PEOPLES GAS SYSTEM

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

Docket No. 080318-GU

In Re: Petition for rate increase by Peoples Gas System

Submitted for Filing: August 11, 2008

DIRECT TESTIMONY AND EXHIBITS OF:

LEWIS M. BINSWANGER On Behalf of Peoples Gas System

DOCUMENT NUMBER-DATE

07046 AUG 118

1	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
2	A.	My name is Lewis M. Binswanger and my business address is 702 N
3		Franklin Street, Tampa, Florida 33602.
4	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
5	A.	I am employed by Peoples Gas System ("Peoples" or the "Company") as
6		Director, Strategic Planning and Regulatory.
7	Q.	PLEASE PROVIDE A BRIEF OUTLINE OF YOUR
8		EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.
9	A.	I received a Bachelor of Science degree in Electrical Engineering in 1982
10		from the University of Texas at El Paso. I am a registered professiona
11		engineer in the State of Texas. In 1998, I completed a Finance and
12		Accounting Executive Program at the Wharton School of the University o
13		Pennsylvania.
14		I have diverse business experience with over 25 years in the energy
15		industry. I have managed several different energy business segments
16		including areas responsible for engineering, operations, marketing
17		regulatory and customer service. In recent years, I have held senio
18		management positions including Vice President Operations, Chie
19		Engineer, Vice President Technical Services, General Manager and
20		Director.
21		I have been employed by Peoples since 2001, when I was hired as
22		General Manager for the South Region. My responsibility at that time was
23		the overall management of distribution, transmission, engineering

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marketing and retail sales of natural gas to over 100,000 customers in nine

counties and 60 municipalities. Over 230 team members located in six

different division offices were under my supervision. I relocated to Tampa in 2005 to assume the position of Director of Operations for one year, after which I became Director, Strategic Planning and Regulatory.

4 Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?

Α.

A. I am responsible for Peoples' overall strategic plans and for directing rate and regulatory matters under the jurisdiction of the Florida Public Service Commission (the "Commission"). I have also coordinated the preparation and filing of Peoples' case in this proceeding. I am a member of the American Gas Association's Rates Committee and the Southern Gas Association's Rates and Regulatory Affairs Committee.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

The primary purpose of my testimony is to explain and support Peoples' proposed Gas System Reliability Rider and Carbon Reduction Rider.

The Gas System Reliability Rider ("Rider GSR") is designed to address and help manage the substantial investments the Company must make each year due to government-mandated relocations of Peoples' facilities. The Carbon Reduction Rider ("Rider CR") is designed to address, manage, and encourage the expansion of natural gas to new developments that are not located near interstate pipelines or existing Company supply mains.

To place the purposes of these riders in proper perspective, I will first explain Peoples' standard policy of routing supply and distribution mains in public rights-of-way. I will also explain the challenges the Company faces when deciding whether to extend its facilities to make natural gas available to new residential and commercial developments.

1	Because the policy and the challenges encountered are interrelated, both
2	will be discussed in the context of potential system expansions.

A.

I will also describe how expanding the Peoples system supports the State of Florida's carbon dioxide ("CO₂") emissions reduction initiatives and energy conservation efforts. Lastly, I will describe Peoples' safety and reliability efforts with respect to underground main and service lines.

Q. DO YOU HAVE ANY EXHIBITS TO BE INTRODUCED IN THIS PROCEEDING?

- 9 A. Yes. I am sponsoring, and prepared or caused to be prepared, Exhibits

 10 ___(LMB-1) through ___(LMB-2). I will also refer to portions of the

 11 new tariff sheets contained in Schedule E-9 of the MFRs (Composite

 12 Exhibit __(PGS-1)) when discussing Rider GSR and Rider CR.
- 13 Q. HOW DOES PEOPLES DECIDE WHETHER IT WILL EXTEND
 14 ITS FACILITIES TO SERVE CUSTOMERS IN AN AREA NOT
 15 PREVIOUSLY HAVING NATURAL GAS SERVICE?
 - Unless the area generally a new development that will eventually consist of new homes and accompanying commercial development is located adjacent to, or relatively near, an interstate pipeline or a Peoples supply main with adequate existing capacity to serve the development, the decision can be difficult. While interstate pipelines traverse Florida, the proximity of potential new customers to the pipelines, or to existing Peoples supply mains, can range from less than a mile to tens of miles. This proximity directly impacts Peoples' multi-step decision of whether or not to serve a new development.

25 Q. PLEASE EXPLAIN THAT PROCESS.

When a new development is identified, steps are taken to ensure that natural gas can be delivered either from a transmission pipeline, or an existing Peoples supply main, to the potential new customers in a safe, reliable and economical manner. At a high level, the steps are to determine the development's gas load potential, design the distribution main, and design the supply main. The distribution main is the main that will traverse the development, and off of which service lines will be run to serve individual customers. The supply main, if any, is the main that will be installed between a Peoples connection with an interstate pipeline, or existing Peoples supply main, and the distribution main.

Q. PLEASE DESCRIBE THE FIRST STEP.

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A.

In the first, or gas load determination step, Peoples obtains information with respect to potential natural gas load and customer locations in the proposed development. The Company meets with the potential developers and thoroughly reviews their master plans. Land use zone maps are reviewed to estimate the commercial and residential development mix that may occur in the proposed development.

Timing for build-out of the development, is a critical part of the gas load determination phase because residential and commercial developments typically build out over several years. Smaller developments (less than 300 homes) generally fully build out in as little as three to five years, while larger developments of over 1,000 homes can fully build out in eight to 12 years. Overall economic conditions often affect these time frames. Completion of this phase results in a load forecast showing gas load locations and a preliminary build-out timeline

for the potential project.

Α.

Q. WHAT ARE THE NEXT STEPS IN THE PROCESS?

In the second step, the distribution main and service lines that will serve customers in the development are designed. Designing a distribution main requires each customer's estimated hourly demand for gas to be identified in the various locations within the proposed development. Company engineers use the estimated customer hourly demand to properly size the distribution main and service lines so Peoples can deliver natural gas at any time, on any day, during any year. The diameters of typical distribution mains range from two inches to four inches, and of service lines from three-quarters of an inch to two inches. Completion of this phase results in the design criteria for a natural gas distribution system, together with construction cost estimates.

