This proposal is entirely editorial in nature, intended to improve the format and readability of the code. This proposal reorganizes 101.2 so that it is clear which piping systems and equipment requirements are intended to be within the scope of the code. Proposed Section 102.2.1 more clearly states the scope for natural gas and LP piping systems.

The paragraph relating to the unusual circumstance of piping systems for gases within the flammable range is added to the list of items that are not within the scope of the code.

Current items #3 and #4 are out of place in a list of items covered and are better stated in a text paragraph as explanatory material.

The proposed revision divides the current text into separate piping and equipment categories as suggested by current text. The list of "not covered" items is converted to a separate subsection for consistency with the text style of the code.

Committee Action: **Approved as Submitted**

Committee Reason: Based on proponent's published reason.

Assembly Action: **Disapproved**

Individual Consideration Agenda

This item is on the agenda for individual consideration because an assembly action was successful.

FG2-02
101.2

Proposed Change as Submitted:

Proponent: Guy Tomberlin, Chair, ICC Ad Hoc Committee for Hydrogen Gas

1. Revise as follows:

SECTION 101 (IFGC)
GENERAL

101.2 Scope.
This code shall apply to the installation of fuel gas piping systems, fuel gas utilization equipment, and related accessories as follows:

1.Coverage of piping systems shall extend from the point of delivery to the connections with gas utilization equipment. (See "point of delivery".)

2.Systems, other than hydrogen systems, with an operating pressure of 125 psig (862 kPa gauge) or less.

Piping systems for gas-air mixtures within the flammable range with an operating pressure of 10
psig (69 kPa gauge)

LP-Gas piping systems with an operating pressure of 20 psig (140 kPa gauge) or less.

3.Piping systems requirements shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation, and maintenance.

4.Requirements for gas utilization equipment and related accessories shall include installation, combustion and ventilation air and venting.

5. Gaseous hydrogen systems shall be regulated by Chapter 7.

This Code shall not apply to the following:

1. Portable LP-Gas equipment of all types that are not connected to a fixed fuel piping system.
2. Installation of farm equipment such as brooders, dehydrators, dryers, and irrigation equipment.
3. Raw material (feedstock) applications except for piping to special atmosphere generators.
4. Oxygen-fuel gas cutting and welding systems.
5. Industrial gas applications using gases such as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen, and nitrogen.
6. Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms, and natural gas processing plants.
7. Integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by chemical reactions or used in chemical reactions.
8. LP-Gas installations at utility gas plants.
9. Liquefied natural gas (LNG) installations.
10. Fuel gas piping in power and atomic energy plants.
11. Proprietary items of equipment, apparatus, or instruments such as gas generating sets, compressors, and calorimeters.
12. LP-Gas equipment for vaporization, gas mixing, and gas manufacturing.
13. Temporary LP-Gas piping for buildings under construction or renovation that is not to become part of the permanent piping system.
14. Installation of LP-Gas systems for railroad switch heating.

15. Installation of hydrogen gas, LP-Gas and compressed natural gas (CNG) systems on vehicles.

16. Except as provided in Section 401.1.1, gas piping, meters, gas pressure regulators, and other appurtenances used by the serving gas supplier in the distribution of gas, other than undiluted LP-Gas.

17. Building design and construction, except as specified herein.

18. Portable fuel cell appliances that are neither connected to a fixed piping system nor interconnected to a power grid.

CHAPTER 2
DEFINITIONS

SECTION 202 (IFGC)
GENERAL DEFINITIONS

FUEL GAS. ~~A natural, manufactured, liquefied petroleum or a mixture of these~~ Fuel gases include: natural gas, manufactured gas, liquefied petroleum gas, hydrogen gas and mixtures of these gases.

2. Add new text as follows:

GASEOUS HYDROGEN SYSTEM. An assembly of piping, devices and apparatus designed to generate, contain, distribute or transport hydrogen in the gaseous form and hydrogen-containing mixtures having a minimum of 5% hydrogen gas by volume. Such systems can consist of a compressed gas container or containers, reactors and appurtenances, including pressure regulators, pressure relief devices, manifolds, pumps, compressors and interconnecting piping and tubing and controls.

PORTABLE FUEL CELL APPLIANCE. A fuel cell generator of electricity, which is not fixed in place. A portable fuel cell appliance utilizes a cord and plug connection to a grid-isolated load and has an integral fuel supply.

