

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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PENNSYLVANIA PUBLIC UTILITY  
COMMISSION

v.

UGI UTILITIES, INC.  
(Gas Division)

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Docket No. R-2011-2238953

ORIGINAL

Rebuttal Testimony and Exhibits of  
ROBERT D. KNECHT

On Behalf of the  
Pennsylvania Office of Small Business Advocate

Topics:

Design Day Demand Forecast  
Mandatory Capacity Assignment  
Sharing Mechanisms

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SECRETARY OF STATE

Date Served: July 25, 2011

Date Submitted for the Record: \_\_\_\_\_

## REBUTTAL TESTIMONY OF ROBERT D. KNECHT

1 **Q. Mr. Knecht, please state your name and briefly describe your qualifications.**

2 A. My name is Robert D. Knecht. I am a Principal of Industrial Economics, Incorporated  
3 (“IEc”), a consulting firm located at 2067 Massachusetts Avenue, Cambridge, MA  
4 02140. As part of my consulting practice, I have prepared analyses and expert testimony  
5 in the field of regulatory economics on a variety of topics. I obtained a B.S. degree in  
6 Economics from the Massachusetts Institute of Technology in 1978, and an M.S. degree  
7 in Management from the Sloan School of Management at M.I.T. in 1982, with  
8 concentrations in applied economics and finance. I am appearing in these proceedings on  
9 behalf of the Pennsylvania Office of Small Business Advocate (“OSBA”). My résumé  
10 and a listing of expert testimony that I have filed in utility regulatory proceedings are  
11 attached in Exhibit IEc-R1.

12 **Q. Did you submit direct testimony in this proceeding?**

13 A. No, I did not. At this writing (July 22, 2011), I am awaiting complete responses to  
14 interrogatories originally submitted to UGI Utilities, Inc. (Gas Division) (“UGI Gas” or  
15 “the Company”) on June 17, 2011. I am advised by OSBA counsel that responses to  
16 these initial interrogatories were due on June 27, 2011. I received responses to these  
17 initial interrogatories on July 7th and 8th, 2011, but the responses were substantially  
18 incomplete. In order to obtain complete responses, OSBA submitted a follow-up set of  
19 interrogatories on July 13, 2011. I am advised by OSBA counsel that responses to  
20 interrogatories are due on July 25, 2011. If my analysis of the responses to these  
21 interrogatories causes me to question any aspect of the Company’s filing in this  
22 proceeding, I will submit supplemental testimony promptly.

23 One aspect of my investigation in this proceeding involved a review of the design day  
24 forecasting methodology for UGI Gas and its affiliates, UGI Penn Natural Gas, Inc.  
25 (“PNG”) and UGI Central Penn Gas, Inc. (“CPG”). In its most recent base rates  
26 proceeding, CPG relied substantially on Commission approval of a design day demand  
27 forecast in a prior Section 1307(f) proceeding for developing allocation factors in its cost  
28 of service study (“COSS”). If UGI Gas and its affiliates are going to rely on such

1 Commission approvals from Section 1307(f) proceedings for developing rate class  
2 allocation factors in base rates proceedings, it becomes necessary for parties to evaluate  
3 class-specific implications of those estimates in these proceedings, where the underlying  
4 methodology can be more carefully evaluated. However, based on the lack of class-  
5 specific information available to me at present, I conclude that the Commission should  
6 give no weight to the Company's design day demand forecast from this proceeding in  
7 developing demand allocation factors in a future base rates proceeding.

8 **Q. Please describe the purpose of this rebuttal testimony.**

9 A. This testimony addresses the recommendations made by Mr. James L. Crist on behalf of  
10 Centerpoint Energy Services, Inc.; Jerome H. Rhoads, Inc. d/b/a Rhoads Energy  
11 Corporation; Shipley Energy Company; and Shipley Choice LLC (collectively, the  
12 "Supplier Group" or "SG"). Mr. Crist's recommendations relate generally to the issue of  
13 UGI Gas's proposed mechanism for mandatory assignment of upstream capacity to  
14 competitive natural gas suppliers ("NGSs") who serve retail "Choice" customers.

15 **Q. Please explain why a natural gas distribution company ("NGDC") such as CPG  
16 would need to assign capacity to Choice NGSs.**

17 A. As suppliers of last resort ("SOLRs"), NGDCs must maintain the capability to provide  
18 natural gas supply service to all retail customers. Providing gas supply service  
19 necessarily includes the capability to meet the "design day" demands of those customers  
20 under extreme weather conditions. To that end, Pennsylvania NGDCs have either  
21 retained sufficient upstream pipeline and storage capacity to meet the design day  
22 requirements of all retail customers, or have required that Choice NGSs assign their  
23 capacity back to the NGDC in the event that Choice customers return to NGDC SOLR  
24 supply.

