

ASGE



American Society of Gas Engineers

MESSAGE FROM THE PRESIDENT



Hello to all the ASGE members,

Well this has been a rather trying year from all types of places. COVID virus has definitely changed how we interact and has had a strong influence in business in general. The election is over (for the most part) and we have a new administration and the social landscape is in unrest with diversity a major topic. I know we are all looking forward to a fresh start in 2020 and I hope that we are prepared for the changes to come.

One item that is a hot topic is the idea of electrification as some states are pushing this agenda more and more. In this newsletter, we will have a few articles and websites that will discuss the impact this is having on our industry. This has also spread into the elections as some parties are looking to place regulations on fossil fuels used in cooking and heating. We as engineers need to keep abreast of this issue, as we need to show that natural gas is not only efficient but clean as well and a much better choice than electricity alone.

We are moving ahead with plans for the 2021 ASGE conference in Las Vegas. By the time the conference rolls around, I hope that the virus is in check and that you will be able to come. We have plans for a new member "meet and greet" and sponsors for activities during the conference. Getting more participation from the younger members is also something that I would like to see. We have speakers already lined up for this coming year's conference and remember this is an election year for ASGE. We will be voting in a new president, vice president, and treasurer.

As a member since 2008 I have truly enjoyed being a part of ASGE, not only did I become a certified CGE, but I also have been able to make many industry connections and hear about interesting topics affecting our industry. So make plans to come in June, I and the other officers look forward to seeing you there,

Ray Maddock, CGE

President of ASGE

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Officers

- President, Ray Maddock
- Vice President, Eric Bruton
- Treasure, Ellora Larson
- Executive Director, Nancy Wilson

Directors

- Director, Mike O'Donnell
- Director, Gary Liljenberg
- Director, Dante Cantal
- Director, William Taylor

Hydrogen in Our Future - Part 2

By Alex Gafford, Charbroil, LLC

Robert Cowan's article in the 1st quarter newsletter was most timely and informative. I would like to add some additional material to the conversation based on work we have been involved in during the last year or so. This has related to the use of a hydrogen methane mix in a gas grill where the ratio was between 70 and 90% hydrogen and the balance methane. This created some challenges but also highlighted some positive benefits. Of course, the big issue is the low energy density of hydrogen compared to propane, the most common gas grill fuel. This was eventually addressed by the concept of using high pressure (ca.3000psi) composite cylinders with two stage regulation to get down to the ½ psi range at the valves. Design of the burners was, of course, the subject of considerable experimental work but a satisfactory solution was found.

In testing two things were most salient; first, the cooking performance at similar BTUs/hr was as good or better with the hydrogen mix as with propane, cooking on two grills side by side, and second, testing of delayed ignition was surprising as we could not get anything other than normal burner ignition no matter how much gas for low long was run into the firebox. That implies that a combustible mixture was only available at the burner ports due to the high diffusivity of hydrogen.

All this work was done in cooperation with Pro-Cyl LLC , a company based in Minnesota that has granted US patents on the gas mix described and their use in cooking appliances. The Pro-Cyl technical team contributed the bulk of the appliance engineering involved and has developed significant expertise in this area.

In any case, my personal opinion is that gas engineers looking into the future need to be considering hydrogen as a thermal fuel both in high and low concentrations. It may be interest to know that in their next meeting the ANSI Z21.58/CSA 1.6 Technical Subcommittee will be considering adding hydrogen mix gas to the list of possible fuels of outdoor cooking gas appliances.

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AHRI Hydrogen Project

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AHRI Project 8024: Assessment of Hydrogen-enriched Natural Gas

AHRI has an ongoing project to assess the uncertainties and safety implications by conducting screening analysis to understand the potential impacts of hydrogen-enriched natural gas on factory new and installed old gas-fired products and components that AHRI Members make. The project is designed to provide manufacturers with results on whether hydrogen-enriched natural gas would have negative impact on gas-fired products safety, if so, what would be of manufacturers concerns and what are the recommended measure to address these concerns.

The scope of the analysis includes gas-fired products and their essential components:

- Furnaces
- Boilers
- Burners
- Control valves
- Venting products etc.
- Water heaters
- Pool heaters
- Fittings and corrugated stainless steel tubing

The main task is to use a proper methodology to evaluate the uncertainties of the hydrogen-enriched fuel for the said equipment and components to identify the safety and reliability implications to gas-fired products, and how hydrogen-enriched gas might impact:

- Operation
- Potential leakage from components and joints
- Combustion byproduct
- Unit setup (product installation)
- Venting categorization
- Anything that installers would have to adjust (such as burner operation characteristic)

The project final report is expected to be available before the end of 2020.

AHRI members will be able to download the report at the AHRI website.