Proponent's Reason:

Introduction. Hydrogen energy safety is based on three primary elements: regulatory requirements, capability of safety technology and the systemic application of equipment and procedures to minimize risks. Groups involved in the industrial scale production of hydrogen (producers) currently implement many successful proprietary methodologies for safely generating and handling large amounts of hydrogen. Hydrogen users (e.g., NASA) depend on cryo-hydrogen as a fuel and have effectively proven the safety of large scale ground and vehicle systems which support the Space Shuttle Program.

The efforts of the International Code Council Ad Hoc Committee for Hydrogen Gas (AHC) intend to address how future building codes can safely cover hydrogen applications in fuel cell vehicles and hydrogen gas motor-vehicle fuel dispensing and generation stations. The AHC consists of a balanced membership of user, producer and regulatory interests working together with a diverse group of technical and advisory interests to propose changes as necessary to the ICC International Codes. This, and other, related proposals is a summation of their work.

Proposed Revisions to IFGC Section 101.2—Scope. The commercial products industry is moving toward the use of hydrogen in vehicles, generators and equipment to replace petroleum-based fuels in order to reduce atmospheric emissions and facilitate a shift to the use of renewable energy supplies. Furthermore, the commercialization of fuel cells, and the goal of sustainable development has propelled hydrogen supply technology to the forefront of clean energy applications for transportation and distributed and regenerative electric power.

In many cases the hydrogen fuel is utilized, with air, within a fuel cell to produce electricity and in some cases co-generate heat. Typically, building officials will be faced with two classes of equipment – those that generate hydrogen (for use by other devices) and those that utilize hydrogen as their energy input such as a stationary fuel cell (as covered in the IFGC-§633, IMC-§924 and IRC-§M1903.1) or portable fuel cell appliances (as addressed in the IMC-§106.2 and IRC-§R105.2).

With regard to proposed Exception 18, the AHC feels that the reason to support this proposed change and related changes to the IMC (M1-01 Item 1, Approved as Submitted 11-0) and the IRC-Pluming/Mechanical (M1-01 Item 2, Approved as Submitted 8-0) approved during last year's cycle remains valid. Two specific stationary fuel cell power plant designs are commercially available now. An ANSI Z21.83 Standard exists for these stationary power plants and has been adopted by reference in the 2000 IMC and the 2001 Supplement to the 2000 IFGC. Regardless of the adoption and implementation of these standards and codes, the vast majority of building regulatory authorities in the U.S. has yet to see a stationary fuel cell or consider approving an installation.

In many cases, hydrogen will be utilized in a manner similar to the current use of natural gas. However, there are two important differences that cause the requirement to amend the ICC codes. First, both hydrogen and natural gas are lighter than air, but hydrogen is lighter than natural gas and is both more diffusive and more buoyant than natural gas. This means that in well-ventilated situations (e.g. outdoors) hydrogen will dissipate more quickly than natural gas, and much more quickly than either propane or gasoline, both of which have fumes that are heavier than air and will linger at an accident site. However, hydrogen and natural gas can both accumulate in unventilated pockets at the top of indoor structures and could represent a risk in such situations. Similarly, propane and gasoline fumes can accumulate at the floor level in unventilated spaces, posing a different risk. Thus ignition sources must be averted at the top of any unventilated spaces for hydrogen and natural gas, while ignitions sources must be precluded near the floor for gasoline or propane vehicles indoors. Second, hydrogen is odorless, colorless and burns with a flame that is not visible to the human eye. This means that it is unlikely that people will be able to detect unsafe conditions (without appropriate instrumentation) if they develop (similar to CO accumulation in a structure).

It is important that the ICC provide building officials with the necessary tools so that they can continue to ensure public safety as the public sector begins to adopt sources of hydrogen within the energy infrastructure. Therefore, the AHC has detailed a foundation for code requirements which will allow the safe handling and use of hydrogen as a fuel. Throughout their work, the AHC has sought consistency with existing codes and standards wherever possible. Where hydrogen standards in place today, do not cover the full scope of use or range of available or anticipated technologies, the AHC actively worked with a diverse group of technical and advisory parties from industry to establish criteria in the model codes to cover the installation and integration of these technologies with the building or facilities with which they are associated.