The third step is the design of the natural gas supply main and associated appurtenances that will connect the development distribution system to the interstate transmission pipeline system or an existing Peoples supply main. Supply main design requirements include the length of the main, hourly customer demand and available gas supply pressure. To properly design the city gate station, regulator station, and supply main, Company engineers use available delivery pressure data from the interstate pipeline. Typical interstate pipeline operating pressures range from 750 to 1,480 pounds per square inch gauge ("psig"), so pressure-reducing equipment or regulator stations must be designed and installed to meet gas delivery requirements.

As I mentioned earlier, the proximity of a potential residential

and/or commercial development to an interstate pipeline system can range from less than a mile to tens of miles. Company engineers use the actual distance to design the proper size and operating pressure of the supply main. Typical supply main diameters are greater than four inches or certified to operate at pressures above 60 psig. Completion of this phase results in the designs for a city gate station, regulator station(s) and supply main, along with estimated construction costs.

8 Q. HOW ARE SUPPLY AND DISTRIBUTION MAINS ROUTED?

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Α.

Peoples installs many miles of natural gas main annually and strives to do so in the most economical manner practicable, meaning we make every effort to select supply and distribution main routes that minimize installation cost. This typically means selecting the shortest possible route from supply source to the end-use customer. Peoples' standard practice is to install supply and distribution main within and at the edge of public rights-of-way at a depth of about 36 inches.

16 Q. WHY IS INSTALLATION IN PUBLIC RIGHT-OF-WAY 17 PEOPLES' STANDARD PRACTICE?

Selecting a route for a natural gas main installation provides at least a theoretical choice between installing in private right-of-way or in public right-of-way. Installing in public right-of-way is substantially less expensive since the private right-of-way may require costly land acquisition or easements from one or more private entities. Installation of main in private right-of-way may also be almost impossible in instances where the main would occupy the land of several different land owners, which in most instances means it is not practical, and would be more

1	costly, to install supply or distribution mains within cities and residentia
2	developments.

3 Q. DOES PEOPLES HAVE CERTAIN RIGHTS TO USE PUBLIC

4 RIGHT-OF-WAY FOR THE INSTALLATION OF NATURAL GAS

INFRASTRUCTURE?

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A. Yes. Peoples installs natural gas facilities in several different governmentowned public rights-of-way including those owned or controlled by the
Florida Department of Transportation, counties, municipalities and water
management districts. Provisions for public utilities' use of these rightsof-way are made by statute, regulation, ordinance or franchise agreement.

There may be costs, such as permit fees, associated with the Company's
use of these rights-of-way, but they are generally far less than the costs
associated with the Company's acquiring property or easements needed to
install under privately owned lands. Even greater economies can be
obtained if an installation in public right-of-way can be accomplished at
the same time other utility facilities, such as water and wastewater
facilities, are installed.

Q. DOES INSTALLING FACILITIES IN PUBLIC RIGHT-OF-WAY SUBJECT PEOPLES TO ANY REQUIREMENTS OF THE PUBLIC

20 ENTITY CONTROLLING THE RIGHT-OF-WAY?

Yes. Peoples must generally abide by various rules, regulations and other requirements. These may include, but are not limited to, requirements that natural gas mains or service lines be installed at depths which will not conflict with other structures, requirements that the natural gas facilities be relocated in the future when mandated by the governmental entity

1	controlling the right-of-way, not installing natural gas facilities under
2	pavement, and providing proper traffic control during construction and
3	maintenance of the natural gas facilities.

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4 Q. CAN GOVERNMENTAL ENTITIES ORDER PEOPLES TO MOVE

ITS FACILITIES INSTALLED IN THE PUBLIC RIGHT-OF WAY?

Yes. When Peoples installs mains or service lines in, under or along public rights-of-way such as streets, roads and highways, the Company is generally required - by statute, rule or local franchise or ordinance - to relocate the facilities when the governmental body controlling the right-ofway orders the Company to do so. The entity may be re-routing or widening a road, installing or relocating water or wastewater lines, or reconfiguring an intersection. In most instances, Peoples must replace or relocate its facilities at its own expense, without reimbursement, just to continue to meet its service obligations.

Q. DOES PEOPLES ATTEMPT TO MINIMIZE OR LIMIT **GOVERNMENT-MANDATED RELOCATIONS?**

Yes, the Company makes those efforts during the design phase of a project, as well as after the facilities have been placed in service.

The design phase is Peoples' first opportunity to minimize the possibility of a relocation mandate. Natural gas facilities are typically installed at the edge of rights-of-way, away from facilities of other utilities. In addition, the main in a development is generally installed behind the curb at a depth to avoid any conflict with road work or underground improvements.

Once Peoples' facilities have been installed and are in service, the

Company provides the government entity maps showing the location of natural gas facilities. To the extent possible, Peoples enlists the assistance of the governmental entity design engineer in making accommodations for the natural gas facilities to minimize any requirement that the Company relocate them.

Q. IF ALL OPTIONS HAVE BEEN EXHAUSTED, WHAT IS THE COMPANY'S PROCESS FOR PHYSICALLY RELOCATING ITS

NATURAL GAS FACILITIES?

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A.

At this point, the Company has no choice but to prepare for the facilities relocation, including designing and engineering how natural gas service will be maintained to affected customers while new facilities are installed. The steps required to relocate facilities are similar to those I previously described when the Company plans for a new installation; that is, determining existing customers' loads, designing and routing supply and/or distribution mains, and coordinating actual construction with the requirements of the government entity that has mandated the relocation.

Q. WHY DOES THE COMPANY HAVE NO CHOICE IN WHETHER OR NOT IT RELOCATES ITS FACILITIES?

As I stated earlier, Peoples' rights to install supply and distribution main in public rights-of-way are in most cases subject to the requirement that the Company relocate its facilities if conflicts develop with work performed by or on behalf of a governmental entity within the right-of-way. As a practical matter, receipt of a relocation order also puts the Company on notice that at some point in the near future, actual road construction work will begin, increasing the possibility of damage to the

Company's underground facilities if they are not relocated outside the construction zone.

Construction contracts between government entities and road work contractors also typically include completion deadlines. If Peoples' failure to timely relocate its facilities causes a contractor's failure to meet the completion deadline, the contractor and/or the governmental entity could impose fees on the Company for downtime reimbursement. Finally, as a practical matter, project delays caused by the Company also create ill will between Peoples and government entities.

