



The Natural News

Iowa Natural Gas Association

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Fall, 2007

PRESIDENT'S MESSAGE

Hello,

On behalf of the Iowa Natural Gas association let me be one of the first to wish you all a happy and safe holiday season!!

This issue of our newsletter has some very good information on a number of topics. I think you will find the proposed changes to the National Fuel Code very interesting, as an example.

Since November is here and the breeze is a little cooler, I thought I would expand a little on the article about natural gas supplies and energy prices in general. As the article states, 2006 was a very strong year for increasing the United States natural gas supplies. In fact, last year we saw the greatest increase in natural gas supplies since 1968.

Unfortunately, increased demand from electric generation and dramatic increases in other fuels among other items kept this increase from generating an respective decrease in price.

On the positive side, natural gas prices right now are slightly lower than they were at this time last year. Additionally, there is a record amount of gas in storage right now, which bodes well for the winter.

Comparatively, propane prices have been increasing all year long with prices in October at \$1.75 per gallon, as per the Iowa Department of Natural Resources, and have risen since then. That rate is well over 70% more than the rates for natural gas. Oil has risen throughout the year as well, as I am sure you have all noticed, and the cost of fuel oil is even higher than propane on a btu basis. Additionally, as I have stated before, Natural gas is the most efficient fuel, delivering 90% of the energy to the burner tip, whereas electricity can only muster approximately 27% to 30% from generation to burner-tip. So natural gas continues to be the best energy value.

Again, have a safe and happy holiday season. And if there are any items or issues you would like us to look into, please call or e-mail the Iowa Natural Gas Association office.

POTENTIAL GAS REPORT SHOWS UNPRECEDENTED INCREASE IN U.S. NATURAL GAS RESOURCES

Washington, D.C. – The U.S. natural gas resource base is larger than previously estimated, with 1,525 trillion cubic feet (Tcf) in total natural gas resources as of the end of 2006 – the equivalent of 82 years of production at current rates, according to a biennial report on long-range supplies of natural gas released today by the Potential Gas Committee (PGC), Colorado School of Mines. According to the PGC, this is the largest volumetric increase and percentage increase in the PGC's biennial estimates since 1968.

Much of the resource growth can be attributed to U.S. onshore areas where success in extracting natural gas from shales and coal seams has resulted in revised assessments of existing resource plays and inclusion of new opportunities. This has been the case in numerous Mid-Continent production areas such as the Arkoma, Anadarko, Fort Worth and Permian basins. According to the PGC report, additional growth in the resource base has resulted from new data from the Gulf Coast, Rocky Mountain and Pacific areas, also.

Abundant natural gas resources help to keep energy costs affordable for U.S. consumers – as long as producers are allowed access to those resources. This kind of growth in onshore resources only happens when companies are permitted to explore and the opportunities for leasing and permitting of multi-use acreage is allowed to proceed.

AGA recognizes that demand for natural gas has shifted recently among consuming sectors, primarily because of its greater use by electricity power generators. Natural gas is the cleanest fossil fuel and its use in power generation helps many power plants to meet cleaner air standards. AGA also believes that proposed climate change legislation may further the demand for natural gas in the future. At the same time, natural gas is the preferred home energy among U.S. households and its direct use in homes and businesses is extremely efficient. Direct use of natural gas delivers three times as much energy as electricity for similar applications, when measured from point of generation to point of use.

According to the Department of Energy, about one-fifth of our natural gas production comes from the Gulf of Mexico, with another large portion coming from concentrated areas, including Texas, Oklahoma, the Gulf Coast onshore, New Mexico, the mountain west and Appalachia.

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FLOOD-DAMAGED APPLIANCES SHOULD BE REPLACED, NOT REPAIRED

With severe flooding, it is important to remember that all flood-damaged plumbing, heating, cooling and electrical appliances and related systems should be replaced, rather than repaired. This warning was issued today by GAMA, the national trade association representing manufacturers of space heating and water heating equipment. The association also recommended that all work on flooded equipment be performed by qualified, licensed contractors, not by homeowners.

The GAMA warning stems from past reports of accidents resulting from improper do-it-yourself repairs of flood-damaged appliances. One homeowner, for example, suffered severe burns in a flash fire that occurred when he tried to re-light the pilot on his flooded gas water heater. The Association stresses that not only gas equipment is at risk but also units using oil or electricity as the energy source.

