

FILE

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

**In the Matter of the Application of The
East Ohio Gas Company d/b/a Dominion
East Ohio for Authority to Increase Rates
for its Gas Distribution Service.**

Case No. 07-829-GA-AIR

**In the Matter of the Application of The
East Ohio Gas Company d/b/a Dominion
East Ohio for Approval of an Alternative
Rate Plan for its Gas Distribution Service**

Case No. 07-830-GA-ALT

**In the Matter of the Application of The
East Ohio Gas Company d/b/a Dominion
East Ohio for Approval to Change
Accounting Methods**

Case No. 07-831-GA-AAM

**In the Matter of the Application of The
East Ohio Gas Company d/b/a Dominion
East Ohio for Approval of Tariffs to
Recover Certain Costs Associated with a
Pipeline Infrastructure Replacement
Program Through an Automatic
Adjustment Clause, And for Certain
Accounting Treatment**

Case No. 08-169-GA-ALT

**In the Matter of the Application of The
East Ohio Gas Company d/b/a Dominion
East Ohio for Approval of Tariffs to
Recover Certain Costs Associated with
Automated Meter Reading Deployment
Through an Automatic Adjustment Clause,
and for Certain Accounting Treatment**

Case No. 06-1453-GA-UNC

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**SUPPLEMENTAL DIRECT TESTIMONY OF
JEFFREY A. MURPHY
ON BEHALF OF
DOMINION EAST OHIO**

___ Management policies, practice and organization

___ Operating income

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- ☐ Rate base
- ☐ Allocations
- ☐ Rate of return
- ☐ Rates and tariffs
- ☒ Other (PIR Rider)

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ATTACHMENT JAM 1.4

1 **Supplemental Direct Testimony of**

2 **Jeffrey A. Murphy**

3 **I. WITNESS IDENTIFICATION AND BACKGROUND**

4 **Q1. Please state your name, occupation and business address.**

5 A1. My name is Jeffrey A. Murphy. I am employed by The East Ohio Gas Company d/b/a
6 Dominion East Ohio ("DEO" or "Company") as its Director, Rates and Gas Supply. My
7 business address is 1201 East 55th Street, Cleveland, Ohio 44103-1028.

8 **Q2. Are you the same Jeffrey A. Murphy that previously submitted Direct Testimony in**
9 **Case Nos. 07-829-GA-AIR, 07-830-GA-ALT, and 07-831-GA-AAM?**

10 A2. Yes.

11 **Q3. What is the purpose of your supplemental direct testimony?**

12 A3. My testimony supports the cost allocation and rate recovery aspects of the Company's
13 Pipeline Infrastructure Replacement ("PIR") program described in the Application
14 submitted in Case No. 08-169-GA-UNC. Pursuant to the Commission's Order in this
15 proceeding dated May 28, 2008, which I will address later in my testimony, the PIR
16 Application is now designated as Case No. 08-169-GA-ALT.

17 **II. THE PIR COST RECOVERY CHARGE**

18 **Q4. Please describe the general types of cost that the Company is seeking to recover.**

19 A4. DEO is seeking to recover costs associated with three major infrastructure-related
20 activities:

- 21 • The replacement of older-vintage bare-steel, cast- or wrought-iron and copper.
- 22 • The assumption of the responsibility for installing, repairing and replacing
- 23 service lines that are currently owned by end use customers.
- 24 • Ongoing infrastructure replacements, pipeline relocations and system
- 25 improvements.

1 Investments in those areas impose incremental costs that the Company is seeking to defer
2 and recover from all end use customer classes through a PIR Cost Recovery Charge.

3 Those incremental costs consist of:

- 4 • Additional depreciation expense for PIR-related gross plant additions.
- 5 • Increased property taxes associated with the new PIR facilities.
- 6 • A rate of return on the rate base equivalent of the net plant additions.

7 As explained later in my testimony, the PIR program has implications for operating and
8 maintenance expenses that must be taken into consideration as well.

9 **Q5. From what customer classes does the Company propose to recover those costs?**

10 A5. The proposed PIR Cost Recovery Charge will be applicable to all customers that receive
11 service under DEO's sales and transportation service rate schedules. The costs will be
12 allocated to rate schedules on the basis of cost causality. As a result, the PIR Cost
13 Recovery Charges will differ from one rate schedule to the next.

14 **Q6. Why is it appropriate to recover PIR program costs through a rider mechanism?**

15 A6. There are two primary reasons. First, the magnitude of the PIR program cost would
16 prevent the Company from ever earning its Commission-authorized rate of return if those
17 costs were recovered through base rate cases. Second, a rider mechanism would lead to a
18 much more efficient regulatory process because rates would be adjusted without the need
19 to conduct full-blown base rate proceedings while ensuring extensive Commission
20 oversight of all costs to be recovered by the rider.

21 **Q7. Please describe the impact of the PIR program on the Company's jurisdictional rate**
22 **base investment.**

23 A7. The PIR program will have a considerable impact on the Company's rate base. The
24 \$2.662 billion estimated cost of the PIR program in 2007 dollars is nearly two-and-a-half

1 times the March 31, 2007 rate base of \$1.072 billion proposed by DEO in its current rate
2 case. Even the yearly PIR program cost impact on rate base is substantial. The average
3 annual cost to replace existing facilities over the proposed 25-year duration is \$106
4 million. That figure does not include the additional cost of installing customer service
5 lines on new construction or the cost of replacing individual customer service lines that
6 are not located on the distribution pipelines being replaced as part of the PIR program.¹
7 In three of the past five years, new residential connections exceeded 10,000 per year. If
8 DEO were to experience that level of customer additions in the future, the cost of
9 installing new service lines could exceed \$10 million dollars per year. Thus, adding the
10 cost of service lines on new construction alone to the cost to replace existing facilities
11 would take the total annual cost of the program to \$116 million or nearly 11% of the
12 company's rate base investment.

13 **Q8. Why would the magnitude of the PIR program cost prevent the Company from**
14 **earning its Commission-authorized rate of return if those costs were recovered**
15 **through the base rate case process?**

16 **A8.** In a rate case, companies are required to use an actual valuation for date certain rate base
17 and no more than nine months of estimated data for test year revenues and expenses.
18 While there is no standard time frame under which all rate cases are processed, the period
19 from application to rates being placed into effect typically exceeds nine months. Even if
20 a company files its initial application with estimated data and subsequently files a two-
21 month update with the required actual information, the lag between a company's
22 investment in rate base and rate recovery is still considerable. By the time rates are

¹ DEO did not include the cost of such service lines in the figures cited in the Application because those costs are not incremental. Customers would bear the cost themselves if DEO were not responsible for those installations.

1 placed into effect, is it likely that rate base will be at least nine months out of date, and
2 the company will have absorbed nine months' worth of additional depreciation and
3 property tax expenses on post-date-certain plant investments. Absent a rider that
4 provides timely recovery of PIR-related costs, the revenue requirement established in the
5 normal rate case process will significantly under-recover actual costs and assure that
6 DEO will not earn its authorized rate of return. Given the magnitude of PIR-related
7 expenditures relative to rate base, that under-recovery could be substantial.

8 **Q9. Why is a rider mechanism a more efficient way to recovery PIR program costs than**
9 **a traditional rate proceeding?**

10 **A9.** The traditional rate case process imposes a substantial burden on all regulatory
11 stakeholders and imposes substantial costs to ratepayers. DEO's estimated rate case
12 expense in Case No. 07-829-GA-AIR is over \$1.8 million. Absent rider recovery, the
13 Company would be compelled to file rate cases every year to recover the substantial
14 increase in revenue requirement associated with the PIR program. Approval of DEO's
15 rider application as proposed will result in fewer rate cases, with the result being that
16 ratepayers will not be asked to pay that annual cost. Not only will rider recovery save
17 ratepayers rate-case expense, DEO also expects that the PIR program will conserve the
18 resources of agencies such as the Commission and the Office of the Ohio Consumers'
19 Counsel. The considerable time and effort necessary to assess the many issues presented
20 by a base rate case filing may be devoted elsewhere.

21 Because the review of rider adjustment applications will be focused solely on PIR
22 program scope and cost, parties will be better able to focus attention on the program and
23 not be burdened by the multitude of other issues that must be addressed in a rate case
24 application. Costs associated with the PIR program will become an increasingly more

1 significant portion of customer bills over time. Focusing annual attention on the program
2 in the context of a rider adjustment review will ensure that the PIR-related portion of a
3 customer's bill receives maximum attention.

4 **Q10. Why will approval of the tracker mechanism proposed by DEO lead to fewer rate**
5 **cases?**

6 A10. As explained in the Application, DEO is seeking recovery of the costs of ongoing
7 pipeline infrastructure replacements and relocations and system improvements as well as
8 the costs associated with the targeted replacement of certain older vintage pipelines and
9 the assumption of responsibility of service lines. The incremental depreciation, property
10 tax and return on those ongoing capital expenditures are a major driver of rate cases
11 because they contribute to higher revenue requirements. Absent a means to recover those
12 revenue requirements, DEO will be forced to file more frequent base rate cases. While
13 other factors such as increased operation and maintenance ("O&M") expenses and
14 benefit costs will eventually lead to the need for increased base rate recovery, DEO does
15 not anticipate that they will increase at a pace requiring frequent rate cases, and certainly
16 not at the pace that PIR investments will be made.

17 **Q11. Will the PIR program better match the actual experience or performance of DEO in**
18 **terms of costs and quality of service to its regulated customers?**

19 A11. Yes. By more closely tying PIR-related investments made by DEO and the Company's
20 recovery of those investments, the PIR Cost Recovery Charge better matches DEO's
21 performance to the cost and quality of service it provides to its regulated customers.

1 **Q12. How will the Company account for the incremental costs associated with the PIR**
2 **program?**

3 A12. DEO will defer the incremental depreciation expense, property taxes and O&M expenses
4 as well as the return on rate base for the expenditures associated with its PIR program and
5 accumulate them in account 182.3, Other Regulatory Assets.

6 **Q13. Please explain how the incremental depreciation expense will be quantified.**

7 A13. The incremental depreciation expense will be based on the cumulative PIR gross plant
8 additions as offset by any associated retirements. The depreciation rates will be based on
9 those authorized by the Commission for the applicable plant accounts in which the
10 additions and retirements are booked. The resulting incremental depreciation expense
11 recorded for each month will then be deferred and accumulated in account 182.3.