10 Q. WHAT IS PEOPLES' ANNUAL CAPITAL COST FOR THESE 11 GOVERNMENT-MANDATED RELOCATIONS?

12 A. The capital costs the Company has incurred for such relocations for each
13 of the last five years are:

14	<u>Year</u>	Cost in Millions
15	2003	\$3.8
16	2004	\$4.3
17.	2005	\$5.2
18	2006	\$2.9
19	2007	\$5.2

For 2008 and the projected test year, the capital budget for these expenditures is \$6.3 million and \$3.8 million, respectively.

Of the capital expenditures for this five-year period, Peoples has been able to recover its depreciation expense and earn a return only on those for 2003 – which was the projected test year in Peoples' last rate case. For the four years from 2004 through 2007, there were total capital

expenditures of \$17.6 million for government-mandated relocations for which Peoples received no revenues through which to recover the associated depreciation and ad valorem tax expenses or a return on its investment in the replacement facilities.

5 Q. DOES PEOPLES INCUR OTHER GOVERNMENT-MANDATED **EXPENDITURES?**

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Yes. As Paul Higgins has testified, Peoples has included over \$750,000 in operations and maintenance ("O&M") expense for the projected test year as a result of the federal Pipeline Safety Act of 2002 (the "2002 Act"), the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006 passed by Congress and signed into law by President Bush (Public Law 109-468, the "PIPES Act") in December 2007, and the U.S. Department of **Pipeline** Hazardous Materials Transportation's and Safety ("PHMSA's") current and proposed regulations Administration's implementing those acts. The 2002 Act required the implementation of integrity management activities with respect to "transmission" pipelines, and the PIPES Act required similar measures with respect to "distribution" The effect on Peoples of the 2002 Act and PHMSA's pipelines. implementing regulations was limited because of the relatively small proportion of pipelines within Peoples' system that are classified as transmission pipelines. However, as Mr. Higgins has testified, the impact of the PIPES Act and PHMSA's implementing regulations will much more directly affect Peoples and other natural gas local distribution

Q. IS PEOPLES REQUIRED TO COMPLY WITH THE ACTS AND

companies ("LDCs").

THE IMPLEMENTING REGULATIONS?

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A.	Yes. The Company has no control over incurring the associated O&M
	expenses which will be required to comply with the acts. As shown by
	Mr. Higgins' Exhibit(JPH-4), the Company will incur government-
	mandated O&M expenses through 2013. As he also testified, the full
	impact of the costs of complying with the acts and the implementing
	regulations is not known, and not every item of the compliance costs will
	be incurred in every year.

In essence, these government-mandated compliance costs are no different than the government-mandated relocation costs Peoples incurs as a result of installing its facilities in public rights-of-way – the Company simply has no control over the incurrence of the costs.

- RETURNING TO YOUR DISCUSSION THE **STEPS OF** INVOLVED IN EXPANSION OF FACILITIES, ONCE THE STEPS YOU DESCRIBED HAVE BEEN COMPLETED, HOW DOES **PEOPLES** DECIDE WHETHER TO **EXPAND ITS** INFRASTRUCTURE TO DELIVER GAS TO A PROPOSED NEW **DEVELOPMENT?**
- Whether or not the Company will actually construct the facilities needed to deliver natural gas to a new development is largely a financial decision, one driven by a number of factors. The primary factor is the cost of installing the supply main. The supply main produces no revenues, but without it, potential revenue-producing customers in the development cannot become customers. The often lengthy lag between the time the Company must make the capital expenditures to install the necessary

1	facilities, and the time the development will be fully built-out also affects
2	the decision

Q. ASSUME PEOPLES HAS DESIGNED AND ROUTED THE FACILITIES NEEDED TO SERVE A NEW DEVELOPMENT AND DECIDED TO MAKE THE REQUIRED CAPITAL EXPENDITURES. WHAT IS THE NEXT STEP?

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An overall timeline for the project is created with different tasks, such as gate station and regulator station construction (if there is to be a new connection to an interstate pipeline), and supply and development main construction to meet the developer's and other potential customers' needs. Peoples' internal guidelines are to install these facilities no sooner than absolutely required by the end-use customers to best manage capital.

When the first customer in a new development is ready for natural gas service, the Company will have already placed in service natural gas facilities that could include a gate station, regulator station(s), supply main and some or all of the required development main. Facilities that provide natural gas service must be in place before a single customer can begin to receive service, even though full build-out of the development, and the associated revenues, may not occur for several years. This is the major challenge in bringing the environmental and other benefits of the direct use of natural gas to more Florida residents.

Q. PLEASE EXPAND ON THOSE ENVIRONMENTAL AND OTHER BENEFITS.

A. Natural gas is an extremely important source of energy for Florida consumers. It provides economical benefits, is environmentally friendly

and domestically produced, with 99% of the natural gas consumed in the United States originating in North America. Natural gas service is also very reliable. During the major storms Florida experienced during the 2004 and 2005 hurricane seasons, less than one percent of Peoples' customers were without gas service. Natural gas appliances also have lower annual operating costs than appliances that use other fuels.

In addition to being a domestically abundant and secure source of energy, the direct use of natural gas offers a number of environmental benefits over other sources of energy, particularly other fossil fuels. Composed primarily of methane, it is the cleanest of all fossil fuels with the main products of its combustion being CO₂ and water vapor, the same compounds we exhale when we breathe.

Direct use of natural gas is also about 90% efficient compared to electricity at about 30% when the full fuel cycle is considered. This efficiency equates to fewer electric power plants required to serve the same number of customers. In fact, had Peoples' 305,000 residential customers used all electric appliances, the State of Florida would have needed an equivalent 250 megawatt power plant that would produced in excess of 650,000 tons net of carbon dioxide emissions per year.

Reducing net carbon emissions attributable to residential customer energy usage is also a major benefit to Florida. An overall net reduction of about 4,000 pounds of CO₂ and an annual operating savings of \$75 per year can be achieved by a residential natural gas customer with a natural gas dryer, range, water heater and furnace, when compared to a like residential customer with all electric appliances installed. My Exhibit

1	(LMB-1) shows these annual operating savings along with the reduced
2	CO ₂ emissions of a typical natural gas home versus a typical all-electric
3	home.