Controls damaged by floodwaters are extremely dangerous and to attempt to use equipment with defective gas or oil control devices can result in fires, flashbacks or explosions. And in the case of electrical appliances, the result can be injury or even death from a powerful electric shock. Devices at risk include water heaters, furnaces, boilers, room heaters and air conditioners.

The repair of flooded appliances and related systems (including damaged venting and electrical connections) is not a job for the do-it-yourselfer, no matter how skilled. This is particularly true of control valves. These components are manufactured to extremely close tolerances. Once submerged in floodwaters, they must be replaced. Field repairs should never be attempted by the homeowner. Even when controls appear to be operative, the unit should not be used after floodwaters recede. It may work for a while but it will deteriorate over time.

It might take a week, a month or even a year, but once any control has been under water it presents a serious hazard...fire or explosion in the case of gas controls, fire or shock in the case of electric equipment. Because so many things can go wrong as a result of floodwaters, it's usually cheaper and always safer to replace rather than repair,

Carbon Monoxide Alarms

Often called the silent killer, CO is an invisible, odorless, colorless gas created when fuels (such as gasoline, wood, coal, natural gas, propane, and oil) burn incompletely. Although annual CO poisonings from incorrectly installed or maintained heating appliances are decreasing, the annual number of CO accidents from all sources is not matching this trend. According to the U.S. Consumer Product Safety Commission (CPSC), at least 64 people died in 2005 from CO poisonings related to portable generators. Many of the deaths occurred after hurricanes, ice storms and blizzards. CPSC also reports that during the last quarter of 2006 (October-December), 32 carbon-monoxide deaths nationwide were related to consumers' use of portable generators.

Too many consumers are still subjected to hazardous levels of CO concentrations every year, sometimes fatally, when they improperly use gas generators, charcoal grills, and fuel-burning camping heaters and stoves inside their homes or in other enclosed or partially enclosed spaces. Equipment such as gas generators and barbeque grills generate CO as a byproduct of combustion and can contribute to this serious problem. Running automobiles and generators in attached garages can also lead to dangerous levels of CO being introduced into a home."

Contractors, service providers or a neighbor's portable equipment operation can also produce a CO risk. A gas-powered tool such as a pressure washer placed outside a window, doorway or ventilation opening can fill a home with deadly CO in minutes.

As states introduce legislation on CO alarm installation, we should encourage that such mandates apply to all residences while working with state lawmakers in adopting measures requiring residences containing only fuel-fired appliances to install CO alarms. So far during the 2007 legislative session, 13 states introduced and/or passed legislation requiring installation of CO alarms. Maryland and Florida have passed legislation requiring installation of CO alarms, while Illinois, Iowa, Minnesota, Missouri, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Texas and Virginia have introduced such measures.

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Efforts by states to require protection for consumers with fuel-fired appliances are a good first step toward reducing the risks of CO poisoning, but they fall short of complete protection from all possible CO sources.

Annual Maintenance of Gas Appliances Recommended

Routine maintenance of a home's appliances will ensure they operate not just with maximum efficiency, but also correctly and safely. The key here is to seek a qualified and licensed contractor to install and inspect all gas appliances in a home. For instance, proper combustion and venting are important for an efficient and safe home appliance. Gas flow and mixing air contribute to proper flame shape and correct combustion. Bird or other animal nests; children's toys; and leaves, branches, and other yard debris can partially or completely block vents that can lead to inadequate venting. One of the byproducts of burning natural gas is water vapor. Water vapor that is not properly vented and expelled outside a home can condense in the vent and lead to corrosion of the vent system. Over time, this can lead to failure of the venting system. This can introduce toxic gases into a home that otherwise would be vented to the outside, partially or completely block vents.

Vent corrosion can also lead to a shorter-than-expected service life of a gas appliance. Another big concern is carbon monoxide (CO), a colorless, odorless, tasteless gas that is formed when carbon-based fuels - such as kerosene, gasoline. There are many gas appliances in a home that require maintenance. This includes making sure there is proper combustion and venting both inside and outside a home. propane, natural gas, oil, charcoal, or wood - are burned with inadequate amounts of oxygen, creating a condition known as incomplete combustion. In the case of home gas appliances, this can be caused by improper installation, poor maintenance, or other appliance misuse or

failure. When incomplete combustion occurs in a home's gas appliances, CO is produced, and this can lead to carbon monoxide poisoning. **The bottom line is this: A qualified and licensed technician is needed.**

MAINTENANCE: WHAT TO LOOK FOR

- Look for recalls or service bulletins by manufacturer and model number.
- Supply proper venting.
- Check for access and fire safety.
- Fuel/air adjustment for proper flame color and size.
- Test for carbon monoxide.
- Check gas controls and safeties.
- Check combustion and ventilation airflow.
- Check for heat exchanger serviceability, leaks, corrosion, gaskets, controls, and safeties.
- Check filters.
- Supply required lubrication.
- Supply unit cabinet care.
- Check fan blades and/or blower.
- Check gas connections.
- Check flue/vent stack system.
- Inspect burner assembly.
- Check airflow.
- Inspect general wiring.
- Check induced draft and supply air motors.
- Go through operation sequence.
- Check ignition.
- Identify temperature rise.
- Check condensate/drain system.