25 However, contracts for upstream capacity come in lumpy increments with inflexible  
26 contract periods, while customers are generally free to switch between SOLR and Choice  
27 supply at will. NGDCs often cannot quickly adjust their contract capacity in order to  
28 maintain a reasonable balance between capacity and customers' requirements. If an  
29 NGDC were to face a significant migration of customers from SOLR to Choice supply

1 without the ability to assign its capacity to the Choice suppliers, it could find itself unable  
2 to divest itself of the excess capacity. The costs for this excess capacity (also known as  
3 “stranded capacity”) would then be borne by the remaining SOLR customers, driving up  
4 the NGDC’s purchased gas cost (“PGC”) rates, and exacerbating the problems associated  
5 with the migration to competitive supply.

6 Giving the NGDC the ability to assign capacity to the Choice suppliers on a recallable  
7 basis avoids the stranded capacity problem. This need for capacity assignment was  
8 therefore recognized in the provisions of the Natural Gas Choice and Competition Act  
9 (notably §2204(d) and (e) of the Public Utility Code). As Mr. Crist notes, the  
10 Commission has recently affirmed the need for NGDCs to be able to make mandatory  
11 assignments of capacity associated with migrating customers in its rulemaking regarding  
12 the promotion of competitive retail markets for natural gas.<sup>1</sup>

13 **Q. Please summarize the Company’s proposal in this proceeding for the mandatory**  
14 **capacity assignment that will take effect in October 2012.**

15 A. The Company proposes no change to its currently approved tariff. Under that tariff, the  
16 Company will offer Choice NGSs two options for mandatory capacity assignment.  
17 Under Option One, the Company will assign pipeline transportation capacity to each  
18 NGS equal to the design day demands of the NGS’s customers. No storage or peaking  
19 capacity will be assigned. The assigned capacity will be priced at the weighted average  
20 demand cost of the Company’s portfolio of transportation, storage and peaking capacity.  
21 Under Option Two, the Company will assign pipeline transportation capacity to each  
22 NGS equal to 59 percent of the design day demands of the NGS’s customers, but at the  
23 same cost as the capacity assigned in Option One. Under Option Two, however, the NGS  
24 will be entitled to purchase 41 percent of its customers’ design winter daily requirements  
25 at summer index prices (plus variable transportation costs to and from storage). In effect,  
26 under Option Two, NGSs will be able to take advantage of the winter-summer natural gas  
27 price differential in a manner similar (but not identical) to having their own storage  
28 capacity.

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<sup>1</sup> See “Revised Final Rulemaking Re Natural Gas Distribution Companies and the Promotion of Competitive Retail Markets, 52 Pa. Code, Chapter 62,” Docket No. L-2008-2069114/57-269, June 24, 2011, pages 46-47.

1 This approach was generally approved by the Commission for UGI Gas and its affiliate,  
2 PNG, in last year's Section 1307(f) proceedings.

3 **Q. Mr. Crist's first recommendation is: "Capacity assigned to Choice Suppliers should**  
4 **include all interstate pipeline transportation and storage capacity that was procured**  
5 **to serve a Choice Supplier's customers." (emphasis in original) Do you agree with**  
6 **Mr. Crist's reasoning for this proposal?**

7 A. As a theoretical matter, Mr. Crist's proposal has a number of advantages over the  
8 Company's current tariff. These advantages generally take the form of maintaining a  
9 level competitive playing field between the NGDC and the NGSs. If it were practical,  
10 the ideal solution would be for the NGDC to assign to each NGS the specific upstream  
11 capacity that it procured to provide transportation and load balancing services to the  
12 specific customers who migrate to that NGS. As Mr. Crist explains, this approach would  
13 provide Choice NGSs with the same flexibility the NGDC has for managing the upstream  
14 assets.<sup>2</sup>

15 Even within this theoretical framework, however, it is important to recognize that some  
16 NGDC Choice plans require that the NGDC continue to provide some or all load  
17 balancing services, and therefore do not require NGSs to provide full load balancing  
18 services or to be responsible for meeting the total design day demand of its customer  
19 base. Therefore, even in the theoretical world of proportional capacity assignment, the  
20 NGDC should assign only that capacity which is necessary for the NGS to meet its  
21 obligations under the Choice Plan. I address this issue in more detail below.

22 Unfortunately, there are at least two significant constraints to the theoretical ideal.<sup>3</sup>

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<sup>2</sup> This appears to have been the original intent of the UGI Gas mechanism. In his rebuttal testimony in last year's Section 1307(f) proceeding, UGI Gas witness Mr. J. P. Ghio indicated, "The weighted average cost was intended to be achieved through the requirement to release a *pro rata* share of all supply contracts, although this was not technically possible given that certain PGC assets are not releasable." UGI Statement No. 3-R, Docket No. R-2010-2172933, page 3.