4 Q. DESPITE THESE BENEFITS, DOES PEOPLES FACE ANY 5 DIFFICULTIES IN MAKING NATURAL GAS SERVICE

6 AVAILABLE TO MORE CUSTOMERS?

A.

Yes. Currently, there is only one natural gas customer for every 10 electric customers in Florida. That is, despite the benefits described, natural gas end-use represents only about a 10% saturation of the state's energy customers.

One reason for this low saturation I have already mentioned is the lack of proximity of potential natural gas customers to natural gas pipelines, or to existing supply mains of LDCs such as Peoples. The Company's engineering requirements to install natural gas supply main to connect potential end-use customers to transmission pipelines are challenging both financially and operationally. Operationally, the supply main must be in service when the first customer needs natural gas, even though full build-out of the residential and commercial development may take 10 or more years. The simple fact is that supply main investment must be made so that natural gas is available for the first customer although the majority of the development's customers may not produce revenue for several years thereafter. If Peoples is unable to timely recover the costs associated with its investment in the supply main, the planning, engineering and financing of the natural gas infrastructure may occur so late in the process that the developer may move on with the project and

build less environmentally friendly homes.

Α.

Another reason the Company faces difficulties in making natural gas available to more customers is that, unlike northern states where winter temperatures are cold enough to make natural gas heat practically a requirement for homeowners, many Florida builders and developers don't believe natural gas is required, even though potential home purchasers want natural gas.

Q. PLEASE DESCRIBE THE RIDERS FOR WHICH PEOPLES IS
SEEKING APPROVAL THAT WILL ADDRESS THE
CHALLENGES IN PROVIDING A SAFE, RELIABLE AND
ENVIRONMENTALLY FRIENDLY FUEL.

As mentioned earlier, there are two -- the Gas System Reliability Rider ("Rider GSR"), and the Carbon Reduction Rider ("Rider CR").

Rider GSR would allow the Company to recover, in a timely manner, certain costs incurred as a result of government-mandated relocations of Company facilities or safety requirements.

Rider CR would act as an incentive to Peoples in making natural gas available to customers in areas where it is not currently available by permitting the Company to recover, on a more timely basis, the costs associated with installing a supply main that is needed to provide such service.

The two riders are similar in terms of the manner in which eligible costs would be recovered, and would be similar to the means by which energy conservation and environmental costs Florida utilities recover. I will discuss the eligible costs to be recovered under each rider separately,

because the costs are different in terms of their qualifying criteria. The actual recovery mechanism for each rider, however, is virtually identical to the other.

Q. WHY IS PEOPLES SEEKING APPROVAL OF THE GAS SYSTEM

RELIABILITY RIDER?

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Peoples invests millions of dollars annually for the installation and replacement of natural gas supply and distribution mains, service lines and other facilities used to provide safe and reliable natural gas service to over 334,000 customers in Florida. As discussed in Bruce Narzissenfeld's testimony and as I have previously testified, the Company expects to make capital expenditures of approximately \$60 million in the 2009 projected test year, approximately \$3.8 million of which is designated for government-mandated relocations of Company facilities. However, there can be a significant lag in recovery of the revenue requirements associated with these capital expenditures from the time the investments are made until they are included in the Company's rate base in a base rate When these relocations are ordered by the governmental entity, the expenses of the Company's complying with the order are in most cases not reimbursed by the governmental entity. Peoples anticipates being faced with additional O&M expenses not covered in the projected test year in this case for pipeline safety mandates pursuant to the PIPES Act.

Rider GSR would help address this lag and would provide Peoples more timely recovery of the costs associated with, and recovery of the weighted average cost of capital on its capital investment. Through timely

1		recovery, the Commission's approval of Rider GSR will also result in the
2	•	Company's having more capital dollars available for expansion projects
3		that would bring the benefits of natural gas to more Florida residents.
4	Q.	IS PEOPLES SEEKING PROJECT "PRE-APPROVAL" BEFORE
5	•	CAPITAL EXPENDITURES ASSOCIATED WITH RELOCATION
6		PROJECTS ARE MADE?
7	A.	No. The Company must continue to relocate facilities as mandated by
8		governmental agencies although the recovery mechanism involves
9		projections of the investments. Resulting costs with a true-up to actual
10		expenses are proposed to be recovered only on plant investments that have
11		been placed in service and that are used and useful for Peoples' existing
12		customer base.
13	Q.	WHAT COSTS WOULD BE RECOVERED UNDER RIDER GSR?
14	A.	The Rider GSR would recover the revenue requirements (i.e., the
15		Company's weighted average cost of capital, depreciation expense and ad
16		valorem taxes, grossed up for federal and state income taxes) associated
17		with eligible infrastructure system replacements. It would also recover
18		incremental O&M expenses incurred to comply with the federal
19		transmission and distribution pipeline integrity requirements I have
20		described. By "incremental," I mean expenses of this type in excess of the
21		levels included for ratemaking purposes in this proceeding or a subsequent
22		base rate proceeding.
23		As set forth in Rider GSR, "Eligible Replacements" would consist

1. Mains, service lines, regulator stations and other pipeline

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of:

components installed to comply with state or federal safety requirements as replacements for existing facilities;

Q.

A.

- 2. Main and service line projects extending the useful life or enhancing the integrity of the pipeline components, undertaken to comply with state or federal safety requirements; and
- 3. Facility relocations due to construction or improvement of a highway, road, street, public way or other public work by or on behalf of a government or other entity having the power of eminent domain, to the extent costs of the project are not reimbursed to Peoples.

No infrastructure system replacement described above would be eligible if its cost was included in the Company's most recent base rate proceeding, or if it increased the Company's revenues by being directly connected to new customers. Since all items of the type described are included through the end of the 2009 projected test year in this proceeding, no item described above would constitute an Eligible Replacement unless installed on or after January 1, 2010.