12 **Q14. How will the Company compute the incremental property taxes to be paid on PIR**
13 **capital investments?**

14 A14. The incremental property taxes will reflect the cumulative PIR capital expenditures, net
15 of any related retirements, through the December 31 lien date of each year. The
16 incremental property taxes to be deferred will be based on the additional property placed
17 into service in each tax jurisdiction and the property tax rates applicable to that
18 jurisdiction. The associated property taxes accrued for each month will be deferred and
19 accumulated with other expenses in account 182.3.

20 **Q15. How will DEO define the incremental O&M expenses to be considered?**

21 A15. The incremental O&M expenses to be deferred will be limited to those that, but for the
22 existence of the PIR program and DEO's ownership of service lines, would not be
23 incurred. In order to accommodate a full review of the costs and verify their incremental
24 nature, DEO will separately identify and fully document the expenses. The resulting

1 incremental O&M expense recorded for each month will be deferred without carrying
2 costs for subsequent recovery through the PIR Cost Recovery Charge.

3 It is worth noting that the cost associated with relocating meters outside is
4 typically treated as an O&M expense rather than capitalized. Due to the potential
5 magnitude of O&M expenses incurred as a result of an approved meter relocation plan,
6 DEO is seeking recovery of carrying costs on those expenditures using the Company's
7 weighted cost of debt from the point of cost incurrence to the date recovery commences
8 through an updated PIR Cost Recovery Charge.

9 **Q16. What is involved in quantifying the return on rate base associated with the**
10 **program?**

11 A16. Each month, DEO will calculate the rate base equivalent of PIR-related expenditures
12 based on cumulative net plant minus associated deferred income taxes and the effect of
13 any retirements. The Company will then apply the pre-tax rate of return authorized by
14 the Commission in Case No. 07-829-GA-AIR, and subsequent cases as appropriate, to
15 the PIR rate base amount. The resulting amount will be credited to revenue and
16 accumulated in account 182.3 along with the incremental expenses that have been
17 deferred.

18 **Q17. Will the Company reduce amounts recovered through the proposed PIR Cost**
19 **Recovery Charge for O&M savings achieved as a result of the program?**

20 A17. Yes. The Application describes the manner in which the Company will use O&M
21 savings generated by the program to reduce amounts that would otherwise be recovered
22 through the rider mechanism. Those savings will arise from reductions in leak repairs,
23 corrosion monitoring activities and Department of Transportation inspections on inside
24 meters that may no longer be necessary if the meters are relocated outside. DEO will

1 work with Staff to ensure that an appropriate baseline for savings calculations is
2 quantified based on the outcome of Case No. 07-829-GA-AIR.

3 **Q18. Will the PIR program provide other savings that will be passed on to consumers in**
4 **other ways?**

5 A18. Yes. The PIR program will also reduce the volume of lost-and-unaccounted-for gas as
6 older vintage pipelines are replaced. The reductions in system-wide lost-and-
7 unaccounted-for gas will be reflected in the annual updates of DEO's fuel retention rate
8 and in the quarterly updates of Transportation Migration Rider – Part B.

9 **Q19. Briefly describe the process that the Company will use to request a change in the**
10 **PIR rate.**

11 A19. In August of each year, DEO will submit an application with schedules supporting the
12 proposed PIR Cost Recovery Charge based on the costs accumulated and bills rendered
13 for the prior fiscal year. DEO selected a fiscal year ending June 30 to spread the
14 Commission's review of LDCs' infrastructure rider applications throughout the year. In
15 order to facilitate Staff's and other parties' review of the application, the Company will
16 file a pre-filing notice 90 days prior to the application that reflects a combination of
17 actual and projected data that will be updated for actual data in the August application.

18 **Q20. What happens to the PIR Cost Recovery Charge if the Company files another rate**
19 **case?**

20 A20. The proposed accounting approach is intended to accommodate future rate cases. All
21 PIR costs accumulated up to the date certain of the next rate case will be recovered in the
22 base rates set in the next rate case. Going forward, the calculation of incremental PIR-
23 related costs will reflect only post-date-certain activity. In other words, the Company
24 will remove costs from the PIR Cost Recovery Charge once they are reflected in
25 approved base rates.

1 **Q21. Please describe the process used to determine the PIR Cost Recovery Charge for the**
2 **various rate schedules to which it will apply.**

3 A21. In order to develop the PIR Cost Recovery Charge for each customer class, DEO will
4 first distribute the revenue requirement associated with the various investments in the
5 program. The cost of certain assets such as transmission and high-pressure distribution
6 mains that are commonly used will be allocated more broadly across customer classes
7 using the average excess factors in the class cost of service study supporting rates
8 approved in Case No. 07-829-GA-AIR. The cost of other assets such as low-pressure
9 distribution mains and service lines are more properly allocated on a customer basis to
10 reflect the manner in which they are used. As noted in the Application, the revenue
11 requirement for each type of investment will be allocated as follows:

<u>Account</u>	<u>Investment Type</u>	<u>Allocator</u>	<u>Type of Allocation</u>
367	Transmission Mains	Total Transmission Plant	Average-Excess Capacity/Commodity
376	Distribution Mains – High Pressure	Total Non-Customer Related Distribution Plant	Average-Excess Capacity/Commodity
376	Distribution Mains – Low Pressure	Total Services	Number of Customers
380	Distribution Services – Main-to-Curb, Service Lines	Total Services	Number of Customers

12
13 Once the costs are properly apportioned among customer classes, the PIR Cost Recovery
14 Charge will be developed using the following design:

<u>Customer Classes</u>	<u>Rate Design</u>	<u>Denominator</u>
General Sales/Energy Choice Transportation Service	Fixed Monthly Charge	Number of Bills in Preceding 12 Months
Large Volume General Sales/Energy Choice Transportation Service	Fixed Monthly Charge	Number of Bills in Preceding 12 Months
General Transportation Service/ Transportation Service for Schools	Fixed Monthly Charge	Number of Bills in Preceding 12 Months
Daily Transportation Service	Volumetric with a \$1,000/month cap	Mcf Billed for the Preceding 12 Months

Q22. Why has DEO proposed to limit the PIR Cost Recovery Charge to Daily Transportation Service ("DTS") customers to \$1,000 per month?

A22. Due to the large differences in usage among DEO's DTS customers, a volumetric PIR Cost Recovery Charge will more equitably distribute the cost to that class of customers than a fixed monthly charge. Limiting the total monthly charge to \$1,000, however, will avoid an outcome in which the largest of those customers pay an excessive amount.

Q23. Will there be an increase in rates upon Commission approval of the proposed cost recovery mechanism?

A23. No. As stated in the Application, the PIR Cost Recovery Charge will initially be set at zero for all rate schedules with the first adjustment to occur in November 2009 based on fiscal year data for the twelve months ended June 2009. No adjustment will occur without further Commission review and approval.

Q24. Please describe the manner in which DEO calculated the initial \$1.12 per month adjustment in the PIR Cost Recovery Charge and the subsequent \$0.90 increases in that monthly rate in future years.

A24. The initial \$1.12 per month adjustment in the PIR Cost Recovery Charge (for residential customers) and the subsequent increases of up to \$0.90 per month in future years were developed using the cost of service model included as Attachment JAM 1.4 to my testimony. First, all PIR investments were divided into two groups: 1) bare steel, cast- or

1 wrought-iron, and copper pipelines and the associated service lines ("Bare Steel"); and 2)
2 the ongoing infrastructure replacements, pipeline relocations and system improvements
3 described in above in response to Question No. 4 ("Ongoing").

4 Second, DEO calculated the appropriate return on rate base, depreciation expense,
5 and associated property tax for both groups, which provided the PIR revenue requirement.
6 The revenue requirement was then grossed up by 4.6% for the Gross Receipts Excise Tax.
7 Costs were then allocated to rate classes as described in the response to Question No. 21
8 above.

9 Third, the revenue requirement for each rate class was divided into the number of
10 customers in each rate class (except for the DTS class, for which the charge is applied on
11 a volumetric basis) to produce the monthly charge. The result is a charge of \$1.12 per
12 month in the first year for residential customers, comprising \$0.58 per month for the Bare
13 Steel component and \$0.54 per month for the Ongoing component.

14 The subsequent annual increases in the monthly charge (up to \$0.90/month/year)
15 were calculated by determining the incremental annual costs of the PIR program. To
16 determine the amount of incremental cost, it was assumed that, without the PIR program,
17 Bare Steel investments would not be made and an annual rate filing would be made for
18 recovery of the Ongoing investments. The increase in monthly cost for the Bare Steel
19 component was calculated by dividing the increased revenue requirement into the number
20 of customers (with increases ranging from \$0.69 in the second year to \$0.91 in the
21 twenty-third year). The increase in the monthly charge for the Ongoing component was
22 calculated as the increase in the revenue requirement from recovering these investments
23 via the PIR Cost Recovery Charge compared to the revenue that would be recovered from

1 annual base rate filings; these differences are outlined in my response to Question Nos. 9
2 and 10. The resulting change in the incremental monthly charge associated with Ongoing
3 investments is an increase of \$0.02 per month in the first year, with annual decreases
4 ranging from \$0.01 to \$0.03 for the remainder of the program. The net incremental
5 adjustment of the Bare Steel and Ongoing components is an increase in the monthly
6 charge of \$0.72 per month in the second year ranging as high as \$0.90 per month in the
7 twenty-third year. It is important to note that those figures are intended to reflect the
8 incremental cost based on the assumptions made. As such, they do not represent
9 projected levels of the PIR Cost Recovery Charge itself.

10 **Q25. Does DEO propose to include mainline extensions needed to serve new customers in**
11 **the PIR program costs to be recovered?**

12 A25. No. DEO will recover revenues from those mainline extensions in the base rates charged
13 to those new customers. In order to avoid duplicative recovery, DEO will not include the
14 costs associated with revenue-generating mainline extensions or other revenue-generating
15 infrastructure investments in the amounts to be recovered by the PIR Cost Recovery
16 Charge.

