

Gary A. Dodge (0897)  
HATCH, JAMES & DODGE  
10 West Broadway, Suite 400  
Salt Lake City, Utah 84101  
Telephone: (801) 363-6363  
Facsimile: (801) 363-6666  
Email: gdodge@hjdllaw.com  
Attorneys for UAE

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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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Joint Application of Questar Gas Company, the Division of Public Utilities, and Utah Clean Energy, for the Approval of the Conservation Enabling Tariff Adjustment Option and Accounting Orders	Docket No. 05-057-T01
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**PREFILED REBUTTAL TESTIMONY OF KEVIN C. HIGGINS ON BEHALF OF  
UTAH ASSOCIATION OF ENERGY USERS**

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The Utah Association of Energy Users (UAE) hereby files the prefiled rebuttal testimony of Kevin C. Higgins in this docket.

DATED this 8<sup>th</sup> day of August, 2007.

HATCH, JAMES & DODGE

/s/ \_\_\_\_\_  
Gary A. Dodge  
Attorneys for UAE

## CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent this 8<sup>th</sup> day of August, 2007, to the mail or email addresses listed below:

Michael Ginsberg  
Patricia E. Schmid  
Assistant Attorney Generals  
500 Heber M. Wells Building  
160 East 300 South  
Salt Lake City, UT 84111  
[mginsberg@utah.gov](mailto:mginsberg@utah.gov)  
[pschmid@utah.gov](mailto:pschmid@utah.gov)

Betsy Wolf  
Utility Ratepayer Advocate  
Salt Lake Community Action Program  
764 South 200 West  
Salt Lake City, UT 84101  
[bwolf@slcap.org](mailto:bwolf@slcap.org)

Reed T. Warnick  
Paul H. Proctor  
Assistant Attorney Generals  
500 Heber M. Wells Building  
160 East 300 South  
Salt Lake City, Utah 84111  
[rwarnick@utah.gov](mailto:rwarnick@utah.gov)  
[pproctor@utah.gov](mailto:pproctor@utah.gov)

F. Robert Reeder  
William J. Evans  
Parsons Behle & Latimer  
201 South Main Street, Suite 1800  
P.O. Box 45898  
Salt Lake City, Utah 84145-0898  
[bobreeder@parsonsbehle.com](mailto:bobreeder@parsonsbehle.com)  
[wevans@parsonsbehle.com](mailto:wevans@parsonsbehle.com)

Gregory B. Monson  
STOEL RIVES  
201 South Main Street, Suite 1100  
Salt Lake City, UT 84111  
[gbmonson@stoel.com](mailto:gbmonson@stoel.com)

Roger J. Ball  
1375 Vintry Lane  
Salt Lake City, UT 84121  
[ball.roger@gmail.com](mailto:ball.roger@gmail.com)

C. Scott Brown  
Colleen Larkin Bell  
Questar Gas Company  
180 East 100 South  
Salt Lake City, UT 84145  
[scott.brown@questar.com](mailto:scott.brown@questar.com)  
[colleen.bell@questar.com](mailto:colleen.bell@questar.com)

Roger Swenson  
Energy Consultant for US Magnesium  
LLC  
238 North 2200 West  
Salt Lake City, Utah 84116  
[roger.swenson@prodigy.net](mailto:roger.swenson@prodigy.net)

Sarah Wright  
Executive Director  
Utah Clean Energy  
917 2nd Ave.  
Salt Lake City, UT 84103  
[sarah@utahcleanenergy.org](mailto:sarah@utahcleanenergy.org)

/s/ \_\_\_\_\_

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF UTAH**

**Rebuttal Testimony of Kevin C. Higgins**

**on behalf of**

**UAE**

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Joint Application of Questar Gas Company, the Division of Public Utilities, and Utah  
Clean Energy, for the Approval of the Conservation Enabling Tariff Adjustment Option  
and Accounting Orders

Docket No. 05-057-T01

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**August 8, 2007**

1                                   **REBUTTAL TESTIMONY OF KEVIN C. HIGGINS**

2

3    **Introduction**

4    **Q.     Please state your name and business address.**

5    A.           Kevin C. Higgins, 215 South State Street, Suite 200, Salt Lake City, Utah,  
6                84111.

7    **Q.     By whom are you employed and in what capacity?**

8    A.           I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies  
9                is a private consulting firm specializing in economic and policy analysis  
10               applicable to energy production, transportation, and consumption.