<sup>3</sup> These concerns were specifically identified by the Company in an interrogatory response attached to Mr. Crist's testimony as Exhibit SG-2. These concerns were also advanced in Mr. Ghio's rebuttal testimony in the UGI Gas Section 1307(f) proceeding last year, wherein Mr. Crist raised similar concerns. See Docket No. R-2010-2172933, UGI Statement No. 3-R, July 21, 2010, pages 3-4.

1 First, certain storage and peaking contracts may not be assigned. Mr. Crist acknowledges  
2 this fact, but he makes only vague suggestions as to how UGI Gas might potentially work  
3 around these problems. Without a specific solution, Mr. Crist does not offer an  
4 implementable capacity assignment plan. As such, the most that can be accomplished at  
5 this stage is to push this issue to another proceeding.

6 Second, relinquishing control over storage capacity poses risks for the NGDC that do not  
7 apply to transportation contracts. As Mr. Crist points out, storage contracts are  
8 assignable, and UGI Gas could require that it retain recall rights to the storage capacity in  
9 the event a Choice supplier defaults. However, the storage capacity provides value only  
10 if there is sufficient physical gas in storage to meet the load requirements of the NGS's  
11 customers. Thus, the NGDC faces the risk that, if the NGS defaults, the NGDC will have  
12 insufficient physical gas in the assigned storage capacity to meet its customers' winter  
13 supply requirements. To ensure that the SOLR will not need to restrict supply to  
14 customers in an extreme winter, any capacity assignment mechanism which includes  
15 assignment of storage capacity should have a requirement that the NGS meet certain  
16 minimum fill requirements. Mr. Crist's proposal does not address this issue.

17 Thus, while there are theoretical advantages to Mr. Crist's proposal, he does not offer the  
18 details as to how his proportional capacity would work, nor does he address the  
19 significant problems associated with assignment of storage capacity.

20 **Q. Mr. Crist's second recommendation is: "The price charged for assigned capacity**  
21 **should be derived from the actual contract rate for the assigned capacity; not a**  
22 **weighted average cost of all capacity that the Company has acquired, including**  
23 **capacity that has no connection to a natural gas supplier's customers." Do you**  
24 **agree?**

25 A. There are advantages and disadvantages to Mr. Crist's proposal relative to the  
26 Company's position. Regarding advantages, first, Mr. Crist's proposal is consistent with  
27 basic cost causation principles; i.e., the NGS pays for the capacity it is assigned. This is  
28 particularly true where it is not possible to achieve the theoretical proportional  
29 assignment of all capacity, which is one of Mr. Crist's chief complaints. If NGSs are

1 assigned only pipeline capacity, they should pay only for pipeline capacity. Second, Mr.  
2 Crist's proposal has the advantage of being consistent with the spirit of the Public Utility  
3 Code for pricing assigned capacity as specified in §2204(d)(3) (even if the capacity  
4 assignment program is approved under §2204(d)(5)).

5 Regarding disadvantages, it is important for both the Commission and the NGSs to  
6 recognize that adopting this approach may put NGSs at a competitive disadvantage in  
7 some circumstances. For PGC pricing, UGI Gas blends all of its pipeline and storage  
8 contracts into a single rate. Therefore, the price to compare implicitly reflects a weighted  
9 average of all such assets. If Mr. Crist's proposal is adopted, there will likely be  
10 circumstances in which the specific contract capacity that is assigned to NGSs is of  
11 higher cost than the weighted average used by the NGDC in developing the price to  
12 compare.

13 In its investigation into promoting competitive retail markets, the Commission explicitly  
14 considered this issue, but made no firm determination. The Commission appears to have  
15 drafted the regulations to allow the flexibility to pursue either the Company's or Mr.  
16 Crist's proposal.<sup>4</sup>

17 To the extent that the Commission adopts Mr. Crist's proposal, it should do so with the  
18 explicit recognition that competitive disadvantages may occur, and that the NGS  
19 proponents of this proposal were fully aware of these ramifications.

20 **Q. Mr. Crist's third recommendation is: "The derivation of the capacity assigned to a**  
21 **natural gas supplier should be based on the average day in the month of highest**  
22 **usage on the Company's system, as it is today in some parts of the current UGI**  
23 **tariff. An NGS's capacity assignment should then equate to its proportional share**  
24 **of the actual capacity UGI has under contract so that UGI does not over or under**  
25 **allocate its actual capacity." Do you agree with this recommendation?**

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<sup>4</sup> See "Revised Final Rulemaking Re Natural Gas Distribution Companies and the Promotion of Competitive Retail Markets, 52 Pa. Code, Chapter 62," Docket No. L-2008-2069114/57-269, June 24, 2011, page 47.