It is important to note that a given volume of natural gas has more than three times the energy of the same volume of hydrogen. Therefore, a given volume of pipe containing natural gas will contain the same

energy (potential hazard) as a three times larger volume of hydrogen (see "Comparison of Motor Fuels" attached).

The revisions proposed to Section 101.2 along with the more specific requirements detailed in this proposal clearly define gaseous hydrogen within the scope of the International Fuel Gas Code (IFGC), and allow gaseous hydrogen to be stored and generated indoors not unlike natural gas, provided specific safeguards are implemented. All portions of the system are designed to be fail safe to provide adequate safety under "worst case" conditions.

Proposed Definitions to IFGC Section 202, FUEL GAS. The AHC believes the current definition in the IFGC for FUEL GAS to be a potential source of nonuniform interpretation and nonuniform enforcement if this code were to cover gaseous hydrogen as a fuel gas. The current form of the definition reads as follows: *FUEL GAS. A natural, manufactured, liquefied petroleum or as a mixture of these.* The proposed definition adds clarity and is consistent with NFPA 54/ANSI Z223.1 National Fuel Gas Code (a.k.a., IFDS) which defines gases as follows: *GASES -- Include natural gas, manufactured gas, liquefied petroleum (LP) gas in the vapor phase only, liquefied petroleum gas-air mixtures, and mixtures of these gases, plus gas-air mixtures within the flammable range, with the fuel gas or the flammable component of a mixture being a commercially distributed product.* Through reasonable interpretation of the code text, the term "manufactured" as it pertains to gas, could be construed as applying to hydrogen. Alternatively, the word "hydrogen" or the phraseology "gas-air mixtures within the flammable range," could secure the same intent in the current form of the code.

GASEOUS HYDROGEN SYSTEM. Section 202 currently does not define GASEOUS HYDROGEN SYSTEM. In as much as the IFGC by interpretation applies to Hydrogen and would explicitly apply with the clarification provided in the prior definition proposed for FUEL GAS, it is imperative that the proposed definition be added to the IFGC. This definition is derived from the IFC Compressed Gases and NFPA 50A. It is the International Code Council Ad Hoc Hydrogen (H2) Committee's intent that appurtenant systems apply to natural gas piping, hydrogen de-sulfurizers, etc., necessary to support operation of the gaseous H_2 system.

PORTABLE FUEL CELL APPLIANCE. Portable fuel cell appliances are quickly reaching their deployment potential and will be commercially available from neighborhood hardware and appliance stores shortly. To the extent that these devices become permanent, a reference to the exception and definition in the code specific to portable fuel cell appliances will provide the code official the necessary information to discern whether these appliances and their associated equipment are "stationary," as subject to the provisions of the IFGC or "portable," and therefore exempt.

In their reason for disapproval the 2001 IFGC Code Development Committee cited an inherent understanding on behalf of all code users that the IFGC does not intend to address "portable" appliances. The presumption that all code users hold this view as self evident, especially as it pertains to emerging fuel cell technologies, does nothing to assist building regulatory officials who enforce the IFGC to assess fuel cell installations proposed in their jurisdictions. Furthermore, if this view is indeed self evident, is there a need for existing Exceptions 1), 2), 4), and 15) to IFGC Section 101.2 as they pertain to "portable" LP-Gas equipment, farm equipment, welding systems, and vehicles, respectively?

In Summary. The AHC has developed these changes through the consultation of a diverse group of technical and advisory parties from various parties in the hydrogen community, inclusive of industry, professional associations, testing laboratories, agencies of government, academic and research institutions and believes it important to provide a template for thorough coverage in the International Codes of equipment, appliances and vehicles that will utilize hydrogen as a fuel such that regulators have a sound technical basis on which to verify installation and to uphold the standard of health and safety for the citizens of their jurisdictions.

Industry is ready to commercialize hydrogen energy systems. The AHC urges your APPROVAL of this proposal "as submitted".

Committee Action: Disapproved

Committee Reason: The proposed text provides no coverage for system pressure limits. A hydrogen/inert gas mixture is not mandated thus flammable mixtures would be allowed. Section 102.1 has wide application which is not addressed in proposed text. The proposed text opens up applications which are not covered by the code. The proposed text would open up hydrogen applicability to all occupancies including dwellings. Hydrogen has a low specific gravity and is hard to contain. The hydrogen ad hoc committee had no members in tune with the IFGC issues. The proposed text does not require certified piping installers. The IFGC committee has no hydrogen expertise. Hydrogen coverage should be in a separate code. The IFC committee excluded indoor fueling operations. Vehicle fueling coverage belongs in the IFC. The proposed text has some unenforceable provisions.

