To:
House Committee on Energy and Environment
State of Colorado

Subject: HB22-1362

My name is Srinidhi Sampath Kumar and I am a Program Manager at RMI, formally known as Rocky Mountain Institute. Our headquarters are in Colorado. Our mission is to transform the global energy system to secure a clean, prosperous, zero-carbon future for all.

I'm writing in strong favor of the bill.

Over the last few years, I worked in affordable housing development and financing. I understand the ins and outs of proformas and the need for projects to pencil out especially in markets where the costs of construction are already high. One thing that I have consistently noticed is that climate progressive codes have supported developers to remain both first cost neutral and helped reduce long-term long-term utility and operations costs.

Colorado's buildings emit over **12 million metric tons** of greenhouse gases per year based on the GHG emissions inventory by the Colorado Department of Health and Environment—10% of statewide emissions. Building right from the start is critical both for the climate but also to improve the health, comfort and safety of residents especially lower-income residents of color. Building pollution disproportionately harms Coloradans of Color. According to a US EPA paper, on average, BIPOC Coloradans are exposed to **25% more** outdoor $PM_{2.5}$ formed by residential methane gas combustion than White coloradans. Black Coloradans' exposure is **70% higher** than White coloradans.

While this bill does not require electrification, we must at the least start planning for solar-ready, electric ready buildings in the short-term. The climate crisis is at our doorsteps. As wildfires and extreme heat events are on the rise, our communities need to prioritize resiliency and safety. Besides, climate friendly, resilient buildings are more economical to build and maintain. From our own analysis, in Denver, an all-electric home saves about $3,000 in net present costs and 12 tons of CO2 emissions over a 15-year period. A mixed-fuel home has a higher up-front cost than the all-electric home, which uses the heat pump system for both heating and cooling. Over a million households would benefit from bill savings today, and these bill savings will only grow as utilities reform their rates and incentives to be climate-aligned. The average household in CO will save $296 on their energy bills based on an analysis from Rewiring

America. This is very much needed as lower income communities face very high housing and energy burdens.

The bill's allocation of $25 million dollars will provide workforce development opportunities. Being on this path, could create up to 4000 jobs, according to analysis by Rewiring America. Finally, we are pleased about the 25% allocation to low-income disproportionately impacted communities and request the bill authors to consider at least a 40% allocation, in line with the Justice40 initiative.

If this bill were to pass:
It will help create workforce development opportunities
It would lower the costs of construction
It will help residents and tenants that face high energy burden
It will help keep Colorado on its track to meet its climate goals

Stepping back, CO is not alone in this effort. We are seeing 12 other states move toward climate-aligned building codes across the country.

Sincerely,
Srinidhi Sampath Kumar
RMI

# Colorado Natural Gas Testimony on HD22-1362

April 14, 2022

Thank you, Chair Valdez, Vice Chair Hooton and members of the Energy and Environment Committee. My name is Lizzy Reinholt. I am the Senior Vice President of Sustainability, Corporate Affairs & Marketing for Colorado Natural Gas. I apologize for not being able to testify in person today.

As background, CNG is a small local distribution company with about 24,000 customers throughout Colorado.

We are committed to bringing a more affordable and lower emissions energy choice to unserved and underserved areas throughout Colorado where residents and businesses are heavily reliant on propane – which is more expensive and results in higher emissions than natural gas.

While safety is CNG's top priority, the company is also deeply committed to helping the state meet its emission reduction goals while mitigating the cost impact to customers.

We are here today to testify on HB-1362. While we appreciate the stakeholder engagement process on this legislation, we oppose this legislation unless amended.

To be clear, we support the 2021 IECC building codes, but are concerned by the unintended rate impact to our customers due to taxpayer subsidized fuel switching in HB-1362, and fundamentally disagree with the overall premise of the legislation, which is that electrification is the only pathway to emissions reduction.

Our energy distribution system has a critical role to play in a low carbon future in Colorado. Today we are delivering conventional natural gas. Tomorrow it could be renewable gas derived from landfills, food waste, and animal manure. A decade from now it could be green hydrogen derived from what would otherwise be curtailed wind and solar energy. Our infrastructure – pipes in the ground –can be a powerful tool as we work to achieve deep decarbonization throughout Colorado. That is why states across the country - and countries across the world - are migrating away from an exclusive focus on electrification versus natural gas or other fuel sources and instead focusing on the true enemy – emissions in general. They are doing this by focusing on policy aimed at decarbonizing the molecule as well as the electron. Examples include the "Natural Gas Innovation Act" passed in Minnesota last year and a recent order in California setting RNG procurement targets for LDCs. In Europe where they first invested heavily in electrification, they are now pivoting to a mixed technology pathway by heavily investing in green hydrogen and renewable natural gas to meet emissions reduction goals. In fact, a 2018 European study found that an all-electric pathway for Europe to reaching emissions reduction goals would cost $1.39 trillion more than a zero-carbon gas solution.