1 A. No, I do not. In fact, except in specific circumstances, Mr. Crist's two sentences are not  
2 consistent with one another. If, for example, a Choice NGS is responsible for meeting  
3 the entire daily load fluctuation of each of its customers, the Choice NGS must therefore  
4 have sufficient capacity to meet the design day demand of those customers, and the  
5 NGDC need retain no capacity for those customers. The "proportional share of the actual  
6 capacity UGI has under contract" should, in this example, be based on design day  
7 demand. Assigning capacity based on an average daily load in January would not be the  
8 "proportional share" Mr. Crist references in his second sentence.

9 As a general rule, both the amount of upstream capacity and the nature of that capacity  
10 that are assigned to Choice NGSs should be consistent with the delivery obligations of  
11 the NGS under the Choice plan at the NGDC in question. As I noted earlier, however,  
12 the delivery obligations of Choice NGSs can vary considerably from NGDC to NGDC.  
13 For example, under the Columbia Gas Choice program, NGSs are required to deliver a  
14 fixed amount of gas on every day of the year, and the NGDC is required to retain  
15 responsibility for all load balancing functions. Under Columbia's plan, it is not  
16 reasonable to assign *any* storage capacity to Choice NGSs, as these NGSs require no load  
17 balancing capability.

18 In the specific case of UGI Gas (and its affiliate PNG), the daily delivery obligations of  
19 Choice suppliers are not terribly clear from the tariff. However, under both the UGI Gas  
20 and PNG plans, the DDR for NGSs is not explicitly stated to be a levelized amount for  
21 each month (as it is for CPG), and appears to at least have the ability to vary on a day to  
22 day basis.<sup>5</sup> The UGI Gas and PNG tariffs therefore imply that Choice suppliers are  
23 responsible for virtually all load balancing. Under this interpretation of the tariff, the  
24 NGDC retains responsibility only for balancing differences between the daily estimate of  
25 load (the daily DDR) and the actual daily consumption, if any. For the balancing service  
26 in the UGI Gas and PNG supplier tariffs, the charge is quite modest, at about 6 cents per

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<sup>5</sup> The Balancing section of Rate AG, Aggregation Service, in UGI Gas' supplier tariff indicates, "Company will balance the daily difference, if any, between the anticipated Customer use, as communicated through the DDR, and the actual usage of Choice Supplier's customers. For this service, the Choice Supplier shall pay to Company the applicable Balancing Fees shown in this rate schedule, per MCF of Aggregation Pool usage, as measured at the meter."

1 Mcf for UGI Gas and 4.5 cents per Mcf for PNG.<sup>6</sup> If Choice NGSs retain responsibility  
2 for meeting daily peak demands at these NGDCs, it is appropriate to assign capacity to  
3 those NGSs based on design day demand.

4 In contrast, the obligations of Choice suppliers at CPG appear to differ from those at  
5 PNG and UGI Gas. At CPG, the NGS is generally required under Section 3.5 of Rate  
6 Schedule MAB in the Natural Gas Supplier Coordination Tariff to provide a levelized  
7 daily delivery requirement (“DDR”) on each day of any particular month, with CPG  
8 retaining responsibility for all intra-month load balancing.<sup>7</sup> For that service, CPG  
9 charges a material load balancing fee, proposed at 42.75 cents per Dth in the current  
10 filing. Thus, in the specific case of CPG, Mr. Crist’s recommendation that capacity  
11 assignment be limited to the capacity necessary to meet the average daily load of the  
12 highest usage month does not appear to be unreasonable, because that is the capacity  
13 necessary to meet the Choice NGS’s obligations under CPG’s Choice plan. In fact, if  
14 CPG were to assign capacity equal to the design day requirements of the Choice  
15 suppliers, it would not retain sufficient capacity to meet its intra-month balancing  
16 requirements for Choice customers under Rate Schedule MAB.

17 **Q. Mr. Crist’s fourth recommendation is: “The Company’s capacity assignment**  
18 **program should be voluntary.” Do you agree?**

19 A. No, I do not. As I explained earlier, mandatory capacity assignment may be necessary to  
20 avoid saddling PGC customers with the costs related to stranded capacity. As Mr. Crist  
21 offers no specific mechanisms for protecting PGC customers from absorbing the costs of  
22 stranded capacity, I recommend that this aspect of his proposal be rejected.

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<sup>6</sup> These rates are posted on the UGI Utilities, Inc. website, at <http://gasmngmt.ugi.com/UGIU/choicebalfee.shtml>  
and <http://gasmngmt.ugi.com/UGIP/choicebalfee.shtml> .