- WHY IS IT APPROPRIATE TO REQUEST O&M EXPENSE FOR PIPELINE INTEGRITY COSTS IF, ACCORDING TO MR. HIGGINS' TESTIMONY, PEOPLES HAS ALREADY INCLUDED \$750,000 FOR THESE COSTS IN THE PROJECTED TEST YEAR? It is appropriate because Peoples cannot predict associated future expenses and has no ability to prevent the expenses from being incurred. Incurrence of these expenses is mandated by the federal government.
- Q. IF RIDER GSR IS APPROVED AND, IN 2010, PEOPLES
 INCURRED THESE TYPES OF EXPENSES AT A LEVEL LESS

1		THAN THE APPROXIMATELY \$750,000 INCLUDED IN THE
2		PROJECTED TEST YEAR, WOULD THE REDUCTION BE
3		CAPTURED IN CALCULATING THE REVENUE
4		REQUIREMENTS TO BE RECOVERED THROUGH THE RIDER?
5	A.	Yes. Any reduction in O&M expense for transmission and distribution
6		pipeline integrity below what is allowed in the projected test year in this
. 7		case would reduce the revenue requirement to be recovered through the
8		rider. All of the qualifying criteria, as well as how charges would be
9		developed, are set forth in proposed Rider GSR, which is found on Sheets
10		Nos. 7.807 through 7.807-2 of the new tariff sheets contained in MFR
11		Schedule E-9.
12	Q.	WHY IS THE COMPANY REQUESTING APPROVAL OF THE
13		CARBON REDUCTION RIDER?
14	A.	As I have previously testified, despite the environmental benefits of the

As I have previously testified, despite the environmental benefits of the direct use of natural gas, the Company faces financial obstacles in extending its facilities — particularly necessary, but non-revenue producing, supply mains — to many areas of Florida that are not in close proximity to an interstate natural gas pipeline to which the Company could connect, or to existing Company supply mains.

Approval of Rider CR is consistent with, and responsive to, Governor Crist's efforts as outlined in Executive Order No. 07-127, titled "Establishing Immediate Actions to Reduce Greenhouse Gas Emissions within Florida." In addition, Rider CR aligns well with several sections of the omnibus energy legislation contained in House Bill 7135 that was passed during the 2008 Session of the Florida Legislature including

1	Section 187.201 that in part encourages the development of low-carbon-
2	emitting electric power plants and Section 377.601 that establishes policy
3	to develop and promote the effective use of energy in the state, discourage
4	all forms of energy waste, and recognize and address the potential or
5	global climate change wherever possible. In essence, a home with natural
6	gas appliances versus all electric appliances produces net lower carbon
7	emissions within the state of Florida.

8 Q. HAS PEOPLES IDENTIFIED AREAS OF THE STATE WHERE

9 DEVELOPMENTS ARE PLANNED THAT ARE NOT

CURRENTLY IN A POSITION TO BE SERVED WITH NATURAL

11 **GAS?**

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12 A. Yes. Peoples has identified over 25 such areas representing approximately
13 100,000 new residential customers and the commercial customers such as
14 restaurants and other gas-consuming businesses that generally follow large
15 residential developments.

16 Q. HOW WERE THESE AREAS IDENTIFIED BY PEOPLES?

A. Areas for potential gas service are identified by sales personnel that track general development growth trends in addition to using data from the census bureau and other studies.

20 Q. WHAT COSTS WOULD BE ELIGIBLE FOR RECOVERY

21 THROUGH THE CARBON REDUCTION RIDER?

A. Rider CR would recover the revenue requirements (i.e., the Company's weighted average cost of capital, depreciation expense and ad valorem taxes, grossed up for federal and state income taxes) associated with supply mains installed to reach a new development. As indicated earlier,

1		those symply makes me dues no necessary for the Comment for the
1		these supply mains produce no revenue for the Company, but the revenues
2		from a potential new development cannot be obtained without their
3		installation.
4	Q.	WOULD THE COSTS OF EVERY COMPANY EXPANSION
5		QUALIFY FOR RECOVERY THROUGH THE RIDER?
6	A.	No. The expenses to be recovered by Rider CR would be limited to
7		Eligible Installations that are defined as extensions of main greater than
8		four inches in diameter, or that are certified to operate at a pressure of 60
9		psig or greater that serve Company distribution systems serving primarily
10		residential customers. All of the qualifying criteria, as well as how
11		charges would be developed, are set forth in proposed Rider CR, found on
12		Sheets Nos. 7.809 through 7.809-2 of the new tariff sheets contained in
13		MFR Schedule E-9.
14	Q.	ON WHAT ANNUAL AMOUNT OF CAPITAL INVESTMENT IN
15		"ELIGIBLE INSTALLATIONS" DO YOU ANTICIPATE PEOPLES
16		WILL SEEK TO RECOVER REVENUE REQUIREMENTS IF
17		RIDER CR IS APPROVED?
18	A.	The amount would obviously vary from year to year, depending on
19		economic conditions in the housing market. Even during "good"
20		economic periods in the housing market, and despite the potential
21		developments the Company has identified, not every development will
22		become a reality, and not all that become a reality will elect to make
23		natural gas available.
24		However, assume Rider CR was in place and Peoples had not
25		initiated this base rate proceeding. Mr. Narzissenfeld has testified that

Peoples will make total capital expenditures of \$62 million in 2008, and \$60 million in the 2009 projected test year. Of these total capital expenditures, \$5.8 million during 2008 and \$3.6 million during the projected test year would have been Eligible Installations on which Peoples could have petitioned the Commission to recover the revenue requirements associated with such plant investments had Rider CR been in place and this rate case not been initiated.

8 Q. HOW WOULD THE CHARGES UNDER RIDERS GSR AND CR

BE ESTABLISHED?

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Each rider contemplates the Company's filing of a petition for approval of the projected revenue requirement to be recovered. In the case of the Rider GSR petition, the projected revenue requirement would be associated with the projected Eligible Replacements and governmentmandated safety measures. In the Rider CR petition, the projected revenue requirement would be associated with projected Eligible Installations of mains greater than four inches in diameter, or certified to operate at 60 psig or greater, that serve Company distribution systems serving primarily residential customers. The revenue requirement under each rider would be calculated and trued up much as expenses are projected and trued up under the Energy Conservation Cost Recovery clauses used by both electric and natural gas utilities. As is the case with proceedings under those clauses, the Commission would have the opportunity to thoroughly review and audit the Company's filings and make any necessary adjustments.