In short, a certified tech can provide the peace of mind consumers and homeowners seek and want.

2009 NATIONAL FUEL GAS CODE

The 2006 National Fuel Gas Code is currently under undergoing its regular revision cycle which will result in the publication of the 2009 edition. The Committee has conducted a call for proposals, reviewed those proposals and taken action. These actions have been placed out for public comment and the committee will be reviewing and taking action on these comments at their October 16-17, 2007 meeting.

List of Major Proposed Revisions to the 2006 Edition Updated: 4/15/07

The following list is the proposed major revisions to the 2006 National Fuel Gas Code currently accepted by the National Fuel Gas Code Committee, ANSI ASC Z223 and NFPA 54, for inclusion into the 2009 edition.

NOTE: The proposed revisions will be published in the NFPA Report on Proposals and therefore are subject to public comment and further committee and membership actions.

PIPING

Section Subject Description of Change

- 5.6.8.2 Acceptable Tubing Joints **Revised** – Recognize press-type copper tubing fittings complying with ANSI LC-4
- 5.7.2.3 Meter Clearances Deleted – The requirement that a gas meter be located at least 3 feet from a source of ignition is eliminated. **Revised** – Global code revision to make measurements from “finished grade” (previously “grade”).
- 7.1.7.2 Connections Between Metallic and Plastic Piping **Revised** – The ASTM F2509 standard is added.
- 7.2.6.1 Support Type **Revised** – Require all pipe hooks, straps, bands,

etc to be metal. Also allow building structural components to support piping.

- 7.3.4 Tubing in Partitions **Revised** – Allow piping to be installed in partitions containing soft type insulation.

PIPING

Section Subject Description of Change

- 7.9.2.4 Shutoff Valve For Laboratories **New** – Require a master shut off valve in laboratory spaces.
- 7.13 Electrical Bonding and Grounding **Revised** – Where a CSST system is likely to become energize, require the CSST system to be bonded to the electrical service grounding electrode where the gas service enters the building. Require a minimum 6 AWG copper wire bonding jumper for all piping systems. **New** – The Code's approved piping and joining materials and methods are displayed in a table format.

VENTING

Section Subject Description of Change

- 12.2.4 Vents Terminating in Screened in Spaces **New** – Prohibits appliances from venting into a space enclosed with screens having a mesh size smaller than ¼ in.
- 12.3.4 Well Ventilated Spaces **Revised** – Venting into well ventilated industrial locations would continued to be allowed but only if the combustion products would not create a health hazard.
- 12.4.3.6 Mechanical Draft System Termination **Revised** – Global code revision to make measurements from “finished grade” (previously “grade”).
- 12.4.4.2 Automatically Operated Appliances Vent Through Kitchen Ventilating System **Revised** – Clarification add that the gas interlock requirement applies only to other than commercial

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cooking appliances.

- 12.5.3** Plastic Vent Joints **New** – Require plastic pipe and joints to be installed in accordance with the manufacturer's instructions. Where a primer is used it shall be of a contrasting color.
- 12.6.3.2** Incinerator Vented in a Chimney Serving Other Appliances **Deleted**
- 12.6.4.2** Continued Use of Unlined Chimney **Revised** – Add a reference to existing code sections that the chimney must be in good repair and sized properly.