Oregon is another great example of a state that has focused on reducing emissions rather than choosing one technology over another. In 2019 Oregon passed landmark renewable natural gas policy that puts their LDCs on the road to decarbonize alongside the state's electric utilities. With that policy they have driven millions of dollars in investments in the development of home-grown renewable gas and the

state's largest LDC, Northwest Natural has already secured contracts for RNG to meet 3% of their annual gas demand at a prudent cost to ratepayers. In addition, like HB-1362, the state considered reach code legislation just this year (SB 1518). Rather than passing legislation in its original form, which would have resulted in increased costs to customers and chosen one technology over another, they instead developed a task force to zoom out and take a more holistic view of decarbonization and build code portfolio standards. We urge you to do the same. HB-1362 selects one technology to reduce emissions, using taxpayer funds to make that technology acceptable to consumers. We need to instead be focused on policy that takes into consideration how we reduce emissions across all technologies today, tomorrow and ten years from now. The most efficient way to achieve those reductions is by focusing emissions reduction across all technologies, maximizing existing infrastructure, and supporting customer choice.

For those reasons, it is discouraging to see the exclusive focus on electrification in HB-1362 without truly understanding the impact to ratepayers and emissions. The bill minimizes the critical role LDC systems can play in a low carbon future by creating taxpayer subsidized grants, even though various studies have shown that all electric homes result in more emissions and costs. In fact, a 2020 study by GTI found that electrification of natural gas homes in Colorado would increase CO2e emissions by 66% and raise household annual energy costs by 139%, creating a large cost for no gain from emissions.

Electrification and industry lobbyists will tell you that the electric grid is dirty now but will be cleaner later, but they do not have any way to show that they can keep that promise without massive consumer costs and the buildout of powerlines.

The structure of these taxpayer-funded subsidies for electrification poses a number of problems. Rather than remaining technology agnostic, they instead drive families, municipalities and businesses throughout the state to choose electricity despite the fact that what is coming across the grid today is dirtier than what is coming across the pipe. While we appreciate the state acknowledging just how costly electrification is to consumers, we believe the state could reduce emissions faster and benefit more Coloradans by creating rebates that are technology agnostic by focusing on the total emissions portfolio of the home. This would allow for greater customer choice as the gas and electric systems work to decarbonize and allows the state to focus on its true goal – emissions reduction – by leveraging the benefits of already existing infrastructure to reduce emissions.

In addition, amending HB-1362 would eliminate the most problematic consequence of these grants– the creation of stranded assets on gas systems and the resulting rate impact to LDC customers as these taxpayer funded subsidies erode the rate base on LDC systems. This would drive up costs for the remaining customers on those LDC systems – most of whom will be low-income customers who cannot afford the cost of switching to electricity even with generous rebates.

If the state chooses to move forward with the rebates focusing solely on electric appliances, it is important to note the cost of electrification goes far beyond the upfront investment in appliances, retrofitting and wiring. For every home given a subsidy to switch from gas to electric the state is creating a stranded asset on LDC systems, and this legislation must solve for that in a fair and equitable way. A solution could be requiring the Public Utilities Commission to determine a stranded asset cost based on the average rate base per customer for each natural gas utility in the state. The PUC then would

require electrification grant projects that result in the net loss of a natural gas service customer to make a payment equal to that stranded asset cost to the utility losing the natural gas service customer or require the state to pay stranded asset costs to the utility losing the gas customer because of receiving a taxpayer subsidized grant. Another option is to limit these rebates to customers who are served by the same utility for their gas and electric services.

We have provided a number of recommended changes to this bill based on those concerns to the CEO, bill sponsors and various stakeholders. In addition, to protect ratepayers throughout Colorado, we have recommended language that would require the CEO to work with the PUC to ensure that ratepayers are held harmless by these grants.

The issue of how best to achieve our shared emissions reduction goals is difficult. There is no silver bullet. As the state considers this legislation – amid at time of increasing electricity and energy costs when more and more Coloradans are struggling to pay their utility bills and fuel their vehicles – we encourage the state to focus on how best to maximize all our already existing energy infrastructure by developing policy focused on decarbonizing both the electron and the molecule so we can truly hit emissions reduction goals while limiting cost to ratepayers.

Thank you.

Jeff Hindman
348 Turner Ave
Berthoud, CO 80513

President – Cottonwood Custom Builders, Inc.
Trustee – Town of Berthoud

## Testimony - HB 22- 1362 – Building Greenhouse Gas Emissions

1) Cottonwood Custom Builders is one of the leading green builders on the front range over the last 26 years. We have built numerous net zero homes and all of our projects exceed current International Energy Conservation Code (IECC).

I am also a Trustee for the Town Board of Berthoud, so I have experience with these issues from the governmental regulation side as an elected official as well.

2) According to Architecture 2030, buildings account for nearly 40% of green house gas emissions world wide. 28% of that is the building operations and 11% is the embodied carbon in the building materials. Much of the focus on green house gas reduction in the past has been on transportation. The benefits of electrification in cars, trucks and buses are well documented. It is equally important to electrify new residential and commercial buildings and disconnect from fossil fuels for heating. The electrical grid is rapidly moving to renewable sources, so moving to all electric buildings will make a huge impact in reducing carbon emissions. The most recent report regarding climate change from the UN is ominous and it is imperative that we act now to avoid catastrophic climate disaster in the near future which will greatly impact our quality of life and water supply.

