: Sarah Burke, Deputy Staff Director; Sydney Greene, Director of Operations; Nate Hodson, Staff 25 26 Director; Tara Hupman, Chief Counsel; Sean Kelly, Press Secretary; Alex Khlopin, Staff Assistant; Emily King, Member 27 Services Director; Elise Krekorian, Counsel; Mary Martin, 28 Chief Counsel; Brandon Mooney, Deputy Chief Counsel; Kaitlyn 29 Peterson, Clerk; Karli Plucker, Director of Operations 30 (shared staff); Peter Spencer, Senior Professional Staff 31 Member, Energy; Dray Thorne, Director of Information 32 Technology; Timia Crisp, Minority Professional Staff Member; 33 Caitlin Haberman, Minority Staff Director; Mackenzie Kuhl, 34 Minority Digital Manager; Kristopher Pittard, Minority Staff 35 Member; Emma Roehrig, Minority Staff Assistant; Kylea Rogers, 36 Minority Policy Analyst; and Medha Surampudy, Minority 37 Professional Staff Member. 38

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*Mr. Duncan. We are going to go ahead and get started,
so I will call the Subcommittee of Energy, Climate, and Grid
Security to order.

And we do have votes that have just been called, so we are going to get through some opening statements and then we will recess and come back. I want to thank everyone for being here.

Good afternoon, and welcome to today's Subcommittee on 47 Energy, Climate, and Grid Security hearing entitled, "Green 48 Building Policies: Jeopardizing the American Dream of Home 49 Ownership.'' Today we are here to discuss a radical energy 50 and building policy of the Biden Administration. These 51 policies are jeopardizing Americans' ability to own homes, 52 increasing energy costs, and straining our electric grid, and 53 putting our national security at risk. 54

55 For millions of Americans across the country, owning a 56 home as part of the American dream. It is a means to 57 financial security. Unfortunately, the Biden 58 Administration's radical agenda is putting this further and 59 further out of reach for many Americans. Building codes are 60 adopted by state and local jurisdictions based on a variety

of factors, such as climate and economic conditions. The Biden Administration has encouraged the adoption of these model codes that seek to restrict the use of gas and promote electrification, even if it is not cost effective or affordable.

The Inflation Reduction Act provided for \$930 million in 66 grants and funding for states that adopt the 2021 Model 67 Energy Code. Many states have chosen not to adopt the most 68 up-to-date codes due to the increase in housing costs. For 69 example, in my home state of South Carolina, if they were to 70 adopt the 2021 Model Code, the average cost of the new home 71 would increase by up to \$31,000, with an energy payback time 72 of 44 to 50 years. This could price many Americans out. 73 Almost 60,000 households that would have previously been able 74 to afford an average home in my state would no longer be able 75 to afford it. 76

This is not exclusive to South Carolina. Families across the country are being priced out of new homes. Advocates of these codes argue home buyers will save money over time, but that really does not matter if people cannot even afford the home in the first place.

82 The Biden Administration is also encouraging Americans to pay more for less through the Department of Energy's Zero 83 84 Energy Ready Home Program. The DoE's own website acknowledges that people can't afford these zero-energy 85 homes, and recommends that, as a way to offset the cost of 86 the expensive zero-energy features, Americans should buy 87 smaller homes with less expensive finishings and furnishings 88 to accommodate the cost of the Biden Administration policies. 89 That is just asinine. 90

Even worse, the Administration is trying to incentivize 91 these rush-to-green building policies by using our taxpayer 92 dollars to sweeten the deal through a near-billion-dollar IRA 93 grant slush fund. The Biden Administration is telling hard-94 working Americans to pay more for less, to sacrifice quality 95 and build a smaller home, and using taxpayers to foot the 96 bill to enforce climate radicalism. They are saying the 97 quiet part out loud. They want to use other people's money 98 to pay for the policies associated with their radical climate 99 agenda. 100

101 The Biden Administration's obsession with banning fossil 102 fuels in buildings and houses is also contributing to this

103 housing affordability crisis. Energy is the foundation of everything in American life. And when the cost of energy 104 105 goes up, so does everything else. The Biden Administration's anti-American energy policies are increasing the 106 manufacturing and construction cost of residential homes and 107 commercial properties. These costs are directly passed along 108 to the consumer. Natural gas allows us to heat our homes, 109 keep the lights on, and to get to our jobs. Despite the 110 DoE's policies to force electrification, their own numbers 111 show that homes with natural gas hookups are 3.4 times more 112 affordable than electric. 113

The fossil fuel phaseout goes further than residential 114 homes. DoE recently issued a rule to eliminate the use of 115 natural gas in all new and modified Federal buildings, 116 starting in 2030. This includes military installations and 117 housing, multi-family high-rise residential buildings, and 118 low-rise residential buildings. In addition to compromising 119 our military and national security, DoE's own data shows this 120 rule actually will increase energy usage. 121

122 At a time where home prices are at an all-time high and 123 Americans are struggling to make ends meet, the Biden

124	Administration is making everyday life more expensive with
125	its rush-to-green building policies.
126	I look forward to exploring this topic more today,
127	hearing from our members and their questions. I want to
128	thank you for being here.
129	[The prepared statement of Mr. Duncan follows:]
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131	*********COMMITTEE INSERT********
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133	*Mr. Duncan. I will now recognize Ranking Member
134	DeGette for five minutes.
135	*Ms. DeGette. I will defer to the ranking member of the
136	full committee.
137	*Mr. Duncan. The chair will now recognize Chair Rodgers
138	for five minutes.
139	*Mr. Pallone. You know what I
140	*Ms. DeGette. No, the ranking member.
141	*Mr. Duncan. Oh, you are going to full committee.
142	Okay, I did not see Mr. Pallone there.
143	Mr. Pallone, you are recognized for five minutes.
144	*Mr. Pallone. Thank you, Mr. Chairman.
145	Today we are once again seeing how extreme House
146	Republicans have become when it comes to our nation's energy
147	policy. At every turn they put polluters over people,
148	including relentlessly attacking popular energy efficiency
149	programs that save American families money on their energy
150	bills and help us confront the worsening climate crisis.
151	Energy efficiency used to be a bipartisan issue. It
152	wasn't controversial because both Democrats and Republicans
153	recognized that it was common sense, and an all-around win

154 for American families. Unfortunately, that is no longer the 155 case. All Congress long, House Republicans have been looking 156 to roll back energy efficiency standards, and the 157 Republicans' extreme attack on energy efficiency programs 158 continues today with a look at building codes.

Building codes are saving American households thousands 159 of dollars on their energy bills. The Department of Housing 160 and Urban Development found that a typical household would 161 save \$15,000 from a house built to the current model code 162 163 compared to one built to the 2009 code. For low-income families using a Federal Housing Administration loan, savings 164 payback the upfront expense in one-and-a-half years. And 165 these codes ensure some basic standards for energy 166 conservation for renters who cannot choose how their homes --167 how their houses or apartments are built. 168

Now, these standards are critical because buildings account for 40 percent of our total energy consumption. Building codes are a critical tool to not only save Americans money, but also dramatically reduce energy consumption and decrease dangerous climate pollution. Energy conservation codes are projected to save Americans \$182 billion and avoid

175 840 million metric tons of carbon pollution by 2040. And these are real savings that we should all be proud of. 176 177 But instead, we are going to hear nothing but fearmongering and misinformation from committee Republicans. 178 They are throwing around exaggerated numbers of upfront costs 179 and payback periods that are simply not true. These codes 180 help households save money; it is that simple. 181 And Republicans also choose to ignore the fact that 182 building codes are voluntary. There is no Federal mandate 183 for states to adopt a certain code for households. The codes 184 are set by third-party organizations, and then states and 185 local entities choose whether or not to adopt the codes. 186 If Republicans were serious about energy costs and 187 trying to help Americans save money, they would be 188 investigating real scandals like Big Oil colluding with OPEC 189 to increase prices at the pump. And committee Democrats 190 opened an investigation to this collusion today. 191 They would also express concern that the International Code Council 192 bowed to the gas industry and violated its own policies in 193 the recent code development process. But instead, 194 Republicans are going after things like dishwashers,

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196 refrigerators, and now building codes, all to drive up energy 197 bills on American families and protect their friends in the 198 oil and gas industry.

And fortunately, despite the majority's best efforts, 199 the Biden Administration is making real progress to reduce 200 energy costs for middle-class Americans. The Bipartisan 201 Infrastructure Law and the Inflation Reduction Act both 202 provided funding to states and local entities to help adopt 203 these voluntary codes, and the Administration recently 204 finalized a Bush-era provision to phase out fossil fuel-205 generated energy consumption in new and remodeled Federal 206 buildings. 207

So I am eager to hear how building and energy 208 conservation codes save money for Americans, as well as the 209 other benefits they can provide such as improving indoor air 210 quality and reducing emissions. We should be figuring out 211 how to further assist states and local entities that want to 212 adopt these codes, instead of attacking the codes and falsely 213 claiming that they are somehow mandatory when they are not. 214 [The prepared statement of Mr. Pallone follows:] 215

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217 *******COMMITTEE INSERT********

219 *Mr. Pallone. And with that, Mr. Chairman, I yield 220 back. 221 *Mr. Duncan. The gentleman yields back. I now go to the chair of the full committee, Mrs. Rodgers, for five 222 223 minutes. Thank you, Mr. Chairman. Good afternoon, 224 *The Chair. everyone. Welcome to our witnesses. I appreciate you being 225 here to testify. We look forward to hearing from you. 226 This committee plays a critical role in ensuring America 227 continues to lead the world in innovation, entrepreneurship, 228 reducing emissions, and improving people's lives. President 229 Biden's rush, a radical, rush-to-green building policy, is 230 destroying -- will destroy this legacy and make it more 231 difficult for people to realize the American dream. 232 Under the Republican majority this Congress, the Energy 233 and Commerce Committee has led the way to shine the light on 234 how the Biden Administration's agenda is wreaking havoc on 235 our economy, our energy security, and our national security. 236 And what we see is this war on American energy is pervading 237 every aspect of our lives. Inflation, energy prices, grocery 238 bills have all reached a historic level. People are 239

struggling to afford basic necessities like gas, groceries, and prescription medications. And in spite of this, the Administration and some Democrat-led states are making life even more unaffordable by doubling down on expensive mandates for solar panels, electric cars, electric appliances. It really appears they want to control every aspect of our lives and force us to do more with less.

It doesn't have to be this way. The cost of buying a home, in particular, has reached an all-time high, with a record average price of over \$380,000. And aggressive, green building regulations have been a major contributing factor in these price increases.

Today we are going to explore how the Democrats' rush-252 to-green agenda is increasing the cost of home ownership. 253 We are going to hear from people with firsthand experience 254 making construction materials, building homes, and delivering 255 utility services in order to better understand how green 256 building policies are impacting home ownership. We are going 257 to uncover how the process to establish state and local 258 regulations for building energy codes has been hijacked by 259 radical environmental activists at the expense of the 260

261 American people.

This is an opportunity for members to judge for 262 themselves whether the Administration's bans on fossil fuels 263 and natural gas are good for the economy and energy security, 264 or whether Americans should be required to have things like 265 rooftop solar panels, electric vehicle charging stations, and 266 all-electric appliances if they make sense, and whether 267 forcing people to pay more for less is a practical solution 268 to deal with high energy bills and an unstable electric grid. 269

Policies like natural gas bans and electrification 270 mandates are becoming increasingly widespread, especially in 271 the more coastal blue states. At least 70 local governments 272 in California, as well as dozens more in 7 states and 273 Washington, D.C. have enacted some type of gas ban. New York 274 has a statewide gas ban. Just recently the Biden 275 Administration finalized new regulations to enforce a fossil 276 fuel ban on all Federal buildings, including military 277 installations and residential housing. 278

The Biden Administration also finalized new green building regulations for federally-backed mortgages, which will substantially limit the availability of affordable

housing. It is a government-wide effort to go after homes and buildings. Dozens of agencies are drafting rules and regulations on buildings and homes to force this so-called green transition. These policies are impacting everyday Americans the hardest.

For decades America has been able to strike a healthy 287 balance between affordable energy, a strong economy, while 288 also continuing to be the leader in emissions reduction. And 289 it is vital for Americans and their quality of life that we 290 continue building on this legacy and striking that balance. 291 So I look forward to working with Chairman Duncan and the 292 members of this subcommittee to keep the Biden Administration 293 and states and local government accountable to the American 294 295 people.

296 [The prepared statement of The Chair follows:]

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300 *The Chair. And with that I look forward to the hearing, and I yield back. 301 302 *Mr. Duncan. The gentlelady yields back. I now recognize the Ranking Member DeGette for five minutes. 303 *Ms. DeGette. I thank the gentleman, and I will submit 304 my full opening statement for the record. I know we have 305 votes on the floor that we need to get to. 306 307 I just want to point out that much of what we are talking about today does not even involve Federal issues 308 because building codes, for the most part, are local 309 governments. There is no national or Federal building code 310 because, under the U.S. Constitution, the regulation of 311 construction is a state right, with some localities going 312 even further. 313 But however, DoE and other agencies, they don't mandate 314 building codes but they have developed voluntary building 315 codes which can address many of our important concerns 316 including public health, safety, and environmental 317 protection. They are developed by a democratic and 318 deliberative process, and so they also address cost 319 efficiency and investment value. But again, the people who 320

321 are developing and promulgating these codes are state and 322 local governments, not the Federal Government.

323 Why have building codes? Well, because they affect us every day. Some building codes, like fire safety codes and 324 structural and seismic standards, affect us in obvious ways. 325 Others, like lighting quality, acoustics, and the air we 326 breathe are less noticeable, but they still have major 327 impacts on our health and productivity. We spend about 90 328 percent of our lives in buildings, including [sic] to the 329 EPA, which is why we are concerned about the impact of 330 building codes on public health. 331

And so these model codes can really help us build it right at the beginning. But frankly, they only work if they are used and enforced by state and local governments. So that is what is happening here.

Now, many buildings that have been built previously, they waste a lot of energy because one of the concerns in building buildings was not energy efficiency as a priority. We don't have to have that as a case now, as we are understanding how important energy efficiency is. Buildings in the United States account for about 70 percent of

electricity use, about 40 percent of the total U.S. primary energy consumption, and about 30 percent of operational GHG emissions. All of that consumption and waste, they -unnecessarily costs homeowners and building owners billions of dollars a year, which is kind of ironic and inexcusable in times of budgetary and economic stress.

Buildings that are constructed to the new codes will close a significant portion of the gap between how energy efficient the average building is. So it is sort of a winwin because you get more efficiency that causes lower energy costs. It means fewer emissions, better to help us get to our climate goals, and it is cheaper for the building owners and the homeowners. What is not to like about that?

But apparently, my friends on the other side of the aisle don't like it because they don't want to have to have any regulations. My consumers, my -- the people who live in the 1st congressional district of Colorado, they would like to pay as little money as they can for energy every month. And that is why having good and equitable building codes will really help.