VENTING

Section Subject Description of Change

- 12.7.1** (4) Securing Joints in Double Wall Vents **New** – Screws, rivets and other fasteners must not penetrate the inner wall of double wall gas vents.
- 12.8.4.1** Single Wall Vent Installation in Residential Occupancies **New** – Prohibit the use of single wall vents in residential occupancies (single wall vent connector is still allowed).
- 12.8.4.6** Single-Wall Vent Installation Relocation – Code coverage under 12.11.14.2 is relocated and revised to apply to single wall vents (previously applied to single wall vent connectors). Single wall vent connectors would be prohibited from passing through exterior walls.
- 12.9.2** Mechanical Draft Venting System Termination **Revised** – Global code revision to make measurements from "finished grade" (previously "grade").
- 12.9.3** Direct Vent Termination **Revised** – Global code revision to make measurements from "finished grade" (previously "grade").
- 12.9.4** Condensate Drain Installation **New** – Requires the condensate drains must be installed in accordance with the manufacturer's installation instructions.
- 12.9.5** Through the Wall Vent – Termination **New** – Through the wall vent terminations shall be in accordance with 12.2.4 (new) which prohibits appliances from venting into a space enclosed with screens having a mesh size smaller than ¼ in.
- 12.9.6** Through the Wall Vents - Sealing Annular Space **New** – Requires the sealing of the annular space around the vent penetration using approved materials to prevent entry of combustion products into the building.
- 12.11.4.1** Common Vents – Vent Connector Openings **New** – Openings into the common vent must be at different levels or if on the same level made at a 45 degree angle.
- 12.11.9.2** Common Vents – Maximum Length of Vent Connectors **Revised** – The maximum length of a vent connector entering a vent serving a single appliance a vent serving multiple appliances shall be a maximum of 75% of the vent height. Previously, vent connectors in multiple appliance venting systems were allowed to be a maximum of 100% of the vent height.
- 12.11.14.2** Single-Wall Vent Connectors Through Walls **Deleted** – Code coverage is relocated and revised to apply to single wall vents. See 12.8.4.6 above.
- 13.1.3** Maximum Offset Length For Single Appliance Vents **Revised** – Combined length of multiple offsets cannot exceed the lateral length listed in venting tables 13.1(a) through 13.1(e).

VENTING

Section Subject Description of Change

- 13.1.11** Category I Single Appliance Vents – Use of Tables for Exterior Chimneys **Revised** – The code provision that allow the use of an alternate design or the use of the manufacturer's installation instructions are deleted from 13.1.11. Alternative installations are permitted under the general code section 1.4 Equivalency.
- Table 13.1(c)** Single appliance Masonry Chimney Table – Type B Double Wall Connector - Seven Times Rule **Revised** – The sizes listed in the "Maximum Internal Area of Chimney (Square Inches)" row are replaced with the statement "Seven times the listed appliance categorized vent area, flue area, or draft hood outlet areas."
- Table 13.1(d)** Single Appliance Masonry Chimney Table – Single Wall Metal Connector – Seven Times Rule **Revised** – The sizes listed in the "Maximum Internal Area of Chimney (Square Inches)" row are replaced with the statement "Seven times the listed appliance categorized vent area, flue area, or draft hood outlet areas."
- 13.2.5** Maximum Vent Offset Length for Multiple Appliance Vents **Revised** – Combined length of multiple offsets cannot exceed total height of the vent.
- 13.2.23** Category I Multiple Appliance Vents – Use of Tables for Exterior Chimneys **Revised** – The code provision that allow the use of an alternate design or the use of the manufacturer's installation instructions are deleted from 13.2.23. Alternative installations are permitted under the general code section 1.4 Equivalency.

EQUIPMENT INSTALLATION

Section Subject Description of Change

- 9.3.8.8** Combustion Air Intakes **Revised** – Global code revision to make measurements from "finished grade" (previously "grade").
- 9.6.1.1** Commercial Cooking Appliances - Gas Pipe Stub Out **New** – Specify positioning and installation requirements for the gas piping stub out serving commercial cooking appliances.
- 9.6.1.2** Commercial Cooking Appliances – Restraint **New** – Require commercial cooking appliance with casters to have a restraining device installed.

EQUIPMENT INSTALLATION

Section Subject Description of Change

- 9.6.1.3** Suspended Low-Intensity Infrared Tube Heaters **New** – Prohibits hard-pipe or semi-rigid tubing connections to gas piping system.
- A.9.6.1.3** Suspended Low-Intensity Infrared Tube Heaters **New** – Explanatory material for new section 9.6.1.3
- 9.6.6** Gas Convenience Outlets **Revised** – Require gas convenience outlets be listed to ANSI Z21.90.
- 10.24.1** Stationary Gas Engine Connection **New** – Prohibits gas engines from being connected to the gas piping systems using hardpipe.
- 10.32** Outdoor Open Flame Decorative Appliances **New** – Add minimum installation requirements for listed and unlisted appliances.
- Table A.11.1.1** Gas Flow Rate to Burner **Revised** – Various table entries have been corrected.