

Exhibit No.:
Issue: Conversions of Appliances
Witness: Ronald G. Smith
Sponsoring Party: Missouri Propane Gas Association
Type of Exhibit: Direct Testimony
Case No.: GC-2016-0083
Date Testimony Prepared: January 19, 2017

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

MISSOURI PROPANE GAS ASSOCIATION,)
)
 Complainant,)
)
 vs.) File No. GC-2016-0083
)
 SUMMIT NATURAL GAS OF MISSOURI, INC.,)
)
 Respondent.)

**DIRECT TESTIMONY OF
RONALD G. SMITH
ON BEHALF OF THE
MISSOURI PROPANE GAS ASSOCIATION
FEBRUARY 1, 2017**

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CONTENTS

	<u>Page</u>
I. Introduction.....	1
II. Purpose and Summary of Testimony.....	1
III. Description of Unvented Gas Heating Products and Standards.....	2
IV. Summit Natural Gas of Missouri’s Conversion Program.....	6
V. Manufacturer Specification.....	7
VI. Stipulation and Agreement in Case No. GR-2014-0086.....	8
VII. Conclusion.....	8

1 **I. INTRODUCTION**

2 **Q 1: Please state your name, occupation and business address.**

3 A: My name is Ronald G. Smith. I am the Executive Director of Operations for Global
4 Engineered Solutions Group, LLC, P.O. Box 177, 145 Bandy Ave., Galesburg, IL
5 61401. My home address is 813 E. 25th Ave., New Smyrna Beach, FL 32169.

6 **Q 2: Please describe your experience and qualifications.**

7 A: I have over 35 years of experience as an engineer working and consulting in the
8 heating appliance industry. Since 1981 I have worked for various manufacturers
9 globally that manufacture gas heating and cooking appliances for both the
10 U.S. and European markets. The primary gas heating appliance I have the
11 most extensive experience with is Unvented (vent-free) Gas-Fired Heaters.
12 I'm currently the senior member and active participant of the Z21 Technical
13 Advisory Group (TAG) for the ANSI Z21.11.2 Standards for Unvented Gas-Fired
14 Heating Appliances. Since 1987 I have Chaired or have taken the lead
15 participation in every major substantive issue under the Unvented Room Heater
16 TAG, from N02 emission coverage, to developing coverage for hearth type
17 unvented room heaters and up to submitting the coverage for Universal Unvented
18 Room Heaters. My curriculum vitae is provided in **Schedule RGS-1** to this
19 testimony.

20 **Q 3: On whose behalf are you appearing in this proceeding?**

21 A: I am appearing on behalf of the Missouri Propane Gas Association ("MPGA").

22 **II. PURPOSE AND SUMMARY OF TESTIMONY**

23 **Q 4: What is the purpose of your testimony in this proceeding?**

1 A: The purpose of my testimony is to address whether SNGMO is violating the
2 provisions of the “Partial Stipulation and Agreement as to Dual Fuel and Conversions
3 of Appliances” (the “Stipulation”) dated August 18, 2014 filed with the Public
4 Service Commission of the State of Missouri in connection with “In the Matter of
5 Summit Natural Gas of Missouri Inc.’s Filing of Revised Tariffs To Increase its
6 Annual Revenues For Natural Gas Service,” GR-2014-0086. In addition, I am
7 responding to Summit Natural Gas of Missouri, Inc.’s (“SNGMO”) actions of
8 disregarding the manufacturers’ specifications and the American National Standards
9 Institute (ANSI) Safety standard for unvented gas heating products.

10 **III. DESCRIPTION OF UNVENTED GAS HEATING PRODUCTS AND STANDARDS**

11 **Q 5: What are unvented gas heating products?**

12 A: Unvented (also known as vent-free) gas heating products are products that do not
13 require any type of vent system. Instead, they are designed to burn clean and the
14 combustion by-products allowed to flow into the room the gas heating product is
15 located in. Stringent requirements ensure that these unvented gas heating products not
16 only burn cleanly, but that they are located in rooms of sufficient size to ensure an
17 adequate supply of fresh air is always available for the combustion process. The most
18 obvious benefit of this type of system is that no heat is lost through the venting
19 system making the unvented gas-fired heater 99.9% efficient.

20 Unvented gas heating products include room heaters, gas logs, fireplace systems,
21 fireplace inserts, and free-standing stoves. They are certified by a third-party testing
22 authority such as Underwriters Laboratories or the Canadian Standards Association
23 for compliance with American National Standards Institute (ANSI) Z21.11.2, the

1 American National Standard for Gas-Fired Room Heaters, Volume II, Unvented
2 Room Heaters.

3 **Q 6: Can you please describe the ANSI Standards?**

4 A: The ANSI Z21 Standards committee writes and maintains standards for gas-fired
5 burning appliances and equipment.

6 **Q 7: Do the ANSI Standards address conversions of unvented gas heating products?**