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[The prepared statement of Ms. DeGette follows:]

366 *Ms. DeGette. With that, as I said, I will put my full statement in the record, and I yield back. 367 368 *Mr. Duncan. The gentlelady yields back. We are -- had hoped to get to all the witness statements before, but 369 looking at the vote tally, we are going to recess now for 370 floor votes and return. Ten minutes, I will gavel in ten 371 minutes after the last vote is called -- not the last vote is 372 closed, the last vote is called. 373 The subcommittee is -- now stands in recess. 374 375 [Recess.] *Mr. Duncan. All right, we are going to go ahead and 376 call the subcommittee back to order. 377 Thanks to the witnesses for bearing with us with the 378 vote. We don't have control over that, but we do have 379 control over this subcommittee. So thank you all for being 380 here and taking time to testify. 381 Each witness will have the opportunity to give an 382 opening statement, followed by a round of questions from the 383 members. 384 And today our witnesses are Mr. Philip Bonnell -- is 385 that Bonnell or Bonnell? 386

387 *Mr. Bonnell. Bonnell. *Mr. Duncan. Bonnell, okay. President of PABCO 388 389 Building Products. Mr. Shawn Woods, President of Ashlar Homes. 390 Mr. Rob Howard, President of Howard Building Science. 391 And Mike Casper, President and CEO of Jo-Carroll Energy 392 Co-op. 393 394 You are going to be given five minutes. There is a series of lights in front of you. They go from green to 395 yellow to red. When it gets to yellow it is about time to 396 start wrapping up. When it gets to red, try to find a way to 397 end it. 398 And so Mr. Bonnell, you are recognized for five minutes. 399 400

401	STATEMENT OF PHIL BONNELL, PRESIDENT, PABCO BUILDING
402	PRODUCTS; SHAWN WOODS, PRESIDENT, ASHLAR HOMES, LLC, ON
403	BEHALF OF NATIONAL ASSOCIATION OF HOME BUILDERS; ROB HOWARD,
404	PRESIDENT OF HOWARD BUILDING SCIENCE; AND MIKE CASPER,
405	PRESIDENT AND CEO, JO-CARROLL ENERGY, INC., ON BEHALF OF
406	AMERICAN PUBLIC GAS ASSOCIATION
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408	STATEMENT OF PHIL BONNELL
409	
410	*Mr. Bonnell. Congressman, members of the committee,
411	thank you for allowing me to speak here today. By
412	introduction, my name is Phil Bonnell, and I am president of
413	PABCO Building Products. We are a family-owned business
414	headquartered in Sacramento, California.
415	PABCO manufactures and sells building products for the
416	residential marketplaces. We sell in 11 western states and
417	in western Canada. Our core products are gypsum drywall and
418	asphalt roof shingles. In addition to that, we also make
419	paper 100 percent recycle, I might add paper for our
420	gypsum wallboard surfacing. We make that in Vernon,
421	California. Our plant locations are Las Vegas, Nevada; I

just mentioned Vernon; Newark, California; and Tacoma,

423 Washington.

Collectively, PABCO employs about 550 people, and we have net sales of about 400 million on an annualized basis. While that may sound large, we are the smallest producers in the United States of these products. Again, as a familyowned business, we are very regional, and we service mostly the northwest and southwest coastal markets in the U.S.

I am here today to offer some points of interest and discussion for our experience in what has happened with energy availability over the last five years. We have had some very unique occurrences in our marketplaces and things that still persist today that have caused energy prices to elevate dramatically.

We will also be talking a little bit about proposals on banning natural gas in residential applications and, in my opinion, banning natural gas in any environment is yet another move to limit diversity of energy sources. And as you will see from my testimony going forward, that is very important.

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Over the last five years we have seen energy cost inputs

443 increase dramatically in our businesses. We are constantly looking for ways to reduce our energy consumption. It is in 444 445 our best interest to do so. Energy input represents a very significant cost factor of the product offering that we have. 446 Over the last 10 years-plus in the western United States, 447 green energy policy has seen the closure of, I believe, more 448 than five coal-powered fire [sic] plants. So over 5,000 449 megawatts has been retired. The net impact of that is that 450 we are now relying on natural gas to generate electricity. 451 And for us, we have seen the use of natural gas in our 452 marketplaces go from about a 19 percent usage for electrical 453 generation up to 46 percent for electrical generation. 454

One of the other big entries into this marketplace has been renewables, but they have a problematic flaw, and that flaw is when the sun doesn't shine and the wind doesn't blow they don't generate electricity currently.

Putting this in perspective, over the last five years, with the fluctuation in energy prices, we have seen energy pricing from as low as \$1.3 an MMBtu up to \$54 an MMBtu. The net differential on this reflects, if we look at our 2020 energy costs for one specific plant, I was paying about \$11.5

464 million on an annualized basis. In 2023 that number was 465 almost \$30 million for energy inputs. So costs are 466 increasing dramatically.

We look to reduce those energy costs wherever possible 467 through our products and materials. We also hedge our energy 468 costs by buying future energy strips, and we also curtail 469 production operations when energy costs are too high. 470 This situation has occurred three times in the last four years for 471 us, where we have had to either curtail energy or rely on our 472 future strip purchases. Buying futures helps us hedge it, 473 but ultimately it raises the cost because you buy at a higher 474 rate than you would, say, on a daily spot if the market is 475 low. 476

So bottom line, energy costs have grown significantly, a huge, huge impact for us on our building materials. It has caused cost increases approaching 30 percent in the last 4 years.

In terms of residential markets and talks about banning natural gas, it is my belief that reducing the diversity of energy sources is only going to create more issues going forward. It puts more strain on an electrical grid that is

485	already taxed, and it will cause, ultimately, more problems
486	and more costs for those people trying to own homes. Thank
487	you.
488	[The prepared statement of Mr. Bonnell follows:]
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490	********COMMITTEE INSERT********
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- 492 *Mr. Duncan. Thank you, sir. We will now go to Mr.
- 493 Woods for five minutes.

495 STATEMENT OF SHAWN WOODS

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497 *Mr. Woods. Chairman Duncan, Ranking Member DeGette, and members of the subcommittee, thank you for the 498 opportunity to testify today on behalf of the National 499 Association of Home Builders. My name is Shawn Woods, and I 500 am a home builder from Blue Springs, Missouri. I strive to 501 502 build homes that families in my community can afford, serving households in the entry level housing market. NAHB 503 represents over 140,000 members involved in residential and 504 light construction, building about 80 percent of all new 505 housing in the United States annually. 506

The primary and persistent challenge of the housing 507 market is a lack of attainable, affordable housing. 508 Currently, 77 percent of households are unable to afford the 509 median price of a new home, and half of all renters are cost-510 burdened, spending over 30 percent of their income on 511 512 housing. We must do better to ensure that all Americans, including workforce families like members of the armed 513 forces, teachers, and first responders have access to 514 affordable housing where they serve and live. 515

Recent Federal pushes for stringent energy codes like the 2021 International Energy Conservation Code are raising construction costs significantly. Compliance with these codes can add as much as \$31,000 to the cost of a single family home.

521 Furthermore, adhering to the zero energy provisions can 522 add an additional \$82,000 per home. These increased costs 523 make homes less attainable, forcing many potential buyers to 524 stay in older, less efficient homes, which undermines the 525 goals of these energy policies.

The Inflation Reduction Act allocated \$1 billion for 526 state and local governments to adopt strict energy codes, but 527 these mandates worsen the housing affordability crisis. 528 Unfortunately, this energy code program has had damaging 529 effects on the housing market in my own community. Shortly 530 after the passage of the IRA, Kansas City, Missouri adopted 531 the 2021 IECC without amendments in hope of receiving these 532 grant funds. This move has, regrettably, paralyzed the 533 housing market in Kansas City at a time when area housing 534 markets are booming. 535

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The Kansas City metro area, excluding Kansas City, has

537 seen a 117 percent rise in single family construction permits 538 in January and February of 2024, compared to last year. 539 Conversely, Kansas City has seen a 22 percent decrease in 540 permits from the same timeframe. The decline in home 541 building has had a domino effect on the rest of the economy, 542 with fewer jobs, fewer housing options, higher housing costs, 543 and a lower tax base.

Unfortunately, the Federal push to use costly energy 544 codes doesn't stop there. HUD and USDA will soon start 545 requiring 2021 IECC for all HUD and USDA-financed new 546 construction. This mandate raises housing costs, 547 particularly in the entry level, limiting access to mortgage 548 financing and hurting vulnerable buyers and renters. HUD and 549 USDA should assist vulnerable home buyers and renters, not 550 price them out of the market. This policy will deter new 551 construction at a time when increasing the housing supply is 552 crucial to lowering shelter inflation costs. 553

Most concerningly, the Federal Housing Finance Agency is considering applying similar standards to those adopted by HUD and USDA for homes financed by Fannie Mae and Freddie Mac, which provides 72 percent of financing for new home

558 purchases. This would set a de facto national energy code, 559 severely disrupting new home construction, compounding the 560 housing supply shortage, and negatively impacting housing 561 affordability.

Beyond energy codes, efforts to reduce greenhouse gas 562 emissions by banning natural gas and propane in new 563 constructions are concerning. New homes are already more 564 energy efficient than older ones, and these mandates are 565 costly and impractical. Electrification increases upfront 566 costs, potentially, by 3,000 to 15,000 per home, pricing 567 thousands of families out of the market. The performance 568 limitations of electric heat pumps in colder climates make 569 fossil fuels a necessary option. 570

Additionally, costs for upgrading electrical service and community infrastructure are substantial, and often not included in initial estimates.

574 Furthermore, restrictions on gas appliances will provide 575 negligible health and energy benefits, and ignore consumer 576 preferences and financial realities. Over 187 million 577 Americans use natural gas appliances, saving an average of 578 \$1,068 annually. Gas stoves are used in nearly 40 million

579	homes nationwide, and have proven to be a safe, efficient,
580	affordable appliance choice for families for well over a
581	century.
582	I think we all agree that the key housing issue facing
583	the nation is the affordability crisis. The only way to
584	improve housing affordability is to increase the housing
585	supply. When the government seeks to mandate ill-conceived
586	and costly green building mandates, this has the opposite
587	effect.
588	Thank you again for this opportunity. We look forward
589	to working with you.
590	[The prepared statement of Mr. Woods follows:]
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592	********COMMITTEE INSERT********
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594 *Mr. Duncan. I thank the gentleman, and I will go to 595 Mr. Howard for five minutes.

597 STATEMENT OF ROB HOWARD

598

599 *Mr. Howard. Chairman Duncan, Ranking Member DeGette, thank you for allowing me to testify this afternoon. My name 600 is Rob Howard. I am the president of Howard Building 601 Science, a home building company in Granite Falls, North 602 Carolina, and a building science lecturer at Appalachian 603 State University. I earned my general contractor's license 604 in 2004, so I have been building sustainable, affordable 605 housing for 20 years. I serve on the board of directors for 606 the Watauga Community Housing Trust, and I was recently 607 appointed to the residential builders seat on the North 608 Carolina Building Code Council. 609

My construction career started at Habitat for Humanity 610 of Catawba Valley in 2001. That same year, Advanced Energy 611 started their System Vision program to help affordable 612 housing providers build energy efficient homes that include a 613 two-year comfort and energy use guarantee. I like to say 614 that I have never built a home to code. That might sound 615 strange, coming from a general contractor. But I have always 616 looked at the building code as the baseline and not the 617

618 finish line.

One of my mentors, Arnie Katz, used to say that a home built to code is the worst home you can build by law. I believe that we can do better than that. We should build homes that are not just affordable to buy, but also affordable to own and operate.

I have heard some complain that building to code makes 624 houses less affordable. My experience has been just the 625 opposite. Yes, there is an upfront cost, and I have found 626 that it is generally in the range of what the Department of 627 Energy, HUD, and the National Labs have estimated, somewhere 628 around 6,000 to \$7,000 per home. But when you amortize that 629 over a 30-year mortgage, as anyone concerned about 630 affordability would be doing, you are talking about maybe \$50 631 a month in additional monthly payment. And I have found, 632 again, just as the Department of Energy and HUD have 633 estimated, that the monthly energy bill savings are larger 634 635 than that.

636 So the homeowner is spending less on net each month and 637 gets a better, more efficient, more comfortable house that is 638 also more durable. And over time, they are saving thousands

639 of thousands of dollars. You could compare it to buying a cell phone plan. You may find some carriers have very low 640 641 upfront costs for the phone, but if the monthly payments are two to three times the size of other plans, then that catches 642 up to you quickly, and you are ultimately spending much more. 643 Unfortunately, in the housing market, it is just not as 644 easy to know what your energy bills will be up front as it is 645 to know a fixed cell phone payment, particularly with new 646 houses, where you can't look at what the energy bills have 647 been historically. I think if it were, buyers would demand 648 homes be built at least to code. 649

And I agree with my colleague here that the appraisal process should do a better job of taking into account and valuing the energy efficiency of a home. That would be a critical market signal.

I am currently building a pocket neighborhood of 11 small homes on 1.25 acres in downtown Granite Falls, North Carolina. Sometimes referred to as a cottage court, Duke Street Cottages is an example of Missing Middle Housing that provides a greater diversity of housing choice in a community where most new construction are large custom homes on large

lots that are out of reach for most people. These are starter homes that are ideal for first-time home buyers, but they are also perfect for retirees who want to downsize into single-level living. My most recent customers are both first-time home buyers. One of them is a nurse at the local hospital in her twenties, and the other is a retired school teacher in her seventies.

These are above-code, all-electric homes, with high 667 efficiency inverter heat pumps for space conditioning, heat 668 pump water heaters, ventless heat pump dryers, and induction 669 ranges. They also have mechanical ventilation systems to 670 ensure healthy indoor air quality with no wood or burning gas 671 appliances. We have no concerns about carbon monoxide or 672 other byproducts of combustion. These are DoE zero-energy-673 ready homes that are roughed in for future solar panels and 674 EV charging. The 45L tax credit for builders of energy 675 efficient homes offers a \$5,000 incentive for building to the 676 677 DoE's Zero Energy Ready Home Standards, which are based on the 2021 IECC. 678

In my experience, the \$5,000 tax credit comes very close to offsetting the additional cost of insulation, air sealing,

high efficiency HVAC, and water heating equipment, and 681 mechanical ventilation systems. Of course, these upgrades 682 683 will eventually pay for themselves with energy savings. My wife and I kept one of the homes at Duke Street 684 Cottages for ourselves. Our daughter just finished her 685 sophomore year of college, and our son is graduating from 686 high school tomorrow. We downsized from almost 4,000 square 687 feet to 1,400 square feet, and our utility bills went from 688 almost \$400 a month to under \$100 a month. Our new home is, 689 obviously smaller, but it is also more comfortable, quiet, 690 low maintenance, and extremely efficient. 691

In summary, I believe that a new home should not only be 692 affordable to buy, but also affordable to own and operate. 693 While certification programs help chart a path to move our 694 industry forward, building and energy codes can have a much 695 broader impact on all new home construction, including 696 health, safety, durability, comfort, and energy savings. 697 Thank you again for the opportunity to testify today. 698 [The prepared statement of Mr. Howard follows:] 699 700

701

702

*Mr. Duncan. I thank the gentleman, and I will now goto Mr. Casper for five minutes.

706 STATEMENT OF MIKE CASPER

707

*Mr. Casper. Thank you, Chairman Duncan, Ranking Member DeGette, and members of the subcommittee. I am president and CEO of JC Co-op. We are headquartered in Elizabeth, Illinois, about two-and-a-half hours west of Chicago. I am also the proud member of the American Public Gas Association's board of directors.

JC Co-op is a not-for-profit, member-owned and 714 controlled distribution cooperative. We serve about 26,500 715 electric, natural gas accounts in four counties of rural 716 northwest Illinois. Our focus is providing members with safe 717 and reliable electric, natural gas, as well as high-718 performance Internet service at the lowest practical price. 719 JC Co-op is also a member of the American Public Gas 720 Association, which represents roughly 1,000 communities 721 across the U.S. that own and operate the retail gas 722 723 distribution entities.

I would like to thank the subcommittee for holding this hearing today on policies that, if implemented, will negatively impact our members. While we serve residents of

727 northwest Illinois, these policies have the potential to negatively impact all community-owned gas utility customers, 728 729 including those who might live in your districts. It is no secret that there are concerted efforts at all 730 levels of the government to use energy policy to pick winners 731 and losers. States and localities are adopting misguided 732 building code and standard provisions that effectively limit 733 a consumer's ability to choose a gas appliance. At the 734 Federal level, the Department of Energy is proposing 735 appliance of efficiency standards that take away consumer 736 choice, forcing them to choose electric appliances. More 737 recently, the current Administration finalized a rule 738 utilizing section 433 of the Energy Security and Independence 739 Act, which would significantly restrict the future on-site 740 use of natural gas in Federal buildings. 741

In addition to Americans losing the ability to choose the energy source that best fits their needs, not allowing the direct use of natural gas to be part of America's energy mix will force consumers to pay more for their energy. The path to our country's affordable, reliable, and sustainable energy future requires continued utilization of community-

748 owned gas infrastructure and its workforce.

DoE's final rule significantly restricts many Federal 749 750 buildings' future use of on-site energy from affordable and resilient natural gas. According to the DoE's own data, 751 natural gas is three times more affordable than electricity. 752 I think of the natural gas used in the Federal prison that we 753 serve in Thompson, Illinois. As with all government 754 facilities, its appliances will require retrofits at some 755 point. I am concerned about the hefty price tag of the 756 requirements to retrofit the entire campus to accommodate 757 electric appliances. And since JC Co-op provides both gas 758 and electric, I am equally concerned about how an already-759 strapped electric grid will reliably adapt -- if these 760 policies are enacted, that is. 761

Allowing the continued direct use of natural gas will not add further strain on the electric grid. Instead, the direct use of natural gas in buildings efficiently and affordably meets energy demand and provides fuel diversity -and I want to emphasize diversity and reliability -- to these important Federal facilities.

