Introductions & Welcome to New Staff

AHRI Heating Team
- Caroline Davidson-Hood
- Tae Kwon
- David Noyes
- Kevin Chou
- Caroline Henley
- Allison Maginot

Todd Lumpkin
Heating Sector Lead

Shannon Corcoran
Regulatory Advisor
Water Heating Regulatory Items
Defining Commercial Water Heating Equipment - DOE Enforcement Policies

2016 DOE changed commercial water heater definitions

2016 DOE issues first enforcement policy: grandfathering existing product

April 2019 – DOE Introduced New Proposed Enforcement Policy

Permits new commercial equipment onto the market if:

- > 55 gallon electric
- ONLY commercial OR residential
- If commercial – must meet commercial standby loss requirements
- If residential – must meet specified UEF minimums

• Critical changes affect electric storage equipment
• Eliminated key commercial characteristics:
  • 180°F thermostat

www.energy.gov/gc/downloads/enforcement-policies-water-heaters

2016 DOE issues enforcement policy: grandfathering existing product
Water Heating – State Activity

Washington State HB 1444/SB 5115
• Requires all residential electric storage water heaters to be CTA-2045 grid interactive by 2021

Illinois HB 3427
• Proposed Illinois plumbing code amendment to require that the manufacturer provide temperature mixing valves for all residential water heaters.
Gas Utility Petition

November 1, 2018 Gas Utilities petitioned DOE to:

- Withdraw the 2017 Commercial Water Heater NOPR
- Withdraw the 2016 Residential Furnace SNOPR
- Issue a legal interpretation finding that non-condensing ventilation technology is a necessary performance characteristic
- Issue a new rule with separate product classes for condensing and non-condensing equipment

AHRI commented:

- DOE should withdraw the commercial water heater NOPR to reconsider challenging installations
- DOE should consider AHRI’s petition on a combined furnace efficiency metric (AFUE2) prior to granting the gas utility petition

DOE is still considering the petition
## Water Heating Test Procedures

<table>
<thead>
<tr>
<th>Lab Evaluation Subcommittee working on:</th>
<th>Recovery efficiency of gas, oil, and heat pump water heaters &gt; 2 gallons</th>
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<td>Thermal efficiency of commercial instantaneous and storage-type instantaneous water heaters</td>
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<td>Test Procedure Waivers</td>
<td>May be a possible resolution</td>
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<td>Other options under consideration</td>
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Hydronics Regulatory Items
NRDC v. Perry

2016

- **Draft Rules Released**
  - DOE released four draft rules for pre-publication
  - Includes commercial boiler efficiency standard
  - DOE did not finalize rules within 45 days (rules remain non-final)

2017

- **Lawsuit Filed**
  - NRDC and states attorneys general claim that DOE is required to finalize rules per the Error Correction Rule
  - Filed suit in San Francisco; AHRI intervened on behalf of DOE

2018

- **District Court Mandate**
  - Judge agreed with NRDC and mandated that the rules are immediately published
  - DOE appeals to 9th Circuit
  - AHRI acquires stay pending appeal

2019

- **Appeal**
  - Briefing is finished; argument held November 14, 2018
  - Oral argument bodes well for DOE appeal

- **What’s Next**
  - 9th Circuit panel will issue a decision upholding or reversing the District Court mandate.
  - If reversed: DOE will reconsider the pre-published rules
  - If affirmed: DOE will be required to finalize rules as written
NRCan Amendment 15

October 2018 NRCan proposed condensing minimum efficiencies for gas boilers

Effective date 2021 – residential

Effective date 2023 – commercial

AHRI commented that non-condensing minimums be preserved for retrofit

Publication/finalization of Amendment 15 is expected this year
ASHRAE 90.1 Proposal

ACCE submitted proposal to ASHRAE 90.1 Mechanical subcommittee

Commercial boiler system: 90% efficiency minimum in new buildings

Comments to 2nd Public Review addressed in Atlanta, April 2019

Addendum bc expected to be included in 2019 edition
Furnace Regulatory Items
Furnace Fans – Fan Energy Rating (FER)

2014 - DOE released its first standard for “furnace fans”

2018 - NRCan issued harmonized regulation

July 3, 2019
- AHRI is finalizing templates for reporting
- Certification program development
WHAT? October 2018 AHRI petitioned DOE to establish a new combined metric for furnaces

WHY? Goals of AFUE2:

- Reduce six rulemaking cycles to two
- Synchronize regulatory timelines on furnaces
- Improve test procedures

WHAT’S NEXT?

- DOE is considering petition
- FER compliance is unaffected
South Coast Air Quality Management District

Residential Furnaces Rule 1111

- 2015
  - SCAQMD introduced an ultra-low NOx limit at 14 n/j
  - At that time no compliant products existed on the market

- 2015-2019
  - Mitigation Fee imposed for all non-compliant furnaces sold in district

- September 30, 2019
  - Mitigation fee period expires. All furnaces in district must meet ultra-low NOx requirements
  - AHRI has requested a sell-through period for stranded inventory

Commercial Boilers PAR 1147
- Regulatory changes introduced for specific applications
- Most regulations apply to facility owners
General Regulatory Items
Process Rule Proposal

• Binding on DOE
• Sequencing of test procedures and standards
• Adoption of industry consensus test methods
• “Early hard look” to prioritize energy savings over statutory timelines
• Exemption for ASHRAE 90.1 proposals
• .5 quad savings as “significant”
• Peer-review of economic modeling

For informational webinar visit AHRI members-only page

Comments submitted May 6, 2019
Cybersecurity

- California SB 327 & Oregon HB 2395
- Expect to see similar bills in other states
- Require internet connected products to have “reasonable security features”
- “Reasonable security measures” is not a legally defined term
- AHAM has proposed legislative language relying on industry standards
- AHRI’s IoT working group is developing a coordinated response
GAC created Electrification Task Force to develop an industry position on a growing trend of electrification policies.

Electrification Task Force generated AHRI’s “Guiding Principles” on electrification:
- Consumer Choice
- Consumer Cost
- Consumer Comfort and Safety

AHRI supports electrification policies that are not “electric-only” and that are technically feasible and economical.

Document available on AHRI’s members-only webpage.
2019 AHRTI initiated two research projects on the effects of hydrogen enriched natural gas on gas-fired products

1. AHRI-AGA-CSA joint research - exploratory testing of equipment performance responses to hydrogen-enriched gases
   • Results to be presented to the Z21/83 and CSA Gas committees for future consideration

   • Study the impacts of hydrogen-enriched natural gas on factory new and installed old gas-fired products and components.
Questions?
Adjournment