Q. WHEN WOULD THE PETITIONS BE FILED?

1 Α. If the Commission approves Riders GSR and CR, Peoples' first petitions would be filed in late 2009, and would be based on eligible investments 2 projected to be placed in service, and incremental expenses to be incurred 3 by the Company, during 2010. The charges resulting from each filing 5 would be included on customers' bills commencing in January 2010. Peoples would again file petitions in 2011 which would recalculate the 6 charges to recover the revenue requirements under each rider based on 7 eligible costs for both 2010 and 2011, as adjusted by projected true-ups of 8 9 the initially projected 2010 revenue requirements and the amount 10 recovered through the surcharges imposed. Charges approved by the Commission as a result of a petition would continue in effect until new 11 12 Commission-approved charges were authorized.

13 Q. HOW WOULD THE REVENUE REQUIREMENTS TO BE
14 RECOVERED THROUGH CHARGES IMPOSED PURSUANT TO
15 THE RIDERS BE ALLOCATED AMONG AND BILLED TO THE
16 COMPANY'S CUSTOMERS?

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- A. The CRR Revenue Requirements would be allocated to customer classes based on the same allocation methodology pursuant to the Energy Conservation Cost Recovery Rule 25-17.015, Florida Administrative Code. The GSRR Revenue Requirements would be allocated to customer classes using the same methodology used in the cost of service study in the Company's most recent base rate proceeding, and would be recovered through a per therm surcharge.
- Q. HOW LONG WOULD PEOPLES COLLECT CHARGES IMPOSED

 PURSUANT TO RIDERS GSR AND CR FROM ITS CUSTOMERS?

A. Collection of the GSRR Surcharges from customers would such time as Peoples began billing new base rates resulting base rate proceeding. Collection of the CRR Surcharges from each Eligible Installation would continue for five years time as Peoples began billing new base rates resulting from a proceeding, whichever occurs first. 7 Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE REQUIREMENT TO BE RECOVERED THROUGH 8 WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? 10 A. A summary of that calculation is found in my Exhibit shown by the exhibit, using the Company's 5-year average investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential customer using 222 therm \$1 million investment in Rider CR Eligible Installations we surcharge of \$0.00069 per therm to a typical residential customer using contact the contact of the surcharge of \$0.00069 per therm to a typical residential customer using contact the contact of the surcharge of \$0.00069 per therm to a typical residential customer using contact the contact of the c	
base rate proceeding. Collection of the CRR Surcharges for each Eligible Installation would continue for five years time as Peoples began billing new base rates resulting from a proceeding, whichever occurs first. Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE REQUIREMENT TO BE RECOVERED THROUGH WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit	GSRR Surcharges from customers would continue until
for each Eligible Installation would continue for five years time as Peoples began billing new base rates resulting from proceeding, whichever occurs first. Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE REQUIREMENT TO BE RECOVERED THROUGH WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit shown by the exhibit, using the Company's 5-year averag investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential cu first year of implementation. This would be approximate month for the average residential customer using 222 therm \$1 million investment in Rider CR Eligible Installations wo surcharge of \$0.00069 per therm to a typical residential customer surcharge of \$0.00069 per therm to a typical residential customer	les began billing new base rates resulting from a full
time as Peoples began billing new base rates resulting from proceeding, whichever occurs first. Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE REQUIREMENT TO BE RECOVERED THROUGH WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit shown by the exhibit, using the Company's 5-year averag investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential customer using 222 therm \$1 million investment in Rider CR Eligible Installations would surcharge of \$0.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would surcharge of \$0.00069 per therm to a typical residential customer using 201 therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would surcharge of \$0.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would surcharge of \$0.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would be surcharge of \$0.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would be surcharged of \$1.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would be surcharged of \$1.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would be surcharged of \$1.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would be surcharged of \$1.00069 per therm to a typical residential customer using 201 therm \$1 million investment in Rider CR Eligible Installations would be surcharged of \$1.00069 per therm to a typical residential customer using \$1 million investment in Rider CR Eligible Replacem	ng. Collection of the CRR Surcharges from customers
proceeding, whichever occurs first. Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE REQUIREMENT TO BE RECOVERED THROUGH WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit shown by the exhibit, using the Company's 5-year averag investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential or first year of implementation. This would be approximat month for the average residential customer using 222 therm \$1 million investment in Rider CR Eligible Installations wo surcharge of \$0.00069 per therm to a typical residential customer using	nstallation would continue for five years or until such
REQUIREMENT TO BE RECOVERED THROUGH WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit shown by the exhibit, using the Company's 5-year averag investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential or first year of implementation. This would be approximate month for the average residential customer using 222 therm \$1 million investment in Rider CR Eligible Installations wo surcharge of \$0.00069 per therm to a typical residential customer surcharge of \$0.00069 per therm to a typical residential customer using \$1.00069 per therm to a typical residential customer us	gan billing new base rates resulting from a full base rate
REQUIREMENT TO BE RECOVERED THROUGH WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit shown by the exhibit, using the Company's 5-year averag investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential cr first year of implementation. This would be approximate month for the average residential customer using 222 therm 17 \$1 million investment in Rider CR Eligible Installations wo surcharge of \$0.00069 per therm to a typical residential customer 18 surcharge of \$0.00069 per therm to a typical residential customer	ever occurs first.
WOULD BE CALCULATED AND ALLOCATED A CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit	VIDE AN EXAMPLE OF HOW THE REVENUE
CUSTOMER CLASSES? A. A summary of that calculation is found in my Exhibit	TO BE RECOVERED THROUGH RIDER GSR
A. A summary of that calculation is found in my Exhibit	LCULATED AND ALLOCATED AMONG THE
shown by the exhibit, using the Company's 5-year average investment in Rider GSR Eligible Replacements would surcharge of \$0.00213 per therm to a typical residential confirst year of implementation. This would be approximated month for the average residential customer using 222 therm \$1 million investment in Rider CR Eligible Installations would surcharge of \$0.00069 per therm to a typical residential customer.	ASSES?
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surcharge of \$0.00213 per therm to a typical residential confirst year of implementation. This would be approximated month for the average residential customer using 222 therm. \$1 million investment in Rider CR Eligible Installations were surcharge of \$0.00069 per therm to a typical residential customer.	bit, using the Company's 5-year average \$4.3 million
first year of implementation. This would be approximate month for the average residential customer using 222 therm 17 \$1 million investment in Rider CR Eligible Installations we surcharge of \$0.00069 per therm to a typical residential customer.	der GSR Eligible Replacements would result in a
month for the average residential customer using 222 therm 17 \$1 million investment in Rider CR Eligible Installations wo 18 surcharge of \$0.00069 per therm to a typical residential customer.	213 per therm to a typical residential customer in the
\$1 million investment in Rider CR Eligible Installations wo surcharge of \$0.00069 per therm to a typical residential custo	ementation. This would be approximately \$0.04 per
surcharge of \$0.00069 per therm to a typical residential custo	age residential customer using 222 therms per year. A
	ent in Rider CR Eligible Installations would result in a
A DAMA MYYA GANAT TITLE TO THE TOTAL TOTAL TO THE TOTAL T	069 per therm to a typical residential customer.
19 Q. DOES THIS CONCLUDE YOUR TESTIMONY?	ICLUDE YOUR TESTIMONY?
20 A. Yes, it does.	