768

I also think of Robins Air Force Base in Houston County,

Georgia, and military installations in San Antonio, Texas, all of which receive natural gas from community-owned utilities. How many military -- how will military readiness and even national security be impacted if these bases are now required to just use electricity?

Another concerning policy that I want to highlight is 774 DoE's final rule on consumer furnaces. Many Americans rely 775 on natural gas furnaces to heat their homes and businesses in 776 the winter, especially in northwest Illinois. The final rule 777 establishes 95 percent efficiency standards for furnaces, 778 which can only be met by condensing furnaces, effectively 779 banning non-condensing furnaces that have been in millions of 780 Americans' homes for generations or more. If a homeowner 781 wants to install a condensing furnace, they may find that, 782 due to structural issues or code restrictions, they are 783 unable to accommodate a condensing furnace's additional 784 venting and drainage requirements. Others may simply be 785 786 unable to afford the additional costs, and I can talk about that later. Americans deserve the right to choose the 787 appliances they want, especially when the Energy Information 788 Administration forecasts natural gas prices to remain low. 789

790	I do want to express gratitude from all APGA members. I
791	do want to express gratitude from all APGA members for the
792	numerous bills that this subcommittee has progressed that
793	would walk back these harmful appliance efficiency standards.
794	Thank you for the opportunity to testify and for
795	supporting policies that allow continued access to the
796	affordable energy consumers want.
797	[The prepared statement of Mr. Casper follows:]
798	
799	********COMMITTEE INSERT********
800	

*Mr. Duncan. I want to thank all the witnesses for your testimony. We will now move into the question-and-answer portion of the hearing. I will begin with answering -asking questions for five minutes.

You know, I disagree with the whole-of-government 805 approach of the Biden Administration in this mandate, green 806 building policies over objections of some states and local 807 governments. After President Biden signed an executive order 808 directing all Federal agencies to develop climate-building 809 [sic] policies, we have seen an avalanche of new rules 810 mandating expensive building codes and eliminating energy 811 choices for Americans. 812

Here are a few examples. DoE announced a \$1 billion 813 grant program to coerce states to adopt unproven, net-zero 814 building energy codes, even if it raises home prices. HUD 815 announced new Federal home efficiency mandates for FHA and 816 USDA-backed mortgages, even when they are not required by 817 state building codes. DoE banned the use of fossil fuels in 818 Federal buildings starting in 2030, even for military 819 installations and family housing. EPA is planning to 820 eliminate natural gas appliances from the Energy Star 821

program, and begin certifying homes and apartments to measure greenhouse gas emissions. And the Biden Administration is actively encouraging states and local governments to adopt stretch codes to ban natural gas and mandate the use of solar panels, EV charging, and electric appliances.

President Biden's green building policies are driving up home prices and pushing home ownership further and further out of the reach for millions of Americans. So Mr. Casper, the whole-of-government, rush-to-green agenda includes rules and regulations that restrict the use of natural gas. Will policies that force Americans to switch from gas to electric increase the cost of living?

*Mr. Casper. From my experience, yes, for our member 834 consumers. And the -- so I will just give an example of a 835 home, a lower-income home complex in our service territory 836 that we provide natural gas as well as electric to. 837 The particular landlord decided -- we worked with him, and they 838 decided, based on our evaluation analysis, that natural gas 839 was the cheapest form not only from upfront costs, but also 840 for utility costs for the future of those particular 841 residents that would be living in that complex. 842

*Mr. Duncan. Thank you for that. As I mentioned, the DoE recently issued a final rule to eliminate the use of fossil fuels in all new and modified Federal buildings starting in 2030. Your testimony mentions this rule can impact everything from Federal prisons to military bases. From your perspective, does this Federal rule undermine our national security?

*Mr. Casper. That is a good question. I am not an expert in our security, military security, but I believe it could, especially speaking from our other members who serve these bases, you know, whether that is in Georgia or in north Texas and across America.

The concern that I have more than anything is that you 855 cannot rely on one fuel source alone. It is important to be 856 able to have a diverse fuel, not only from an electric 857 generation standpoint, but think about it from a perspective 858 of utilizing natural gas for power generation. As we begin 859 providing -- or more and more electricity is being utilized 860 by beneficial electrification, let's call it, for facilities, 861 you are going to be utilizing more natural gas for power 862 generation to fill those gaps that renewables can't. 863

*Mr. Duncan. Thank you for that. We visited Misawa Air 864 Base up in northern Japan in June of last year, and they do 865 866 have some solar panels up there. They have also got natural gas. And I can't imagine, as cold as it gets -- we saw the 867 snowplows they use to clear the runways in the military base 868 there. I can't imagine how cold it gets, the ski area -- of 869 just trying to heat your home with electricity in that kind 870 of environment, and the costs that may be associated with it. 871 Mr. Woods, although states and local governments have 872 the authority to adopt and amend national model building 873 codes, do you agree that there is an effort by this 874 Administration to push the adoption of these aggressive 875 codes? 876

*Mr. Woods. Yes, I do. I mean, like I spoke about in my municipality, Kansas City, Missouri, they had turned down the 21 energy code. They weren't going to adopt it until the IRA came out and gave them grant money. They came back, and the whole discussion was a financial discussion amongst the city council members to adopt the code in hopes of gaining grant money from the IRA.

*Mr. Duncan. Thank you for that. My last question is

885 for Mr. Howard. [Slide] 886 887 *Mr. Duncan. These are the houses that you are building, correct? 888 *Mr. Howard. 889 Yes. *Mr. Duncan. One is an 800-square-foot, 1,400-square-890 foot. What is the price per square foot for those? 891 *Mr. Howard. The sales price? Is that what you are 892 asking? 893 Sale price, yes, price per square foot. 894 *Mr. Duncan. They are in the 200 to \$250-a-square-foot 895 *Mr. Howard. 896 range. *Mr. Duncan. Okay, thank you for that. We see a lot of 897 these in South Carolina, mainly on and around college 898 campuses as rentals for the college kids, not for single 899 family residences. 900 So it is intriguing, but I am out of time, so I am going 901 902 to yield to the Ranking Member DeGette for five minutes. *Ms. DeGette. Okay. Well, following up on what the 903 chairman said, the houses that you build, Mr. Howard, you 904 said that you are building those houses for a variety of 905

906 people because they are affordable. Is that right? *Mr. Howard. That is correct. 907 908 *Ms. DeGette. You are not just building them for college students. You are building them for retired people 909 and for young professionals and others. 910 *Mr. Howard. Certainly, yes. Our target market is 911 really both ends of the spectrum, first-time home buyers that 912 are typically in their twenties and thirties, as well as 913 retirees who want to downsize into single-level living. 914 915 *Ms. DeGette. And are those the -- and also you? *Mr. Howard. That is right. I am not quite ready to 916 retire yet, but --917 *Ms. DeGette. Okay. No, but I mean the -- now, were 918 the homes that the chairman was showing you, were those your 919 homes? 920 *Mr. Howard. Actually, the two-story is mine, yes. 921 *Ms. DeGette. Okay. So we had heard claims that the 922 codes that the Administration is pursuing would add 22,000 to 923 \$31,000 to the price of a new house. That is several times 924 more than HUD found, or the Energy Department, or the most 925 recent study conducted by Pacific Northwest National 926

927 Laboratory. Is that true, from your experience?
928 *Mr. Howard. Not in my experience, no. As I mentioned
929 in my testimony, I am seeing cost increases somewhere in the
930 neighborhood of 6,000 to \$7000, which aligns with the numbers
931 that we are seeing from the National Labs.

Ms. DeGette. And that is a cost for the home that is built. Is it to these new codes, or is it higher than these new codes, as you testified?

Mr. Howard. So again, I am building to the DoE's Zero
Energy Ready Home Standard --

937 *Ms. DeGette. Okay.

938 *Mr. Howard. -- which is based on the 2021

939 International Energy Conservation Code.

940 *Ms. DeGette. Okay. And so what -- and then you were 941 saying, though, that those -- that that cost can be offset. 942 Is that right?

*Mr. Howard. Certainly. So the 45L tax credit can directly offset some of that cost. But, you know, you are also seeing significant cost savings over the lifetime that you live in that home.

947 *Ms. DeGette. Well that is correct. Like, let's say

you have a 30-year mortgage. Let's say it is 6,000 to \$7000 948 over 30 years. But then are you accounting for the reduced 949 950 energy bills? *Mr. Howard. Yes, certainly. I think, just based on a 951 simple payback calculation, you are probably talking about a 952 six to seven-year payback that we are seeing. And, you know, 953 again, this is just my experience in a small town in western 954 955 North Carolina. *Ms. DeGette. Well, your experience is what counts. 956 Now, are your homes popular? 957 *Mr. Howard. I like to think so. 958 *Ms. DeGette. I mean, do you have trouble selling your 959 960 homes? *Mr. Howard. No, we have not -- so we typically have 961 these homes sold before they are complete. 962 *Ms. DeGette. And what do the people tell you about why 963 they want to purchase the homes? 964 *Mr. Howard. I think most of my buyers are interested 965 because of the price point and, of course, location is always 966 a factor in a real estate transaction. But yes, ultimately, 967 I think they probably don't -- aren't able to appreciate the 968 54

969 other benefits until they have actually lived in the home for 970 some time.

971 So we have a property owners association and we have monthly meetings, so I certainly have plenty of opportunity 972 to hear direct feedback from my buyers, and I think the 973 things that surprised them the most -- or, you know, they are 974 pleasantly surprised by how easy it is to heat and cool these 975 976 homes, how comfortable they are. They have also commented on how quiet the homes are. So a home that is better insulated 977 and better air sealed also ends up being just a quieter place 978 979 to live.

980 *Ms. DeGette. Okay. Thank you. Now I just want to set 981 the record straight with something.

Some of my colleagues have been talking about Federal buildings and their -- and the "green projects.'' I just want to point out that, under the 2007 Energy Independence and Security Act, which was signed into law by President George W. Bush, that requires the DoE to develop and finalize a regulation that phases out fossil fuel consumption in Federal buildings.

989

The most -- the recently finalized Clean Energy for New

990 Federal Buildings and Major Renovations of Federal Buildings Rule completes the statutory requirement that was placed on 991 992 the DoE under the George W. Bush Administration. The total net benefit to the public, according to DoE's estimates, will 993 reach up to \$134 million, and it is expected to reduce carbon 994 emissions by 2 million metric tons and methane emissions by 995 16,000 tons, which is equivalent to cutting pollution from 996 997 310,000 homes in one year.

So I guess my point of saying this is I really feel like Congress and local and state governments and home builders and others could work together to try to find affordable, energy-efficient buildings that could actually be economically viable and positive. And that is what I think we should be talking about.

1004 I yield back.

1005 *Mr. Duncan. The gentlelady yields back.

1006 Thank God for the fracking revolution that found and 1007 harvested more natural gas after 2007.

1008 I will now recognize the committee chair of the full 1009 committee, Mrs. Rodgers, for five minutes.

1010 *The Chair. Thank you, Mr. Chairman.

1011 Mr. Bonnell, thank you for your testimony. And as a family-owned manufacturing business placed -- based in 1012 1013 California and operating in several Western states, you are certainly on the front lines of this war on American energy. 1014 The governors of California and my home state, Washington, 1015 want to close your manufacturing facilities and put you out 1016 of business by banning natural gas. Can you make -- so my 1017 questions -- can you make Sheetrock, asphalt shingles, or 1018 paper products without natural gas? 1019 *Mr. Bonnell. Congresswoman, I would ask you 1020 1021 respectfully not to use Sheetrock; that is a brand name for my competitor. 1022 [Laughter.] 1023 1024 *Mr. Bonnell. But in direct --*The Chair. What do you sell? 1025 *Mr. Bonnell. The direct answer to your question, it is 1026 possible to make drywall with electrical dryers. 1027 It is not commercially feasible at this point. We would look at 1028

1029 options for that. If they were -- we would constantly look

1030 at new equipment, and are always looking for capital

1031 investments to lower our energy costs. But the simple fact

1032 of the matter is it is a higher cost equation. *The Chair. What about asphalt shingles? 1033 1034 *Mr. Bonnell. Same story. *The Chair. Paper products? 1035 *Mr. Bonnell. Even more so with paper products. 1036 *The Chair. So --1037 *Mr. Bonnell. Paper products would be very difficult. 1038 They are highly energy-intensive, both gas and electric. 1039 *The Chair. So would you speak to -- where do you see 1040 these products coming from in the future? 1041 1042 Is it going to be possible to manufacture these kind of products in America, or are they going to be coming from 1043 other countries, like China? 1044 *Mr. Bonnell. Well, we have seen these products 1045 manufactured in other countries before. And quite frankly, 1046 it was a horrible experience here in the United States. 1047 Most notably, I think Chinese drywall in Florida caused very 1048 significant problems and issues resulting in millions and 1049 millions of dollars of rebuild work that had to be done. 1050 I think the American consumer is not necessarily 1051 interested in buying a Chinese product to put in their home 1052

1053 right now. But foreseeably, without the ability to use natural gas, we will lead to more offshore production. 1054 1055 *The Chair. Yes, Chinese building materials, Chinese electric vehicles. 1056 Another question: What happens to the price of 1057 construction materials if you have a statewide natural gas 1058 1059 ban? *Mr. Bonnell. I can't even speculate. Right now I am 1060 looking at -- I guess the best way to respond to that is to 1061 look to what happened to us in January of 2023, when we saw 1062 1063 \$54 per MMBtu gas prices. We would literally see probably a doubling to quadrupling of pricing on drywall products. 1064 *The Chair. Okay, thank you. 1065 Mr. Woods, as you know, climate activists and 1066 environmental groups have a lot of influence with the 1067 International Code Council and other standards-setting groups 1068 that develop the model energy codes. These codes increase 1069 construction costs with the promise of long-term energy 1070 savings. Would you speak to how they are working in 1071 1072 practice? *Mr. Woods. You are asking me to speak to how the 1073

1074 energy savings are working in practice?

1075 *The Chair. Yes.

*Mr. Woods. So, I mean, we just adopted the 2021 energy code in Kansas City, Missouri, so I haven't seen it yet in practice in our area. But I do know the estimates that are coming out for what they are saying, the costs are grossly underestimated because they are not taking into account how we have to build the house differently to account for the codes themselves.

Like, one of those things would be R60 insulation. 1083 In 1084 Kansas City we stick frame our roofs. We don't use trusses. You can't fit R60 insulation on a stick frame roof the way we 1085 do it in Kansas City. So we have to go back, re-engineer our 1086 roofing, redo how we frame the roof. Some people have to go 1087 to energy trusses. It is just a total change in the 1088 production style of the house. So in practice right now we 1089 are seeing drastic cost increases for not only the change in 1090 1091 the insulation, but also how we have to build that home. From what I have seen, we have modeled our own houses 1092 from what we were building from the 2009 energy code to the 1093 2021 energy code, and we are seeing savings of energy of only 1094

\$125 or less a year, and experiencing cost increases that are making customers have mortgage payments and PMI in upwards of \$800 a year. So in my opinion it never pays back.

1098 *The Chair. So when the Federal policies conflict with 1099 the state or local energy codes, what impact does that have 1100 on the supply of new homes?

Mr. Woods. Well, I think I spoke to it in my first testimony. In Kansas City, Missouri you can see a drastic reduction in production, and that is some of people stalling to get things out that --

*The Chair. Thank you. I have one more question I wanted to get to. What do you -- in my area we had wildfires come through and burn hundreds of homes last year. And now they -- and they want to rebuild, but now they are being told they can't hook up to natural gas. What would you tell homeowners like that when they have to rebuild?

1111 *Mr. Woods. But they can't -- when they can't hook up
1112 to natural gas?

1113 *The Chair. Yes, yes.

1114 *Mr. Woods. I would say it is unfortunate. I mean, in 1115 my area I can't meet my energy codes without spending a bunch

1116	more money without putting a natural gas furnace in the
1117	house. That is how I meet the 21 energy code. So it is
1118	counterproductive to say that I can't use a gas furnace, yet
1119	I can build the house more efficiently and meet the code with
1120	a gas furnace.
1121	*The Chair. Yes, you just can't afford to rebuild.
1122	Okay, I yield back.
1123	*Mr. Duncan. The gentlelady yields back. I now go to
1124	the ranking member of the full committee, Mr. Pallone, for
1125	five minutes.
1126	*Mr. Pallone. Thank you, Mr. Chairman. I am just
1127	trying my questions are for Mr. Howard.
1128	A lot of talk here about production style, how you build
1129	a home. Tell me how you talk a little about the energy-
1130	efficient houses you build, and the upgrades, and the
1131	features you incorporate. I mean, I am getting the
1132	impression from some of the others on the panel that
1133	production style, how you build it is impossible to do an
1134	energy efficient home. There is a big discrepancy here. Why
1135	are you able to do it, and what does it actually involve?
1136	Tell me.