11   **Q.     On whose behalf are you testifying in this proceeding?**

12   A.           My testimony is being sponsored by the Utah Association of Energy Users  
13                (UAE).

14   **Q.     Please describe your professional experience and qualifications.**

15   A.           My academic background is in economics, and I have completed all  
16                coursework and field examinations toward a Ph.D. in Economics at the University  
17                of Utah. In addition, I have served on the adjunct faculties of both the University  
18                of Utah and Westminster College, where I taught undergraduate and graduate  
19                courses in economics. I joined Energy Strategies in 1995, where I assist private  
20                and public sector clients in the areas of energy-related economic and policy  
21                analysis, including evaluation of gas and electric utility rate matters.

1           Prior to joining Energy Strategies, I held policy positions in state and local  
2 government. From 1983 to 1990, I was economist, then assistant director, for the  
3 Utah Energy Office, where I helped develop and implement state energy policy.  
4 From 1991 to 1994, I was chief of staff to the chairman of the Salt Lake County  
5 Commission, where I was responsible for development and implementation of a  
6 broad spectrum of public policy at the local government level.

7 **Q. Have you previously testified before this Commission?**

8 A.           Yes. Since 1984, I have testified over fifteen times before the Utah Public  
9 Service Commission on natural gas and electric power issues.

10 **Q. Have you testified previously before any other state utility regulatory**  
11 **commissions?**

12 A.           Yes. I have testified in over fifty other proceedings on the subjects of  
13 utility rates and regulatory policy before state utility regulators in Alaska,  
14 Arizona, Arkansas, Colorado, Georgia, Idaho, Illinois, Indiana, Kansas,  
15 Kentucky, Michigan, Minnesota, Missouri, Nevada, New York, Ohio, Oklahoma,  
16 Oregon, Pennsylvania, South Carolina, Virginia, Washington, West Virginia, and  
17 Wyoming.

18           My qualifications are presented in detail in UAE Exhibit 1.1 (KCH-1),  
19 attached to my direct testimony filed previously in this docket on May 15, 2006.

20 **Q. What was the subject of your previous testimony filed in this docket?**

21 A.           On May 15, 2006, I filed testimony on behalf of UAE in which I  
22 recommended against adoption of the revenue decoupling mechanism (termed the

1 Conservation Enabling Tariff or “CET”) that had been proposed, on a pilot basis,  
2 by Questar Gas Company (“QGC”), the Division of Public Utilities (“Division”),  
3 and Utah Clean Energy. In September 2006 a Stipulation was submitted by these  
4 three parties, as well as the Committee of Consumers Services, which, among  
5 other things, called for adoption of the CET on a three-year pilot basis, subject to  
6 a one-year review. As explained in the position statement filed by UAE at the  
7 time the Stipulation was considered by the Commission, UAE opposes revenue  
8 decoupling, but elected to neither support nor oppose the Stipulation.

9

10 **Overview and conclusions**

11 **Q. Does UAE continue to adhere to its position expressed in September 2006**  
12 **that it opposes revenue decoupling, but neither supports nor opposes the**  
13 **September 2006 Stipulation?**

14 A. Yes. UAE’s position remains unchanged.

15 **Q. Do you continue to adhere to the opinions expressed in your direct testimony**  
16 **filed in this docket on May 15, 2006 in which you recommend against**  
17 **adoption of a revenue decoupling mechanism?**

18 A. Yes.

19 **Q. What is the purpose of your testimony in this proceeding?**

20 A. My testimony addresses certain conclusions presented in the report  
21 prepared by Division witness Daniel G. Hansen dated May 2007, and filed as  
22 Exhibit DPU Exhibit No. 6.1 (DGH-A.1).