Residential Appliance Energy Comparison

		<u> </u>	Natural Ga	\$				Electricity		Natural Gas Savings							
Appliance	Energy Consumption (MMBtu/yr)	Avg Cost Rate (\$/MCF,2006)		Annual CO2 Emissions (lbs)	Source Energy (MMBtu)	Energy Consumption (kWh/yr)	Avg Cost Rate (¢/kWh,2006)	Annual Operating Cost	Annual CO2 Emissions (lbs)	Source Energy (MMBtu)	Annual Operating Cost	Annual CO2 Emissions (lbs)	Source Energy (MMBtu)				
Furnace	5.25	21.54	\$ 109.79	614	5.46	476	11.33	53.95	642	4.44	(55.84)	28	(1.02)				
Water Heater	14.15	21.54	\$ 295.96	1,656	14.72	3,493	11.33	395,74	4,708	32.58	99.78	3,053	17.87				
Dryer	3.72	21.54	\$ 77.82	435	3.87	967	11.33	109.61	1,304	9.02	31.79	869	5.15				
Cooktop	0.60	21.54	\$ 12.55	70	0.62	95	11.33	10.77	128	0.89	(1.78)	58	0.26				
TOTAL	23.72		\$ 496.12	2,776	24.67	5,032		\$ 570.07	6,783	46.94	73.95 13%	4,007 59%	22.26 47%				

Sources: Energy Consumption, Annual CO2 Emissions, and Source Energy are from the Appliance Calculator Residential Consumer Version developed by ICF International and the Energy Solutions Center.

Average Cost Rates for both natural gas and electricity are 2006 annual average rates for residential customers in Florida as reported by the Energy Information Administration.

Peoples Gas System Gas System Reliability Rider Calculation of the Projected Amount for the Period January 20xx to December 20xx

Return on Capital Investments, Depreciation and Taxes Eligible Replacements

Line Description	 January		ebruary	 March	April		May		June		July		August	Sep	otember	0	ctober	No	ovember	D	ec <u>em</u> ber		End of Period Total
Investments Eligible Replacements - Mains Eligible Replacements - Services Eligible Replacements - Regulator Station; d. Other	358,333 0 0 0	\$	358,333 0 0 0	\$ 358,333 0 0 0	\$ 358,3	33 : 0 0	\$ 358,333 0 0 0	\$	358,333 0 0 0	\$	358,333 0 0 0	\$	358,333 0 0 0	\$	358,333 0 0 0	\$	358,333 0 0 0	\$	358,333 0 0 0	\$	358,333 0 0	\$ 4	1,300,000
Gross Plant-In-Service/Depreciation Base Less: Accumulated Depreciation Net Book Value (Lines 2 + 3)	 358,333 0 358,333	•	716,667 (866) 715,801	 (2,598)	(5,19	96)_	\$ 1,791,667 (8,660) \$ 1,783,007		(12,990)		(18,186)		,866,667 {24,248} :,842,419	_ `	(31,176)		583,333 (38,970) 544,363		,941,667 (47,630) ,894,037		,300,000 (57,156) ,242,844		
5. Average Net Investment	\$ 179,167	\$	537,067	\$ 894,101	\$ 1,250,27	70 \$	1,605,572	\$ 1	,960,008	\$ 2	,313,579	\$ 2	,666,283	\$ 3,0	018,121	\$ 3,	369,094	\$ 3	,719,200	\$ 4	,068,440		
Return on Average Net Investment Net Operating Income after tax (A)	\$ 2,179	\$	6,532	\$ 10,875	\$ 15,20	o7 \$	19,528	\$	23,839	\$	28,139	\$	32,429	\$	36,708	\$	40,977	\$	45,235	\$	49,483	\$	311,131
7. Investment Expenses a. Depreciation (B) b. Amortization d. Property Taxes (C) e. Other	 0 0 202 0		866 0 604 0	 1,732 0 1,006 0	2,59 1,40	O	3,464 0 1,806 0		4,330 D 2,205 0		5,196 0 2,603 0		6,062 0 3,000		6,928 0 3,395 0		7,794 0 3,790 0		8,660 0 4,184 0		9,526 0 4,577 0		57,156 0 28,779
Revenue Requirements (Lines 6 + 7)	\$ 2,381	\$	8,002	\$ 13,613	\$ 19,21	2 \$	24,798	\$	30,374	\$	35,938	\$	41,491	\$	47,031	\$	52,561	\$	58,079	\$	63,586	\$	397,066

Notes:

(A) Line 5 x 8.88% x (1/12) x 1.6436. Based on ROE of 11.50%, Income tax rate of 38.575%, expansion factor of 1.6436
(B) Applicable depreciation rate is 2.4%
(C) Ad Valorem Tax Rate is 1.35%

GAS SYSTEM RELIABILITY RIDER SUMMARY OF GSRR SURCHARGE CALCULATION MONTHS: January 20xx Through December 20xx