Assembly Action: Approved as Submitted

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted and an assembly action was successful.

Public Comment 1:

Gilbert Gonzales, Murray City Corp., requests Approved as Submitted.

Commenter's Reason: The proposed text does not address every possible scenario nor is it a perfect document. However, as with any new technology the industry must have a reasonable and enforceable base from which to regulate the safe installation and delivery of hydrogen gas. The Ad Hoc Committee for Hydrogen Gas has made every conceivable attempt to provide the Fuel Gas Code Committee and the ICC membership with just that. The comment made in the committee reasoning that states the ad hoc committee had no members in tune with fuel gas issues is incorrect. The original proposal noted that "The AHC consists of a balanced membership of user, producer and regulatory interests working together with a diverse group of technical and advisory interests to propose changes as necessary to the ICC International Codes." The fact that hydrogen is a fuel gas, would make the Fuel Gas Code the logical choice for these requirements. To address the code requirements for hydrogen gas through a separate code is both unreasonable and impractical.

Public Comment 2:

ICC Ad Hoc Committee for Hydrogen Gas, requests Approved as Modified by this comment.

Modify proposal as follows:

SECTION 101 (IFGC)
GENERAL

101.2 Scope.
This code shall apply to the installation of fuel gas piping systems, fuel gas utilization equipment, and related accessories as follows:

1. Coverage of piping systems shall extend from the point of delivery to the connections with gas utilization equipment. (See "point of delivery".)

2. Systems, other than hydrogen storage vessels and equipment used for the storage, generation, compression or dispensing of hydrogen ~~systems~~, with an operating pressure of 125 psig (862 kPa gauge) or less.

   Piping systems for gas-air mixtures within the flammable range with an operating pressure of 10 psig (69 kPa gauge)

   LP-Gas piping systems with an operating pressure of 20 psig (140 kPa gauge) or less.

3. Piping systems requirements shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation, and maintenance.

4. Requirements for gas utilization equipment and related accessories shall include installation, combustion and ventilation air and venting.

5. Gaseous hydrogen systems shall be regulated by Chapter 7.

This Code shall not apply to the following:

1. Portable LP-Gas equipment of all types that are not connected to a fixed fuel piping system.

2. Installation of farm equipment such as brooders, dehydrators, dryers, and irrigation equipment.

3. Raw material (feedstock) applications except for piping to special atmosphere generators.

4. Oxygen-fuel gas cutting and welding systems.

5. Industrial gas applications using gases such as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen, and nitrogen.

6. Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms, and natural gas processing plants.

7. Integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by chemical reactions or used in chemical reactions.

8. LP-Gas installations at utility gas plants.

9. Liquefied natural gas (LNG) installations.

10. Fuel gas piping in power and atomic energy plants.

11. Proprietary items of equipment, apparatus, or instruments such as gas generating sets, compressors, and calorimeters.

12. LP-Gas equipment for vaporization, gas mixing, and gas manufacturing.

13. Temporary LP-Gas piping for buildings under construction or renovation that is not to become part of the permanent piping system.

14. Installation of LP-Gas systems for railroad switch heating.

15. Installation of hydrogen gas, LP-Gas and compressed natural gas (CNG) systems on vehicles.

16. Except as provided in Section 401.1.1, gas piping, meters, gas pressure regulators, and other appurtenances used by the serving gas supplier in the distribution of gas, other than undiluted LP-Gas.

17. Building design and construction, except as specified herein.

18. Portable fuel cell appliances that are neither connected to a fixed piping system nor interconnected to a power grid.

CHAPTER 2
DEFINITIONS

SECTION 202 (IFGC)
GENERAL DEFINITIONS

FUEL GAS. Fuel gases include: natural gas, manufactured gas, liquefied petroleum gas, hydrogen gas and mixtures of these gases.