1137 *Mr. Howard. As Chairman Duncan pointed out earlier, I mean, these are smaller homes to begin with. So that is 1138 1139 reducing cost. And, you know, just the overall amount of materials that are required to build these homes. 1140 But I quess, you know, if you want to think of it in 1141 terms of the secret sauce, you know, to achieving 2021 IECC 1142 or Zero Energy Ready Home certification on a budget, I am 1143 utilizing structural insulated panels as the wall and roof 1144 assembly of these homes. They are built in a small factory 1145 1146 in Mocksville, North Carolina by a company called Eco-Panels, and they bring them out to our job site on a flatbed truck, 1147 and we actually assemble them with two to three laborers. It 1148 doesn't require, you know, the level of skilled labor that is 1149 typically required in stick framing at home. So I am able to 1150 put a house in the dry, as we say, in two to three days in my 1151 market. With traditional labor, that would take two to three 1152 So I am able to shorten the turn time on these homes, 1153 weeks. which also means I am shortening the carrying costs that is 1154 associated with the construction loans that I am taking out 1155 in order to build these homes. 1156

1157 *Mr. Pallone. Now, what about this -- the Federal

1158 incentives you mentioned? I mean, I know there is not a Federal mandate. It is, 1159 1160 you know -- but what is the -- what are the incentives that people take advantage of? Can you talk a little bit about 1161 1162 that? *Mr. Howard. Sure, yes. The 45L tax credit that was 1163 renewed gives a builder the option of, if they certify a home 1164 to the Energy Star standards, it is a \$2,500 tax credit per 1165 house. And if they certify to Zero Energy Ready Home, it is 1166 a \$5,000 tax credit per house. So again, in my experience, 1167 1168 that comes very close to offsetting the additional costs for 1169 me to --*Mr. Pallone. And those -- you obviously don't find 1170 those that difficult to obtain, right, these Federal 1171 incentives? 1172 *Mr. Howard. Not at all. 1173 *Mr. Pallone. Okay. And now, what about the -- I mean, 1174 again, you are saying 6,000 to 7,000 per home. The others 1175 are talking 30,000 or above. Why is this big discrepancy 1176 between these numbers? 1177 I mean, I want to talk about the real world. Why are 1178

they talking numbers that are, like, you know, so much more? *Mr. Howard. Yes, I am -- I have only recently seen some detail on how those estimates were created, and I feel like, in some cases, they are factoring in some costs that, you know, to me, just don't make sense. But yes, I mean, certainly, it -- costs to build homes varies, you know, from market to market.

But, you know, I could see if somebody who had never 1186 built to that standard might end up spending more money, but 1187 the longer I have done this, you know, you start to figure 1188 out ways to be more efficient, to optimize systems. 1189 And certainly, I have also made the choice to make some trade-1190 offs in finishes to try to, I guess, put the money where I 1191 feel like it matters, into the building envelope of the home, 1192 which is going to be very difficult for somebody to change 1193 later. You know, you are going to remodel your kitchen or 1194 your bathroom probably in the next 10 to 15 years, just as 1195 tastes change. But how often are you going to open the walls 1196 and change the amount of insulation in there? You know, not 1197 very often. So I am trying to focus on those things that are 1198 difficult to change later. 1199

1200 *Mr. Pallone. I mean, I appreciate what you are saying. 1201 I mean, my experience with any kind of innovation or any kind 1202 of effort to make things more efficient is that, you know, a lot of people just don't like to make change, right? And if 1203 you start to make the change, you look at it and you say, oh 1204 my God, you know, this is going to be terrible, but then when 1205 you start doing it, you can do it for less and you can 1206 actually do it without a great deal of difficulty, and that 1207 seems to me exactly what you are saying. So thank you so 1208 much. 1209

1210 Thank you, Mr. Chairman.

1211 *Mr. Duncan. I now go to Mr. Latta for five minutes.
1212 *Mr. Latta. Well, thanks, Mr. Chairman, and thanks for
1213 our witnesses for being with us today. And we all know that
1214 home ownership is one of those dreams that all Americans
1215 really want to have.

And when I look at the State of Ohio, half the housing units in Ohio have been built before 1965, including the home that we live in, and more than two-thirds of the homes were built before 1980. Ohio's home sales are primarily from first-time buyers: 43 percent are purchasing a small town

1221 [sic]; 95 percent of first-time buyers are financing their purchase. You know, and when you look at the landscape 1222 1223 across Ohio, I have serious concerns that these are -- farreaching energy efficiency mandates could have unintended 1224 consequences for Ohioans trying to buy their first home. 1225 Mr. Woods, in your testimony you highlight that 1226 compliance with the 2021 IECC can add significant cost to the 1227 price of a new home. Would you explain how these additional 1228 costs affect middle class and first-time buyers? 1229 *Mr. Woods. Sure, thank you, Representative. 1230 1231 Basically, for every \$1,000 that we increase the price of a house, 106,000 households are priced out of the market. So 1232 when you take this into effect, that 77 percent of people 1233 1234 can't even afford a median-priced house today, yet we are talking about raising costs that much, we are pricing out a 1235 huge majority of the market; 2 million people won't be able 1236 to buy these homes if it costs \$20,000 extra to build this 1237 1238 house. So you are taking a huge chunk of the market out of home ownership by adding these codes on top. 1239

1240 *Mr. Latta. Well, you know, with the new HUD 1241 regulations, as you mentioned, they will significantly

1242 increase the stringency of the codes for construction of homes backed by FHA and USDA. One of the things about this 1243 1244 committee, we have a very broad jurisdiction, and I can ask them -- sometimes you have to ask these questions. 1245 When you look at the 2009 and the 2021 codes, is this 1246 out of your -- out of curiosity, your interaction with 1247 regulators, how many of the regulators have been in 1248 construction? 1249 *Mr. Woods. How many regulators are in construction? 1250 1251 *Mr. Latta. Yes. 1252 *Mr. Woods. I couldn't even begin to count. It is enormous, how many people are regulating all aspects --1253 *Mr. Latta. Well, no, I mean the regulators themselves 1254 have been in construction. 1255 *Mr. Woods. Oh, very few. 1256 *Mr. Latta. Okay, because this is one of the weird 1257 1258 questions I always have to get into because, again, when they start these regulations -- and I have never heard anybody 1259 ever say this before us in this committee, I have never heard 1260 anybody say that they are against all regulations, but they 1261 all -- but I don't care what industry you are in, they all 1262

1263 say the same thing: "Give us regulations we can live with." And especially when you look at these numbers that you 1264 have given us today, you know, my concern is that -- how do 1265 they get their working knowledge to come up with what a code 1266 ought to look like from the 2009 to the 2021, and the changes 1267 out there, if -- you know it is just out of your opinion --1268 if they have never been in construction to actually see it 1269 1270 done?

*Mr. Woods. I don't know if it becomes special interest 1271 groups influencing decisions or what, but they are definitely 1272 not one-size-fits-all, and that is the unfortunate thing 1273 about the 21 energy code, is that what I need to do in Kansas 1274 City to make my house more energy efficient or better for the 1275 environment is much different than what somebody needs to do 1276 in California or Florida for that same house. So it is 1277 really hard to have a code that is written for the whole --1278 *Mr. Latta. Right. So something that is being built in 1279 1280 northwest or northern Ohio is different from if it is going to be built in southern California. 1281

You know, under the current law with the federallyfinanced mortgages must comply with that 2009 IECC, it now

requires, you know, these homes to conform with the 2021 code. And again, getting into this again, is there a -given the conflict in the regulations, how are the builders supposed to comply with this when you have a conflict between the 2009 and the 2021?

*Mr. Woods. You won't be able to. I mean, you won't be able to build a house for a customer -- if I was building a spec home, and a customer walked in and wanted to buy it, and I wasn't building it to the 2021 energy code because the municipality didn't require it, I just can't sell that house to them. And unfortunately --

Mr. Latta. But, like, again, if it is in Ohio, if the Ohio code says 2009, then what do you do? Who is the arbitrator on that?

Mr. Woods. There won't be. I mean, if it is a mandate from USDA, there will not be a loan that is able to be put on that house.

*Mr. Latta. Well, thank you very much. And just to follow up -- not to be picking on you here -- do you foresee a scenario where first-time home buyers may have a difficulty securing a federally-backed home loan or on an older home,

1305 such as a USDA Rural Development home loan? *Mr. Woods. Yes, I haven't seen how the -- how it 1306 1307 applies to an older home, but, I mean, if all USDA loans have to comply to the 2021 energy code, then I am not sure how 1308 they would buy a home that was built in the last year or two. 1309 They would all be not able to have a USDA loan on them. 1310 *Mr. Latta. Okay, well, thank you very much. 1311 And Mr. Chair, my time has expired and I yield back. 1312 *Mr. Duncan. The gentleman yields back. I now go to 1313 the gentleman from California, Mr. Peters, for five minutes. 1314 1315 *Mr. Peters. Thank you, Mr. Chairman. One of the biggest problems facing California and San

1316 Diego is the cost of housing. I have said that I think that 1317 the cost of housing is probably the biggest barrier to the 1318 continued prosperity of San Diego and the Golden State. So I 1319 take very seriously the concerns that have been raised here. 1320 You know, and most of these policies are formed at the 1321 state and local level, as people have pointed out. And I 1322 have to say that, you know, California -- and I have -- this 1323 is an issue back home -- has done a really terrible job of 1324 allowing new housing to be built. We put a lot of 1325

impediments there. And over three decades I think we have really fallen behind, and that supply-demand thing is a big factor. So I don't want to suggest that that is Federal policy, but that is a problem in my state.

At the Federal level I did introduce the Build More 1330 Housing Near Transit Act with Chair Rodgers, which is a great 1331 bipartisan effort to make sure that housing gets built near 1332 those projects that we spend Federal taxpayers' money on for 1333 transit. We ought to incentivize that if we are going to be 1334 building -- spending a lot of money on a transit project. 1335 1336 As a Federal Government, we ought to know what the local government is doing to make sure that people are going to 1337 ride it, and part of that is putting housing next to it, and 1338 incentivizing that, and making that part of the competition. 1339 So that is good for whether you are concerned about taxpayers 1340 getting farebox recovery out of that project or whether you 1341 are concerned, as an environmentalist, about people --1342 getting people out of their cars and reducing greenhouse 1343 gases, that makes good sense. 1344

But again, most of what happens on housing is a state and local.

1347 Mr. Howard, I recognize, because of the modernized 1348 standards, homeowners will save money on the back end through 1349 efficiency gains and reduced spending on heating, cooling, 1350 and water. I want to ensure that we are not increasing 1351 barriers to home ownership by passing along costs to lower-1352 income residents who may not be able to afford that bigger, 1353 upfront investment.

There is billions of dollars in the infrastructure bill and in the Inflation Reduction Act for states and localities to implement these codes, as well as the 45L tax credit. However, the grant dollars don't go toward construction or reducing the costs of these more efficient materials, and the tax credit is not enough.

How do you think we can reduce the upfront costs of compliance with these updated codes, and make sure that these more efficient homes are affordable for all of our

1363 constituents?

*Mr. Howard. Yes, good question. I mean, I think ultimately, as, you know, more stringent codes are adopted, the industry adapts. You know, it takes some time. It takes -- you know, we are talking about a, obviously, a large,

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sophisticated industry. It is like turning a battleship.
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      So --
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           *Mr. Peters. Right.
           *Mr. Howard. But I think we underestimate ourselves in
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      terms of the amount of innovation that we have seen in
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      construction over the last few years. I think off-site
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      construction technologies in particular have the ability to
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      expedite construction --
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           *Mr. Peters. Right.
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           *Mr. Howard. -- by building components in a controlled
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      environment, as opposed to out in the weather, like most of
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      us do, and also to try to reduce some of that cost burden.
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           So whether we are talking about panelized construction
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      as I am doing today, or full volumetric modular
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      construction --
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           *Mr. Peters. Right.
           *Mr. Howard. -- I think that is one of the answers to
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      your question.
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           *Mr. Peters. Another issue that is not directly related
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      to what we are talking about today is what is happening in
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      the insurance markets, and being able to be able to get
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insurance so that you can get a mortgage. Building codes 1389 play a part in that, too, in terms of resiliency. 1390 1391 And in California we have lost a lot of homes to wildfires. In San Diego County we have, too. And I think at 1392 another time we probably want to talk about what is the role 1393 of building codes in making sure that we are providing 1394 assurance to the markets that they can invest in this home as 1395 a -- as someone who is lending money. Again, something I 1396 think has long -- sort of short-term costs, but long-term 1397 benefits. 1398

1399 And finally, I just want to say again about the nature of this hearing. This already has happened. Again, this --1400 these are rules we are talking about that were issued, final 1401 rules, in April of this year. Yet this is the committee that 1402 has jurisdiction over building law in this area. And we not 1403 only did we not do something legislative here, we waited 1404 until the rules were final. We are not even taking this 1405 issue up while there was a notice of proposed rulemaking, 1406 presumably a year or two ago. 1407

1408 So I am sorry to the witnesses that this is a little bit 1409 of an academic exercise. We are kind of late to the game

here, and we are actually not doing our job, which is to 1410 actually take the testimony from folks like you and come up 1411 1412 with the rule ourselves, because a bipartisan rule is going to be better, and it is going to be more durable. 1413 What is going to happen now is, assuming -- if there is a change in 1414 administration -- there will be some day, whether it is this 1415 year or in four years -- you have the potential that the 1416 regulations get repealed. I am sorry about that. 1417

I think we should do better. I think this committee should be taking these issues up, from a legislative perspective, and dealing with them like it is our job to do, not waiting until -- let the administration do it and then waiting until it is over. And I apologize for that.

1423 And I yield back.

1424 *Mr. Duncan. The gentleman yields back. I now go to1425 Mr. Griffith for five minutes.

Mr. Griffith. While the five-story glass atrium that illuminates lush groves of green bamboo inside the Thurgood Marshall Federal Judiciary Building across the street from Union Station is beautiful, it is also a death trap. This, according to a "Washingtonian'' article published on May 10,

1431 2024. And the reason is that they have a glass atrium and 1432 the birds fly into it because they can't see that it is a 1433 glass atrium.

Here we are, discussing Federal buildings and private 1434 buildings in the building code, and we are not even talking 1435 about -- and the Federal Government hasn't even talked about 1436 -- the number of birds that die every year because they 1437 collide with glass structures and glass buildings. Now, you 1438 want to do something for the environment? Do you make people 1439 spend billions of dollars to get a little bit of a change 1440 1441 maybe on the climate increase, the temperature increase, or do you save birds? 1442

And people are going to say, well, it is just a few 1443 birds. In fact, the Thurgood Marshall Building, they 1444 estimate they pick up about 500 birds a year. The problem is 1445 estimates show that a very small percentage actually were 1446 found at the end of a building. The data shows us that birds 1447 that hit the building often fly off. They have a head 1448 injury, they have a beak injury, they have internal bleeding, 1449 and they die later. 1450

According to a January 14, 2023 American Bird

1452 Conservancy article that cites the Smithsonian, the estimates are between 365 million birds and 1 billion birds annually 1453 1454 die because of bird strikes on buildings. And the reason I get frustrated about this is because we are talking here 1455 today about Federal regulations that want to, in a sense, 1456 essentially ban de facto natural gas in Federal buildings. 1457 And I am just going to talk about the Federal side of this. 1458 I know there is a private side, too. 1459

But on the Federal side we could pass the Bird Safe 1460 Building Act. Instead, we pass this. It is going to cost 1461 billions of dollars and do very little. If we passed the 1462 Bird Safe Building Act, which has been introduced for a 1463 number of years now by Mr. Quigley and I -- and we trade. 1464 When the Democrats are in control he introduces it and I am 1465 his chief cosponsor. When the Republicans are in control, I 1466 introduce it. And the cost of putting protection in is 1467 minimal. 1468

When you are building -- and keep in mind that this gas requirement under section 433 of the Energy Security and Independence Act of 2007 that mandates a 90 percent reduction in fossil fuels consumption in new and renovated buildings --

the Bird Safe Act -- Bird Safe Building Act applies to Federal new and renovated buildings. And if you are putting the building together, or you are renovating it, and you put a film on the glass anyway, the cost is either zero or very, very small to add in ultraviolet fibers. Those fibers allow the birds to see the glass.