17 **III. COMPLIANCE WITH CHAPTER 4901:1-19-05, OHIO ADMINISTRATIVE**
18 **CODE.**

19 **Q26. Under what statute did the Company file the PIR Application?**

20 A26. DEO originally filed its PIR Application under Section 4929.11 of the Ohio Revised
21 Code. The Commission, however, by Order on Rehearing dated May 28, 2008, has
22 determined that the PIR Application constitutes an alternative rate plan and is therefore
23 subject to Chapter 4901:1-19-05, Ohio Administrative Code.

1 **Q27. Does the PIR Application comply with Rule 4901:1-19-05, Ohio Administrative**
2 **Code?**

3 A27. Yes. The substantive information required by the Commission's rules is provided in the
4 PIR Application, filings made in Case No. 07-829-GA-AIR and the consolidated cases,
5 or in my testimony.

6 **Q28. Rule 4901:1-19-05(C)(1) requires applicants to "submit the exhibits described in**
7 **divisions (A) to (E) of section 4909.18 of the Revised Code, and standard filing**
8 **requirements pursuant to rule 4901-7-01 of the Administrative Code, (SFRs), when**
9 **filing an alternative rate case." Has DEO provided this information in these cases?**

10 A28. Yes. All of the required information was included in DEO's initial Application in Case
11 No. 07-829-GA-AIR.

12 **Q29. Rule 4901:1-19-05(C)(2)(a) requires the applicant to state "the facts and grounds**
13 **upon which the application is based, and . . . set[] forth the plan's elements,**
14 **transition plans, and other matters," as well as describe "the rationale for the initial**
15 **proposed tariff changes for all impacted natural gas services." Has DEO provided**
16 **this information in these cases?**

17 A29. Yes. Information regarding the facts and grounds on which the PIR Application is based
18 and the elements of the plans was included in Paragraphs 1 through 20 of DEO's
19 Application in Case No. 08-169-GA-UNC.

20 **Q30. Rule 4901:1-19-05(C)(2)(b) requires the applicant to "fully justify any proposal to**
21 **deviate from traditional rate of return regulation," and "[s]uch justification shall**
22 **include the applicant's rationale for its proposed alternative rate plan, including**
23 **how it better matches actual experience or performance of the company in terms of**
24 **costs and quality of service to its regulated customers." Has DEO provided this**
25 **information in these cases?**

26 A30. Yes. This information is generally provided in my Supplemental Testimony and in
27 particular my responses to Question Nos. 6 through 11.

1 **Q31. Rule 4901:1-19-05(C)(2)(c) requires certain comparisons “[i]f the alternative rate**
2 **plan proposes a severing of costs and rates.” Does the PIR program propose a**
3 **severing of costs and rates?**

4 A31. No, it does not. Any increase in the price paid by customers will be directly tied to
5 investments and expenditures made by the Company.

6 **Q32. Rule 4901:1-19-05(C)(2)(d) states that “[i]f the applicant has been authorized to**
7 **exempt any services, the applicant shall provide a listing of the services which have**
8 **been exempted, the case number authorizing such exemption, a copy of the**
9 **approved separation plan(s), and a copy of the approved code(s) of conduct.” Has**
10 **DEO provided this information in these cases?**

11 A32. Yes. This information was set forth in Alt. Reg. Exhibit D to the Application filed in
12 Case No. 07-830-GA-ALT.

13 **Q33. Rule 4901:1-19-05(C)(2)(e) requires that the applicant “provide a complete matrix**
14 **showing the following: each rate, service, or regulation that is included in the plan**
15 **and an explanation of how it may be affected during the term of the plan.” Has**
16 **DEO provided this information in these cases?**

17 A33. Yes. This information was provided in Paragraphs 21 and 22 of DEO’s Application in
18 Case No. 08-169-GA-UNC, as well as the tariff attached to that Application. Additional
19 details regarding the effect of the plan on customer rates are provided in my
20 Supplemental Testimony in the responses to Questions Nos. 21 through 24 as well as the
21 cost of service model included as Attachment JAM 1.4.

22 **Q34. Rule 4901:1-19-05(C)(2)(f) requires the applicant to “provide a detailed discussion**
23 **of how potential issues concerning cross-subsidization of services have been**
24 **addressed in the plan.” Has DEO provided this information in these cases?**

25 A34. Yes. This information was provided in DEO’s Application in Case No. 08-169-GA-
26 UNC. Paragraphs 17 through 20 of the Application provide that DEO will separately
27 account for all PIR-related expenses and investments and that all aspects of the PIR
28 program will be subject to the review of the Commission and other intervenors.
29 Paragraphs 21 and 22 of the Application describe a cost allocation and rate design

1 process that will provide cost-based PIR Cost Recovery Charges for each customer class
2 using cost allocations consistent with the rates established in Case No. 07-829-GA-AIR
3 and the related cases. The process is illustrated in greater detail in the cost of service
4 model included as Attachment JAM 1.4 in my testimony.

5 **Q35. Rule 4901:1-19-05(C)(2)(g) requires the applicant to “provide a detailed discussion**
6 **of how the applicant is in compliance with section 4905.35 of the Revised Code, and**
7 **is in substantial compliance with the policies of the state of Ohio specified in section**
8 **4929.02 of the Revised Code,” as well as “a detailed discussion of how it expects to**
9 **continue to be in substantial compliance with the policies of the state specified in**
10 **section 4929.02 of the Revised Code, after implementation of the alternative rate**
11 **plan.” Has DEO provided this information in these cases?**

12 **A35. Yes. This information was set forth in Alt. Reg. Exhibit G to the Application filed in**
13 **Case No. 07-830-GA-ALT. Approval of the PIR Application will not take DEO out of**
14 **compliance with R.C. 4905.35 or R.C. 4929.02, and thus DEO’s compliance with these**
15 **sections will continue if the proposal is approved.**

16 **Q36. Rule 4901:1-19-05(C)(2)(h) requires the applicant to “provide the projected**
17 **financial data required in section F of chapter II of appendix A to rule 4901-7-01 of**
18 **the Administrative Code, through the term of the proposed plan and which reflects**
19 **the effects of the proposed plan including the effects of any and all assumptions**
20 **regarding changes in proposed indices.” Has DEO provided this information in**
21 **these cases?**

22 **A36. Yes. Attachment JAM 1.4 to my testimony, which was prepared by me or under my**
23 **supervision, contains the required information. Although the formatting of the data in**
24 **Attachment JAM 1.4 is not identical to that described in Section F, it nonetheless**
25 **contains all of the information needed to derive that data as well as a detailed list of the**
26 **assumptions used to project changes in the proposed rates.**

1 **Q37. Rule 4901:1-19-05(C)(2)(i) requires the applicant to “provide projected financial**
2 **data through the term of the proposed plan under the assumption that the proposed**
3 **plan is not adopted. This additional set of information shall be labeled as section**
4 **G.” Has DEO provided this information in these cases?**

5 A37. Yes. This information was set forth in Alt. Reg. Exhibit I to the Application filed in Case
6 No. 07-830-GA-ALT.

7 **Q38. Rule 4901:1-19-05(C)(2)(j) requires the applicant to “submit a list of witnesses**
8 **sponsoring each of the exhibits in its application.” Which witnesses are sponsoring**
9 **the exhibits to the PIR Application?**

10 A38. I am the responsible witness. Tim McNutt is also sponsoring testimony in support of the
11 PIR Application.

12 **Q39. Rule 4901:1-19-05(C)(3) states, “To the extent the applicant is seeking alternative**
13 **forms of rate setting than that found in section 4909.15 of the Revised Code, the**
14 **applicant should detail those commitments to customers it is willing to make to**
15 **promote the policy of the state specified in section 4929.02 of the Revised Code. The**
16 **extent of commitments specified should be dependent upon the degree of freedom**
17 **from section 4909.15 of the Revised Code requested by the applicant.” Has DEO**
18 **provided this information in these cases?**

19 A39. Yes. The statement required by this section was set forth in the “Statement Required by
20 Section 4901:1-19-05(C)(3), Ohio Administrative Code” that was filed with the Alt. Reg.
21 Exhibits in Case No. 07-830-GA-ALT.

22 **IV. CONCLUSION**

23 **Q40. Does this conclude your testimony?**

24 A40. Yes.

DOMINION EAST OHIO

Cumulative Impact of Pipeline Infrastructure Replacement Program Rider on Residential Customers

Bare Steel Component

<u>Rate Class</u>	<u># of Customers</u>	<u>Year:</u>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GSS/ECTS	1,207,801	1	\$0.58	2	\$1.28	3	\$2.05	4	\$2.85	5	\$3.64	6	\$4.44
Change from prior year:				\$0.69	\$0.78	\$0.79	\$0.80	\$0.80	\$0.80	\$0.81	\$0.81	\$0.81	\$0.82

Incremental Impact of Ongoing Component (Rate Case lag)

<u>Rate Class</u>	<u># of Customers</u>	<u>Year:</u>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GSS/ECTS	1,207,801	1	\$0.54	2	\$0.56	3	\$0.53	4	\$0.50	5	\$0.48	6	\$0.47
Change from prior year:				\$0.54	\$0.02	(\$0.03)	(\$0.03)	(\$0.02)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)

Total Impact: Bare Steel + Ongoing Components

<u>Rate Class</u>	<u># of Customers</u>	<u>Year:</u>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GSS/ECTS	1,207,801	1	\$1.12	2	\$1.84	3	\$2.59	4	\$3.35	5	\$4.12	6	\$4.91
Change from prior year:				\$1.12	\$0.72	\$0.75	\$0.76	\$0.76	\$0.77	\$0.78	\$0.79	\$0.79	\$0.80

Assumptions: Pipeline Infrastructure Replacement Program Cost Model
Cast Iron/Bare Steel Pipe and Related Services

05/28/08

Filing for Pipeline Infrastructure Rider in 2008, Revenue Impact in 2009

Pipeline Infrastructure investment starts at \$72.5 million in FY 2009, increases to \$78 million in FY 2011

- Investment in Distribution LP Mains & Services escalated at 3.0%/year starting in FY 2012

- All figures are in 2007 \$.