GASEOUS HYDROGEN SYSTEM. See Section 702.1. ~~An assembly of piping, devices and apparatus designed to generate, contain, distribute or transport hydrogen in the gaseous form and hydrogen-containing mixtures having a minimum of 5% hydrogen gas by volume. Such systems can consist of a compressed gas container or containers, reactors and appurtenances, including pressure regulators, pressure relief devices, manifolds, pumps, compressors and interconnecting piping and tubing and controls.~~

PORTABLE FUEL CELL APPLIANCE. A fuel cell generator of electricity, which is not fixed in place. A portable fuel cell appliance utilizes a cord and plug connection to a grid-isolated load and has an integral fuel supply.

Commenter's Reason: In their reason for disapproval the Code Development Committee cited the following technical issues:

1) Definition of hydrogen gas is incomplete.
2) Lacks limits on pressure.
3) Lacks piping leak test criteria
4) Lacks specific piping material and identification requirements.
5) Confusion with regard to location of ventilation openings.
6) Confusion with regard to location of ignition sources.
7) Lacks requirements for certified piping installers.
8) A general concern for indoor refueling hazards.
9) A general concern that liquefied hydrogen is beyond scope.
10) A general concern that commingling provisions for hydrogen with existing language could lead to confusion.

The AHC has addressed and resolved the technical issues identified by the Code Development Committee directly as modified by this and other coordinated public comments to all hydrogen-related proposals (F176, M7, FG2, FG15, FG41 & FG48). The following Reason in support provides a brief explanation of each solution:

Specifically:

1) The definition, GASEOUS HYDROGEN SYSTEM, has been revised ; first, to establish the threshold criterion requiring the use of IFGC hydrogen provisions, and second to clarify the upper limit on the balance of non-ignitable gases in the mixture as distributed in the piping system. The definition is explicit in that the mixture is nontoxic and outside the flammable range.

There is a perception that the delivery of a hydrocarbon-based fuel as feedstock and subsequent generation of hydrogen from that feedstock somehow conflicts with the term "point-of-delivery" as defined by the IFGC. This is not the case. In fact, the two definitions are complimentary. The hydrocarbon-based fuel (feedstock) service ends and the hydrogen system begins as soon as the feedstock fuel service reaches the first piece of process equipment (e.g., desulfurizer or catalyst bed), as defined by the term GASEOUS HYDROGEN SYSTEM.

2) An upper pressure limit for general hydrogen distribution piping similar to that for natural gas (125 psig) is specified. However, a similar pressure limitation for storage, generation and dispensing systems was dismissed on grounds that establishing such a limit could unnecessarily restrict the fuel transfer process— compressed gas storage pressures must be high to accomplish the closed-transfer of fuel to the vehicle. In that regard, the upper pressure limit could be as high or higher than

currently required for Natural Gas Vehicle (NGV) fuel-dispensing operations. Moreover, no such pressure limitation exists in NFPA 50A to which the IFC refers the user for the design of gaseous hydrogen systems today.

3) The requirements of ASME B31.3, *Process Piping*, are referenced for the testing and inspection of gaseous hydrogen piping.

4) Stainless steel piping has been used by the space program and industry successfully for a number of years and is recommended as the minimum standard for material performance. Table A5.1 of NASA's "Standard Safety for Hydrogen Systems", lists among others, Types 304, 304L and 316 as being suitable for both gaseous and liquid hydrogen service. Requirements for identification are added similar to IFC Section 3003.2.

5) Clarifying language has been added to specify the location of the openings for venting a hydrogen leak such that the both openings are located entirely within 12-inches of the garage ceiling and floor in the same wall.

6) Provisions for ventilation were reformatted to address the number of hydrogen vehicles served, a floor area allowance consistent with the current IMC threshold for garages (IMC Table 403.3, Footnote 'd'), the location of ignition sources (e.g., garage door opener), and establishing an upper generation limit for on demand hydrogen generators, all consistent with ongoing research at the University of Miami, Coral Gables. A given standard of safety is met by the chosen set of restrictions. The AHC's choice of hydrogen leakage rates and ignition source location produce the highest level of safety.

7) ASME B31.3, *Process Piping* as referenced for the design and installation of piping systems, establishes certification requirements for piping installers. Training is not required beyond the provisions of ANSI B31.3.