1 **Q. What conclusions and recommendations do you provide in this rebuttal**  
2 **testimony?**

3 A. I recommend that the Commission give no weight to the conclusion in Dr.  
4 Hansen's report that there is no need to consider a reduction in QGC's allowed  
5 rate of return to compensate customers for the risk shift from decoupling. His  
6 conclusion is overreaching and not adequately supported by his analysis.

7

8 **Analysis of Risk Shifting**

9 **Q. Please describe the analysis of risk shifting prepared by Dr. Hansen.**

10 A. Dr. Hansen has prepared a report, attached to his direct testimony, entitled  
11 "A Review of Natural Gas Decoupling Mechanisms and Alternative Methods for  
12 Addressing Utility Disincentives to Promote Conservation." As the title suggests,  
13 the report discusses various aspects of revenue decoupling. In Section 5.2 of the  
14 report, Dr. Hansen purports to test whether a decoupling mechanism would shift  
15 risks from QGC to its customers. He posits that in order to conclude that  
16 decoupling would result in important risk-shifting, a statistically significant  
17 relationship must be found between GS-1 annual usage per customer on the one  
18 hand and one or more weather-related, commodity-price-related, and Utah  
19 economy-related independent variables on the other hand; and that further,  
20 variations in the underlying independent variables must result in "large"  
21 variations in GS-1 annual usage-per-customer.

1 Dr. Hansen then presents an analysis in which he measures the statistical  
2 relationship between GS-1 annual usage per customer and heating-degree-days,  
3 the real price of natural gas, Utah unemployment rate, real Utah Gross Domestic  
4 Product, real Utah per capita disposable income, as well as an annual time trend.

5 Dr. Hansen offers the following observations concerning the results of his  
6 analysis:

- 7 (1) The effect of weather on GS-1 usage per customer is statistically  
8 significant.  
9  
10 (2) The simple time trend of (declining) usage per customer is statistically  
11 significant.  
12  
13 (3) The Utah GDP variable coefficient has a negative sign, suggesting  
14 (counter-intuitively) that an improvement in economic conditions  
15 reduces usage per customer.  
16  
17 (4) The effect of the price of natural gas on GS-1 usage per customer is  
18 not statistically significant.  
19  
20 (5) The results do not provide any evidence that changes in economic  
21 conditions affect usage per customer.  
22

23 Dr. Hansen summarizes his findings by concluding that weather risk from  
24 decoupling exists, but that economic and commodity price risks do not appear to  
25 exist based on the analysis of the available data. He then offers the following  
26 policy prescription: Based on these results, there is no need to consider a  
27 reduction in QGC's allowed rate of return to compensate customers for the risk  
28 shift from decoupling.

29 **Q. What is your assessment of Dr. Hansen's analysis of risk shifting?**



1 A. Dr. Hansen grossly overreaches in drawing a sweeping and extreme policy  
2 conclusion that is out of proportion to the rather unremarkable results of his  
3 statistical analysis. The only clear implications of Dr. Hansen's statistical results  
4 are the obvious conclusion that GS-1 usage per customer is a function of  
5 temperature and a confirmation that GS-1 usage per customer has declined as a  
6 function of time. The latter phenomenon was described and demonstrated in detail  
7 by QGC from the outset of this proceeding, and is not disputed.<sup>1</sup>

8 Of some concern, Dr. Hansen's models are unable to demonstrate a  
9 significant relationship between the price of natural gas and usage per customer  
10 (the coefficients produced by his analysis are of the wrong sign), which is  
11 suggestive of a likely (although not unusual) specification problem in his models.  
12 Nevertheless, Dr. Hansen relies on these results to conclude that there is no need  
13 to consider a reduction in QGC's allowed rate of return to compensate customers  
14 for any risk shift attributable to revenue decoupling. I find this conclusion to be  
15 troubling and farfetched. It is not supported by the limited definitive results that  
16 appear in the study, and it should be given no weight by the Commission.