But instead, my colleagues on the other side and others 1479 -- and there is people on both sides of this issue, but they 1480 want to talk about spending billions of dollars to save 1481 energy and ignore something we could actually do today that 1482 within 10 years would save hundreds of millions of animal 1483 I don't know why we are not doing it. To me, it is a lives. 1484 green issue that is also a conservative issue because it 1485 doesn't cost much money. 1486

And then, when we show that the Federal Government can do it fairly cheaply, builders are going to say, hey, this is an option when I am building your new house. Here is an option we can show you, and the Federal Government has already shown us we can do it for next to no money while we are building your house. After it is built, if you are -only if you are applying the film on the glass at that time

1494 would it be practical.

I say all of that because it does concern me, because 1495 1496 these regulations are going to drive up the cost for the Federal Government. These regulations related to the fuel 1497 consumption, as several of you have mentioned -- Mr. Bonnell 1498 and Mr. Woods, would you agree that we could do more with 1499 this thing that doesn't cost anything than we are going to do 1500 with these energy requirements and energy requirements that, 1501 I am sorry, Mr. Howard, it may price my constituents out of 1502 the home-buying market, and they will end up in mobile homes 1503 1504 instead. Not as good an option. I am sure you build fine houses. But that is an option for the consumer. And when we 1505 build it into the price, they can't afford it. 1506

1507 Mr. Bonnell, would you agree with the general assessment 1508 I have just made?

1509 *Mr. Bonnell. I am pro-birds.

1510 [Laughter.]

1511 *Mr. Bonnell. So that part, yes.

Mr. Griffith. Well, and in all fairness, part of the reason I chose this opportunity -- because it does touch on this issue -- is that so many people, whether they are

building a new building of 4 to 11 stories or whether they are building a new home, they don't even think about it. And for just making the decision to put the right film on your glass, you could save lives.

1519 I yield back, Mr. Chairman.

1520 *Mr. Duncan. For the record, I am pro-bird, too.

1521 Thanks for the levity, as well.

1522 *The Chair. Me too.

1523 *Mr. Duncan. Now I go to my friend from Texas, Mrs.
1524 Fletcher, for five minutes.

1525 *Mrs. Fletcher. Well, thank you, Mr. Chairman. And for 1526 the record, I am also pro-birds, and I appreciate the 1527 testimony of all of our witnesses today.

And I think, you know, it is interesting to me, because 1528 I feel like we are all sort of talking past each other 1529 sometimes on some of these issues. Certainly, we have 1530 building codes for safety. And consumers like a lot of the 1531 energy efficiency that we have seen over the last several 1532 years. And consumers want affordable homes. And that is 1533 something that we in my district in Houston have always had a 1534 lot of, we have had a great supply of affordable housing. It 1535

has made Houston a destination for many people, and that is why we are so proud to welcome people from across the country and around the world who want to move to our community and become Houstonians.

1540 And we know that, at the same time, we want to see those -- whether it is homes or commercial buildings -- be energy 1541 efficient, because while we want homes that are affordable, 1542 we want homes that are insulated -- certainly for us from the 1543 heat, but also from the winter storms. We really -- we 1544 understand the importance of efficiency on a number of 1545 1546 levels, and we also understand the incredible impact that some of these inefficiencies have on our larger 1547

1548 infrastructure like our grid.

So we are concerned about all of these issues at the 1549 same time, and I think we can be concerned about all of these 1550 and work together in a way where we can really find that 1551 middle ground to talk about how do we do things smarter, how 1552 do we make sure that we are reducing electricity consumption 1553 as our energy demands continue to grow, and helping Americans 1554 save, you know, thousands of dollars a year in heating and 1555 cooling costs while keeping the price of building new homes 1556

1557 affordable and retrofitting homes with new equipment, how can 1558 we keep that affordable?

And certainly, we have seen that in my district we know that energy efficient buildings have been more resilient in some of our extreme weather events. We just had another one last week. But certainly, prior to that, with the winter storm a couple of years ago, better-insulated buildings were -- protected the residents better, and we had some tragic, tragic circumstances in some of our less efficient homes.

And so, as Mr. Peters said, we also know that state and local jurisdictions are primarily the ones who are drawing up these codes, and that the Administration has been working on some voluntary codes with people across the country and encouraging states to adopt them to address all of these competing needs.

1572 Certainly, as I was saying, we have always had a lot of 1573 affordable housing in Houston, but that is changing. And in 1574 the most recent survey, our annual city survey, the Houston 1575 Area Survey, affordable housing is a concern for as many as 1576 25 percent, 20 to 25 percent of our residents. So these are 1577 real concerns that Americans have in every community in the

1578 country, and I think that we should be working together to 1579 figure out how we achieve all of these goals. They don't 1580 have to be mutually exclusive.

So I want to ask a couple questions of -- Mr. Howard, in 1581 the time that we have, you know, you have firsthand 1582 experience sort of seeing what those upfront costs to build 1583 in the energy efficiency into the homes have for buyers and 1584 how they are weighed against sort of the long-term 1585 projections. And I think many of us know that sometimes you 1586 can factor that in, but it isn't as present as just sort of 1587 1588 that initial -- the downpayment, and what is your monthly cost going to be in purchasing a home. 1589

And so one of the things that you mentioned was that 1590 there could be an opportunity to address that in the 1591 appraisal process, as well, and that the appraisal process 1592 doesn't do a great job of considering the value of these 1593 energy efficiency investments. So do you feel or do you 1594 think that some kind of rating system that can help rate a 1595 home and explain those potential cost savings both to buyers 1596 and to those who might be doing loans -- I know that has been 1597 established in some other countries. Do you think that that 1598

would help buyers make -- would help people make choices, and perhaps help address some of the concerns about upfront costs?

*Mr. Howard. Absolutely. We actually, you know, 1602 through the home energy rating process that was developed by 1603 ResNet back in the 1990s, I mean, we certainly have the 1604 ability today to certify and rate homes to give them sort of 1605 a -- almost like a miles per gallon rating to be able to 1606 compare the relative efficiency of one home to another. 1607 So we definitely have that capability. If anything, I think it 1608 1609 is grossly under-utilized.

But directly to your point about the appraisal process, 1610 the Appraisal Institute came up with an addendum 10 or 15 1611 years ago now that gives appraisers the ability to recognize 1612 the additional value of energy efficiency features. And 1613 again, there is another resource that has been available to 1614 us for some time that is grossly under-utilized. So some of 1615 it is just taking advantage of the tools that already exist. 1616 *Mrs. Fletcher. All right. Well, thank you so much. 1617 I went over my time, so I will yield back. 1618 *Mr. Duncan. You are forgiven. I will now go to the 1619

- gentleman from Indiana, who -- Indiana's state bird, like the 1620 gentleman from Virginia, is the cardinal. 1621 1622 *Mr. Bucshon. There you go. *Mr. Duncan. So the men from the cardinal states. 1623 Ι recognize Mr. Bucshon for five minutes. 1624 *Mr. Bucshon. 1625 Thank you very much, Mr. Chairman. I think people might be aware the Department of Energy 1626 recently finalized efficiency standards that fail to take 1627 into consideration the design and factory construction 1628 techniques of manufactured homes, and would similarly drive 1629 1630 up the cost for housing for working-class Americans. That is why I introduced and the committee Republicans passed the 1631 Affordable Homes Act, which would rescind the provision of 1632 1633 the 2007 Energy Independence Security Act that directs the Department of Energy to establish energy standards for 1634 manufactured homes. 1635 I just want to throw that out there. You know, we are 1636 talking about building homes, but the manufactured home 1637
- 1638 industry is also substantial in the affordable space, and 1639 that will also be dramatically affected by some of these 1640 regulations.

1641 Look, I also want to just say I am an all-of-the-above energy person. Look, I think we can decrease our emissions 1642 1643 and use all different types of energy sources. But the people I represent want reliable energy and affordable 1644 energy. Those are -- when you actually sit down and talk to 1645 people, those are critical. And, you know, most people do --1646 are concerned about emissions. But when it butts up -- when 1647 these standards butt up against the ability to have 1648 affordable, reliable sources of energy, reliability and 1649 affordability wins out. 1650

1651 And I think, you know, we are all -- I agree we are talking past each other a lot on this. We all want to make 1652 progress. But, you know, if you look at what percentage of 1653 emissions and -- are related to your industry worldwide, I 1654 mean, it is essentially zero. And so we are going to -- are 1655 we really going to do things that are going to make it 1656 difficult for people that are lower income to afford an 1657 entry-level home when we know that the effect actually on the 1658 global climate will be zero, essentially zero? 1659

1660 I mean, if you look at this -- you know, if you really 1661 -- if you took -- if you stopped essentially all U.S. carbon

emissions right now, it would be a -- I don't know what the number -- 20, 25 percent of worldwide emissions, maybe, if you stopped every single carbon emission in the United States.

So I think sometimes in these hearings I find myself 1666 listening to these hearings, and I know the American people 1667 do, too, and we are talking about issues that are important. 1668 We all want efficiency. We all want to not waste energy. We 1669 want we know that our grid is going to be having huge demands 1670 on our electrical grid, particularly. I mean, just the 1671 proposals to go to all EVs, which I support, alone are 1672 estimated to increase the demand on energy 30 to 40 percent 1673 in the United States, roughly. 1674

And now -- and so, you know, where is this energy going 1675 to come from? And you know, there is carbon capture 1676 techniques, American natural gas is the cleanest in the 1677 world. We have national security issues related to our LNG. 1678 I have been in Eastern Europe. I asked them what -- where 1679 they would be right now without LNG imports from United --1680 primarily the United States, and Qatar, and other like-minded 1681 -- because they cut themselves off from Russian natural gas 1682

almost overnight, particularly the -- in Poland. So I just 1683 want to throw that out there. 1684 1685 I mean, this is important, don't get me wrong. But in the overall scheme of things, we are -- are we really going 1686 to make it hard for people to buy a darn house? Really? 1687 Because the people I represent, let me tell you, you sit at 1688 the table with them, they want affordability, they want to be 1689 able to go to the grocery store and buy groceries, they want 1690 affordable gasoline for their cars, or if -- they want 1691 affordable energy for their home. 1692 1693 And all of these things are important. But, you know, I think we are wasting a lot of time arguing about things that 1694 have essentially no impact on the global climate, but have a 1695 dramatic impact on the people I represent. You know, the 1696 average income in my district is \$55,000 a year. 1697 That is average. Think about that. And the manufactured home 1698 industry is going to be damaged or devastated, and people 1699 can't buy manufactured homes. And that is sometimes what 1700 people can afford. 1701

1702 So I appreciate all the testimony and I appreciate your 1703 concern on all these things. But at the end of the day, Mr.

Chairman, we need to do pragmatic, practical things to both keep affordable energy for this country, reliable energy for this country, and decrease our emissions. I yield back. *Mr. Duncan. The gentleman yields back. I will now go to the gentlelady from California -- and this last time I will do it -- the California state bird is the California quail.

1711 Ms. Matsui, you are recognized for five minutes.

1712 *Ms. Matsui. Oh, okay. You are correct on that. We do1713 like birds, too.

Anyway, first of all, I want to thank Phil Bonnell, who is President of PABCO, for coming before the committee to testify today. PABCO was founded in my hometown district of Sacramento in 1953. So welcome.

California is the 5th biggest economy in the world. And there is a reason why so many successful companies are there and flourish there. It is because we really bring together some of the most ambitious and visionary and innovative people in the world to tackle the most difficult problems facing this country.

1724 Today that problem is climate change, and we must be

1725 clear-eyed about the challenge ahead. Buildings are 1726 responsible for 30 percent of U.S. greenhouse gas emissions, 1727 so increasing the efficiency of buildings can go a long way. 1728 Fortunately, energy efficiency is also one of the most cost-1729 effective ways to fight to fight climate change.

1730 Mr. Howard, I am going to pick on you again. You 1731 previously worked for Habitat for Humanity, so you know how 1732 to build an affordable home, is that correct?

1733 *Mr. Howard. I do.

Ms. Matsui. Okay. I understand you also work for Mitsubishi Heating and Cooling, so you must think a lot about energy bills. Is that correct?

1737 *Mr. Howard. Yes.

Ms. Matsui. On top of that, I also see that you were an instructor for the National Association of Home Builders. So you must be highly qualified to assess the Home Builders' estimates for when it comes to build a modern, efficient home. Are the Home Builders' cost estimates accurate? *Mr. Howard. Not in my experience. Again --*Ms. Matsui. Okay.

1745 *Mr. Howard. Yes, the cost increases I am seeing are in

1746 the 6,000 to \$7000 range, nowhere close to the 30,000-plus estimates that I have seen in other places. 1747 1748 *Ms. Matsui. Okay. If you had to recommend to your fellow homebuilders how to reduce the cost of building an 1749 energy efficient home, what advice would you give? 1750 *Mr. Howard. So, you know, I will repeat the suggestion 1751 I made earlier, which is, you know, one of those is taking 1752 some of the construction off site into a controlled 1753 environment, where we can increase efficiency and optimize 1754 material resources. So whether that is panelized 1755 1756 construction or full, volumetric modular construction, I think that is one of the solutions we need to be looking at 1757 today and moving forward into the future. 1758 *Ms. Matsui. Okay. You often hear that certain 1759 efficiency measures like heat pumps don't work for all 1760 climates. But analysis by the Pacific Northwest National Lab 1761 has shown that the average payback period for modern, energy-1762 1763 efficient homes in North Carolina is less than 11 years across all climate zones. 1764

1765 Mr. Howard, you live in western North Carolina, where 1766 winter temperatures can be bitter. How do energy efficiency

1767 measures perform in colder climates?

*Mr. Howard. And again, speaking from personal 1768 1769 experience as a builder of all-electric homes and, you know, someone who is living in one of those homes now, these are 1770 heated with what are considered cold climate heat pumps. So, 1771 you know, they are rated to operate at 100 percent capacity 1772 as low as negative 5 degrees. So, you know, as cold as it 1773 might get in western North Carolina, we don't see those kind 1774 of temperatures for very long. 1775

1776 So yes, I think the technology has certainly come a long 1777 way, and I think we are grossly under-estimating it.

Ms. Matsui. Okay, thank you. And Mr. Howard, California building codes require that all new buildings be electric vehicle ready, meaning a home charger can easily be installed if the homeowner wants one. Mr. Howard, can you describe what that means in practical terms for a home builder to make a home EV ready?

*Mr. Howard. Yes. So for DoE's Zero Energy Ready Home requirements, we are basically just leaving space in the electric panel to add a breaker for a future EV charger, and then typically running conduit from that panel to an exterior

1788 location. I think going an extra step to putting in a 240 1789 volt outlet where you could plug in an EV would probably add 1790 somewhere to in the 500 to \$600, you know, range per house if 1791 we wanted to go that extra step. I don't think it is 1792 necessary to actually add an EV charging station, which can 1793 be quite expensive.

*Ms. Matsui. So you can just go and do the wiring and 1794 conduit, and leave it at that. And they will just -- if they 1795 want to do that, just an extra \$500 more. Okay, thank you. 1796 So studies by DoE and RMI have found that retrofitting a 1797 1798 house to install an EV charger can be several times more expensive than doing the wiring during the initial 1799 construction. So that is where, when you are building a 1800 house, if you would just do that at that point in time, it 1801 1802 would be great.

So let me just say that many energy efficiency measures are much cheaper to install -- and you have already said that before -- during construction, rather than doing it to improve energy efficiency after the home is built. So the cost added, if you didn't do that and you built a home without having that happen, would be much more expensive.

1809	And I see that I lost my time, gone over my time. Thank
1810	you very much.
1811	I yield back. Thank you.
1812	Thank you very much, Mr. Howard.
1813	*Mr. Pfluger. [Presiding] The gentlelady's time has
1814	expired. The chair now recognizes the gentleman from
1815	Alabama, Mr. Palmer.
1816	*Mr. Palmer. Thank you, Mr. Chairman.
1817	Mr. Howard, how many of these homes have you built,
1818	these smaller homes?
1819	*Mr. Howard. I am working on an 11-unit community right
1820	now, and
1821	*Mr. Palmer. How many have you built in total?
1822	*Mr. Howard. So in my past experience with
1823	*Mr. Palmer. How many are complete?
1824	*Mr. Howard Habitat for Humanity
1825	*Mr. Palmer. How many are complete this you said the
1826	size is about 1,000 square feet.
1827	*Mr. Howard. Anywhere from 800 to 1,400 square feet.
1828	Yes, sir.
1829	*Mr. Palmer. Okay. So how many have you completed?