<sup>7</sup> Section 4.1 of CPG Rate Schedule MAB indicates, “Fluctuations between actual daily customer usage by the pool and the levelized gas flow required of the NGS will be balanced by the Companies through the use of their on-system and/or contract storage capabilities.”

1 **Q. Mr. Crist's fifth recommendation is: "The 75% customer share of off-system sales**  
2 **revenues should be credited to both PGC customers (including applicable firm**  
3 **transportation customers) and Choice customers." Do you agree?**

4 A. For the most part, I do not. The margins earned by UGI Gas from capacity release and  
5 off-system sales are primarily derived from unused capacity on the Company's  
6 transmission and storage assets during non-peak periods. Because NGSs control any  
7 capacity assigned to them, NGDCs can rely only on capacity retained for its own  
8 obligations to earn these margins.

9 Thus, the margins earned by UGI Gas are related to the assets that are retained for PGC  
10 customers, and which, to a very large extent, are paid for by PGC customers.  
11 Accordingly, the credit associated with the use of those assets for alternative transactions  
12 should be credited almost entirely to PGC customers.

13 NGS Choice suppliers are similarly able to generate margins from off-system sales and  
14 capacity release transactions with the upstream capacity they are assigned, and are free to  
15 credit their customers with those margins as they see fit. Assigning NGDC margins to all  
16 customers would allow shopping customers to benefit twice from these margins, first  
17 from the capacity that is used to serve PGC customers and second from the capacity used  
18 by the NGS to serve Choice customers.

19 However, as I discussed earlier, UGI Gas does provide minimal balancing services to  
20 Choice NGSs, for which it relies on upstream capacity. Because Choice NGSs are  
21 paying for that capacity, it is appropriate that the margins earned from off-system sales  
22 and capacity release transactions offset load balancing costs. I therefore agree with Mr.  
23 Crist that a proportionate share of the margin credit should offset the cost basis for the  
24 balancing charges under Rate Schedule AG that UGI Gas imposes on the Choice  
25 suppliers.

26 **Q. Does this conclude your rebuttal testimony?**

27 A. Yes, it does.

**EXHIBIT IEc-R1**

**RÉSUMÉ AND EXPERT TESTIMONY LIST**

**FOR**

**ROBERT D. KNECHT**



INDUSTRIAL ECONOMICS, INCORPORATED

## ROBERT D. KNECHT

Robert D. Knecht specializes in the practical application of economics, finance and management theory to issues facing public and private sector clients. Mr. Knecht has more than thirty years of consulting experience, focusing primarily on the energy, metals, and mining industries. He has consulted to industry, law firms, and government clients, both in the U.S. and internationally. He has participated in strategic and business planning studies, project evaluations, litigation and regulatory proceedings and policy analyses. His practice currently focuses primarily on utility regulation, and he has provided analysis and expert testimony in numerous U.S. and Canadian jurisdictions. Mr. Knecht also served as Treasurer of IEc from 1996 through 2010, and was responsible for the firm's accounting, finance and tax planning, as well as administration of the firm's retirement plans, during that period. Mr. Knecht's consulting assignments include the following projects:

- For the Pennsylvania Office of Small Business Advocate, Mr. Knecht provides analysis and expert testimony in industry restructuring, base rates and purchased energy cost proceedings involving electric, steam and natural gas distribution utilities. Mr. Knecht has analyzed the economics and financial issues of electric industry restructuring, stranded cost determination, fair rate of return, claimed utility expenses, cost allocation methods and rate design issues.
- For independent power producers and industrial customers in Alberta, Mr. Knecht has provided analysis and expert testimony in a variety of electric industry proceedings, including industry restructuring, cost unbundling, stranded cost recovery, transmission rate design, cost allocation and rate design.
- For industrial customers in Québec, Mr. Knecht has prepared economic analysis and expert testimony in regulatory proceedings regarding cost allocation, compliance with legislative requirements for cross-subsidization, and rate design.
- As a participant on various international teams of experts, Mr. Knecht has prepared the economic and financial analysis for industry restructuring studies involving the steel and iron ore industries in Venezuela, Poland, and Nigeria.
- For the U.S. Department of Justice and for several private sector clients, Mr. Knecht has prepared analyses of economic damages in a variety of litigation matters, including ERISA discrimination, breach of contract, fraudulent conveyance, natural resource damages and anti-trust cases.
- Mr. Knecht participates in numerous projects with colleagues at IEc preparing economic and environmental analyses associated with energy and utility industries for the U.S. Environmental Protection Agency.

Mr. Knecht holds a M.S. in Management from the Sloan School of Management at M.I.T., with concentrations in applied economics and finance. He also holds a B.S. in Economics from M.I.T. Prior to joining *Industrial Economics* as a principal in 1989, Mr. Knecht worked for seven years as an economic and management consultant at Marshall Bartlett, Incorporated. He also worked for two years as an economist in the Energy Group of Data Resources, Incorporated.