7 A: Yes, they do.

8 **Q 8: What do the ANSI Standards say about conversions?**

9 A: The standards do not permit conversions for unvented gas heating products. ANSI
10 national product standards are adopted by unvented gas heating products
11 manufacturers. These standards expressly prohibit field conversion of a unit from one
12 type of gas to another, as exemplified in these warnings that manufacturers of the
13 units are required to provide in printed instructions to buyers of the products:

14 a) ANSI Z21.11.2-2013, section 1.2: “This standard covers unvented room heaters
15 and gas-fired unvented decorative room heaters that comply with either of the
16 following types: a) shipped from the factory equipped specifically for use with
17 one gas only. Field conversion of gas types by any means including the use of a
18 kit shall not be permitted; (emphasis added)

19 b) ANSI Z21.11.2-2013, section 4.20.2 g): “WARNING: Any change to this heater
20 or its controls can be dangerous.”

1 c) ANSI Z21.11.2-2013, section 4.20.4: "WARNING: If the information in this
2 manual is not followed exactly, a fire or explosion may result causing property
3 damage, personal injury or loss of life."

4 d) ANSI Z21.11.2-2013, section 4.20.5: "WARNING: This appliance is equipped
5 for (natural or propane) gas. Field conversion is not permitted."

6 These warnings are placed by unvented gas heating product manufacturers in the
7 Owners' Manuals for the product. The warning is also placed on the rating plate that
8 is attached to the unit so that anyone working on the unit is informed of the
9 conversion prohibition. I have attached an example of an actual Owner's Manual and
10 a rating plate as **Schedule RGS-2** and **Schedule RGS-3**, respectively, to this
11 testimony.

12 It is important to note that the general warnings and instructions cited above are not
13 just intended for layperson homeowners. The ANSI Z21.11.2 Safety Standard for
14 Gas-fired Unvented Room Heaters makes no distinction of safety warnings or
15 specifications between laypersons and qualified service people, or anyone else that
16 works on these units.

17 **Q 9: Do all unvented gas heating product manufacturers in the United States adhere to**
18 **the ANSI safety standard?**

19 A: Yes they do.

20 **Q 10: Why do they adhere to the ANSI safety standard?**

21 A: Although there is no national code or regulation that gas appliances must be tested to
22 a safety standard, reputable retailers will not purchase a non-certified gas-fired
23 appliance for sale to consumers. As far as I am aware, all manufacturers of gas-fired

1 heating products in the United States seek third party certification to the ANSI
2 Z21.11.2 safety standard.

3 **Q 11: Based on this, do all unvented gas product manufacturers prohibit the conversion of**
4 **their products?**

5 A: Yes, they do, for those products that are designed for one fuel only. However, it is
6 important to note that manufacturers do make what are called “universal” unvented
7 heaters that are specifically made for dual fuel use. These universal unvented heaters
8 are specially designed by the manufacturer so that they can be switched from one fuel
9 to the other without any conversion of the product being necessary. There is simply a
10 switch that can be flipped to make the fuel change. The universal unvented heaters
11 are also designed and manufactured for compliance to the ANSI safety standard.

12 **Q 12: Why do manufacturers prohibit the conversion of their products that are designed**
13 **to be used with one fuel only?**

14 A: Well, besides the fact that it is a verbatim requirement of the ANSI Z21.11.2 safety
15 standard, there can be design differences between an unvented heater equipped only
16 for natural or propane gas that could render the product unsafe and not in compliance
17 with the safety standard if only the burner injector, pilot and regulator were changed.

18 **Q 13: Is a natural gas utility like SNGMO required to comply with the ANSI safety**
19 **standard when they work on unvented gas heating products?**

20 A: Yes. I would expect any reputable utility to comply with nationally recognized safety
21 standards.

22 **Q 14: Why?**

23 A: Besides the obvious reasons for any company or individual to follow nationally
24 recognized safety standards, in this particular circumstance a qualified serviceperson

1 could not know that there are physical product design differences with the burner
2 systems of an unvented heater equipped for natural or propane gas that could render
3 the product unsafe and not in compliance with the safety performance specifications
4 and requirements if converted.

5 **IV. SUMMIT NATURAL GAS OF MISSOURI'S CONVERSION PROGRAM**

6 **Q 15: Are you familiar with SNGMO's appliance conversion activities?**

7 A: Yes. I have reviewed SNGMO's the response to MPGA's First Set of Data Requests
8 No. 4, which are attached as **Schedule RGS-4** to this testimony. In its response to that
9 data request which asked, "Please provide a list of all vent-free appliances, including
10 date of conversion, type of appliance, name of manufacturer, model and serial
11 number for each such appliance converted by SNGMO in the past 5 years.", SNGMO
12 submitted a spreadsheet showing all of the conversions it had performed or had
13 contracted with a third party to perform from 2013-2015. SNGMO submitted a list of
14 109 unvented gas product conversions either it or outside contractors under its
15 direction and control converted from propane to natural gas.