8) Provisions for indoor generation, compression, storage and dispensing equipment have been reworked in response to clarifications requested by the IFC Committee (see F176-02). The exceptions proposed by F176-02 As Modified by Public Comment (AMPC) are intended for the purpose of clearly establishing provisions already allowed by other sections of the IBC and IFC. Additionally, where a maximum allowable quantity threshold in the IFC is exceeded, the proposed language would require the construction of the appropriate H occupancy to accommodate such indoor generation or refueling operations.
9) Provisions associated with the vaporization of liquefied hydrogen for gasified applications have been consolidated into a single new Chapter 7 for hydrogen gas, FG41-02 As Modified by Public Comment (AMPC).

10) To address concerns that a user could confuse or otherwise commingle newly proposed hydrogen provisions with those existing for natural and LP gas, the AHC has consolidated all provisions for hydrogen in one new Chapter 7.

The AHC is comprised of 3 regulators (a fire official, a mechanical official, and an environmental specialist) representing general interests; 5 producer interests representing the utility, testing laboratory, petroleum, automotive and combined gas/chemical processing industries, respectively; and a researcher representing user interests. Over the course of the past 24 months, this committee has worked with a diverse group of technical and advisory parties in 5 open meetings, two (45-day) public comment periods and three public hearings in order to detail a foundation for code requirements which will allow the safe handling and use of hydrogen as a fuel. Hopefully, those who have an interest in this matter came forward through this process.

Throughout their work, the AHC has sought consistency with existing codes and standards wherever possible and recommends inclusion of provisions for gasified hydrogen in the Fuel Gas Code. The AHC urges your approval of this proposal AS MODIFIED by this PUBLIC COMMENT (AMPC).

Public Comment 3:

Jim Ranfone, American Gas Association requests Disapproved.

Commenter's Reason: The American Gas Association (AGA) supports the IFGC Committee action for disapproval. In addition to the Committee Reason for disapproval documented in the Report on the Public Hearing, additional reasons addressed in the public hearing testimony by AGA and others include the following:

1.) Coverage of hydrogen and hydrogen applications is already addressed in ICC codes other than the IFGC, most notably the *International Fire* Code (IFC) which already covers storage cylinders and containers among other aspects of hydrogen storage and handling. If current coverage of these codes is insufficient, proposals to expand coverage for hydrogen should be directed to those codes. As for hydrogen applications such as fuel cells and vehicles that would use fuel gases as a feedstock (the most commonly cited scenario for hydrogen end use), the IFGC already provides coverage for these applications, including coverage of piping systems serving both listed and unlisted equipment. No additional coverage for these applications is needed.

2.) IFGC Section 101, "Other Fuels," clearly was intended to cover fuels such as hydrogen. This section states, "The requirements for the design, installation, maintenance, alteration and inspection of mechanical systems operating with fuels other than fuel gas shall be regulated by the International Mechanical Code." This text, added to the IFGC in the 2000 edition, provides clear direction for ICC coverage of fuels such as hydrogen without tampering with the IFGC definition of "fuel gases" to include hydrogen.

3.) The proposal's definition of hydrogen in the scope of the IFGC, as well as in accompanying proposals, is ambiguous and opens up questions about hydrogen safety not currently at issue for fuel gases. For example, the proposal provides no restriction on piping pressures or compositions including flammable mixtures, two areas explicitly treated in the IFGC and in field practice for fuel gas installations. As a result, the proposal does not provide minimum requirements for hydrogen consistent with the requirements for fuel gases under the code. In testimony, proponents could not address these issues because of a lack of clarity of the ultimate applications of interest for hydrogen-based fuels. Perhaps when greater clarity of the applications is presented, the appropriateness of proposed minimum requirements in the appropriate codes can be better evaluated.

4.) The proposal does not address other important issues of the scope of the IFGC. The scope states that, "Coverage of piping systems shall extend from the point of delivery to connections with gas utilization equipment." However, the definition of "point of delivery" in the IFGC is incompatible with delivery of hydrogen. The proposal does not address this issue.

AGA supports the development of sound code or standards coverage of hydrogen and hydrogen systems under the ICC. AGA advocates the expeditious development of a separate, stand-alone code or standard for hydrogen systems. In order to maintain the integrity of ICC documents as model codes, proponents of code coverage for hydrogen and hydrogen systems need to address deficiencies identified in the current proposals.

FG3-02

Proposed Change as Submitted:

Proponent: John Terry, Chair; representing the International Existing Building Code Drafting Committee

1. Revise as follows: