CORNING NATURAL GAS CORPORATION

CASE 11-G-0280

DIRECT TESTIMONY OF

FRANK W. RADIGAN

ON BEHALF OF BATH ELECTRIC, GAS AND WATER SYSTEMS

SEPTEMBER 23, 2011

Q. MR. RADIGAN, WOULD YOU PLEASE STATE YOUR FULL NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Frank W. Radigan. I am a principal in the Hudson River Energy Group, a consulting firm providing services regarding utility industries and specializing in the fields of rates, planning and utility economics. My office address is 237 Schoolhouse Road, Albany, New York 12203.

Q. WOULD YOU PLEASE SUMMARIZE YOUR EDUCATION AND BUSINESS EXPERIENCE?

A. I received a Bachelor of Science degree in Chemical Engineering from Clarkson College of Technology in Potsdam, New York (now Clarkson University) in 1981. I received a Certificate in Regulatory Economics from the State University of New York at Albany in 1990. From 1981 through February 1997, I served on the Staff of the Department of Public Service, the staff arm of the New York State Public Service Commission. I served in the Rates and System Planning sections of the Power Division and in the Rates Section of the Energy and Water Division. My responsibilities included resource planning and the analysis of rates, depreciation rates and tariffs of electric, gas, water and steam utilities in the State and encompassed rate design and performing embedded and marginal cost of service studies as well as depreciation studies.

Before leaving the Commission, I was responsible for directing all engineering staff during major proceedings, including those relating to rates, integrated resource planning and environmental impact studies. In February 1997, I left the Commission and joined the firm of Louis Berger & Associates as a Senior Energy Consultant. In December 1998, I formed my own company.

In my 30 years of experience, I have testified as an expert witness in utility rate proceedings on more than 100 occasions before various utility regulatory bodies, including the Arizona Corporation Commission, the Connecticut Department of Utility Control, the Delaware Public Service Commission, the Illinois Commerce Commission, the Maryland Public Service Commission, the Massachusetts Department of Telecommunications and Energy, the Michigan Public Service Commission, the New York State Public Service Commission, the New York State Department of Taxation and Finance, the Nevada Public Utilities Commission, the North Carolina Utilities Commission, the Public Service Commission of the District of Columbia, the Public Utilities Commission of Ohio, the Rhode Island Public Utilities Commission, the Vermont Public Service Board, and the Federal Energy Regulatory Commission.

I currently advise a variety of regulatory commissions, consumer advocates, municipal utilities and industrial customers concerning rate matters, including

wholesale electricity rates and electric transmission rates. A summary of my qualifications and experience is included as Exhibit__(FWR-1).

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of Bath Electric Gas and Water Systems ("Bath"), which is a customer of the Corning Natural Gas Corporation ("CNG", "Corning" or the "Company").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. CNG charges Bath for delivering natural gas to Bath, who in turns sells retail natural gas service to its customers and provides transportation services to CNG for its Hammondsport District. CNG proposes to increase the delivery charge to Bath by 86% in the three-year period May 2012-May 2014. I have been asked to review CNG proposed rate design and the material that CNG used to support this proposal for its reasonableness.

Q. COULD YOU PLEASE SUMMARIZE THE FINDINGS OF YOUR REVIEW?

A. Yes. There are two problems with the presentation by CNG: the cost of the projects, known as the "Main Upgrades", which drive the proposed increase and the allocation of the costs. The genesis of the proposed rate increase to Bath is two improvements that CNG is making to its system and which the Company has

termed the “Main Upgrades.” The “Main Upgrades” are the replacement of the transmission line that connects the Bath system with the interstate pipeline system, and known as Line 15, and a connection to the Inergy Interconnection, which has had various names associated with it – the interconnection of Line 15 to the Thomas Corners storage field, the Inergy interconnection and the Bath Reliability – Second Supply.

As to the replacement of the Line 15, information uncovered during the discovery phase of this case has shown that the absolute cost of this project is so large that is should cause Bath to rethink its gas supply options as there may be cheaper alternatives available to it. In the past 10 months, the project cost has grown from $6.2 million to $20.7 million.

On top of this CNG has proposed to allocate a disproportionate share of this project directly to Bath, under the guise of increased reliability, while at the same time ignoring the potential massive amount of revenue that the Company could make by renting storage field space to the large and burgeoning cadre of local natural gas production, as well as by transporting more local production gas. To the extent that Bath shares in the costs, it should share in the revenues.

Combined the proposed cost to Bath is so great that Bath should probably spend no more time in negotiating with CNG to extend its gas supply agreement and should seek alternative means of supply.

Q. WHAT WOULD BATH NEED IN ORDER TO SUPPORT THE PROPOSED "MAIN UPGRADES" PROJECT?

A. Bath would require:

1. A reasonable allocation of costs, which would recognize the benefits of the storage fields to the Corning system, and the ability to transport more local production gas, and allocate the costs accordingly;
2. A sharing of new revenues derived from these projects, which would contribute to the revenue requirement in the same proportion as the final cost allocation; and
3. A rate of return on the Bath system equal to the CNG system average rate of return, in contrast to the much higher rate of return Bath is currently contributing.

Q. COULD YOU PLEASE DISCUSS THE PROPOSED RATE OF RETURN CNG IS ASKING FOR FROM BATH?

A. Yes. To understand the rate increase that CNG proposes one must first review the Company's presentation in this case. Schedule PMN-3 which is the results of the accounting cost of service based on historical data for the 2010 calendar year

sponsored by Company Witness Paul Normand. As shown on Page 1-1 of this Schedule, in 2010, CNG earned a return of 19.39% on the Bath system. The Company as a whole earned a return of 7.30%. CNG's return on the Bath system was 2.7 times the overall average rate of return. The rates that Bath is currently paying are well in excess the cost to serve Bath and Bath's rates should be reduced. I have attached the above referenced sections of Schedule PMN-3 to my testimony as Exhibit__FWR-2.

Q. PLEASE CONTINUE.

A. The next important piece of information is the data contained in Schedule PMN-4, which is also sponsored by Company Witness Paul Normand. This schedule presents the actual and proposed rate of return summary results using the actual historical period, 2010, with the "Main Upgrades." The proposed system-wide rate of return (also known as the Targeted rate of return) is 8.86%. This schedule first determines the cost of service for each class of customers and then calculates the rate change required to bring the customer class to the proposed rate of return. As shown on page 1-1, line 3, of this Schedule CNG'S current rate of return on the Bath system is 6.4%, while the Company's overall average return is 6.1%. Line 11of this Schedule calculates the revenue increase for each customer class in order to bring the rate of return up to the targeted rate of return. In the case of Bath, the revenue increase is $85,857. The above mentioned pages of Schedule PMN-4 are attached to my testimony as Exhibit__FWR-3.

Q. HOW DOES THE COMPANY USE THIS INFORMATION?

A. As noted earlier, Schedule PMN-4 is a revised cost of service that reflects the construction budget for the "Main Upgrades." As testified to by company Witness Normand, the revenue requirements associated with these upgrades and system enhancements have been equalized to the same level of increase of $1,429,281 in each of three years and allocated to customers accordingly (Normand Direct at page 17). Mr. Normand's Schedule PMN-5 shows his proposed rate design based on equalized annual increase for 2013, 2014 and 2015. As shown on Page 1 of 1 of that Schedule Bath's base revenues are proposed to increase from $320,168 per year to $596,579 per year for an 86% increase in rates. I have attached the Company's proposed rate design to my testimony as Exhibit__FWR-4.

Q. HAS CNG BEEN CONSISTENT IN ITS APPROACH TO COST ALLOCATIONS?

A. No. For the Main Upgrades, CNG has used a different methodology that assigns a much larger allocation to Bath, which is completely unsupported and unjustified.

Q. PLEASE EXPLAIN THE EFFECTS OF USING THE TWO DIFFERENT METHODOLOGIES.

A. To understand the difference one needs to look at how the "Main Upgrades" were allocated amongst service classes. In the historic cost of service study, the details of cost allocation are shown on schedule PMN-7, which shows that Bath was

allocated $851,478 of the total transmission gas plant in service out of a total of $6,654,204, which equates to an allocation of 12.8% of total transmission plant.

In the cost of service with "Main Upgrades," the details of this study are shown on PMN-6 and it shows that Bath was allocated $2,929,836 of the total transmission and distribution gas plant in service out of a total of $11,560,004, which equates to an allocation of 25.3% of total transmission plant.

The difference in these two studies is the inclusion of the "Main Upgrades." The Inergy Interconnection is allocated in two parts: $2.8 million of the project was allocated on ***design day demands*** of Corning, Bath and Hammondsport where Bath is allocated 18.8% of the project and $0.8 million which was ***directly assigned*** only to Bath and Hammondsport under a term called Bath Reliability Addition Storage. The Line 15 improvements that cost $1.3 million were also directly assigned to Bath and Hammondsport.

Q. WHAT IS THE SIGNIFICANCE OF COST THAT IS DIRECTLY ASSIGNED VERSUS COST THAT IS ALLOCATED?

A. Costs that are directly assigned are costs that only serve a certain group of customers. A classic example is the cost of street lights; only a certain group of customers take this service so the cost of the lamp poles, lamp arms and bulbs are directly assigned to the street lighting class. An allocated cost is one that is used by

all customers such as the company headquarters or the cost of a transmission line. A portion of these costs are allocated to each customer class based some cost causation principle. For example, customer billing and collection costs could be allocated to a class based on the class' proportionate share of bills sent out to all customers.

The pertinent pages of Schedules PMN-6 and PMN-7, as well as a response to a discovery request on how the company allocated the "Main Upgrades," are attached to my testimony as Exhibit__FWR-5.

Q. ARE THERE ANY STUDIES THAT SUPPORT THIS DISPROPORTIONATE ALLOCATION TO BATH?

A. No. CNG created these factors out of whole cloth. In fact, as demonstrated below, the new facilities will benefit the entire CNG system and provide an additional revenue stream.

Q. IS THERE AN ALTERNATIVE ALLOCATION OF THE "MAIN UPGRADES" THAT WOULD BE REASONABLE?

A. Yes, both CNG and the Commission have clearly stated the benefits of the proposed projects. In CNG's December 27, 2010 filing in Case 08-G-1137[1]

[1] Case -8-G-1137 – Proceeding on Motion of the Commission as to the Rates Charges, Rules and Regulations of Corning Natural Gas Corporation for Gas Service.

regarding its Alternate Plan for Line 15 and Inergy Interconnect Construction. There the Company was candid in its statement.

> "Corning's distribution system is uniquely located to take advantage of the Trenton Black River and Marcellus Shale local gas production. The company is also situated to take advantage of local gas storage opportunities. The Company's goal is to supply all of its customer's gas supply needs with local production gas and local gas storage. This will reduce the gas commodity costs to Corning's customers and provide an opportunity to reform the Company's supply contract with its current interstate suppliers." (12/27/2010 filing page 3)

The Commission has been equally candid on this subject. The following excerpts are from a Commission Order on Corning's gas supply plan (Case 08-G-1137, *Order Approving Revised Natural Gas Supply and Acquisition Plan With Conditions*, issued and effective June 21, 2010.

> "…a new storage field, the Thomas Corners storage field, came on line in April 2010, which is in close proximity to Corning's three service territories (Bath, Hammondsport and Corning). This new storage field will increase Corning's storage capacity from 40% up to 50% of its normal weather winter supply. Corning filed its revised plan to take advantage of this additional gas storage capacity by allowing the Company to reduce the use of fixed price contract to meet its winter gas supply hedge responsibilities from 15% to 5%, and to increase the use of physical gas in storage form 40% to 50%."
>
> "Without a direct transmission line connecting the Thomas corners storage field to Corning's Line 15 and without certain upgrades to Line 15 itself, a supply path to take advantage of the new Thomas Corners storage does not currently exist…"
>
> "…our approval of the revised plan is also conditioned upon Corning addressing our concerns regarding a long-term solution for

> transportation of the stored gas in the Thomas Corners storage field to all Corning customers, including the customers in the Bath Hammondsport."

Obviously the "Main Upgrades" are going to be an integral part of Corning's system and should be allocated accordingly on each customer's proportionate share of the design day demand. The above-mentioned Company's December filing is attached as Exhibit__FWR-6, and the Commission's Order are attached to my testimony as Exhibit__FWR-7.

Q. WHAT WOULD BE THE IMPACT OF ALLOCATING "MAIN UPGRADES" AS A SYSTEM UPGRADE?

A. Had the Inergy Interconnection and Line 15 improvements been allocated to the users of the Thomas Corners storage field based on their proportionate use of the storage assets instead of a direct allocation basis, Bath's allocation would decrease by the gas plant in service allocated to Bath by about $1.3 million. The revenue requirement to support this amount of plant equates to approximately $188,000. That level of revenue requirement would substantially reduce or eliminate any proposed increase to Bath.

Q. COULD YOU PLEASE DISCUSS YOUR CONCERNS WITH THE COST OF THE LINE 15 IMPROVEMENTS?

A. Yes. The Company's December 27, 2010 filing mentioned above and included as part of Exhibit__FWR-6 was a study of other project alternatives that the Company

considered in making improvements to its system. In that study, it identified the "Main Upgrades" as the most promising project at a total cost of $6.2 million. This compared to other options, such as building a new pipeline to interconnect with the Tennessee Gas Pipeline at a cost of $8 million or building a new interconnect with the Millennium pipeline at a cost of $6.75 million. The conclusion of the study was "Main Upgrades" was the most feasible option (See Exhibit__FWR-6, page 11). Those alternatives were discussed in detail at an all-parties meeting attended by Staff, CNG and Bath on February 10, 2011.