Associated Retirements have not been factored into the cost of service model

Book Depreciation

-Transmission - Mains @ 2.0% (includes all regulator stations)

-Distribution - Mains @ 1.79% (both LP and HP)

-Distribution - Services @ 4.0% (includes both Main-Curb and Curb-Meter portion)

Tax Depreciation

-Transmission - Mains: 15 year MACRS

-Distribution - HP Mains: 15 year MACRS

-Distribution - LP Mains and Services:

2008-2010: 15 year MACRS

2011 and beyond: 20 year MACRS

Property Tax: 1.1% on Gross Plant (expense incurred as plant added)

Tax Rate: 35%

Return on Rate Base: 11.85% (with pre-tax ROE)

Based on:

<u>Capital Component</u>	<u>After Tax</u>	<u>Pre-Tax ROE</u>	<u>Cap Structure</u>	<u>Return used for model</u>
Debt	6.05%	6.05%	54.33%	3.287%
Equity	11.90%	18.31%	45.67%	8.361%
Return on Rate Base (WACC)	8.72%			11.648%

First year: Assets in place for 6 months on average (for depreciation purposes)

Functional Allocation for Depreciation Expense

-Transmission Mains allocated based on Transmission Depreciation Expense

-Distribution LP Mains allocated based on Customer: Services portion of Distribution Depreciation Expense

-Distribution Services allocated based on Customer: Services portion of Distribution Depreciation Expense

- Distribution HP Mains allocated based on Capacity/Commodity portion of Distribution Depreciation Expense

Functional Allocation for Property Tax, Rate Base/Return

-Transmission Mains allocated based on Transmission Gross Plant

-Distribution LP Mains allocated based on Customer: Services portion of Distribution Gross Plant

-Distribution Services allocated based on Customer: Services portion of Distribution Gross Plant

- Distribution HP Mains allocated based on Capacity/Commodity portion of Distribution Gross Plant

No PISCC or incremental O&M expense impact considered

Model does not reflect potential O&M savings nor does it quantify potential for fuel retention savings

Cost of Service Model - Pipeline Infrastructure Replacement Program

Fiscal Year

Cast Iron/Bare Steel component of PIR program

Revenue Requirement Summary (\$,000)

Annual Investment

Accumulated Book Depreciation

Net Plant

Accumulated Deferred Income Tax

Rate Base (\$000)

Approved Pre-Tax (ROE) Return on Rate Base

Annualized Return on Rate Base

Depreciation Expense

Property Tax Expense

O&M Expense Impact (Initially set at 0)

PISCC (Initially set at 0)

Revenue Requirement before GRET

GRET Adjustment

Total Revenue Requirement for Infrastructure Rider

Customer Impact, Annual Revenue by class

GSS/ECTS

LVGSS, LIVECTS

GSS/TSS

DTS

TOTAL

Avg. Monthly Cost per Customer

GSS/ECTS

Change from prior year

LVGSS, LIVECTS

Change from prior year

GSS/TSS

Change from prior year

DTS

Change from prior year

2008
Year 1
2010
Year 2
2011
Year 3
2012
Year 4
2013
Year 5
2014
Year 6
2015
Year 7
2016
Year 8
2017
Year 9
2018
Year 10
2019
Year 11

72,500	76,000	78,000	80,340	82,760	85,233	87,790	90,423	93,136	95,930	98,808
732	3,085	7,302	13,641	22,143	32,875	45,904	61,297	79,126	99,464	122,387
71,768	145,435	219,197	283,189	367,447	441,947	516,709	591,739	667,048	742,638	818,523
1,013	3,836	8,515	14,173	20,453	27,311	34,773	42,945	51,927	61,719	72,247
70,755	141,498	210,682	279,027	348,983	414,637	481,935	548,784	615,119	680,919	746,216
11.648%										
8,242	16,462	24,540	32,601	40,418	48,287	56,136	63,924	71,650	79,314	86,927
732	2,333	4,237	6,338	8,503	10,732	13,028	15,393	17,829	20,336	22,923
788	1,633	2,491	3,375	4,285	5,223	6,189	7,183	8,208	9,263	10,350
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
9,771	20,448	31,269	42,215	53,206	64,252	75,353	86,501	97,687	108,915	120,199
4.6044%										
10,221	21,390	32,709	44,159	55,656	67,211	78,823	90,483	102,185	113,930	125,734
\$5,000	8,458	18,491	28,783	41,269	52,795	64,373	78,004	87,682	98,400	111,163
	260	433	448	455	462	471	480	490	499	509
	884	1,457	1,479	1,470	1,464	1,461	1,460	1,460	1,460	1,460
	619	1,009	999	986	935	906	879	852	825	798
	10,221	21,390	32,708	44,159	55,656	67,211	78,823	90,483	102,185	113,930
1,207,801	\$0.58	\$1.28	\$2.05	\$2.85	\$3.64	\$4.44	\$5.24	\$6.05	\$6.86	\$7.67
	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month
2,248	\$9.86	\$16.04	\$16.61	\$16.86	\$17.14	\$17.46	\$17.80	\$18.15	\$18.50	\$18.86
	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month
2,910	\$25.31	\$41.72	\$42.35	\$42.08	\$41.91	\$41.83	\$41.82	\$41.81	\$41.82	\$41.82
	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month
78	\$681.04	\$1,078.24	\$1,067.39	\$1,031.80	\$988.79	\$968.11	\$938.96	\$910.18	\$881.40	\$852.63
	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month	\$/month
		\$417.20	-\$10.85	-\$35.59	-\$33.01	-\$30.88	-\$29.17	-\$28.76	-\$28.78	-\$28.77

	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Investment in Replacement of LP Distribution Mains	23,405	34,000	47,500	48,925	50,393	51,905	53,462	55,066	56,717	58,419	60,172
Accumulated Gross Plant	23,405	57,405	104,905	153,830	204,223	256,127	309,589	364,654	421,372	479,791	539,963
Book Depreciation Expense using rate of:	210	723	1,453	2,316	3,205	4,120	5,083	6,084	7,035	8,065	9,127
Accumulated Book Depreciation	210	933	2,385	4,701	7,906	12,026	17,089	23,123	30,158	38,224	47,351
Investment in Replacement of Transmission Mains	16,211	9,727	0	0	25,938	25,938	25,938	25,938	25,938	25,938	25,938
Accumulated Gross Plant	16,211	25,938	25,938	25,938	25,938	25,938	25,938	25,938	25,938	25,938	25,938
Book Depreciation Expense using rate of:	182	421	619	619	519	519	519	519	519	519	519
Accumulated Book Depreciation	182	603	1,102	1,721	2,240	2,759	3,278	3,797	4,316	4,835	5,354
Investment in Replacement of Services (M-C, C-M)	6,000	16,143	30,500	31,415	32,327	33,238	34,149	35,059	35,969	36,879	37,789
Accumulated Gross Plant	6,000	22,143	52,643	84,058	116,415	148,774	181,132	213,490	245,848	278,206	310,564
Book Depreciation Expense using rate of:	120	383	1,496	2,734	4,009	5,323	6,679	8,070	9,508	10,984	12,507
Accumulated Book Depreciation	120	503	1,883	4,617	8,622	14,245	20,922	28,660	37,468	47,352	58,359
Investment in Replacement of HP Distribution Mains	25,884	15,130	0	0	43,014	43,014	43,014	43,014	43,014	43,014	43,014
Accumulated Gross Plant	25,884	43,014	43,014	43,014	43,014	43,014	43,014	43,014	43,014	43,014	43,014
Book Depreciation Expense using rate of:	241	826	1,536	2,408	3,176	3,946	4,715	5,485	6,255	7,026	7,796
Accumulated Book Depreciation	241	1,067	2,603	5,011	8,187	11,333	14,548	17,833	21,189	24,615	28,111
Investment in Replacement of Inside Meters	0	0	0	0	0	0	0	0	0	0	0
Accumulated Gross Plant	0	0	0	0	0	0	0	0	0	0	0
Book Depreciation Expense using rate of:	0	0	0	0	0	0	0	0	0	0	0
Accumulated Book Depreciation	0	0	0	0	0	0	0	0	0	0	0
Total Project CAPEX	72,500	76,000	78,000	80,340	82,750	85,233	87,780	90,423	93,156	95,980	98,808
Total Accumulated Gross Plant	72,500	149,500	228,500	306,840	389,590	474,823	562,612	653,039	746,172	842,102	940,910
Total Book Depreciation Expense	732	2,333	4,237	6,938	8,503	10,732	13,029	15,393	17,829	20,338	22,927
Accumulated Book Depreciation	732	3,065	7,302	13,641	22,143	32,876	45,904	61,297	79,126	99,464	122,987
Net Plant	71,768	145,435	219,197	293,199	387,447	441,947	516,709	591,739	667,046	742,638	818,923
Tax Depreciation Rate by Year											
Total Tax Depreciation - LP Distribution Mains	1,170	3,823	7,606	11,056	13,723	16,329	18,930	21,644	24,334	27,073	30,827
Total Tax Depreciation - Transmission Mains	811	2,028	2,310	2,080	1,672	1,684	1,582	1,530	1,532	1,531	1,532
Tax Depreciation Rate - Services - 15 years (2008-2010)	5.00%	8.50%	8.35%	7.70%	6.93%	6.23%	5.80%	5.80%	5.81%	5.80%	5.81%
Tax Depreciation Rate - Services - 20 years (2011-2030)	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.88%	4.52%	4.46%	4.46%	4.46%
Total Tax Depreciation - Services	300	1,377	3,572	5,918	7,748	9,624	11,288	13,029	14,895	16,772	18,605
Total Tax Depreciation - HP Distribution Mains	1,344	3,361	3,631	3,449	3,105	2,793	2,591	2,338	2,241	2,150	2,061
Total Tax Depreciation - Distribution Meter Installations	0	0	0	0	0	0	0	0	0	0	0
Total Tax Depreciation Expense	3,625	10,887	17,319	22,503	28,448	30,324	34,350	38,741	43,491	48,315	53,005
Book-Tax Timing Difference											
Distribution - LP Mains	981	3,200	6,153	8,741	10,510	12,203	13,866	15,510	17,149	18,768	21,201
Transmission - Mains	849	1,805	1,791	1,581	1,363	1,105	1,043	1,011	1,013	1,012	1,013
Distribution - Services	180	814	2,076	3,184	4,201	4,591	4,959	5,378	5,788	6,188	6,585
Distribution - HP Mains	1,104	2,735	3,061	2,679	2,335	2,023	1,821	1,768	1,771	1,769	1,771
Book-Tax Timing Difference	2,883	8,394	13,082	16,184	17,945	18,592	21,322	23,348	25,862	27,977	30,082
Deferred Income Tax using rate of:											
Distribution - LP Mains	336	1,120	2,164	3,059	3,681	4,271	4,853	5,463	6,125	6,788	7,420
Transmission - Mains	227	502	627	546	474	408	366	354	355	354	355
Distribution - Services	63	285	727	1,114	1,308	1,470	1,607	1,736	1,863	1,989	2,114
Distribution - HP Mains	386	967	1,071	898	817	708	637	619	620	619	620
Deferred Income Tax using rate of:											
Distribution - LP Mains	1,013	2,924	4,579	5,658	6,281	6,867	7,480	8,172	8,882	9,782	10,529
Transmission - Mains	336	1,456	3,610	6,689	10,350	14,821	19,474	24,938	31,083	37,865	45,275
Distribution - Services	227	789	1,418	1,962	2,436	2,944	3,208	3,563	3,917	4,271	4,626
Distribution - HP Mains	63	1,075	2,189	3,353	4,170	4,878	5,515	6,134	6,754	7,373	7,993
Total Accumulated Deferred Income Tax	386	1,343	2,415	3,353	4,170	4,878	5,515	6,134	6,754	7,373	7,993
Rate Base:											
Distribution - LP Mains	22,869	65,016	96,910	142,460	186,967	229,480	273,026	316,593	360,161	403,712	447,337
Transmission - Mains	15,822	24,566	23,420	22,365	21,383	20,436	19,552	18,679	17,806	16,933	16,060
Distribution - Services	5,817	21,112	48,380	76,957	103,986	130,531	156,575	182,127	207,168	231,689	255,954
Distribution - HP Mains	28,267	40,804	36,963	37,255	36,668	34,180	32,783	31,384	30,004	28,615	27,225
Distribution - Meter Installations	0	0	0	0	0	0	0	0	0	0	0
Total Rate Base	70,768	141,498	210,682	279,027	346,993	414,637	481,935	548,794	616,119	683,919	749,276