3) The biggest change in green building in the last 25 years is the progression of building science and best practices for constructing energy efficient and healthy homes and buildings. The IECC has evolved greatly since 2006 and each code update improves on the previous version. The regular updates every 3 years correct deficiencies missing items that were identified in the implementation of the previous code. The 2021 IECC is a very good code that eliminates problems or oversights with the 2018 code.

4) It is a myth that building energy efficient or net zero building results in a major increase in the cost of a new building or remodel. The cost difference in meeting the 2021 IECC versus the 2018 code was recently estimate to be $4,800 by the Pacific Northwest National Laboratory. The added cost to install enough photo voltaic panels or do geo thermal to reach a net zero building is approximately $15 - $30,000. In the overall cost of a new building or major remodel these added costs are a small percentage of the total.

5) For a building that meets the current IECC the monthly utility costs are significantly lower. The owner or tenant will save thousands of dollars over the life of the building. The savings far outweigh the extra costs. Meeting the current IECC also results in a much healthier indoor environment for the people who live or work there.

6) It is very appropriate for the State to set minimum standards for updating building codes to the most current version. For example, the state mandates that all governmental entities adopt the new electrical code within one year of when it is updated. The IECC should be no different.

7) One quick anecdote. It took Berthoud over 12 years to update from the 2006 IECC due to philosophical opposition from some elected officials and the Town Administrator. HB 22-1362 will correct situations like this and ensure that all of Colorado is meeting the recent IECC to the benefit of our state, the planet, and building owners and users.

Thank you for supporting this important legislation.

LEAGUE OF WOMEN VOTERS® OF COLORADO

April 14, 2022

House Energy & Environment Committee
Colorado General Assembly
200 E. Colfax Avenue
Denver, CO 80203

Re: HB22-1362 Building greenhouse gas emissions

Dear Members of the House Energy & Environment Committee:

My name is Ann Sutton, living in Westminster CO. This testimony represents the position of the League of Women Voters of Colorado (LWVCO).

LWVCO supports this bill that requires adoption of building codes in Colorado for energy conservation, for electric- and solar-ready construction, and voluntary adoption for low energy use and reducing carbon emissions.

The League believes in an interrelated approach to combating climate change including air pollution controls, promoting renewable resources and protecting public health. This bill will—

- Reduce GHG emissions from the built environment by supporting reduction in the use of fossil methane for space and water heating and cooking.
- Reduce indoor air pollution by promoting transition away from burning fossil methane.
- Promote renewable energy by supporting rooftop solar panel installations with solar-ready electrical installations.
- Encourage electric vehicle adoption to reduce air pollution by facilitating electric vehicle charging in buildings or closely near-by.

LWVCO is committed to equity in access to technology that advances clean air and high-efficiency utilities and appliance for all communities in the state. The grant programs described in the bill will assure that low-income, disproportionately impacted, and Just-Transition communities can participate in the economies-of-scale for installation of high-efficiency electrification equipment.

We thank the committee for their careful review and consideration.

Sincerely,

Ann Sutton Volunteer Lobbyist
League of Women Voters of Colorado
1410 Grant Street, Suite B-204
Denver, CO 80203

# Community Planning & Permitting

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April 13, 2022

To: Chair Valdez and Committee Members - House Energy and Environment Committee

From: Ron Flax
Chief Building Official, Boulder County

Re: House Bill 22-1362

Dear Chair Valdez and Committee Members:

I write today on behalf of Boulder County to express our strong support for HB 1362, Building Greenhouse Gas Emissions, sponsored by Representatives Bernett and Valdez. I respectfully ask for your YES vote on the bill when it is heard by the Energy & Environment Committee on Thursday, April 14, 2022.

As the Chief Building Official for Boulder County, I have a responsibility to protect the health, safety, and welfare of the residents of Boulder County. Building Codes have long been a primary and effective tool for this purpose by regulating the built environment during the construction and remodeling of homes and businesses in our jurisdiction.

The initiatives put forth in HB 1362 are practical and achievable strategies that will go a long way towards advancing the State of Colorado in our efforts to protect our residents.

As we regulate the construction industry, we must make sure that we do not place undue burdens on the individuals and families who wish to build new homes or refurbish existing homes. Affordability of the housing stock in Colorado is a large and complex problem. I believe it is important to point out that the measures contained in this proposal do entail modest additional up-front costs during the construction process. That said, these costs are balanced by the overwhelming reduction in long-term operational costs that will improve the affordability of homes in Boulder County. This is in addition to the substantial direct and indirect financial benefits that comes with reductions of carbon emissions and improved air quality for the entire community.

Boulder County is currently responding to the historic tragedy from the Marshall Fire. We know that as our climate changes the possibility of similar events increases. We have a responsibility to make sure that we actively pursue policies that reverse this trend.

I believe that HB 1362 is a practical and appropriate way to meet the needs of our community and I respectfully ask for your YES vote on this bill.

Thank you for your time, and your service to our community,

- *Ron Flax*