Industry Updates

AGA/American Public Gas Association (APGA) Successfully Appeals International Code Council (ICC) Pro-Electrification Energy Code Proposals.

As previously reported in End Use Codes and Standards Updates, AGA and APGA filed joint appeals addressing four code actions on the ICC International Conservation Code (IECC) and energy provisions in the International Residential Code (IRC) that presented two major issues, which AGA and APGA contend should have been prevented to be published during the Group B Code Development process. They are:

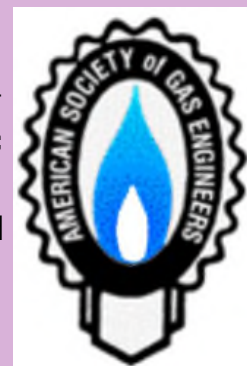
- Potential violations of federal pre-emption of minimum efficiency standards for appliances and equipment (RE107 and RE126), and
- Setting of code requirements that are outside the boundaries of the “Intent” sections of the IECC (RE147-19 and CE217-19, Parts I and II)

Regarding the first item on federal pre-emption, we previously reported that the ICC Board of Directors heard the Appeals Board decision on Wednesday September 16 along with testimony from AGA/APGA, Air-Conditioning Heating, & Refrigeration (AHRI), National Association of Home Builders (NAHB) and Leading Builders of America (LBA) and we were pleased that while the Code Council Board found [no procedural violations](#) on the two code proposals and denied the appeal, they did however “determine that, upon review, including potentially preempted provisions in the I-Codes is inconsistent with the spirit, intent and mission of the Code Council.” They also found that “the codes explicitly state that they do not nullify any provisions of local, state or federal law”. Accordingly, the Board determined that the approved language from RE107-19 and RE126-19 will not be included in the 2021 International Residential Code (IRC) or International Energy Conservation Code (IECC).

On the second item of “Intent”, we were informed yesterday that the ICC Board of Directors announced its decision (see attached) in support of the AGA/APGA, NAHB and LBA appeals and issued the following decision:

“The American Gas Association, the American Public Gas Association, the National Association of Home Builders (NAHB) and the Leading Builders of America (LBA) appealed three proposed changes to the 2021 International Energy Conservation Code (IECC) and 2021 International Residential Code (IRC) on the grounds that the proposals in question are outside the scope of the codes. The code changes appealed were RE147-19 (requiring electric readiness) and CE217-19, Parts I and II (requiring electric vehicle supply equipment). Following the [recommendation of the Appeals Board](#), the Code Council Board determined that the code changes in question are outside the current scope and intent of the energy provisions of the IECC and IRC and sustained the appeals. RE147-19 and CE217-19 will not appear in the 2021 International Codes.”

AGA and APGA are pleased that the ICC Code Council Board found in favor of our appeals that rejected adding provisions into the ICC IECC and IRC that essentially promote “electrification” at the expense of recognizing the economic and environmental benefits of the direct use of natural gas. We also wish to recognize the support from AHRI, NAHB and LBA who joined us in our appeals and who provided substantial testimony at the ICC Appeals Panel Hearings and Board of Director meetings that helped convince the ICC Appeals Board and Board of Directors to issue the finding agreeing with our appeals.



Continued...

AHRI Releases August 2020 Heating and Cooling Equipment Shipment Data

For those interested in shipment trends for residential and commercial gas and electric storage type water heaters, residential gas and oil furnaces, electric heat pumps and air-conditioners, click [here](#) for the October 9, 2020 Air-Conditioning Heating, & Refrigeration (AHRI) Press Release that provides the August 2020 U.S. Heating and Cooling Equipment Shipment Data. You may also wish to share this information with other groups or individuals within your organization that would be interested in water heater

State Codes Activity Update

[This is a weekly feature of the "Friday Update" covering state code calendar activities as presented by the online utility "Fiscal Note," which is sponsored by APGA and AGA Code and Standards.]

Recent Activity Alerts:

State	Date	Title
OR	10/05/2020	2017 ORSC - Solar readiness amendments
These amendments to the 2017 ORSC require that all new residential structures to include either a rigid metal raceway or		
OR	10/01/2020	Commercial energy standards - ASHRAE 90.1-2019
The Oregon Building Codes Division anticipates that the Construction Industry Energy Board will begin reviewing ASHRAE 90.1-2019 at its Oct 20, 2020 meeting" (the 2019 version of 90.1 has not yet been adopted by the state).		