1830 *Mr. Howard. Yes, if you included my Habitat experience, over 100 houses. 1831 1832 *Mr. Palmer. Okay. You realize that that size is about what it was during the Great Depression. So you want to get 1833 more people into smaller homes to -- because of climate 1834 1835 change? 1836 I mean --*Mr. Howard. So yes. I am not suggesting that that 1837 size home is appropriate for every family, but these are 1838 1839 intended to serve primarily one and two-person households. 1840 *Mr. Palmer. Yes, well, it sure comes across from some of the questions and responses that that is where you are 1841 heading with this, and maybe it is part of an agenda to 1842 reduce family size, I don't know. But I have got a couple of 1843 1844 other questions. Mr. Casper, every time I hear the Biden Administration 1845 talk about a new policy that is going to save families money, 1846 I immediately suspect that prices are going up. And the 1847 elimination of natural gas, having worked in a couple of 1848 international engineering companies, having been involved in 1849 home building at different levels, I understand that natural 1850

1851 gas is critical to home building not just for appliances, but 1852 for kiln-dried lumber, kiln-dried brick. Can you comment on 1853 that?

*Mr. Casper. Yes, I can. You know, our consumers are industrial, commercial. I will just give an example of a manufacturer who is wanting to expand, wanting to make sure that he had reliable electricity specifically in Illinois to be able to continue to produce, and then plus natural gas because he wanted to bring a heat-treating system into the -into his manufacturing, as well, or expand on it.

And so it is critically important that -- not only from a fuel diversity, which, in my -- which I always say equals reliability, that is important not only for the production of these products from the housing industry, but any type of manufacturing across the board.

*Mr. Palmer. From an engineering perspective -- and Mr. Bonnell, Mr. Woods, you -- either one of you can respond to this, but in terms of strength and reliability, and in terms of the quality of the building materials, do you prefer airdried brick or wood compared to kiln-dried brick or wood? *Mr. Bonnell. So we -- our company, as well as

manufacturing drywall, a sister subsidiary manufacturers clay 1872 brick. Air-dried clay brick is not feasible from any sort of 1873 1874 reasonable manufacturing schedule in terms of moving volume through. So what would happen would be a much diminished 1875 throughput, constraining the amount of product --1876 *Mr. Palmer. So you diminish quality. 1877 *Mr. Bonnell. Likely diminish quality. I would have --1878 I am not a clay brick expert, but likely. 1879 *Mr. Palmer. Yes. Mr. Woods? 1880 *Mr. Woods. Yes, we definitely -- all of our lumber 1881 1882 that we are using is kiln-dried lumber. I mean, we haven't even --1883 *Mr. Palmer. Even with kiln-dried lumber, you call out 1884 quite a bit because some moisture remains, results in warping 1885 of the woods. Is that correct? 1886 *Mr. Woods. Yes, that is correct. 1887 *Mr. Palmer. It would be very difficult for other wood 1888 products like plywood and particle board and things like 1889 that, if it were not adequately dried. Wouldn't that be 1890 1891 correct? *Mr. Woods. That is correct, yes. 1892

*Mr. Palmer. Yes. That is the problem with some of my 1894 -- some of the folks in the Biden Administration. They have 1895 never -- you know, they are not familiar with building 1896 science, they are not familiar with engineering. They have 1897 science degrees. The bad news is it is political science.

1898 Mr. Chairman, I yield back.

1899 *Mr. Duncan. [Presiding] The gentleman yields back. I 1900 now go to New York's Mr. Tonko for five minutes.

1901 *Mr. Tonko. Thank you, Mr. Chair.

The reality is energy insecurity has been a longstanding 1902 issue faced by millions of Americans. In both 2015 and 2020 1903 the Energy Information Administration found that more than a 1904 quarter of U.S. households reported difficulty paying energy 1905 1906 bills or keeping their home at an unsafe temperature because of energy cost concerns. Millions of Americans forgo food 1907 and medicine to pay their energy bills, so I appreciate my 1908 Republican colleagues' concerns about affordability. And I 1909 would encourage us to come together to support programs that 1910 benefit the most vulnerable Americans because I agree with 1911 Mr. Wood's testimony about the importance of retrofitting 1912 existing homes. 1913

1914 Luckily, there are effective Federal programs to support Americans struggling with home energy affordability, such as 1915 1916 LIHEAP and the Weatherization Assistance Program. Buildings receive weatherization services and save -- their owners 1917 save, on average, \$372 every year, not to mention the 1918 benefits of living in a healthier and more comfortable home. 1919 So if we really want to address energy affordability, I hope 1920 we can give proper attention and support to the programs with 1921 proven track records to upgrade existing homes. 1922

And the reasons these major cost savings are possible is because these homes can be incredibly expensive to own, operate, and maintain, often because they were built at a time with no or weak minimum energy codes to ensure cost effective operation.

So Mr. Howard, you discussed in your testimony that upfront home costs are just one of several factors that should be considered when determining home affordability. When you are building a home, how much do you consider how certain features will make homes more affordable to own and operate?

1934 *Mr. Howard. It is a huge focus for me, personally,

primarily because of my background with Habitat for Humanity. 1935 It is a -- again, the way I look at it is not just about the 1936 1937 first cost. We have to make sure that the home is not only affordable to buy, but also affordable to own and operate. 1938 So, you know, being very careful with our choices, you 1939 know, in the building process, and making sure that, you 1940 know, we are doing the very best that we can at the time we 1941 build the home to ensure that it remains an affordable place 1942 to live long-term. 1943

1944 *Mr. Tonko. And I assume you bring that to your 1945 customers' attention.

1946 *Mr. Howard. Absolutely.

Mr. Tonko. And how do you decide which of these features to include in any home that you are building? Mr. Howard. It is always a cost benefit analysis. So, you know, we are trying to find building technologies or building materials that are the most cost-effective, but also achieve, you know, the greatest results.

Mr. Tonko. Right. Mr. Howard, you said you see energy codes as a minimum floor. Let's talk about how we can raise that floor for all American consumers.

Recently, HUD and USDA announced that new homes financed by those agencies would need to meet stronger minimum energy codes, the 2021 International Energy Conservation Code. Mr. Howard, do you believe raising this floor from the 2009 code which had previously been required to the 2021 code will

1961 deliver significant savings?

1962 *Mr. Howard. Yes, absolutely.

*Mr. Tonko. These agencies agree, finding that 1963 residents of single family homes would save, on average, some 1964 \$963 every year on energy costs. And this tracks with 1965 analysis by the Pacific Northwest National Laboratory of 1966 North Carolina's decision to move from the 2015 IECC code to 1967 the 2021 version. The Lab's experts found households will 1968 save almost \$400 annually on energy bills, and will pay back 1969 the upfront cost increases within a matter of a few years. 1970 So over 30 years this update will save, I am informed, North 1971 Carolinians over \$5.3 billion in energy costs. I think that 1972 is worth achieving. 1973

1974 So with that I thank you for your testimony and I thank 1975 you, Mr. Chair, and yield back.

1976 *Mr. Duncan. The gentleman yields back. I will now go

1977 to Texas, Mr. Weber, for five minutes.

Mr. Weber. Thank you, Mr. Chairman, and I am sorry I had to be late. I had meetings with other people so I didn't get to hear a whole bunch of this. But I have got these -you all's information in front of me.

1982 Mr. -- is it Bonnell or --

1983 *Mr. Bonnell. Bonnell.

Mr. Weber. Bonnell? Okay. Throughout this Congress Republicans have been fighting for affordable, reliable, and dispatchable energy sources to remain as baseload power for our grid. Before I actually get into my question, I want to make a few comments.

You all watched that, under the current President, he 1989 came out with a transportation infrastructure bill to build -1990 - to put 500,000 electric vehicle charging stations around 1991 the country, okay? We don't have the grid right now to 1992 support what we have got right now. So if I can be funny for 1993 a minute, I said I saw a survey last week that said 90 1994 percent of all electric vehicles are still on the highway 1995 today; the other 10 percent made it home safely. Some of you 1996 all will figure that out later. 1997

So you have been -- you know that Republicans, Mr. Bonnell, have been fighting for affordable, reliable, and dispatchable energy sources to remain as a baseload power for our grid. If we don't get our grid geared up, or electrified -- or powered up, probably, is a better term -- we are going to be in a "meck of a hess'' if we do build those 500,000 electric vehicle charging stations.

As you wrote in your testimony, the sun doesn't always shine -- I try to tell my friends across the aisle the sun goes down at night -- and the wind doesn't always blow, which means renewables are not always going to contribute to the grid. Your company's plant in Las Vegas has experienced, according to you, a 248 percent increase in the cost of gas and electricity.

I owned an air conditioning company for 35 years. We watched subdivisions get built, we watched homes get calculated for the amount of energy they would need, whether it was going to be heat pumps, whether it was going to be electric heat. And -- you know this -- electric heat is the highest cost of heating a home, because it is a dead short between 2 lines of 120. You all know those electric heating

2019 homes.

2020 Mr. Woods, you probably know that, too. I put in a lot 2021 of systems back in the day.

2022 So you have a 240 percent increase in the cost of gas 2023 and electricity. Can you speak to how reliable -- unreliable 2024 energy markets actually affect the market construction on new 2025 homes? Can you speak to that for a minute, Mr. Bonnell? 2026 *Mr. Bonnell. So the -- I can speak to it from my 2027 perspective and my building materials.

The average home consumes approximately 10,000 square feet of wallboard. And the average cost increase -- if we did not have a reliable grid, number one, but also reliable energy in the form of natural gas. The numbers that you are currently seeing, that 10,000 square feet of wallboard roughly would cost -- it depends on your market, I suppose, but maybe, you know, \$1,000 to \$2,000 for the home.

If we did not have reliable energy, the question was posed to me, "What about using electrical grid right now to dry our products?'' That number would be more like 4,000 to \$5000 or more. And you can take the same case for the asphalt roofing. It would more than double this.

And you know, I think one of the points that I would like to make is that, though there will be more strain on the electrical grid if we follow some of these mandates, what are we going to do to replace the 46 percent of electricity that is currently generated by natural gas?

*Mr. Weber. Well, we will be -- that will be a problem. We will be looking at that. But as a builder, you are looking for cheaper materials. Are you looking outside -are you forced to look outside the country for cheaper materials?

Mr. Bonnell. We are a U.S. manufacturer, and proudly so, and we want to stay that way. So I would say no, we will not source from the outside. We will -- you know, we will find a way to make the products as best we can. But quite frankly, if we are not economically attractive, our products are largely commodity products.

2056 *Mr. Weber. Sure.

2057 *Mr. Bonnell. And they won't be bought.

Mr. Weber. Well, I built a home for my beautiful bride in 1992, a 4,000-square-foot home in Friendswood. I am in Pearland, Texas. I put three air conditioning systems in it.

I was the architect, basically, and we went from 2x4 walls to 2062 2x6 walls. Instead of half-inch sheathing with foil back on 2063 the outside, I put one-inch sheathing with foil on each side. 2064 Some of you all remember the old cordless phones they came 2065 out with in the 1990s? They said you could get away 900 feet 2066 outside the house from the base? Not in my house, you 2067 couldn't. It was wrapped in foil and aluminum.

So people need to be able to do the things that are the best for their homes. And local codes mean something, local control means something. And for this Administration or anybody else to want to say that government needs to tell you how to do things best is ludicrous.

2073 Anyway, I am out of time, and I am going to leave it 2074 there and yield back.

2075 Mr. Chairman, I yield back.

2076 *Mr. Duncan. The gentleman yields back. We will now go 2077 to Ms. Castor from Florida for five minutes.

2078 *Ms. Castor. Great, thank you, Mr. Chairman.

2079 Building energy codes save money. They pay for

2080 themselves, they help lower electric bills. And I really

2081 regret that my GOP friends in this committee have wasted so

2082 much time this Congress on trying to scare people into believing that energy efficiency is bad, because the American 2083 2084 people are a lot smarter than that. They like energy efficiency, they -- it is popular. They like lower electric 2085 bills, they like energy efficient appliances and buildings. 2086 And when the Democrats drafted the Inflation Reduction 2087 Act, we recommended some new policies to help people save 2088 money and cut pollution at the same time, because buildings 2089 are the source of about 40 percent of climate pollution in 2090 our country. So we did a few things to cut cost and cut 2091 2092 pollution. One was these new incentives for states and local communities to adopt to update building energy codes. The 2093 other was tax incentives. And if you don't know about these, 2094 you might want to write them down because they are real money 2095 back into your pockets. 2096

Under the 25C tax credit, that is the Energy Efficiency Home Improvement Tax Credit, up to \$2,000 per year each calendar year if you -- for renovations or an existing home for a new heat pump or air conditioner. And that tax credit is available through 2032.

2102 Then the 179D tax credit, that is the Energy Efficiency

Tax Credit for Commercial Buildings. That is a deduction based on square footage to make it easier for owners to qualify for larger tax deductions for HVAC systems and facades, walls, lighting upgrades.

And 45L was expanded. That is the Energy Efficient Home Tax Credit that helps builders, developers, and contractors with new construction and renovation. That is up to \$5,000 per year.

2111 And then additional cost savings through rebates, 2112 through weatherization of homes.

2113 And then one here that is at issue is helping local 2114 communities and states update cost saving building codes.

And just so it is on the record, when local communities and states do this, it is voluntary. So any implication that this is a Federal mandate is completely wrong.

But what has also been missing from this discussion is also the rising costs of the climate crisis. The climate changes we are experiencing right now are dangerous. They are intensifying. They are driving up the cost of property insurance. They are driving up the cost of flood insurance and electric bills. And these are real considerations when

you are trying to afford the purchase of a home. 2124 So if the committee wanted a serious hearing on the 2125 2126 rising cost of home-buying in America, we would be talking about skyrocketing property insurance, especially in Florida. 2127 I just pulled up this news article: "Home insurance 2128 rates are expected, on average, to increase 6 percent in 2129 2024, could jump as high as 23 percent in states with severe 2130 weather.'' That is making 30 percent of Americans very 2131 nervous. In Florida we are already paying more than 4 times 2132 the national average for home insurance, and early forecasts 2133 2134 are for a hyperactive 2024 Atlantic hurricane season that could bring more rate increases into 2025. And what is 2135 driving that is the burning of fossil fuels. 2136 2137 So we have just got to be a whole lot smarter here, and not focus on some shiny object that you think energy 2138 efficiency is driving up costs. It is a whole much larger 2139 picture. And I am not even going to get into the health cost 2140 2141 or the cost of all of these natural disasters on the bottom line of the Federal budget. We just need to keep working to 2142

2143 lower pollution and lower energy costs for families and 2144 tackling the climate crisis.

2145 But I do want to end on an optimistic note. It is not all doom and gloom. We have a lot of the solutions. Mr. 2146 2147 Howard, what innovations in home building are exciting to you? What have you seen in just the past few years that give 2148 What do you see on the horizon to help make 2149 vou hope? families -- their homes more resilient and more efficient? 2150 *Mr. Howard. Yes. I quess, as you heard, I spent a few 2151 years in the HVAC industry working for Mitsubishi Electric. 2152 And, you know, that is just one example of a manufacturer 2153 that has come a long way on cold climate heat pump 2154 2155 technology.

Ms. Castor. It is kind of a funny word, "heat pump,"
because in Florida we say air conditioner. And heat pump, it
is not a great connotation, but these are cooling units.
Mr. Howard. Absolutely, yes. You are getting heating
and cooling.

And you know, the beauty of -- or the magic, I guess, of a heat pump is that you are not making heat, you are just moving it from one place to another. So in Florida we are going to take it out of your house and dump it outside. *Ms. Castor. Yes.

*Mr. Howard. Yes, so I think heat pump, you know, technology, as you heard me say in my testimony both in terms of the space conditioning, water heating, a heat pump dryer that doesn't require a vent to the outside, it is a condensing dryer.

2171 So yes, I think, in my opinion, those are some of the 2172 great strides we have made in construction technology to help 2173 us continue to reduce our energy bills.

*Ms. Castor. Thank you very much.

2175 I yield back.

2176 *Mr. Duncan. The gentlelady's time has expired. I will 2177 now go to the crossroads of America, Indiana's Mr. Pence.

*Mr. Pence. Where we are having the Indy 500, Mr.

2179 Chairman, this weekend. Thanks for holding this committee 2180 hearing, and Ranking Member DeGette for holding this, and all 2181 of you all for being here.