Cost of Service Model - Pipeline Infrastructure Replacement Rider
 Fiscal Year: 2009 Year 1 2010 Year 2 2011 Year 3 2012 Year 4 2013 Year 5 2014 Year 6 2015 Year 7 2016 Year 8 2017 Year 9 2018 Year 10 2019
 Cast Iron/Bare Steel Component of PIR Program Details
DEPRECIATION EXPENSE ALLOCATION

Depreciation Expense - LP Distribution Mains										
Customer: Services portion of Dist Dep Ex from COS	14,289,068	208	720	1,446	2,204	3,189	4,100	5,038	6,005	7,001
GSS/ECTS	0	1	3	4	6	7	9	11	13	14
LVGSS/LVECTS	25,708	0	0	0	0	0	0	0	0	0
GTS/TS	43,216	1	2	4	7	10	12	15	18	21
DTS	1,318	0	0	0	0	0	0	0	1	1
TOTAL	14,359,310	210	723	1,453	2,316	3,205	4,120	5,083	6,034	7,035

Depreciation Expense - Transmission Mains										
Customer: Trans Dep Ex from COS	210,568	115	300	369	369	369	369	369	369	369
GSS/ECTS	12,362	7	18	22	22	22	22	22	22	22
LVGSS/LVECTS	42,687	23	61	75	75	75	75	75	75	75
GTS/TS	30,257	17	43	53	53	53	53	53	53	53
DTS	285,774	182	421	519	519	519	519	519	519	519
TOTAL	285,774	182	421	519	519	519	519	519	519	519

Depreciation Expense - Distribution Services										
Customer: Services portion of Dist Dep Ex from COS	14,289,068	119	560	1,488	2,721	3,880	5,297	6,844	8,031	8,459
GSS/ECTS	0	0	1	3	5	7	10	12	14	17
LVGSS/LVECTS	25,708	0	0	0	0	0	0	0	0	0
GTS/TS	43,216	0	2	5	8	12	16	20	24	29
DTS	1,318	0	0	0	0	0	0	1	1	1
TOTAL	14,359,310	120	563	1,486	2,734	4,009	5,323	6,876	8,070	8,506

Depreciation Expense - HP Distribution Mains										
Customer: CapEx/Comm portion of Dist Dep Ex from COS	10,408,813	171	445	548	548	548	548	548	548	548
GSS/ECTS	612,082	10	26	32	32	32	32	32	32	32
LVGSS/LVECTS	2,104,156	35	90	111	111	111	111	111	111	111
GTS/TS	1,485,653	25	64	79	79	79	79	79	79	79
DTS	14,620,703	241	626	770	770	770	770	770	770	770
TOTAL	14,620,703	241	626	770	770	770	770	770	770	770

Depreciation Exp - Distribution Meter Installations										
Customer: Services portion of Dist Dep Ex from COS	14,289,068	0	0	0	0	0	0	0	0	0
GSS/ECTS	25,708	0	0	0	0	0	0	0	0	0
LVGSS/LVECTS	43,216	0	0	0	0	0	0	0	0	0
GTS/TS	1,318	0	0	0	0	0	0	0	0	0
DTS	14,359,310	0	0	0	0	0	0	0	0	0
TOTAL	14,359,310	0	0	0	0	0	0	0	0	0

TOTAL DEPRECIATION EXPENSE ALLOCATION										
GSS/ECTS	614	2,025	3,861	5,842	8,096	10,315	12,589	14,953	17,377	19,874
LVGSS/LVECTS	17	48	59	63	67	71	76	79	84	88
GTS/TS	59	155	194	201	207	214	221	228	235	243
DTS	41	107	132	132	132	133	134	133	133	134
TOTAL	732	2,333	4,237	6,338	8,503	10,732	13,028	15,393	17,829	20,338

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Cash frontload Steel Component of PIR Program Details Fiscal Year: 2009 Year 1 2010 Year 2 2011 Year 3 2012 Year 4 2013 Year 5 2014 Year 6 2015 Year 7 2016 Year 8 2017 Year 9 2018 Year 10 2019

PROPERTY TAX ALLOCATION

Calculated at a rate of: 1.10% on Gross Plant

Property Tax Expense - LP Distribution Mains												
GSS/ECTS	299,593,979	256	628	1,148	1,883	2,235	2,803	3,388	3,990	4,611	5,250	5,908
LVGSS/AVECTS	527,085	0	1	2	3	4	5	6	7	8	9	10
GTS/TS	1,024,258	1	2	4	6	8	10	12	14	16	18	20
DTS	32,959	0	0	0	0	0	0	0	0	1	1	1
TOTAL	301,178,281	257	631	1,154	1,892	2,246	2,817	3,405	4,011	4,635	5,278	5,940

Property Tax Expense - Transmission Mains												
GSS/ECTS	148,788,233	127	203	203	203	203	203	203	203	203	203	203
LVGSS/AVECTS	8,749,199	7	12	12	12	12	12	12	12	12	12	12
GTS/TS	30,077,143	28	41	41	41	41	41	41	41	41	41	41
DTS	21,379,088	18	29	29	29	29	29	29	29	29	29	29
TOTAL	208,880,670	178	285	285	285	285	285	285	285	285	285	285

Property Tax Expense - Distribution Services												
GSS/ECTS	289,593,979	68	242	576	920	1,274	1,639	2,014	2,401	2,800	3,210	3,633
LVGSS/AVECTS	527,085	0	0	1	2	2	3	4	4	5	6	6
GTS/TS	1,024,258	0	1	2	3	4	6	7	8	10	11	12
DTS	32,959	0	0	0	0	0	0	0	0	0	0	0
TOTAL	301,178,281	68	244	579	925	1,281	1,647	2,025	2,414	2,814	3,227	3,652

Property Tax Expense - HP Distribution Mains												
GSS/ECTS	635,329,885	211	337	337	337	337	337	337	337	337	337	337
LVGSS/AVECTS	37,360,084	12	20	20	20	20	20	20	20	20	20	20
GTS/TS	128,432,827	43	68	68	68	68	68	68	68	68	68	68
DTS	91,291,184	30	48	48	48	48	48	48	48	48	48	48
TOTAL	892,413,981	286	473	473	473	473	473	473	473	473	473	473

Property Tax Expense - Diet Meter Installations												
GSS/ECTS	289,593,979	0	0	0	0	0	0	0	0	0	0	0
LVGSS/AVECTS	527,085	0	0	0	0	0	0	0	0	0	0	0
GTS/TS	1,024,258	0	0	0	0	0	0	0	0	0	0	0
DTS	32,959	0	0	0	0	0	0	0	0	0	0	0
TOTAL	301,178,281	0	0	0	0	0	0	0	0	0	0	0

TOTAL PROPERTY TAX EXPENSE ALLOCATION												
GSS/ECTS	659	1,410	2,284	3,143	4,048	4,981	5,942	6,931	7,950	9,000	10,081	10,081
LVGSS/AVECTS	20	33	35	36	36	40	41	43	45	47	48	48
GTS/TS	69	112	115	118	121	124	126	131	134	138	142	142
DTS	49	78	78	78	78	78	78	78	79	79	79	79
TOTAL	798	1,633	2,491	3,375	4,285	5,223	6,189	7,183	8,208	9,263	10,350	10,350

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Fiscal Year:

2009 Year 1 2010 Year 2 2011 Year 3 2012 Year 4 2013 Year 5 2014 Year 6 2015 Year 7 2016 Year 8 2017 Year 9 2018 Year 10 2019 Year 11

Cost Ion/Bare Steel Component of PIR Program Details

RETURN ON RATE BASE ALLOCATION

11.648%

Return on Rate Base (Equity pre-tax)
Transmission - Mains
Distribution - Services
Distribution - HP Mains
Distribution - Meter Installations
Total Return on Rate Base

Distribution - LP Mains:

GSS/ECTS
LVGSS/ALVECTS
GT/STSS
DTS
TOTAL

Dist Plant/Customer: Services from COS

299,593,979
527,085
1,024,259
32,959
301,178,281

Transmission Mains:

GSS/ECTS
LVGSS/ALVECTS
GT/STSS
DTS
TOTAL

Trans Plant from COS

146,785,233
8,749,186
30,077,143
21,379,088
206,990,670

Distribution Services:

GSS/ECTS
LVGSS/ALVECTS
GT/STSS
DTS
TOTAL

Dist Plant/Customer: Services from COS

299,593,979
527,085
1,024,259
32,959
301,178,281

Distribution - HP Mains:

GSS/ECTS
LVGSS/ALVECTS
GT/STSS
DTS
TOTAL

Dist Plant: CapEx/Comm portion on COS

635,329,885
37,360,084
128,432,827
91,281,184
892,413,961

Distribution - Meter Installations:

GSS/ECTS
LVGSS/ALVECTS
GT/STSS
DTS
TOTAL

Dist Plant/Customer: Services from COS

299,593,979
527,085
1,024,259
32,959
301,178,281

ALLOCATION OF RETURN ON RATE BASE

GSS/ECTS
LVGSS/ALVECTS
GT/STSS
DTS
TOTAL

6,812
211
717
502
8,242

14,242 22,366 30,367 36,327 46,244 54,117 61,938 69,688 77,386 85,044
334 334 337 337 340 343 346 349 352 354
1,126 1,104 1,086 1,071 1,058 1,047 1,037 1,026 1,015 1,004
780 746 713 683 656 629 603 577 551 525
16,482 24,549 32,501 40,418 48,297 56,136 63,924 71,650 79,314 86,927

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Fiscal Year:

Cost Item/Bare Steel Component of PIR Program Details

REVENUE REQUIREMENT BEFORE GRET

	2009 Year 1	2010 Year 2	2011 Year 3	2012 Year 4	2013 Year 5	2014 Year 6	2015 Year 7	2016 Year 8	2017 Year 9	2018 Year 10	2019 Year 11
GSS/ECTS	8,086	17,677	28,472	39,462	50,471	61,639	72,668	83,822	95,026	106,270	117,570
LVGSS/ALVECTS	249	414	428	435	442	450	459	468	477	486	496
GTS/TS	845	1,303	1,414	1,405	1,398	1,397	1,386	1,386	1,386	1,386	1,386
DTS	591	985	955	923	894	866	840	814	789	763	737
TOTAL	9,771	20,449	31,289	42,215	53,206	64,232	75,353	86,501	97,687	108,815	120,189

TOTAL REVENUE REQUIREMENT

Using GRET of:

4.60440%

GSS/ECTS	8,458	18,491	28,783	41,289	52,785	64,373	76,004	87,882	99,400	111,163	122,984
LVGSS/ALVECTS	260	433	448	455	462	471	480	480	489	499	516
GTS/TS	884	1,457	1,479	1,470	1,464	1,461	1,460	1,460	1,460	1,460	1,461
DTS	619	1,009	998	966	935	905	879	852	825	798	771
TOTAL	10,221	21,390	32,708	44,159	55,658	67,211	78,823	90,483	102,185	113,930	125,734

ANNUAL COST PER CUSTOMER

of Customers

GSS/ECTS	1,207,801	\$7.00	\$15.31	\$24.86	\$34.17	\$43.71	\$53.30	\$62.98	\$72.60	\$82.30	\$92.04
LVGSS/ALVECTS	2,248	\$115.81	\$182.51	\$188.37	\$202.28	\$205.57	\$208.48	\$213.58	\$217.78	\$222.82	\$228.30
GTS/TS	2,910	\$303.75	\$500.82	\$508.24	\$505.02	\$502.87	\$502.01	\$501.78	\$501.79	\$501.79	\$501.85
DTS	78	\$7,832	\$12,838	\$12,869	\$12,382	\$11,985	\$11,617	\$11,267	\$10,922	\$10,577	\$10,232
TOTAL	1,213,037	\$8.43	\$17.63	\$28.96	\$38.40	\$45.38	\$55.41	\$64.98	\$74.59	\$84.24	\$93.92

DTS Volumetric Annual DTS Volume 50,389,814

	\$0.0123	\$0.0200	\$0.0198	\$0.0192	\$0.0188	\$0.0180	\$0.0174	\$0.0169	\$0.0164	\$0.0158	\$0.0153
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MONTHLY COST PER CUSTOMER

GSS/ECTS	\$0.58	\$1.28	\$2.05	\$2.85	\$3.84	\$4.44	\$5.24	\$6.05	\$6.86	\$7.67	\$8.46
LVGSS/ALVECTS	\$8.65	\$16.04	\$16.61	\$16.88	\$17.14	\$17.46	\$17.80	\$18.15	\$18.50	\$18.86	\$19.22
GTS/TS	\$25.31	\$41.72	\$42.35	\$42.08	\$41.91	\$41.83	\$41.82	\$41.81	\$41.82	\$41.83	\$41.83
DTS	\$61.04	\$1,078.24	\$1,067.39	\$1,031.80	\$998.78	\$968.11	\$938.95	\$910.18	\$881.40	\$852.63	\$823.86

Assumptions: Pipeline Infrastructure Replacement Program Cost Model
Ongoing Pipeline Infrastructure Expenditures

05/28/08

Filing for Pipeline Infrastructure Rider in 2008, Revenue Impact in 2009

Ongoing Pipeline Infrastructure Investment starts at \$60 million in FY 2009
- decreases to \$55.8 million in 2013 and is steady thereafter.

Associated Retirements have not been factored into the cost of service model

Book Depreciation

- Transmission - Mains @ 2.0% (includes all regulator stations)
- Distribution - Mains @ 1.79% (both LP and HP)
- Distribution - Services @ 4.0% (includes both Main-Curb and Curb-Meter portion)

Tax Depreciation

- Transmission - Mains: 15 year MACRS
- Distribution - HP Mains: 15 year MACRS
- Distribution - LP Mains and Services:
2008-2010: 15 year MACRS
2011 and beyond: 20 year MACRS

Property Tax: 1.1% on Gross Plant (expense incurred as plant added)

Tax Rate: 35%

Return on Rate Base: 11.65% (with pre-tax ROE)

Based on:

<u>Capital Component</u>	<u>After Tax</u>	<u>Pre-Tax ROE</u>	<u>Cap Structure</u>	<u>Return used for model</u>
Debt	6.05%	6.05%	54.33%	3.287%
Equity	11.90%	18.31%	45.67%	8.361%
Return on Rate Base (WACC)	8.72%			11.648%

First year: Assets in place for 6 months on average (for depreciation purposes)

Functional Allocation for Depreciation Expense

- Transmission Mains allocated based on Transmission Depreciation Expense
- Distribution LP Mains allocated based on Customer: Services portion of Distribution Depreciation Expense
- Distribution Services allocated based on Customer: Services portion of Distribution Depreciation Expense
- Distribution HP Mains allocated based on Capacity/Commodity portion of Distribution Depreciation Expense

Functional Allocation for Property Tax, Rate Base/Return

- Transmission Mains allocated based on Transmission Gross Plant
- Distribution LP Mains allocated based on Customer: Services portion of Distribution Gross Plant
- Distribution Services allocated based on Customer: Services portion of Distribution Gross Plant
- Distribution HP Mains allocated based on Capacity/Commodity portion of Distribution Gross Plant

No PISCC or incremental O&M expense impact considered

Model does not reflect potential O&M savings nor does it quantify potential for fuel retention savings

Infrastructure Rider vs. Rate Case Filings

	Fiscal Year:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total PIR Rider Revenue Requirement:		8,540	17,448	25,846	33,658	41,110	48,340	55,360	62,160	68,735	75,086	81,219
(Ongoing component of PIR program)												

Rate Case Scenarios:

Rate Case filed in 2009 and annually thereafter	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Incremental Rate Case Revenue:	0	8,540	17,448	25,846	33,658	41,110	48,340	55,360	62,160	68,735	75,086
Incremental Revenue Requirement (\$/year)	8,540	8,909	8,397	7,812	7,452	7,231	7,019	6,800	6,575	6,351	6,133
Total Customer Impact	\$/year	8,540	8,909	8,397	7,812	7,452	7,231	7,019	6,800	6,575	6,351
GSS/ECTS Class Impact	\$/year	7,826	8,170	7,738	7,264	6,960	6,757	6,560	6,356	6,147	5,939
\$/Month per Customer	1,207,801	\$0.54	\$0.56	\$0.53	\$0.50	\$0.48	\$0.47	\$0.45	\$0.44	\$0.42	\$0.41
Change from prior year		\$0.54	\$0.02	(\$0.03)	(\$0.03)	(\$0.02)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Ongoing Component of PIR Program	Fiscal Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Revenue Requirement Summary (\$,000)												
Annual Investment		60,000	60,000	58,700	56,600	55,800	55,800	55,800	55,800	55,800	55,800	55,800
Accumulated Book Depreciation		690	2,758	6,192	10,958	17,027	24,381	33,050	43,004	54,253	68,798	80,636
Net Plant		69,311	117,242	172,508	224,342	274,073	322,509	369,650	415,496	460,048	503,304	545,266
Accumulated Deferred Income Tax		809	3,130	6,746	11,243	16,272	21,749	27,669	34,090	41,064	48,662	56,593
Rate Base (\$000)		58,502	114,112	165,762	213,099	257,801	300,760	341,861	381,406	418,983	454,722	488,673
Approved Pre-Tax (ROE) Return on Rate Base		11.648%	9.5%	4.5%	2.9%	2.1%	1.7%	1.4%	1.2%	1.0%	9%	7%
Annualized Return on Rate Base		6,814	13,292	19,308	24,822	30,029	35,033	39,834	44,427	48,804	52,966	56,921
Depreciation Expense		690	2,068	3,434	4,766	6,069	7,384	8,659	9,954	11,249	12,544	13,838
Property Tax Expense		660	2,00%	66%	38%	27%	21%	18%	15%	13%	12%	10%
O&M Expense Impact (Initially set at 0)		0	100%	49%	32%	24%	19%	15%	14%	12%	11%	10%
PI SCC (Initially set at 0)		0	0	0	0	0	0	0	0	0	0	0
Revenue Requirement before GRET		8,164	16,690	24,708	32,176	39,300	46,213	52,923	59,424	65,710	71,781	77,644
GRET Adjustment		4.6044%	104%	49%	30%	22%	18%	15%	12%	11%	9%	8%
Total Revenue Requirement for Infrastructure Rider		8,540	17,448	25,846	33,658	41,110	48,340	55,360	62,160	68,735	75,086	81,219
Customer Impact: Annual Revenue by class												
GSS/ECTS		\$,000	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
LVGSS, LVECTS			7,826	15,995	23,733	30,988	37,958	44,715	51,275	57,634	63,778	69,717
GSS/STS			110	224	326	411	489	563	636	705	773	838
DTS			361	735	1,069	1,347	1,597	1,838	2,072	2,297	2,515	2,725
TOTAL			243	494	717	901	1,066	1,224	1,378	1,526	1,669	1,807
			8,540	17,448	25,846	33,658	41,110	48,340	55,360	62,160	68,735	75,086
Avg. Monthly Cost per Customer												
GSS/ECTS		1,207,801	\$,month	\$0.54	\$1.10	\$1.64	\$2.14	\$2.62	\$3.09	\$3.54	\$3.98	\$4.40
Change from prior year			\$,month	\$0.56	\$0.53	\$0.50	\$0.48	\$0.47	\$0.45	\$0.45	\$0.44	\$0.42
LVGSS, LVECTS		2,248	\$,month	\$4.07	\$8.29	\$12.08	\$16.25	\$20.88	\$23.58	\$26.15	\$28.65	\$31.06
Change from prior year			\$,month	\$4.22	\$3.78	\$3.17	\$2.87	\$2.77	\$2.68	\$2.59	\$2.50	\$2.41
GSS/STS		2,910	\$,month	\$10.35	\$21.06	\$30.62	\$38.58	\$45.74	\$52.64	\$59.32	\$65.79	\$72.02
Change from prior year			\$,month	\$10.71	\$9.57	\$7.96	\$7.15	\$6.90	\$6.65	\$6.46	\$6.23	\$6.01
DTS		76	\$,month	\$258.38	\$527.67	\$766.30	\$962.94	\$1,138.56	\$1,307.83	\$1,471.77	\$1,630.24	\$1,783.11
Change from prior year			\$,month	\$258.28	\$258.63	\$196.64	\$175.81	\$169.27	\$163.95	\$158.47	\$152.86	\$147.21

