

**HEARING of the ENERGY SUBCOMMITTEE
of the HOUSE ENERGY AND COMMERCE COMMITTEE
on
DECARBONIZING THE US ENERGY SECTOR**

**STATEMENT of ERIC HOFMANN
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Chairman Rush, Ranking Member Upton, and Distinguished Members of the Subcommittee:

Thank you for inviting me to appear before the Energy Subcommittee to address this vitally important topic. I am Eric Hofmann, President of Local 132 of the Utility Workers Union of America (UWUA), AFL-CIO. I speak on behalf of the members of my local including over 4000 represented union workers at Southern California Gas Company (So Cal Gas). We go to work every day to provide safe, reliable, affordable, clean gas service to over 20 million people in Southern California. This statement does not necessarily reflect the views of the national union.

In California Local 132 has been very proactive in the energy policy space. In the wake of a deadly pipeline explosion in a San Francisco suburb in 2010, we sponsored and saw enacted landmark legislation to define safety as the top priority in operating the gas system; to require safety plans to identify and mitigate hazards before they cause injury and damage; and to fully engage the workforce in developing and implementing those plans.¹ In 2014 we sponsored and saw enacted legislation that requires utilities to find and fix leaks in the gas transport and delivery systems to reduce methane emissions and to develop best practices to do so (Find It/Fix It).²

I can't say that implementation of our legislation has been easy or smooth. I can say that we work hard to put these policies in practice in the field, at the bargaining table with our employers and at the regulatory agencies responsible for implementing and enforcing the law. We work to be partners to be respected.

¹ California Statutes 2011, Chapter 522 (SB 705, Leno), Cal. Pub. Util. Code sections 961 and 963.

² California Statutes 2014, Chapter 525 (SB 1371, Leno), Cal. Pub. Util. Code sections 975-978 inclusive,

CONSIDERATIONS ABOUT UTILITY WORKERS

At the core of our message is the idea that union workers in the gas industry have skills, experience and knowledge that are crucial to addressing the challenges we all face as the gas distribution and transmission infrastructure for which we are responsible evolves. We advocate for a work culture in the gas industry that fully empowers workers to use what we know to make the systems on which an advanced economy relies safe, reliable, affordable and clean. That means a workforce that is adequately staffed, well trained, fairly compensated and having a place at the table where decisions are made.

Workforce stability to operate and maintain the infrastructure is a key factor as we transform that infrastructure over time to reduce its carbon footprint, to de-carbonize. We, the union workers, are a resource and a force for achieving our nation's environmental goals when our talents, knowledge, creativity and energy are engaged and valued. We are partners to be respected and included. That means, for example, making a place for us to contribute when operating standards, safety programs and environmental controls are developed at EPA, PHMSA (Pipeline and Hazardous Materials Safety Administration) and at OSHA. You should eliminate incentives in utility ratemaking at FERC for job cuts and for cutting corners on safety, reliability and emission reductions. You should encourage employers to utilize collective bargaining processes that recognize and implement safety and environmental responsibility policies in the workplace.

This also includes providing for a secure and orderly process for maintaining continuity in the workforce that operates and maintains the energy infrastructure, including recruitment, training and skill development throughout the workers' careers.

Chairman Rush has already demonstrated an awareness of the primary importance of robust workforce development in the CLEAN Future Act, HR 1512. An example is the requirement in Section 231 that strategies for development of hybrid microgrids, one of the cutting-edge technologies promoted in that bill, consider the "capacity of the local workforce to operate, maintain, and repair a hybrid microgrid system."

CONSIDERATIONS ABOUT ENERGY POLICY

It should be clear from our record of activism and achievement that we – Local 132 members and officers -- are fully committed to safe, reliable, affordable and clean gas systems, and that includes reducing the impacts of the gas system on our environment. We are in full support of responsibly de-carbonizing our gas systems. We are in full support of a de-carbonization policy and process that takes account of developing technologies and does not disable us in our efforts to provide decent living conditions – housing, food, jobs, transportation, health care – for all of the American People, for ourselves and our children.