I am not going to explain to you theoretical stuff. I spent my entire career in distributing petroleum product, or getting energy where it needed to be, when it needed to be, in the quantities it needed to be. And so my approach on this committee back home has been to put together a

2187 roundtable and talk to people about the implementation of the mandates that come out of the Administration. 2188 2189 I have gotten the State of Indiana, utilities, distributors, researchers in universities, Purdue Vincennes, 2190 parking mobility experts, charging station developers, and 2191 had them all come together. And I recently heard from energy 2192 companies, energy transmitters, and housing developers that 2193 say that if one or two more homes in their developments 2194 install EV charging stations, they will need new transformers 2195 to power the neighborhood. 2196

Now, I bring that up, that is kind of a simple -- people have probably -- you have probably already talked about the transmitter -- transformer issue out there. But all I hear about is they can't do -- we can't get the energy there into the neighborhoods where it needs to be, whether I am talking to MISO in my area or people that need to buy the transformers.

And here is a new one I want to ask each one of you about. Have you heard this one? Insurance companies are dropping homeowners' insurance where they are putting EV chargers in the homes.

2208 Mr. Bonnell, have you heard that one? *Mr. Bonnell. I have not heard of that. But in the 2209 2210 State of California you are lucky if you are keeping your home insurance right now. 2211 *Mr. Pence. Why is that? Tell me that. 2212 *Mr. Bonnell. Well, I think the insurance companies are 2213 moving out in force is what has happened. They are pulling 2214 their willingness to insure. I know this personally. 2215 *Mr. Pence. For other reasons? You know this 2216 2217 personally? 2218 *Mr. Bonnell. I know this personally. We just lost insurance coverage on our house in Thousand Oaks, California, 2219 and we are forced to go into the tertiary, third-party market 2220 2221 and absorb a 50 percent price increase just to have it. So to answer your question, you know, I think what most 2222 people point to is the severe wildfire issues that --2223 *Mr. Pence. Which have a lot to do with the power lines 2224 2225 and --*Mr. Bonnell. Right. 2226 *Mr. Pence. -- the inadequate transmission. Correct? 2227 *Mr. Bonnell. That is absolutely true. It also has to 2228

2229 do with a state who, I think with right intentions, tried to limit insurance companies' ability to charge. And instead of 2230 2231 being able to raise rates to meet the risk, they are simply just not insuring. 2232 *Mr. Pence. Well, then, we should have more mandates. 2233 That, obviously, helps. 2234 2235 How about Mr. Woods? Have you heard about the insurance 2236 debacle? *Mr. Woods. I have heard of people losing their home 2237 insurance due to fires caused by EV chargers inside their 2238 2239 homes, yes. *Mr. Pence. Any sense of what type of charging 2240 stations? 2241 *Mr. Woods. I don't know --2242 *Mr. Pence. I even heard -- and I think it was one of 2243 my peers told me about -- their neighbor put in a charging 2244 station, and their charging station at their house heated up 2245 2246 in their carriage house. There was an effect which -probably a transformer issue, right? 2247 So these building mandates that you have to put them --2248 put certain things in, even water -- the more they are going 2249 115

2250 to demand electricity, the more problems we are going to 2251 have. 2252 Have you heard that that is a fact, they have dropped 2253 insurance? *Mr. Woods. I have heard of -- yes, I have heard of 2254 fires in houses where people have lost their insurance 2255 because of it, and it is because of an EV charger inside the 2256 2257 home. *Mr. Pence. Mr. Howard? 2258 *Mr. Howard. No, to be honest, I have not heard that. 2259 2260 I mean, I have been driving electric vehicles for almost 10 years, and I have had home charging stations for that entire 2261 time. And it has never been an issue for my insurance 2262 company. 2263 *Mr. Pence. Good. 2264 2265 Mr. Casper? 2266 *Mr. Casper. Yes. I have not heard that, but we are 2267 electric distribution cooperative, as well as natural gas, and we are seeing the strains on the grid system, 2268 specifically the distribution system. 2269 You think about -- you have one transformer you 2270 116

mentioned that might supply five different homes in a 2271 particular community, and then you might have another one 2272 2273 down on the next pole that is serving. *Mr. Pence. Yes. 2274 *Mr. Casper. So if everybody put five EVs, and then --2275 again, you would have to have a --2276 *Mr. Pence. Yes. I had a local utility said if 2277 somebody else puts another EV in this neighborhood, 2278 everybody's power is going down. 2279 2280 *Mr. Casper. Yes. 2281 *Mr. Pence. And, of course, that -- I know of these big boxes, where they are putting them on the interstate and --2282 where there is not enough energy coming to that location to 2283 actually do -- so these mandates for building codes make no 2284 sense because we don't have the ability to get the energy 2285 there. 2286 And with that, Mr. Chairman, I yield back. 2287 *Mr. Duncan. The gentleman yields back. Dr. Schrier is 2288 recognized for five minutes. 2289

2290 *Ms. Schrier. Thank you, Mr. Chairman.

I would like to take a moment to just get into the nitty

2292	gritty of the cost benefit analysis, and I wanted to enter
2293	into the record a study published by the Pacific Northwest
2294	National Laboratory, PNNL, on the cost effectiveness of the
2295	residential provisions in the 2021 IECC, or International
2296	Energy Conservation Code, standards. Would that be all right
2297	to enter that into the record?
2298	*Mr. Duncan. Without objection, so ordered.
2299	
2300	
2301	
2302	[The information follows:]
2303	
2304	********COMMITTEE INSERT********
2305	

2306 *Ms. Schrier. Thank you. Thank you, Mr. Chairman. Well, with every release of the International Energy 2307 2308 Conservation Code, the IECC, Department of Energy commissions PNNL to conduct this robust analysis on the cost 2309 effectiveness for both commercial buildings and residential 2310 homes, and how it compares to the previous standard. 2311 And importantly, this particular study in 2021 took a 2312 fuel-neutral approach. So it looked at natural gas, it 2313 looked at fuel oil, electricity, including heat pumps, in 2314 that electricity -- heat and cooling as all possible sources 2315 2316 for different ways of heating and cooling. The study concluded that homeowners, over a 30-year period in every 2317 domestic climate region, will see a net cost benefit. And 2318 that is factoring in construction costs, new building 2319 materials, interest rates, and more. 2320

I will also say, because I know that different areas are different, but -- that these savings were returned on average within 10-and-a-half years. So that means that over a typical 30-year mortgage, homeowners make back those savings and then continue to enjoy those savings for the next 20 years when, without a doubt, energy costs will be much more

2327 expensive.

So we have had a PNNL study like this one for every new IECC standard since the -- since in 2006, when they started doing these evaluations and these standards. And every one of these studies by PNNL has shown the same trend: lowered costs overall for the homeowner.

2333 Mr. Howard, you have already answered my first question 2334 about what you have been seeing on the ground, and so I 2335 thought I would just follow up on that question, because you 2336 are talking about a 6,000 or \$7000 increase, and then we are 2337 hearing from the National Association of Homebuilders about a 2338 \$30,000 increase. And I was wondering if you could just talk 2339 about why there is this big difference.

Mr. Howard. Yes, I mean, I can only speak from
personal experience, but it is hard to fathom how there could
be that large a gap, you know, between those estimates.

I mean, certainly, as we have talked about already, depending on where you are building in the country, you know, costs are going to vary. But yes, I don't see how there could be that great a discrepancy, which, you know, certainly causes you to question the numbers.

2348 *Ms. Schrier. Now, I am also curious because you build homes for Habitat for Humanity. I am sure that you have to 2349 2350 think about what is the most impactful change that you could make to get the biggest bang for your buck. And I was just 2351 wondering if you could tell me, you know, kind of a couple 2352 thoughts, not necessarily in perfect order, but what -- as 2353 homeowners are thinking about it, they are building a new 2354 home, what should they do, top to bottom, what are the most 2355 impactful things in order? 2356

Mr. Howard. Yes, sure. The same way I would, you know, talk to my building science students at App State, we are primarily focusing on the building envelope, and trying to make improvements to that because, as I mentioned earlier, those are difficult changes to make for a homeowner down the line.

2363 So increasing levels of insulation, where that makes 2364 cost effective sense, as well as air sealing details, better 2365 windows, better doors, all those things impact the overall 2366 ability of that home to preserve heat in the wintertime or 2367 reject heat in the summertime.

*Ms. Schrier. Thank you. Those are all changes we have

improved in our own home. The next change we are going to make is probably changing our gas stove to an induction stove. And so we did a little looking there, and really did not find that the induction stove was much more expensive. So I think that will be a great pay-off, especially in the Pacific Northwest, where electricity prices are notoriously lower than the rest of the country.

2376 So I want to thank you for what you are doing and for 2377 taking that conservation into account when you are building 2378 these homes, and looking out for people's health and for 2379 their pocketbooks.

2380 Thank you, I yield back.

*Mr. Duncan. The gentlelady yields back. I will now goto Mr. Allen from Georgia for five minutes.

Mr. Allen. Thank you, Chair Duncan, for holding this important hearing, and I want to thank the witnesses for being here today.

I come from the construction business. You know, building concrete has doubled in cost in the last three years. That wasn't caused by building codes. That was caused by terrible energy policy, and it cost twice as much

2390 to develop neighborhoods today. And guess what? We can't 2391 develop neighborhoods because we can't get transformers 2392 because of this new rule on transformers.

So I think what we are talking about here today, I mean, they are talking about some savings down the road. I am telling you the American people are priced out of just about everything today, whether it be groceries -- I don't care what it is. And when you put out rules to substantially reduce a major portion of our economy and it drives up prices, people are going to suffer.

2400 And what I want the American people to understand is where this is coming from. The reason we are holding this 2401 hearing today is because there are several rules that are 2402 driving certain HVAC principles, you know, the gas, the heat 2403 pumps. I am going to tell you. A gas heat comes on, it will 2404 heat your house. That gas heat will run about five minutes. 2405 That heat pump is going to run for hours to heat the same 2406 2407 house. And you got one motor running, running 120 volts, and yet we have no idea where we are going to get the electricity 2408 to do all these things that this Administration is talking 2409 about. They have no idea what the future holds. 2410

I will tell you who does have the idea is the people 2411 sitting here, the people in the business. The free market 2412 out there understands the repercussions of these policies. 2413 And we are all sick of it. 2414 2415 Mr. Woods, can you talk about some of the issues in the 2021 IECC, particularly with the International Code Council 2416 2417 process? Is this 2021 code more expensive than previous energy 2418 code editions? Can you talk about that a little bit, what it 2419 is --2420 2421 *Mr. Woods. Yes --*Mr. Allen. -- what it is doing to you? 2422 *Mr. Woods. Yes. I mean, I think we have heard today 2423 from both sides that the 2021 energy code is more expensive 2424 to build, no matter how you shake it. From \$8,000 to 2425 \$30,000, it is more expensive to build, which, in my opinion, 2426 is unfortunate when everybody has agreed too that 2427 affordability of homes is the issue. 2428 *Mr. Allen. Yes. 2429 *Mr. Woods. So why, if affordability of the homes is 2430 the issue, are we talking about raising prices at all? 2431 We

2432 should be trying to figure out how to reduce the price of the 2433 house so that people can get into it.

My customers have had for years options to upgrade the energy efficiency of their home, and I can't tell you how many we have sold, but it is 1 or 2 in 200 homes is what we sell. So one to two percent --

2438 *Mr. Allen. Right, right.

2439 *Mr. Woods. -- buy energy upgrades; they choose other 2440 upgrades.

*Mr. Allen. The upfront cost associated with complying with it, how long does it typically take for homeowners to see a return? Like, they are talking about these down-theroad savings, you know. Will anybody ever benefit from that? I mean, how long have you got to live?

Mr. Woods. Well, I think that is the thing. I mean, we are talking about energy savings that are -- I think it was said -- 10 years. It has been said 20 years. Most people live in their house seven years. So they are never going to get it back. In my opinion, it never pays back. *Mr. Allen. Yes.

*Mr. Woods. Because in my home that I had the energy

code ran on, it was \$125-a-year savings, but it cost \$860

2454 more for the mortgage a year.

2455 *Mr. Allen. Right.

2456 *Mr. Woods. That never pays back.

2457 *Mr. Allen. Yes, yes.

Mr. Bonnell, you mentioned since 2010 green energy policies have been a significant driver of energy costs, and this has -- in turn, impacts construction costs. How do you -- you know, like, there is a lot of volatility in pricing today. How are you dealing with that?

*Mr. Bonnell. The two methods we really have available to us are looking at buying futures, gas strips, which cost typically much more than the daily spot market, but you are protecting against future volatility and spikes. So that has a raising of the baseline effect.

The other method, quite frankly, that we have used is curtailing production. And in a commodity business, when less product is available in the marketplace, prices go up. It is pretty simple.

2472 *Mr. Allen. Well, it is obvious that the, you know, the 2473 EPA and their requirements, like the gas stove -- I had, you

know, never in my wildest imagination did I think I would stand on the House floor and defend my wife's gas stove. And we won. We won that battle, and we will win other battles, and -- because this nonsense has got to come to an end. Thank you very much, and I yield back.

2479 *Mr. Duncan. The gentleman yields back. Mr. Cardenas,
2480 you are recognized for five minutes.

2481 *Mr. Cardenas. Thank you very much, Mr. Chairman, and 2482 thank you for holding this hearing. And also to Ranking 2483 Member DeGette.

2484 Gas stoves?

Prior to coming to Congress I was fortunate enough to 2485 serve my community as a Los Angeles city councilman for 2486 nearly 10 years. During my tenure I sat on the Housing 2487 Community and Development Committee which oversaw housing. 2488 Having significant experiences dealing with building codes, I 2489 was concerned by my Republican colleagues' March 27 letter to 2490 2491 Secretary Granholm which seems to suggest that the Department of Energy's Building Code Grant programs are mandates. 2492

2493 Either Republicans have completely misunderstood how 2494 building codes work, or they are pushing forward a blatant

2495 misinformation. Let me be clear. The Department of Energy does not mandate new minimum building energy codes for 2496 2497 communities, states -- and states voluntarily adopt them. Luckily for the states and localities that would like to 2498 do so, congressional Democrats and the Biden Administration 2499 have worked to deliver support. The Bipartisan 2500 Infrastructure Law provided \$225 million to help states, 2501 tribes, and local entities implement updated building energy 2502 codes. 2503

2504 Similarly, the Inflation Reduction Act established the 2505 assistance for latest and Zero Building Energy Code adoption 2506 programs which provides \$1 billion for states and local 2507 governments to adopt and implement the latest building energy 2508 codes.

2509 Mr. Howard, can you speak to how choice is embedded into 2510 these grant programs, and how, once awarded, these programs 2511 support the localized needs of communities?

2512 *Mr. Howard. Yes. Again, I can speak to my experience 2513 in North Carolina.

2514 So I think it is important to point out that there is 2515 both a prescriptive path and a performance path to code. And

I think most builders, including myself, have historically utilized the -- only the prescriptive path. But what I have found through building homes to the Zero Energy Ready Home Standard and working with my Home Energy rater, HERS rater, is that we can actually utilize the performance path and often find savings that way.

2522 So in essence, build the home for less money because we 2523 are using a performance path, and we can sort of fine-tune or 2524 tailor that path to make sure that it is a more cost-2525 effective house at the end of the process.

*Mr. Cardenas. Isn't it a business practice in almost every industry to look at initial cost and long-term stranded costs, and then look at cost expenditures and savings on the front end, but also extrapolate out whether it is cost beneficial to save money throughout time?