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Operating component of PIR Program

Fiscal Year:

2009 Year 1 2010 Year 2 2011 Year 3 2012 Year 4 2013 Year 5 2014 Year 6 2015 Year 7 2016 Year 8 2017 Year 9 2018 Year 10 2019 Year 11

Rate Base (\$800)

Investment in Replacement of LP Distribution Mains		Proposed Rate for LP Distribution Mains	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Accumulated Gross Plant	31,000	62,000	31,000	62,000	62,000	124,000	155,000	168,000	217,000	248,000	279,000	310,000	341,000
Book Depreciation Expense using rate of:	278	532	278	532	1,367	1,942	2,497	3,052	3,607	4,162	4,717	5,272	5,825
Accumulated Book Depreciation	278	1,110	278	1,110	2,497	4,439	6,936	9,988	13,039	16,091	19,143	22,195	25,247
Investment in Replacement of Transmission Mains	16,800	18,800	16,800	18,800	15,500	13,400	12,900	12,800	12,600	12,500	12,400	12,300	12,200
Accumulated Gross Plant	16,800	33,600	16,800	33,600	49,100	62,500	75,100	87,700	100,300	112,900	125,500	138,100	150,700
Book Depreciation Expense using rate of:	163	504	163	504	827	1,116	1,376	1,636	1,896	2,156	2,416	2,676	2,936
Accumulated Book Depreciation	163	672	163	672	1,499	2,615	3,991	5,617	7,489	9,631	12,016	14,651	17,539
Investment in Replacement of Services (M-C, C-M)	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200
Accumulated Gross Plant	12,200	24,400	12,200	24,400	36,600	48,800	61,000	73,200	85,400	97,600	109,800	122,000	134,200
Book Depreciation Expense using rate of:	244	732	244	732	1,220	1,708	2,196	2,684	3,172	3,660	4,148	4,636	5,124
Accumulated Book Depreciation	244	976	244	976	2,196	3,904	6,100	8,784	11,956	15,616	19,764	24,400	29,524
Investment in Replacement of HP Distribution Mains	0	0	0	0	0	0	0	0	0	0	0	0	0
Accumulated Gross Plant	0	0	0	0	0	0	0	0	0	0	0	0	0
Book Depreciation Expense using rate of:	0	0	0	0	0	0	0	0	0	0	0	0	0
Accumulated Book Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment in Relocation of Inside Meters	0	0	0	0	0	0	0	0	0	0	0	0	0
Accumulated Gross Plant	0	0	0	0	0	0	0	0	0	0	0	0	0
Book Depreciation Expense using rate of:	0	0	0	0	0	0	0	0	0	0	0	0	0
Accumulated Book Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project CAPEX	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Total Accumulated Gross Plant	60,000	120,000	60,000	120,000	178,700	225,300	281,100	346,800	402,700	468,500	534,300	600,100	665,900
Total Book Depreciation Expense	600	2,758	600	2,758	5,182	8,156	10,559	13,914	17,267	20,620	23,973	27,326	30,679
Accumulated Book Depreciation	600	3,456	600	3,456	8,638	13,794	19,953	27,167	35,434	43,701	51,968	60,235	68,502
Net Profit	69,311	117,242	69,311	117,242	172,508	224,342	274,073	325,579	379,830	433,483	487,136	540,789	594,442
Tax Depreciation Rate by Year													
Total Tax Depreciation - LP Distribution Mains	1,550	4,496	1,550	4,496	7,146	9,145	10,386	11,627	12,868	14,109	15,350	16,591	17,832
Total Tax Depreciation - Services	510	1,789	510	1,789	2,832	3,559	4,286	5,013	5,740	6,467	7,194	7,921	8,648
Total Tax Depreciation - Distribution Meter Installations	3,000	6,700	3,000	6,700	12,765	17,617	20,437	23,012	25,574	28,136	30,698	33,260	35,822
Book-Tax Timing Differences													
Distribution - LP Mains	1,273	3,663	1,273	3,663	5,759	7,203	8,039	8,865	9,691	10,517	11,343	12,169	12,995
Transmission - Mains	672	1,932	672	1,932	2,980	3,757	4,310	4,749	5,188	5,627	6,066	6,505	6,944
Distribution - Services	368	1,037	368	1,037	1,582	1,891	1,970	2,014	2,058	2,102	2,146	2,190	2,234
Distribution - HP Mains	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution - Meter Installations	0	0	0	0	0	0	0	0	0	0	0	0	0
Book-Tax Timing Differences	2,311	6,632	2,311	6,632	10,331	12,850	14,398	15,648	16,915	18,182	19,450	20,717	21,984
Deferred Income Tax using rate of	36%		36%										
Distribution - LP Mains	445	1,282	445	1,282	2,016	2,521	2,831	3,110	3,350	3,704	4,049	4,384	4,729
Transmission - Mains	235	678	235	678	1,043	1,315	1,508	1,662	1,808	1,957	2,134	2,305	2,476
Distribution - Services	128	368	128	368	567	662	689	705	721	737	753	769	785
Distribution - HP Mains	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution - Meter Installations	0	0	0	0	0	0	0	0	0	0	0	0	0
Deferred Income Tax using rate of	35%		35%										
Accumulated Deferred Income Tax	809	2,321	809	2,321	3,616	4,488	5,028	5,477	5,820	6,221	6,621	7,018	7,415
Distribution - LP Mains	445	1,272	445	1,272	3,743	6,264	9,095	12,205	15,585	19,299	23,349	27,732	32,414
Transmission - Mains	235	911	235	911	1,904	3,269	4,778	6,440	8,249	10,215	12,348	14,664	17,182
Distribution - Services	128	481	128	481	1,046	1,710	2,389	3,104	3,826	4,576	5,367	6,195	7,047
Distribution - HP Mains	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution - Meter Installations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Accumulated Deferred Income Tax	809	3,130	809	3,130	6,746	11,243	16,272	21,740	27,669	34,080	41,064	48,583	55,592
Rate Base:													
Distribution - LP Mains	30,277	58,163	30,277	58,163	86,760	113,267	138,698	163,807	187,810	210,944	233,178	254,523	275,015
Transmission - Mains	16,267	32,017	16,267	32,017	46,647	56,616	66,531	76,441	86,351	96,261	106,171	116,081	125,991
Distribution - Services	11,828	22,933	11,828	22,933	33,956	43,188	52,501	61,812	71,123	80,434	89,745	99,056	108,367
Distribution - HP Mains	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution - Meter Installations	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Rate Base	58,502	114,112	58,502	114,112	165,762	213,089	257,801	300,760	341,961	381,406	418,963	454,722	488,673

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Ongoing component of PIR Program		Fiscal Year:										
DEPRECIATION EXPENSE ALLOCATION		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11

Depreciation Expense - LP Distribution Mains		Customer: Services portion of Dist Dep Ex from COS										
GSS/ECTS	14,289,088	276	628	1,380	1,983	2,485	3,037	3,689	4,141	4,694	5,246	5,798
LVGSS/VECTS	25,708	0	1	2	3	4	5	6	7	8	9	10
GTS/SS	43,218	1	3	4	6	8	9	11	13	14	16	18
DTS	1,318	0	0	0	0	0	0	0	0	0	0	1
TOTAL	14,359,310	278	632	1,387	1,992	2,497	3,052	3,697	4,152	4,717	5,272	5,826

Depreciation Expense - Transmission Mains		Trans Dep Ex from COS										
GSS/ECTS	210,588	120	359	599	795	980	1,159	1,338	1,518	1,697	1,877	2,056
LVGSS/VECTS	12,382	7	21	35	47	58	66	79	89	100	110	121
GTS/SS	42,587	24	73	119	161	189	224	271	307	343	378	416
DTS	30,287	17	62	85	114	141	167	192	218	244	270	295
TOTAL	295,774	168	504	827	1,116	1,378	1,628	1,890	2,132	2,394	2,656	2,898