RATE	MAINS NET	SERVICES	TOTAL	N 05 T0T41	****		GSRR
SCHEDULE		NET	NET	% OF TOTAL	GSRR	T1155101	SURCHARGE
SCHEDULE	PLANT*	PLANT"	PLANT*	PLANT	REVENUES	THERMS*	PER THERM
RS & RS-SG	\$60,563,268	\$79,163,368	\$139,726,636	33,30%	\$132,229	61,965,936	\$0.00213
SGS & CS-SG	5,544,083	6,388,409	11,932,492	2.84%	11,292	8,296,450	\$0.00136
GS-1	46,564,900	12,184,342	58,749,242	14.00%	55,597	65,430,833	\$0.00085
GS-2	82,344,758	8,975,978	91,320,736	21.76%	86,421	124,454,784	\$0.00069
GS-3	46,741,082	2,496,659	49,237,741	11.74%	46,596	74,743,912	\$0.00062
GS-4	25,769,463	447,292	26,216,755	6.25%	24,810	43,269,635	\$0.00057
GS-5	21,688,785	427,101	22,115,885	5.27%	20,929	64,790,915	\$0.00032
SIS	9,842,341	150,223	9,992,564	2.38%	9,456	48,728,719	\$0.00019
IS	8,401,950	45,585	8,447,535	2.01%	7,994	134,464,513	\$0.00006
ISLV	155,959	4,531	160,490	0.04%	152	152,002,324	\$0,00000
WHS	796,403	35,448	831,850	0.20%	787	1,582,430	\$0.00050
NGVS	247,219	48,338	295,557	0.07%	280	428,668	\$0,00065
CSLS	540,877	10,816	551,693	0.13%	522	901,552	\$0.00058
TOTAL	\$309,201,089	\$110,378,089	\$419,579,178	100.00%	\$397,066	781,060,672	

^{*} Source: Data in these columns are for the projected test year, taken from Schedule H-2

Peoples Gas System

Carbon Reduction Rider Calculation of the Projected Amount for the Period January 20xx to December 20xx

Return on Capital Investments, Depreciation and Taxes Eligible installations

Line	e Description		January		ebruary	 March	 April		May	 June	July		August	Se	ptember	 October	N	ovember	D	ecember		End of Period Total
1.	Investments a. Eligible Investments - Mains	\$	83,333	\$	83,333	\$ 83,333	\$ 83,333	\$	83,333	\$ 83,333	\$ 83,333	s	83,333	s	83,333	\$ 83,333	\$	83,333	\$	83,333	s 1	,000,000
	a. Eligible Investments - Services a. Eligible Investments - Regulator Stations		0		0	0	0		0	0	0		0	•	0	0	•	0	•	0	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	d. Other		0		0	Ō	ō		ō	0	ō		ŏ		ŏ	ŏ		ŏ		Ö		
2. 3.	Gross Plant-in-Service/Depreciation Base Less: Accumulated Depreciation	\$	83,333 0	\$	166,667 (278)	\$ 250,000 (834)	\$ 333,333 (1,667)	\$	416,667 (2,778)	\$ 500,000 (4,167)	\$ 583,333 (5,834)	\$	666,667 (7,778)	\$	750,000 (10,000)	\$ 833,333 (12,500)	\$	916,667 (15,278)	\$	1,000,000 {18,334}		
4.	Net Book Value (Lines 2 + 3)	\$	83,333	\$	166,389	\$ 249,166	\$ 331,666	\$	413,889	\$ 	\$ 577,499	\$	658,889	\$	740,000	\$ 200 500	\$	901,389	\$	981,666		
5.	Average Net investment	\$	41,667	\$	124,861	\$ 207,777	\$ 290,416	\$	372,778	\$ 454,861	\$ 536,666	\$	618,194	\$	699,444	\$ 780,417	\$	861,111	\$	941,527		
6.	Return on Average Net Investment a. Net Operating Income after tax (A)	\$	507	\$	1,519	\$ 2,527	\$ 3,532	\$	4,534	\$ 5,532	\$ 6,527	\$	7,519	\$	8,507	\$ 9,492	\$	10,473	\$	11,451	\$	72,120
7.	a. Depreciation (B)		0		278	556	833		1,111	1,389	1,667		1,944		2,222	2,500		2,778		3,056		18,334
	b. Amortization d. Property Taxes (C) e. Other		0 47 0		140 0	0 234 0	0 327 0		0 419	0 512 0	604 0		0 695		0 787	0 878 0		969 0		1,059		6,671
8.	Revenue Requirements (Lines 6 + 7)	 _\$_	554	<u> </u>	1,937	\$ 3,317	\$ 	\$_	6,064	\$ 7,433	\$ 8,798	\$	10,158	\$	11,516	\$ 12,870	\$		5	15,566		97,125

Notes:
(A) Line 5 x 8.88% x (1/12) x 1.6436. Based on ROE of 11.50%, Income tax rate of 38.575%, expansion factor of 1.6436

(B) Applicable depreciation rate is 4% (C) Ad Valorem Tax Rate is 1.35%

CARBON REDUCTION RIDER SUMMARY OF CRR SURCHARGE CALCULATION MONTHS: January 20xx Through December 20xx

RATE SCHEDULE	BILLS*	THERMS*	CUSTOMER CHARGE*	NON-GAS DIST CHARGE*	TOTAL CUST. & DIST CHG REVENUE*	CRR REVENUES	CRR AS % OF TOTAL REVENUES	CRR SURCHARGE PER THERM
RS & RS-SG	3,683,881	61,965,936	\$55,364,824	\$19,903,459	\$75,268,283	\$42,551	0.05653%	\$0.00069
SGS & CS-SG	134,617	8,296,450	3,421,331	3,020,240	6,441,571	3,642	0.05653%	\$0.00044
GS-1	159,942	65,430,833	5,411,313	18,398,496	23,809,809	13,460	0.05653%	\$0.00021
GS-2	72,768	124,454,784	3,494,727	30,408,037	33,902,764	19,166	0.05653%	\$0.00015
GS-3	9,931	74,743,912	1,468,905	15,813,569	17,282,474	9,770	0.05653%	\$0.00013
GS-4	1,476	43,269,635	369,000	6,652,274.00	7,021,274	3,969	0.05653%	\$0.00009
GS-5	1,242	64,790,915	372,756	7,437,997	7,810,753	4,416	0.05653%	\$0.00007
NGVS	180	428,668	8,100	80,847	88,947	50	0.05653%	\$0.00012
CSLS	756	901,552	0	178,219	178,219	101	0.05653%	\$0.00011
TOTAL	4,064,793	444,282,685	\$69,910,956	\$101,893,138	\$171,804,094	\$ 97,125	0.05653%	

^{*} Source: Data in these columns are for the projected test year, taken from Schedule H-1