Mr. Howard. Of course. You know, we want to make sure that, you know, we are making good decisions, you know, based on trying to keep the home affordable to buy on the front end, but also making sure it is affordable to own and --*Mr. Cardenas. So actually, saving on ongoing monthly

costs for 3, 5, 10, 20 years or longer can actually replenish

2537 whatever the upfront costs may have been in some cases. *Mr. Howard. Absolutely. 2538 2539 *Mr. Cardenas. Okay. Thank you. So to be clear, this is a one-size-fits-all approach, or do states and local 2540 entities have the flexibility to adopt codes that best suits 2541 their needs? 2542 2543 *Mr. Howard. Yes. *Mr. Cardenas. Yes, as in is it a one-size-fits-all, or 2544 is there flexibility where local -- excuse me, local users 2545 can benefit by using flexibility? 2546 *Mr. Howard. There is a lot of flexibility in the code. 2547 So can I give an example? 2548 *Mr. Cardenas. Please do. 2549 *Mr. Howard. So one of the examples that Mr. Woods gave 2550 earlier was the requirement in certain climate zones to go 2551 from what might have been R38 or R49 to R60 in the attic. 2552 And certainly --2553 2554 *Mr. Cardenas. You are talking about insulation? *Mr. Howard. Yes, sir, yes. So if you are building a 2555 -- stick-building a roof, and trying to put R60 in that, that 2556 is going to be very difficult, to his point. But there are 2557 130

2558	essentially options in the code that allows you to back that
2559	down to either R49 or even R38 in some cases.
2560	So as you stated, there is certainly some flexibility in
2561	there, and it is it doesn't even require some special
2562	exemption. It is literally written into the code.
2563	*Mr. Cardenas. Oh, so it is actually literally written
2564	in the code? Okay. Thank you very much.
2565	Can you speak about how the DoE grant programs
2566	established in the BIL and the IRA will help improve
2567	efficiency and, as a result, better ensure long-term
2568	affordability?
2569	*Mr. Howard. Again, I will speak from my own experience
2570	with the 45L tax credit.
2571	I mean, I was planning you know, I was already
2572	building to the Zero Energy Ready Home standard before 45L
2573	was renewed. But certainly, it is nice to have the tax
2574	credit to offset some of those additional costs to achieve
2575	that level of performance.
2576	*Mr. Cardenas. Okay. So there are benefits up front
2577	and long-term, especially.

2578 *Mr. Howard. Absolutely.

2579 *Mr. Cardenas. Okay. My time having expired, I yield back. 2580 2581 *Mr. Duncan. I thank the gentleman. Now I will go to Mr. Balderson from Ohio for five minutes. 2582 *Mr. Balderson. Thank you, Mr. Chairman. I appreciate 2583 you all being here today. And my first question will be for 2584 Mr. Bonnell and Mr. Casper. 2585 Just last week the North American Electric Reliability 2586 Corporation released their 2024 Summer Reliability Assessment 2587 that shows significant risk for supply shortfalls and power 2588 2589 outages across the country. The EPA's Clean Power Plan 2.0 will shut down existing reliable power generation and prevent 2590 new, natural-gas-fired power plants from being built. And at 2591 the same time, we are seeing record increases in demand on 2592 2593 the electric grid. Mr. Casper, you mentioned concerns with the impact the 2594 Department of Energy's rule will have on VA facilities and 2595 military bases. 2596

And Mr. Bonnell, you raised concerns about the strained electric grid, and increasing demand from AI and data centers.

2600 As I was coming to the door to ask my question I heard Congressman Weber brought up something on grid reliability, 2601 2602 and I would like to follow up on that and this rush -- the consequences of this rush to electrification. 2603 Mr. Casper and Mr. Bonnell, can you expand on the 2604 concerns you have listed with the Department's role on grid 2605 2606 reliability? And why is a reliable grid essential to your businesses 2607 and customers you serve? 2608 Mr. Casper, you may answer first. 2609 2610 *Mr. Casper. Yes, I can start. *Mr. Balderson. 2611 Thank you. *Mr. Casper. I mentioned earlier about a particular 2612 member consumer of ours in the electric as well as the 2613 natural gas who was concerned about the reliability in the 2614 Midcontinental Independent System Operating area. And the 2615 bigger picture of this is that direct use of natural gas, it 2616 is 90 percent or more efficient. When you are talking about 2617 generating additional electricity, it is going to be 2618 requiring additional natural gas to develop or to be able to 2619 produce the amount of electricity that is going to be needed 2620

2621 for this electrification that we are talking about today, whether it is homes, businesses, or commercial operations. 2622 2623 So when you are talking maybe 66 percent efficient at the top in converting that natural gas to electricity, in 2624 most cases, just on a simpler cycle, it is probably more like 2625 35 to 40 percent efficient. So you are talking three times 2626 more efficiency through a direct use of natural gas. 2627 *Mr. Balderson. Would like to follow up? 2628 *Mr. Bonnell. Yes. We are talking about a lot of 2629 things here today about improving efficiencies of homes, 2630 2631 which I think everybody probably in this room can agree that is a valuable exercise. What we should be talking about is 2632 where we are at today. And where we are at today, in the 2633 western half of the United States at least, is we are in a 2634 very strained energy position. 2635

I mentioned at the top of my testimony that in the last 10 years we retired 5,000 megawatts of coal production in the West. That has been supplanted with natural-gas-fired generation of electricity. We have strived to make renewables a big portion of our portfolio in California. I believe it is around 12 or 13 percent, maybe a little bit

higher, but they have a big problem in their interruptible nature. And what that means to our business is, quite frankly, is a very volatile cost situation.

And I used references to three times in the last four 2645 years that we have seen incredible pricing on natural gas 2646 which we use to make our products. At one point in 2023, the 2647 highest natural gas price on the planet -- on the planet, not 2648 higher than Europe, higher than the things that they have --2649 were experiencing over there during the Ukraine war, the 2650 highest on the planet -- that impacted Southern California 2651 2652 and Las Vegas. Those things make our products much more costly, and just simply adds to the cost of building a home. 2653 *Mr. Balderson. Thank you. 2654

Mr. Casper, I will go back to you again and I want to be conscious of our time here. I want to discuss the cost savings and affordability associated with natural gas. Mr. Bonnell kind of touched on it a little bit.

You mentioned that homeowners who have chosen to use natural gas appliances for heating and cooking can save an average of \$1,000 per year on their energy bills, compared to homeowners who use electric appliances. If the government

2663 takes away the option for natural gas and propane home hookups, how will our rural constituents be impacted, and 2664 2665 will it raise costs or lower costs? You have 20 seconds, please. Thank you. 2666 *Mr. Casper. Yes, no problem. We actually have an 2667 energy detective that we use. We evaluate this for our 2668 member consumers whether electric, natural gas, what is best 2669 2670 for them. But again, going back to fuel diversity equaling 2671 reliability -- and it is really a consumer choice of who and 2672 2673 what they want, or what that individual wants, whether it is the elderly or the low-income. And when I say elderly I 2674 2675 don't mean that from that perspective, but from a fixed 2676 income --*Mr. Balderson. My 84-year-old mother. 2677 *Mr. Duncan. The gentleman's time has expired, and I 2678 now go to Mr. Veasey for five minutes. 2679 *Mr. Veasey. I thank you, Mr. Chairman, and I know that 2680 it has been talked about already here before, but with the 2681 United States using so much of our electricity use towards, 2682 you know, building operations, and being a big part of the 2683 136

greenhouse gas emissions that we see in this country, and then when you think about, you know, all of the new devices that we are about to add onto the grid, when you think about the data centers and all of that energy that is going to be, you know, plugged in, we can see that our electricity pie is only going to grow. It is not going to get smaller any time soon.

And in a fast, you know, state that I live in, like Texas, that is literally just, like, growing, like, right before your eyes. It is amazing. We have new, little subdivisions and new towns popping up literally all the time. I do not exaggerate. And I know that our grid operator anticipates and ERCOT anticipates about 152 gigawatts of new load by 2030. That is a lot. That is a lot.

And so we are here today debating building energy codes that could provide Americans with about \$182 billion in energy savings and avoid about 840 million metric tons of carbon pollution by 2040, which is also a lot. I know that these codes are voluntary, and states can choose to adopt these model codes and can also decide whether their cities have the authority to adopt their own codes. And so I am

2705 trying to figure out why we shouldn't be tackling this2706 problem from both sides.

2707 And I want to ask Mr. Woods, on this topic of voluntary adoption, you say in your testimony that it is designed to 2708 serve as a model for state and local governments who can 2709 choose to adopt or amend the various provisions based on 2710 their localized communities. But then you go on to discuss 2711 the negative consequences of implementing a national energy 2712 code with no consideration for local conditions. And you 2713 conclude this passage with, "At a minimum, Federal policies 2714 and programs must provide sufficient flexibility and 2715 incentives.'' Isn't that exactly what the DoE is doing with 2716 IECC, or am I missing something here? 2717

*Mr. Woods. No, I respectfully say they are not. I 2718 mean, they have given grant funds to people to adopt the code 2719 unamended. Every code in my area has been amended for as 2720 long as I can remember until the 2021 energy code was adopted 2721 2722 unamended because they received grant money, and the hook was you have to adopt it unamended. That makes it to where they 2723 are not making choices, they are adopting the full code. 2724 *Mr. Veasey. I also wanted to ask -- I know that the --2725

about the cost estimates in your testimony. You know, I think that you said that the compliance can add up to about \$31,000 per home, but the American Council for an Energy Efficiency Economy says that claim is based on old speculation by home builders in one city about a proposed local update code. So who is right?

Again, is that true? Is it based on an old assumption there by one home builder?

Mr. Woods. Well, I think that, like we have said before, there is many different ways to build houses in the parts of the country. The \$31,000, I believe, came out of Kansas City, and I know it to be a true number. I am a builder in Kansas City that builds a much smaller house. My number is not \$31,000. It is 13,000 to 18,000 per house is what it costs me.

But as I said earlier, we have run projections on what the cost savings is for a homeowner on that same house by coming up to the 2021 energy code. It never pays them back. The extra money they are going to pay on a mortgage is more than they are going to save in energy. They are already strained to buy the house, so it doesn't matter what the

2747 energy costs are at the back end for them if they can't get 2748 into the house to begin with.

2749 *Mr. Veasey. Okay. I would also like to ask some of the other panelists to give some voluntary input on this. I 2750 know that DoE's response to the majority letter, it states 2751 that the DoE also does not mandate new minimum building codes 2752 for communities and that, rather, these funds assist states 2753 and units of local government with the authority to update 2754 building codes that voluntarily choose to update their 2755 standards. 2756

I wanted to ask in the brief time that is there, how do you all respond to that, especially those that are opposed to DoE's actions and the IECC?

We could just go from the left, and we will skip over Mr. Woods and make our way, please.

2762 *Mr. Bonnell. Congressman, building codes are not my 2763 field of expertise. I am a very rare breed. I am a 2764 manufacturer, so it would be difficult for me to answer 2765 those.

But I do think the issue at hand that we are all dancing around is affordability.

2768 *Mr. Veasey. Yes. *Mr. Bonnell. And we know that homes are not affordable 2769 2770 now. And what we are doing on energy policy, as well as what we are doing in code, is helping to drive that price up. 2771 *Mr. Veasey. Thank you. 2772 Thank you, Mr. Chairman. 2773 *Mr. Duncan. The gentleman yields back. We have one 2774 more congressman, Mr. Pfluger from Texas. After that, 2775 regardless of any members that come in, I am going to adjourn 2776 the committee due to committee to House floor votes. 2777 So Mr. 2778 Pfluger is last, and then we will adjourn. But, Mr. Pfluger, you recognized. 2779 *Mr. Pfluger. Yes, thank you, Mr. Chairman, and I thank 2780 the witnesses. 2781 2782 Mr. Casper, I think we will have a five-minute conversation here --2783 *Mr. Casper. We could. 2784 *Mr. Pfluger. -- and just spend my time talking with 2785 you, because what I am worried about just -- this is kind of 2786 a general theme that we have seen in the last three-plus 2787 years of this Administration. You have got these mandates 2788 141

2789 and you have these things that are happening, but yet I am kind of thinking about the science here, and the math, and 2790 all the ways that that is going to happen, whether it is an 2791 EV mandate or whether it is a ban on certain appliances or 2792 whether it is building codes and localities and 2793 municipalities that say you can't have natural gas hookups, 2794 and I am just trying to figure out in my head where the 2795 electricity is going to come from --2796

2797 *Mr. Casper. Yes.

2798 *Mr. Pfluger. -- and where the power is going to come 2799 from.

2800 So what I want to start with is in the coming 10, 15, 20 2801 years, maybe describe to us what you see, and how you see 2802 natural gas, the role that it is going to play throughout our 2803 country, demand-wise, and maybe give us a prediction of what 2804 demand for electricity looks like in the next 10 to 15 years 2805 in this country.

*Mr. Casper. Yes, I think that is a great question. So I just got back from gas supply conference, and we talked about these -- especially with AI and data centers, for example. So potentially, another 1.3 Chicagos being added,

and -- by 2030. Then beyond that it could be four times, 2810 four additional Chicagos for the electric load. 2811 2812 So yes, where is this electric power going to come from? We are struggling just in the Midwest to build a natural gas-2813 fired facility. And so I remember traveling in Texas in the 2814 early 2000s. They were building them left and right because 2815 you have natural gas, sufficient quantities of natural gas, 2816 which is pumped -- or distributed all the way up to our 2817 locations in the Midwest. And we utilize that natural gas 2818 for direct use of -- for our members, whether that is 2819 2820 manufacturing, commercial, or residential. *Mr. Pfluger. Is electricity demand going to increase 2821 in the U.S. in the next 10 to 15 years? 2822 And if so, what -- just what are the estimates you are 2823 hearing, just anecdotally? 2824 *Mr. Casper. Like I said, just data centers alone, 2825 potentially, for four additional Chicago loads --2826 *Mr. Pfluger. Four additional. 2827 *Mr. Casper. -- you know, one of our largest cities in 2828 the nation. 2829 *Mr. Pfluger. And what part of the -- how much of the 2830 143

pie will be serviced by natural gas? 2831 And is -- I mean, worldwide, is --2832 2833 *Mr. Casper. Yes. *Mr. Pfluger. -- are fossil fuel is going away? 2834 *Mr. Casper. So no, they are not. Forty percent of our 2835 natural gas currently that is being utilized here in the U.S. 2836 is being used for electric generation. I know Phil had 2837 mentioned up to 46 percent of electricity. On average, I 2838 think it is 43 percent across the nation last year, in 2023, 2839 that was utilized, natural gas to produce their electricity. 2840 2841 Now again, from efficiency standpoint, and I mentioned this earlier, we are looking at maybe 40 percent efficient 2842 and converting that natural gas to electricity. And -- where 2843 direct use of natural gas, you can get 90 percent-plus 2844 2845 efficiency from that same unit of natural gas. *Mr. Pfluger. Wow. When you think about the localities 2846 and municipalities, I mean, are you seeing this nationwide, 2847 where they are banning natural gas in one form or another? 2848 And then, if so, what is the impact on consumers, and 2849 what is the impact on those local economies and our larger 2850 American economy? 2851

2852 *Mr. Casper. Yes. Just from our smaller communities in northwest Illinois, again, it is about reliability. You have 2853 got to have -- and consumer choice, more than anything. 2854 When we sit down with our member consumers and we talk to them, we 2855 show them the energy assessments, we go over them with them 2856 -- we are a not-for-profit cooperative. We are not out to 2857 make a bunch of money off of one or the other. We want what 2858 is best for our member consumers, and it is their choice. 2859 And I mentioned earlier, you know, with fixed income 2860 folks, they will look at it and they will go, you know, I 2861 2862 don't necessarily can afford this heat pump, you know, for I would rather have, you know -- I am probably 2863 example.

2864 going to be in this house for another six years. I am not 2865 going to look 30 years out, for example.

*Mr. Pfluger. When you look at the policies that are in place, where will this put us? If we go down this road of banning natural gas hookups and appliances, mandating EVs, doing the things that have been done in the last three-and-ahalf years, where will that put us in our competition with other countries, China, Russia?

2872 *Mr. Casper. Yes.

2873 *Mr. Pfluger. What is the net effect? *Mr. Casper. Well, for example, I mean, of course, 2874 2875 China being one of our biggest competitors, they are building all types of generation facilities across the nation. 2876 We are only building renewables right now. And that is going to 2877 come back and bite us from a reliability standpoint, more 2878 than anything. And that is going to harm our economy in the 2879 2880 future. There is some transition in the future, but it is 20, 2881 2882 30, 40 years out. 2883 *Mr. Pfluger. Thank you to the other witnesses. Thank you for being here. 2884 And with that, Mr. Chairman, I --2885 *Mr. Duncan. The gentleman yields back. I want to 2886 thank all of our witnesses for being here today. 2887 Members may have additional questions which they will 2888 submit in writing. And we just -- they have 10 business days 2889 to do that. We ask you to submit the answers within 10 2890 business days. And I ask that witnesses to do their best to 2891 do that upon receipt of the questions. 2892 I ask unanimous consent to insert in the record the 2893 146

2894	documents included on the staff hearing documents list.
2895	Without objection, that will be the order.
2896	[The information follows:]
2897	
2898	********COMMITTEE INSERT********
2899	

2900 *Mr. Duncan. And without objection, the subcommittee
2901 will stand adjourned.
2902 [Whereupon, at 5:00 p.m., the subcommittee was
2903 adjourned.]