Now Company Witness Cook has presented detailed cost estimates of the "Main Upgrades" for the period 2011-2014, which are contained in CNG-8. The detailed costs estimates are shown on the table below, and as can be seen the total cost estimate of the "Main Upgrades" is now $8.4 million.

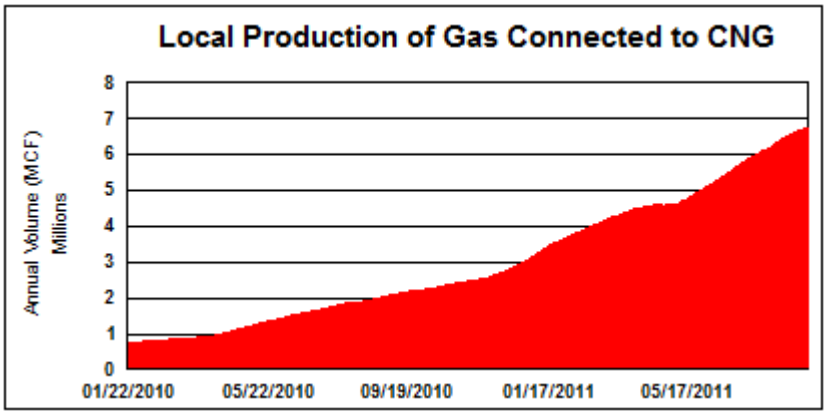
Year	Inergy Interconnect	Line 15	Total
2011	$50,000	$1,480,000	$1,530,000
2012	$4,500,000	0	$4,500,00
2013	$0	$750,000	$750,000
2014	$0	$787,500	$787,500
2015	$0	$826,875	$826,875
Total	$4,550,000	$3,844,375	$8,394,375

The $8.4 million cost estimate is 35% above the cost estimate provided in December of 2010 and February 2011. This is not the end of the story; however, as a discovery question in this case indicates that modifications to Line 15 will continue beyond 2015. Per the response to DPS-180, the Company anticipates that it will replace approximately 1 mile of Line 15 per year from 2013 to 2026 (DPS-180 is attached to the testimony as Exhibit__FWR-8). When this additional work is included the total cost of the "Main Upgrades" will be $20.7 million. This is the first time numbers of that size have been put on the table. CNG has at the very least not been clear and consistent in describing its plans. When one considers that Corning would allocate $12.7 million of the total cost of the project to Bath, Bath must examine other gas supply options. With this new information, options that compared unfavorably against a cost of $6.2 million as presented by CNG in December 2010 and February 2011 look much more attractive when compared against $20.7 million.

Q. PLEASE DISCUSS THE POTENTIAL OF LOCAL PRODUCTION THAT YOU IDENTIFIED EARLIER.

`A. In gas supply considerations, Bath, like CNG, must recognize where it stands in the development of local gas production. Attached as Exhibit__FWR-9, is the Company response to DPS-196, which shows the system map of Corning's system. As can be seen, Corning and Bath are very close to the gas fields of Trenton Black River and Marcellus Gas coming out of Pennsylvania. Based on information

derived from the response to DPS-269, attached as Exhibit__FWR-10, below is a graph of local gas production being imported from Pennsylvania.



As can be seen from the graph, local gas production is literally exploding with a seven fold increase in gas in just the last year and a half. It should also be noted that this graph just represents the local production at the Stateline Gate where Marcellus Shale Gas is coming in from Pennsylvania and ignores all of the other well fields being developed in New York State. To put this into perspective the latest production figures show that local production is 9.4 BCF per year with is almost three times as great as Corning's annual sales volume of 3.5 BCF per year.

The increase in local production will present a fundamental shift in available supply on a day-to-day basis, will increase available capacity on interstate pipelines, and will completely alter the availability and use of local storage fields and transmission lines, including Line 15.

Another issue with respect to local production is the interrelationship with the local production and Corning's gas storage assets. As local production increases the opportunities for using local storage will certainly increase. Currently the revenues received from one such project, the Root Pipeline, are first used to pay the plant investment costs down with any further revenues shared 80%/20% between customers and shareholders. In this case, the Company is requesting rate base treatment. Thus, rates will be set for the higher rate base, but there are no means for crediting customers with revenues received. I propose that any revenues received by the Company for the transportation of local production or for use of its storage facilities be credited to customers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.