The U.S. is at an important inflection point in the evolution of our energy policy, as we play our part in responding to the global climate crisis at a moment of accelerating technological innovation. Reducing the carbon emissions of the energy supply used to fuel our advanced economy is a goal shared by everyone. But a narrow doctrinaire approach that prematurely picks preferred fuels and technologies and the physical and commercial structures that link sources and sinks risks setting us back in reaching our de-carbonization goals. It also risks obstructing our efforts to meet other equally important goals such as addressing chronic housing shortages, pursuing environmental and economic justice, and maintaining the health and well-being of our people. So, we are fully supportive of an “all of the above” approach to de-carbonization.

We advocate for a policy to optimize the use of natural gas and the gas infrastructure, not minimize or eliminate it. Despite the wishes, hopes and fears of some, a de-carbonization policy does not inevitably lead to steep reduction of gas throughput on an optimized gas system, although the composition and chemistry of the throughput may evolve over time – from fossil methane and other fractions to bio-methane (both captured and produced), to syngas, to hydrogen and various blends. Energy moves in the form of electrons at times and in the form of molecules at times. Gas pipeline systems are simply ways of moving energy from sources to sinks. Sound public policy should direct us to integrate and optimize these systems to support our lives as we reduce our nation’s carbon footprint.

De-carbonization does not equate to electrification. We need to move past an overly simplified set of assumptions and presumed outcomes that privilege electrification over other de-carbonized end use fueling methods. We need a more realistic and grounded, less doctrinaire approach to managing the role of the gas pipeline system for transporting and

delivering gas to the users who depend on it. We should advance, rather than obscure, an understanding of the forces that may drive that evolution, including new technologies and policies. That means that the specifics of timing and location of changes to fueling end-uses, which drive utility operations and investments, can be articulated and evaluated and related to other social and economic policy outcomes. For example, The UC Irvine Advanced Power and Energy Program has recently published a *Roadmap For The Deployment And Buildout Of Renewable Hydrogen*, and the Green Hydrogen Coalition has launched a *Western Green Hydrogen Initiative*.³ These publications outline a role for hydrogen production and use in storing energy from renewable power projects.

DE-CARBONIZATION DOES NOT MEAN BUILDING ELECTRIFICATION

California is at the forefront of many energy policy initiatives and innovations. UWUA Local 132 has been engaged in many of those debates. In general, we at Local 132 fully support de-carbonization. We do not support mandated building electrification. As essential workers who go into homes every day to keep them safe and warm, we see the LA-area housing shortage as a severe immediate crisis for LA residents. Electrification is more costly than modernizing gas end-uses over both the short-run and the long-run and poses significant barriers to addressing the housing crisis. Reducing building-related emissions through a combination of fixing gas leaks (Find It/Fix It), replacing older gas appliances with state-of-the-art efficient gas appliances using electronic ignitions, and blending hydrogen in delivered gas fuels is a much more effective multi-pronged strategy than approaches⁴ that seek to simply restrict or ban the use of gas for heating, water heating and cooking.

Building electrification is a good example of how we need to approach the goal of de-carbonization with an open mind. First, it is important to understand that building emissions are a relatively small fraction of GHGs in California. The California Air Resources Board (CARB)

³ California Energy Commission Document CEC-600-2020-002 (June 2020); “Western Green Hydrogen Initiative Launched,” Green Hydrogen Coalition <https://www.ghcoalition.org/ghc-news/western-green-hydrogen-initiative-launched>

⁴ REACH ordinances are measures adopted by some California local governments to limit or prohibit the use of natural gas in some new residential and commercial buildings.

estimates that transportation-related GHGs – defined as tailpipe emissions – are 39.9% of emissions. All building emissions are less than 10% and residential buildings 6%, most of that in the form of CO₂ resulting from use of natural gas for heat and hot water. Building electrification thus focuses on a relatively small part of the problem at increased first cost for installation of electric appliances for heating and water heating and the infrastructure (wiring, panels, ductwork, ventilation and building configuration) needed to support them.

Second, it is important to understand that California is experiencing significant electric rate increases and rolling blackouts. In addition to the significantly higher first cost of electrification, rising electric rates and back-up electricity (generators and batteries) place a further financial burden on housing occupants. In California we have seen rolling blackouts and massive rate increases associated with natural disasters, infrastructure breakdown and market failures. Electrification turns out to be risky and expensive under current conditions.

Third, proponents of electrification suggest that current typical natural gas appliances should be completely replaced by all electrical appliances, not high-efficiency gas appliances. Electric resistance space heating and water heating are inefficient technologies that drive up electric usage and electric bills. For space heating and water heating applications, the alternative on offer is heat pump technology. These technologies sound great in theory, but there are issues. For example, space-heating heat pumps, which have severe operational limitations in colder climates, use incredibly toxic and GHG “unfriendly” refrigerants, known as hydrofluorocarbons (HFC). The refrigerant category is the fastest growing category of GHGs in California, according to the California Air Resources Board. It is already approaching the level of all residential building emissions (4.3% Versus 6.1%). R-410A, the most common refrigerant used, is rated at 2,100X more potent than CO₂. It is in the process of being phased out world-wide pursuant to the Kigali Amendment of the Montreal Protocol, so that every new heat pump installed today could be considered already obsolete.

Heat pump proponents claim that a new refrigerant technology, R-32 (still several years out) has a lower Global Warming Potential (GWP), still nearly 700 times more potent than CO₂. However, while R-32 is not a HFC, it is flammable. No heat pump that uses an HFC (non-flammable) can use R-32 (flammable). So, a heat pump installed today will have

to be replaced. Most existing ductwork in even the most modern houses does not support the applicability of R-32 technologies, which is a significant additional cost to consider for homeowners.

Fourth, the preceding concerns about electrification are magnified for the occupants of the 12 million existing housing units that use gas to for heat and hot water. The need to upgrade electrical panels, redo ductwork and wiring, and remodel building configurations to accommodate heat pump airflow make electrification very pricey for all those Californians who now rely on gas service in their homes.

Why focus on replacing residential gas use with electricity in the midst of a severe housing shortage and rapidly increasing electricity rates and bills in most of California? One answer proposed by electrification proponents is that leaks upstream of the building put methane into the air. But when the “find it/fix It” leak repair requirement of current law is fully implemented, those upstream leak-related emissions will be largely eliminated.

Further, there are significant sources of methane and GHGs from agriculture (manure and enteric fermentation), forestry and forest fires (black carbon) that are not counted in regular GHG inventories. This fugitive methane can be captured and used, or converted to hydrogen, and/or blended to de-carbonize the fuels we use for heat and power. We will need the pipes to move these substances. An example for California is the use of chemical processes, pyrolysis for example, to manage the large quantities of wood waste in our orchard crops and in our forests, as part of a strategy to manage wildfires by reducing combustible fuels. Research partnerships among universities, the federal government and the private sector to develop these technologies at scale and to find beneficial uses for the by-products, including gases and solids such as biochar as a soil amendment can help us understand the possibilities and the infrastructure needs including pipes to transport materials to locations for beneficial end uses.

FURTHER ENERGY POLICY CONSIDERATIONS

In addition, UWUA 132 proposes the following for clear pathways for further de-carbonizing our overall energy systems:

- 1) Sponsor programs and initiatives for low-income and underserved communities to trade in old, inefficient appliances for state-of-the-art efficient natural gas and electric appliances, without abandoning the existing delivery infrastructure.
- 2) Allow for companies and unions to partner on hydrogen-blend systems and advances in hydrogen fuel cell technologies. More R&D is needed in this space to fully understand the maximum feasibility of these blended technologies with safety, reliability and affordability to fully optimize our energy infrastructure.
- 3) Explore enhancements for renewable natural gas capabilities at the large dairy digesters, landfills etc., to capture and recycle as much fugitive methane as possible
- 4) Look to better incentivize companies and businesses beyond the existing 45Q tax credit to allow for real, achievable carbon capture utilization and sequestration methodologies. Significant investment and expansion of these technologies at the larger CO₂ emitters will actually yield meaningful and measurable positive results in reducing GHGs.

CONCLUSION

The truth of the matter is that real work needs to be done if we are going to get serious about reducing greenhouse gas emissions in our country. We need to drastically improve in this sector. We must and we will. I submit to you all that the time is upon us now to recognize this problem.

The members of Local 132 are here to help. And we maintain that it will require true non-partisanship and decisive declarative leadership to overcome these challenges. We are confident that as long as we, the experts who work on these systems every day, have a seat and a voice at the table, we will meet these challenges and ultimately overcome them together. Together for our children, our grandchildren and generations yet to come.

Thank you for your time and consideration of my comments today.