Recent and Upcoming Code Body Meetings:

State	Body	Date	Address	Agenda
OR	Construction Industry Energy Board	10/20/2020	Teleconference	Agenda
CA	Building Standards Commission	10/13/2020	Virtual meeting	Agenda
IN	Fire Prevention & Building Safety Commission	10/06/2020	Virtual meeting	Agenda



Bills with Recent Activity:

State	Bill #	Bill Title	Primary Sponsor (s)	Last Action	Last Action Date
SC	H 4327	Building Codes	Joe Jefferson (D) Russell Ott (D) Josiah Magnuson (R) Bill Chumley (R) Mike Burns (R)	Enacted; Effective date 09/28/20	10/02/2020
<p>Summary: This bill adds Section 6-9-67. Structures without a commercial kitchen used in agritourism activity as defined by Section 46-53-10 shall fall under the group A-3 classification as defined in the 2015 International Building Code. Such structures may accommodate up to three hundred guests without installing a sprinkler system.</p>					
CA	SB 1371	Maintenance of the codes.	Andreas Borgeas (R) Maria Durazo (D) Lena Gonzalez (D) Brian Jones (R) Bill Manning (D) Henry Stern (D) Tom Umberg (D) Bob Wieckowski (D) Senate Committee on Judiciary	Enacted; Approved by Governor	09/30/2020
<p>Summary: This bill would make non substantive changes in various provisions of law to effectuate the recommendations made by the Legislative Counsel to the Legislature.</p>					

2021 BECS Committee Meeting Schedule

January 12-13, 2021, TBD

May 11-12, 2021, TBD

September 14-15, 2021 TBD



2019 Group B Code Cycle Appeals Concluded

The International Code Council Board of Directors has issued a final decision on the second groups of appeals within the 2019 Group B code cycle – surrounding scope and intent, and the impact of online voting (CP 28), cost impact, voting guides, voter eligibility and validation process – completing the appeals process.

Scope and Intent

The American Gas Association, the American Public Gas Association, the National Association of Home Builders (NAHB) and the Leading Builders of America (LBA) appealed three proposed changes to the 2021 International Energy Conservation Code (IECC) and 2021 International Residential Code (IRC) on the grounds that the proposals in question are outside the scope of the codes. The code changes appealed were RE147-19 (requiring electric readiness) and CE217-19, Parts I and II (requiring electric vehicle supply equipment).

Following the [recommendation of the Appeals Board](#), the Code Council Board determined that the code changes in question are outside the current scope and intent of the energy provisions of the IECC and IRC and sustained the appeals. RE147-19 and CE217-19 will not appear in the 2021 International Codes.

Impact of Online Voting (CP 28), Cost Impact, Voting Guides, Voter Eligibility and Validation Process

NAHB and LBA appealed a group of twenty code changes to the 2021 IECC on the grounds of ineligible voters, cost impact, not meeting the spirit and intent of the process, and improper use of voting guides.

The Appeals Board found no clear violation of process or procedure and [recommended](#) denial of the appeals. The Code Council Board of Directors voted to deny the appeals.

In addition, the Code Council Board referred a number of issues to the [Board Committee on the Long-Term Code Development Process](#) for further review, including the definitions of governmental members and voting representatives, the procedures for the in-person and online votes, and the issue of cost impact. This committee is a venue for stakeholders to provide feedback on the process and suggest changes.

The Code Council Board also recommended consideration of a Code Council energy standard to replace the IECC and Chapter 11 of the IRC.

This concludes the 2019 Group B code cycle appeals, adding to the decisions on the [first two groups of appeals](#) – preemption and committee reconsideration.

The International Code Council's code development protocols are designed to protect the integrity of the process. These appeals are one part of a longer code development process that is responsive, transparent and open. For more information about this process that is responsive, transparent and open. For more information about this process and how it creates the most widely used and adopted set of building safety codes in the world, [click here](#).



2021

ASGE Conference Presenters

Mark Mason – Maxitrol – Communication Compatibility with HVAC Equipment, IoT

Jon Grohman – CSA - Non-metallic venting

Stuart Saulters – American Public Gas Association APGA – battling electrification

Jim Ranfone – AGA – debunking commercial gas cooking electrification

Kent Nelson – UL – Gas Control US Safety Standards and International Harmonization

Frank Johnson – GTI – residential cooking and indoor air quality.



AGA Energy Analysis

AGA wrote a paper about the negative impact of the electrification of cooking appliances. The paper is titled "A Comparison of Energy Use, Operating Costs, and Carbon Dioxide Emissions of Home Appliances Update".

Please see the ASGE website to read this very informative paper.



2021 ASGE Conference

Set your calendar for this coming years conference.

Yes, it is time to start thinking about the 2021 ASGE conference.

Speakers are chosen (see page 8) and this is the new year with new officers and awards.

When: June 6th through the 8th

Where: South Point Resort Las Vegas

This year we will be adding a family fun activity on Monday and of course the golf outing!

Hope to see you all there.