17 **Q. Why is Dr. Hansen's policy conclusion unwarranted?**

18 A. There are at least two reasons. The first is that Dr. Hansen's test for  
19 determining whether a reduction in risk should be recognized in QGC's allowed  
20 rate of return is arbitrary and unduly restrictive. He limits the conditions for  
21 recognizing such a reduction to situations in which a statistically significant  
22 relationship can be demonstrated between usage per customer and the price of

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<sup>1</sup> See direct testimony of Barrie McKay, pp. 7-8, filed January 23, 2006. See also QGC Exhibit 1.4.

1 natural gas and/or Utah economic conditions.<sup>2</sup> In other words, Dr. Hansen deems  
2 that revenue decoupling will convey no reduction in risk to QGC unless GS-1  
3 usage per customer can be shown to vary significantly with changes in the natural  
4 gas price or changes in Utah economic conditions – irrespective of any other  
5 factors. Dr. Hansen thus rules out, by definition, any adjustments to QGC’s rate of  
6 return to reflect reduced risk from decoupling which may be attributable to  
7 variables other than commodity price or the Utah economy. This limitation is  
8 arbitrary and unsupported.

9 Second, in drawing his policy conclusion that there is no need to consider  
10 adjusting rate of return, Dr. Hansen ignores the very evidence that QGC presented  
11 in introducing its revenue decoupling proposal at the outset: namely that usage  
12 per customer has been declining for over 25 years and this decline reduces QGC’s  
13 distribution non-gas (“DNG”) revenue per customer in between rate cases. Even  
14 Dr. Hansen’s own regression analysis demonstrates that the “annual time trend”  
15 variable is statistically significant in “explaining” the decline in usage per  
16 customer. Yet despite the fact that revenue decoupling will insulate QGC’s  
17 revenue per customer from this downward usage trend, Dr. Hansen concludes that  
18 no risk reduction will occur from decoupling, and that no rate of return adjustment  
19 is warranted. This conclusion is not only unwarranted, it is difficult to fathom.

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<sup>2</sup> As I noted above, Dr. Hansen also tests for the significance of weather on usage per customer, but rules out any recognition in rate of return because “methods exist that can mitigate this risk for both the utility and its customers.” [Report, p. 23] In fact, QGC’s rate design for GS-1 already removes almost all of the weather-related volatility from revenue per customer, even without revenue decoupling.

1 **Q. Is Dr. Hansen’s policy conclusion at odds with policy conclusions offered by**  
2 **other DPU witnesses in this proceeding?**

3 A. Yes. In direct testimony filed on January 23, 2006, DPU witness George  
4 Compton expressed his support for adoption of a revenue decoupling pilot program  
5 for QGC, while stating that both customers and the utility would be better served  
6 by having the customers bear the risks associated with revenue decoupling while  
7 being compensated via a utility rate-of-return adjustment.<sup>3</sup>

8 **Q. Is there another section of Dr. Hansen’s report that presents a more**  
9 **reasonable discussion of incorporating the effects of revenue decoupling into**  
10 **the allowed rate of return?**

11 A. Yes. Dr. Hansen’s report contains an Appendix A, authored by a different  
12 individual, Robert Camfield. Appendix A describes a conceptual approach for  
13 estimating reductions in the allowed rate of return due to the introduction of  
14 decoupling. In contrast to the unwarranted policy conclusion offered by Dr.  
15 Hansen, the conceptual approach discussed in Appendix A has considerable merit.  
16 If, in the next QGC general rate case proceeding, revenue decoupling is under  
17 consideration for the rate effective period, then the approach outlined in Appendix  
18 A would provide some useful guidance to the parties and the Commission.

19 **Q. Does this conclude your direct testimony?**

20 A. Yes, it does.

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<sup>3</sup> Direct testimony of George Compton, page 10.