16 **Q 16: As someone who has been in this industry for over 35 years, are you aware of any**
17 **organization or company having a conversion program to convert unvented gas**
18 **heating products like SNGMO does?**

19 A: I am not. To my knowledge, SNGMO is the only company that has such a program.

20 **Q 17: Why do you think this is?**

21 A: In my experience, a reputable utility typically complies with nationally recognized
22 safety standards. Plus, there could be dire consequences if an unvented gas-fired
23 heater that discharges the combustion emissions into the living space is converted
24 from one fuel to another.

1 **Q 18: What kind of dire consequences?**

2 A: Possible dire consequences could be carbon monoxide poisoning, or risk of fire or
3 explosion. That is why the ANSI safety standard that governs the design, construction
4 and performance of unvented gas-fired heating products have not permitted those
5 products to be converted from one fuel to another.

6 **V. MANUFACTURER SPECIFICATION**

7 **Q 19: What is a manufacturer specification?**

8 A: A manufacturer specification is a document that provides critical defining information
9 about a product and can include identification of the manufacturer; a list of rules,
10 bans and standards that apply to the item; and design specifications and product
11 images that visually illustrate the product and note distinguishing characteristics.

12 **Q 20: Is this definition of manufacturer specification widely accepted in the unvented gas**
13 **heating products manufacturing industry?**

14 A: Yes, it is.

15 **Q 21: Are the unvented gas product manufacturers' warnings that appear throughout the**
16 **Owners' Manuals considered by the industry to be a manufacturer specification for**
17 **the product?**

18 A: Yes, they are considered specifications for the unvented gas-fired heating products.

19 Also, it is important to note that the type of gas that the product is designed to use is
20 considered a design specification (see the specifications page, page 32, of **Schedule**
21 **RSG-2**).

22 **Q 22: Why are the unvented gas product manufacturers' warnings that conversions of the**
23 **products from one gas to another considered a manufacturer's specification?**

24 A: Well, again, besides the fact that it is a verbatim requirement of the ANSI Z21.11.2
25 safety standard, there can be product design differences between an unvented gas-

1 fired heater equipped for propane gas and one equipped for natural gas that could
2 render the product unsafe and out of compliance with the safety standard if only the
3 burner injector, pilot and regulator were changed. There are subtle design differences
4 between natural gas and propane gas appliances, in some cases internal to the burner
5 and or other components, which are not detectable and would require combustion
6 testing equipment equal to the certifying Nationally Recognized Testing Laboratory
7 (NRTL) in order to assure performance equal to the original performance
8 specifications.

9 **VI. STIPULATION AND AGREEMENT IN CASE NO. GR-2014-0086**

10 **Q 23: Are you familiar with the “Partial Stipulation and Agreement as to Dual Fuel and**
11 **Conversions of Appliances” (Stipulation) between MPGA and SNGMO that the**
12 **Commission approved in Case No. GR-2014-0086?**

13 A: Yes, I have reviewed the Stipulation. The Stipulation, paragraph 1 states: “For
14 converting appliances from propane to natural gas, [Summit Natural Gas of Missouri,
15 Inc.] agrees to follow all applicable national and local codes and manufacturers’
16 specifications relating to the conversion of appliances.”

17 **Q 24: In converting vent free appliances from propane to natural gas, is SNGMO**
18 **complying with this provision in the Stipulation?**

19 A: No, it is not. SNGMO is violating the Stipulation in two ways: (1) it is not following
20 the ANSI safety standard; and (2) it is not following the manufacturers’
21 specifications. Both the ANSI safety standard and the manufacturers’ specifications
22 do not permit conversions of unvented appliances from propane to natural gas and
23 vice versa.

24 **VII. CONCLUSION**

1 **Q 25: What is your conclusion as to SNGMO's conversion program regarding unvented**
2 **heating products?**

3 A: It is my conclusion that for the foregoing reasons, SNGMO actions, in converting
4 unvented gas heating products from propane to natural gas, violate the Stipulation
5 that the Commission approved in Case No. GR-2014-0086.

6 **Q 26: Does this complete your testimony?**

7 A: Yes it does.

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Complainant,)

vs.)

SUMMIT NATURAL GAS OF MISSOURI, INC.,)

Respondent.)

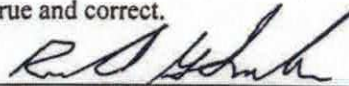
File No. GC-2016-0083

AFFIDAVIT OF RONALD G. SMITH

STATE OF Nevada)
COUNTY OF Clark) ss

Ronald G. Smith, being first duly sworn on his oath, states:

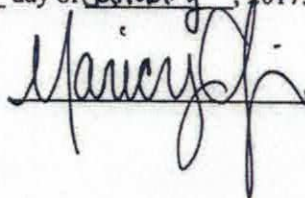
1. My name is Ronald G. Smith. I am the Executive Director of Operations for Global Engineered Solutions Group, LLC. My business address is P.O. Box 177, 145 Bandy Ave., Galesburg, IL 61401.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of the Missouri Propane Gas Association, consisting of 9 pages, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.



Ronald G. Smith

Subscribed and sworn to before me this 31st day of January, 2017.





My commission expires: 08/08/2020

Notary Public