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## EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2005 TO 2010

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
NBEUB 2009-017	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	March 2010	New Brunswick Public Intervenor	Cost allocation, rate design
R-2009-2145441	Pennsylvania Public Utility Commission	T.W. Phillips Gas & Oil	March 2010	Pennsylvania Office of Small Business Advocate	Unaccounted-for gas and retainage rates
R-2010-2150861	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	March 2010	Pennsylvania Office of Small Business Advocate	Gas costs
P-2009-2099333	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	February 2010	Pennsylvania Office of Small Business Advocate	Purchase of receivables program
R-3708-2009	Régie de l'Énergie, Québec	Hydro Québec Distribution	November 2009	AQCIE/CIFQ	Post-patrimonial generation cost allocation, revenue allocation
M-2009-2123944, 2123945, 2123948, 2123950, 2123951	Pennsylvania Public Utility Commission	PECO, Duquesne Light, Metropolitan Edison, Pennsylvania Electric, Penn Power, West Penn Power	October, November 2009	Pennsylvania Office of Small Business Advocate	Smart Meter Cost Allocation and Rate Design
NBEUB 2009-006	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	September 2009	New Brunswick Public Intervenor	Development Period Criteria
M-2009-2092222, 2121952, 2112956, 2093218, 2093217, 2093215	Pennsylvania Public Utility Commission	Metropolitan Edison, Pennsylvania Electric, Penn Power, West Penn Power, Duquesne Light, PPL Electric	August 2009	Pennsylvania Office of Small Business Advocate	Energy efficiency and conservation programs, cost allocation, rate design
1604944; ID# 184	Alberta Utilities Commission	ATCO Gas	July 2009	Rate 13 Group	Cost allocation, rate design
R-2009-2105904, 909, 911	Pennsylvania Public Utility Commission	UGI Penn Natural Gas, UGI Central Penn Gas, UGI Utilities Inc. Gas Division	July 2009	Pennsylvania Office of Small Business Advocate	Gas supply procurement hedging, unaccounted-for gas, revenue sharing mechanisms
R-2009-2093219	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2009	Pennsylvania Office of Small Business Advocate	Revenue sharing mechanisms, retainage rate, gas procurement

## EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2005 TO 2010

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
R-2008-2079660	Pennsylvania Public Utility Commission	UGI Penn Natural Gas	May 2009	Pennsylvania Office of Small Business Advocate	Equity cost of capital, cost allocation, rate design
R-2008-2079675	Pennsylvania Public Utility Commission	UGI Central Penn Gas	May 2009	Pennsylvania Office of Small Business Advocate	Equity cost of capital, cost allocation, rate design
R-2008-2075250	Pennsylvania Public Utility Commission	T.W. Phillips Gas & Oil	April 2009	Pennsylvania Office of Small Business Advocate	Retainage rates
R-2009-2088076	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2009	Pennsylvania Office of Small Business Advocate	Gas procurement
R-2009-2083181	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	March 2009	Pennsylvania Office of Small Business Advocate	Retainage rates, gas procurement
P-2008-2060309	Pennsylvania Public Utility Commission	PPL Electric Utilities	December 2008	Pennsylvania Office of Small Business Advocate	Default electric supply procurement
R-2008-2073938	Pennsylvania Public Utility Commission	Philadelphia Gas Works	December 2008	Pennsylvania Office of Small Business Advocate	Revenue requirement, financial cash flows, cost allocation, rate design.
P-2008-2044561	Pennsylvania Public Utility Commission	Pike County Light & Power	October 2008	Pennsylvania Office of Small Business Advocate	Electric default service procurement
R-3669-2008	Régie de l'Énergie, Québec	Hydro Québec TransÉnergie	October 2008	AQCIE/CIFQ	Transmission cost allocation.
R-3677-2008	Régie de l'Énergie, Québec	Hydro Québec Distribution	October 2008	AQCIE/CIFQ	Post-patrimonial supply cost allocation, revenue allocation, rate design.
R-3673-2008	Régie de l'Énergie, Québec	Hydro Québec Distribution	August 2008	AQCIE/CIFQ	Electric supply contract modifications.
1550487	Alberta Utilities Commission	ENMAX Power Corporation	July 2008	D410 Group	Formula-based (performance-based) ratemaking; ratepayer-supplied equity contributions.

## EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2005 TO 2010

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
R-2008-2039417 et al.	Pennsylvania Public Utility Commission	UGI Utilities (Gas Division)	July 2008	Pennsylvania Office of Small Business Advocate	Design day demand forecast.
R-2008-2039284	Pennsylvania Public Utility Commission	UGI Penn Natural Gas	July 2008	Pennsylvania Office of Small Business Advocate	Revenue sharing, gas supply costs.
R-2008-2039634	Pennsylvania Public Utility Commission	PPL Gas Utilities	July 2008	Pennsylvania Office of Small Business Advocate	Lost and unaccounted-for gas, gas supply costs.
A-2008-2034045	Pennsylvania Public Utility Commission	UGI Utilities, PPL Gas Utilities	June 2008	Pennsylvania Office of Small Business Advocate	Public benefits of proposed sale.
R-2008-2011621	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2008	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design.
R-2008-2028039	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2008	Pennsylvania Office of Small Business Advocate	Gas supply cost functionalization; cost reconciliation method, sharing mechanisms.
R-3648-2007	Régie de l'Énergie, Québec	Hydro Québec Distribution	April 2008	AQCIE/CIFQ	Electric supply contract modifications.
R-2008-2021348	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2008	Pennsylvania Office of Small Business Advocate	Sharing mechanisms, gas supply contracts.
R-2008-2012502	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	March 2008	Pennsylvania Office of Small Business Advocate	Transportation and sales customer rate design, design day forecasts.
R-2008-2013026	Pennsylvania Public Utility Commission	T.W. Phillips Gas and Oil	March 2008	Pennsylvania Office of Small Business Advocate	Rate design treatment of capacity release revenues.
P-00072342	Pennsylvania Public Utility Commission	West Penn Power d/b/a Allegheny Power	February 2008	Pennsylvania Office of Small Business Advocate	Default service electricity procurement, rate design, reconciliation.
2007-004	New Brunswick Board of Commissioners of Public Utilities	New Brunswick Power Distribution and Customer Service Corporation	November 2007	New Brunswick Public Intervenor	Cost allocation, revenue allocation, rate design.

## EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2005 TO 2010

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
R-3644-2007	Régie de l'Énergie, Québec	Hydro Québec Distribution	October 2007	AQCIE/CIFQ	Cost allocation, revenue allocation, rate design.
P-00072305	Pennsylvania Public Utility Commission	Pennsylvania Power Corporation	July 2007	Pennsylvania Office of Small Business Advocate	Default electric service procurement.
R-00072334	Pennsylvania Public Utility Commission	UGI Penn Natural Gas, Inc.	July 2007	Pennsylvania Office of Small Business Advocate	Asset management arrangement, gas procurement.
R-00072333	Pennsylvania Public Utility Commission	PPL Gas Utilities Corporation	July 2007	Pennsylvania Office of Small Business Advocate	Design day forecasting, gas procurement.
R-00072155	Pennsylvania Public Utility Commission	PPL Electric Utilities Corporation	July 2007	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design, energy efficiency.
R-00049255 (Remand)	Pennsylvania Public Utility Commission	PPL Electric Utilities Corporation	May 2007	Pennsylvania Office of Small Business Advocate	Revenue allocation.
R-00072175	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania, Inc.	May 2007	Pennsylvania Office of Small Business Advocate	Gas procurement.
R-00072110	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2007	Pennsylvania Office of Small Business Advocate	Gas procurement, margin sharing mechanisms.
R-00061931	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2007	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, retail gas competition.
P-00072245	Pennsylvania Public Utility Commission	Pike County Light & Power Company	March 2007	Pennsylvania Office of Small Business Advocate	Default service procurement, rate design.
R-00072043	Pennsylvania Public Utility Commission	National Fuel Gas Distribution Company	March 2007	Pennsylvania Office of Small Business Advocate	Design day requirements.
C-20065942	Pennsylvania Public Utility Commission	Pike County Light & Power Company	November 2006	Pennsylvania Office of Small Business Advocate	Wholesale power procurement by provider of last resort.
R-3610-2006	Régie de l'Énergie, Québec	Hydro Québec Distribution	November 2006	AQCIE/CIFQ	Post-patrimonial generation cost allocation; cross-subsidization; rate design.

## EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2005 TO 2010

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
P-00052188	Pennsylvania Public Utility Commission	Pennsylvania Power Company	September 2006	Pennsylvania Office of Small Business Advocate	Affidavit: POLR rates, wholesale to retail.
R-00061493	Pennsylvania Public Utility Commission	National Fuel Gas Distribution Corporation	September 2006	Pennsylvania Office of Small Business Advocate	Rate of return, load forecasting, cost allocation, revenue allocation, rate design, revenue decoupling.
R-00061398	Pennsylvania Public Utility Commission	PPL Gas Utilities Corporation	August 2006	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design.
R-00061365	Pennsylvania Public Utility Commission	PG Energy/Southern Union Company	July 2006	Pennsylvania Office of Small Business Advocate	Merger savings, cost allocation, revenue allocation, rate design.
R-00061519	Pennsylvania Public Utility Commission	PPL Gas Utilities Corporation	July 2006	Pennsylvania Office of Small Business Advocate	Design day weather and throughput forecasts; gas supply hedging.
R-00061518	Pennsylvania Public Utility Commission	PG Energy/Southern Union Company	July 2006	Pennsylvania Office of Small Business Advocate	Design day weather and throughput forecasts; gas supply hedging.
A-125146	Pennsylvania Public Utility Commission	UGI Utilities, Inc., Southern Union Company	June 2006	Pennsylvania Office of Small Business Advocate	Public benefits of proposed sale of PG Energy to UGI; asset management agreement.
R-00061355	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2006	Pennsylvania Office of Small Business Advocate	Gas supply and hedging plan; procedural issues
R-00061296	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2006	Pennsylvania Office of Small Business Advocate	Gas procurement and procedural issues.
R-00061246	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	March 2006	Pennsylvania Office of Small Business Advocate	Gas procurement; unaccounted for gas retention rates.
2005-002 Refiling	New Brunswick Board of Commissioners of Public Utilities	New Brunswick Power Distribution and Customer Service Company	February 2006	New Brunswick Public Intervenor	Cost allocation, rate design.
P-00052188	Pennsylvania Public Utility Commission	Pennsylvania Power Company	December 2005	Pennsylvania Office of Small Business Advocate	Cost allocation and rate design for POLR supplies.
R-3579-2005	Régie de l'Énergie, Québec	Hydro Québec Distribution	November 2005	AQCIE/CIFQ	Generation cost allocation; cross-subsidization; revenue allocation.
2005-002	New Brunswick Board of Commissioners of Public Utilities	New Brunswick Power Distribution and Customer Service Company	August 2005	New Brunswick Public Intervenor	Cost allocation, rate design.

## EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2005 TO 2010

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
R-00050538	Pennsylvania Public Utility Commission	PG Energy	July 2005	Pennsylvania Office of Small Business Advocate	Gas procurement diversification.
R-00050540	Pennsylvania Public Utility Commission	PPL Gas Utilities Corporation	July 2005	Pennsylvania Office of Small Business Advocate	Gas procurement, hedging, retention rates, sharing mechanism.
R-00050340	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2005	Pennsylvania Office of Small Business Advocate	Gas procurement, hedging and diversification.
R-3563-2005	Régie de l'Énergie, Québec	Hydro Québec Distribution	April 2005	AQCIE/CIFQ	Generation cost allocation; industrial demand response.
R-00050264	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2005	Pennsylvania Office of Small Business Advocate	Gas procurement, risk hedging, financing costs in the gas cost rate.
R-00050216	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	March 2005	Pennsylvania Office of Small Business Advocate	Gas supply procurement and forward pricing policies.
EB-2004-0542	Ontario Energy Board	Union Gas Limited	March 2005	Tribute Resources Inc.	Cost allocation and rate design for service to embedded storage pools.
R-00049884	Pennsylvania Public Utility Commission	Pike County Light and Power (Gas Service)	January 2005	Pennsylvania Office of Small Business Advocate	Fair rate of return, cost allocation, class revenue assignment.

March 2010

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission** :  
v. : **DOCKET NO. R-2011-2238953**  
**UGI Utilities, Inc. – Gas Division** :

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AFFIDAVIT OF ROBERT D. KNECHT

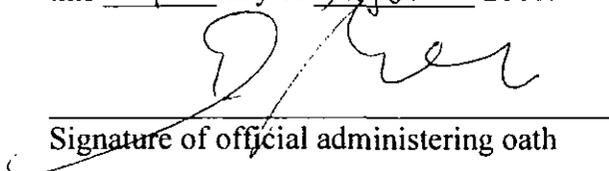
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I, Robert D. Knecht, being duly sworn according to law, depose and say that I am employed as a consultant by the Pennsylvania Office of Small Business Advocate, having qualifications as set forth in Exhibit IEC-R1 to my Rebuttal Testimony at OSBA Statement No. 1 and have been authorized to make this affidavit on its behalf, and that the facts set forth in my Rebuttal Testimony (OSBA Statement No. 1), and accompanying Exhibits are true and correct to the best of my knowledge, information, and belief and expect to be able to prove the same at any hearing hereof.



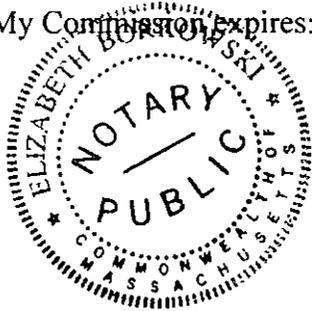
Robert D. Knecht

Sworn and subscribed before me  
this 4 day of April 2011.



Signature of official administering oath

My Commission expires: 11/6/15



SECRETARY'S BUREAU  
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