Depreciation Expense - Distribution Services		Customer: Services portion of Dist Dep Ex from COS										
GSS/ECTS	14,289,088	243	728	1,214	1,700	2,185	2,671	3,156	3,642	4,128	4,613	5,098
LVGSS/VECTS	25,708	0	1	2	3	4	5	6	7	7	8	9
GTS/SS	43,218	1	2	4	5	7	8	10	11	12	14	15
DTS	1,318	0	0	0	0	0	0	0	0	0	0	0
TOTAL	14,359,310	244	732	1,220	1,708	2,188	2,684	3,172	3,650	4,148	4,638	5,124

Depreciation Expense - HP Distribution Mains		Cap/Comm portion of Dist Dep Ex from COS										
GSS/ECTS	10,408,813	0	0	0	0	0	0	0	0	0	0	0
LVGSS/VECTS	612,082	0	0	0	0	0	0	0	0	0	0	0
GTS/SS	2,104,156	0	0	0	0	0	0	0	0	0	0	0
DTS	1,489,883	0	0	0	0	0	0	0	0	0	0	0
TOTAL	14,620,703	0	0	0	0	0	0	0	0	0	0	0

Depreciation Exp - Distribution Meter Installations		Customer: Services portion of Dist Dep Ex from COS										
GSS/ECTS	14,289,088	0	0	0	0	0	0	0	0	0	0	0
LVGSS/VECTS	25,708	0	0	0	0	0	0	0	0	0	0	0
GTS/SS	43,218	0	0	0	0	0	0	0	0	0	0	0
DTS	1,318	0	0	0	0	0	0	0	0	0	0	0
TOTAL	14,359,310	0	0	0	0	0	0	0	0	0	0	0

TOTAL DEPRECIATION EXPENSE ALLOCATION		639	1,916	3,183	4,427	5,650	6,867	8,084	9,301	10,519	11,738	12,953
GSS/ECTS		8	24	39	63	68	78	81	103	116	128	141
LVGSS/VECTS		28	77	127	172	212	252	291	330	370	409	449
GTS/SS		17	52	85	114	141	167	193	219	245	271	296
DTS		690	2,088	3,434	4,766	6,099	7,384	8,639	9,954	11,249	12,544	13,838
TOTAL												

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Ongoing component of PIR Program
Fiscal Year

Calculated at a rate of:

1.10% on Gross Plant

	2009 Year 1	2010 Year 2	2011 Year 3	2012 Year 4	2013 Year 5	2014 Year 6	2015 Year 7	2016 Year 8	2017 Year 9	2018 Year 10	2019 Year 11
PROPERTY TAX ALLOCATION											
Property Tax Expense - LP Distribution Mains											
GSS/ECTS	269,593,679	339	679	1	1,018	1,367	1,696	2,035	2,374	2,714	3,053
LVGSS/ALVECTS	527,065	1	2	3	4	5	6	7	8	9	10
GTS/TS	1,024,258	1	2	3	4	5	6	7	8	9	10
DTS	32,969	0	0	0	0	0	0	0	0	0	0
TOTAL	301,178,281	341	682	1,023	1,364	1,705	2,046	2,387	2,728	3,069	3,410
Property Tax Expense - Transmission Mains											
GSS/ECTS	146,785,233	132	263	395	489	588	687	786	884	983	1,081
LVGSS/ALVECTS	8,749,196	8	15	23	29	35	40	46	52	58	64
GTS/TS	30,077,143	27	53	78	99	119	139	159	179	199	219
DTS	21,879,088	19	38	55	70	85	99	113	127	141	155
TOTAL	208,690,670	185	370	540	688	826	965	1,103	1,242	1,381	1,519
Property Tax Expense - Distribution Services											
GSS/ECTS	299,593,679	133	267	400	534	667	801	934	1,068	1,201	1,335
LVGSS/ALVECTS	527,065	0	0	1	1	2	3	3	4	4	5
GTS/TS	1,024,258	0	1	1	2	2	3	3	4	4	5
DTS	32,969	0	0	0	0	0	0	0	0	0	0
TOTAL	301,178,281	134	268	403	537	671	805	939	1,074	1,208	1,342
Property Tax Expense - HP Distribution Mains											
GSS/ECTS	635,329,885	0	0	0	0	0	0	0	0	0	0
LVGSS/ALVECTS	37,360,064	0	0	0	0	0	0	0	0	0	0
GTS/TS	128,432,827	0	0	0	0	0	0	0	0	0	0
DTS	91,281,184	0	0	0	0	0	0	0	0	0	0
TOTAL	852,413,961	0	0	0	0	0	0	0	0	0	0
Property Tax Expense - Diet Meter Installations											
GSS/ECTS	299,593,679	0	0	0	0	0	0	0	0	0	0
LVGSS/ALVECTS	527,065	0	0	0	0	0	0	0	0	0	0
GTS/TS	1,024,258	0	0	0	0	0	0	0	0	0	0
DTS	32,969	0	0	0	0	0	0	0	0	0	0
TOTAL	301,178,281	0	0	0	0	0	0	0	0	0	0
TOTAL PROPERTY TAX EXPENSE ALLOCATION											
GSS/ECTS	604	1,209	1,803	2,390	2,982	3,573	4,064	4,656	5,237	5,808	6,380
LVGSS/ALVECTS	9	17	25	32	39	45	52	59	65	72	79
GTS/TS	28	56	83	105	127	149	170	192	213	235	258
DTS	18	36	55	71	85	99	113	127	142	156	170
TOTAL	660	1,320	1,958	2,568	3,202	3,816	4,430	5,044	5,657	6,271	6,885

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Ongoing component of PIR Program

RETURN ON RATE BASE ALLOCATION

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Fiscal Year:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Return on Rate Base (Equity pre-tax)	11.646%											
Distribution - LP Mains		3,527	6,891	10,106	13,197	16,187	19,080	21,876	24,571	27,161	29,647	32,034
Transmission - Mains		1,910	3,728	5,317	6,985	7,726	8,511	9,348	10,239	11,180	12,172	13,215
Distribution - Services		1,378	2,671	3,880	5,030	6,115	7,142	8,109	9,017	9,882	10,647	11,372
Distribution - HP Mains		0	0	0	0	0	0	0	0	0	0	0
Distribution - Meter Installations		0	0	0	0	0	0	0	0	0	0	0
Total Return on Rate Base		6,814	13,292	19,308	24,822	30,029	35,033	39,834	44,427	48,804	52,988	56,921
Distribution-LP Mains:												
SSS/ECTS	299,593,979	3,506	6,866	10,063	13,126	16,102	19,080	21,781	24,442	27,018	29,491	31,885
LVSS/ALVECTS	327,085	6	12	16	23	28	33	36	43	48	52	58
GT/STSS	1,024,268	12	23	34	45	55	65	74	84	92	101	109
DTS	32,869	0	1	1	1	2	2	2	3	3	3	4
TOTAL	301,178,281	3,527	6,891	10,106	13,197	16,187	19,080	21,876	24,571	27,161	29,647	32,034
Transmission-Mains:												
SSS/ECTS	148,786,233	1,360	2,655	3,785	4,695	5,501	6,273	7,012	7,717	8,387	9,022	9,622
LVSS/ALVECTS	8,748,106	80	156	223	276	323	369	412	454	493	531	566
GT/STSS	30,077,143	275	537	765	948	1,112	1,268	1,417	1,560	1,695	1,824	1,945
DTS	21,379,006	185	381	544	675	790	901	1,007	1,109	1,205	1,298	1,383
TOTAL	208,980,670	1,910	3,728	5,317	6,985	7,726	8,511	9,348	10,239	11,180	12,172	13,215
Distribution-Services:												
SSS/ECTS	299,593,979	1,370	2,657	3,866	5,004	6,083	7,104	8,067	8,969	9,810	10,591	11,312
LVSS/ALVECTS	527,085	2	5	7	9	11	12	14	16	17	19	20
GT/STSS	1,024,268	5	9	13	17	21	24	28	31	34	36	39
DTS	32,869	0	0	0	1	1	1	1	1	1	1	1
TOTAL	301,178,281	1,378	2,671	3,880	5,030	6,115	7,142	8,109	9,017	9,882	10,647	11,372
Distribution-HP Mains:												
SSS/ECTS	638,329,865	0	0	0	0	0	0	0	0	0	0	0
LVSS/ALVECTS	37,360,064	0	0	0	0	0	0	0	0	0	0	0
GT/STSS	128,432,827	0	0	0	0	0	0	0	0	0	0	0
DTS	91,291,184	0	0	0	0	0	0	0	0	0	0	0
TOTAL	862,413,961	0	0	0	0	0	0	0	0	0	0	0
Distribution-Meter Installations:												
SSS/ECTS	299,593,979	0	0	0	0	0	0	0	0	0	0	0
LVSS/ALVECTS	527,085	0	0	0	0	0	0	0	0	0	0	0
GT/STSS	1,024,268	0	0	0	0	0	0	0	0	0	0	0
DTS	32,869	0	0	0	0	0	0	0	0	0	0	0
TOTAL	301,178,281	0	0	0	0	0	0	0	0	0	0	0

ALLOCATION OF RETURN ON RATE BASE

SSS/ECTS	6,238	12,167	17,703	22,826	27,696	32,357	36,899	41,127	45,215	49,104	52,795
LVSS/ALVECTS	89	173	247	308	382	415	465	513	556	601	642
GT/STSS	282	568	813	1,011	1,188	1,357	1,518	1,674	1,821	1,961	2,093
DTS	198	383	545	677	788	894	1,011	1,112	1,208	1,301	1,387
TOTAL	6,814	13,292	19,308	24,822	30,029	35,033	39,834	44,427	48,804	52,988	56,921

Cost of Service Model - Pipeline Infrastructure Replacement Rider

Fiscal Year:

Ongoing component of PIR Program

Revenue Requirement Before GRET

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	
GSS/ECTS	7,481	15,291	22,689	29,633	36,287	42,747	49,018	55,084	60,971	66,648	72,132
LVGSS/LECTS	105	214	311	383	467	539	608	674	739	801	861
GTS/TS	346	703	1,022	1,266	1,627	1,757	1,980	2,198	2,404	2,605	2,788
DTS	232	472	666	882	1,019	1,170	1,317	1,459	1,596	1,727	1,854
TOTAL	8,164	16,680	24,708	32,178	39,300	46,213	52,923	59,424	65,710	71,781	77,644

TOTAL REVENUE REQUIREMENT

Using GRET of

4.60440%

GSS/ECTS	7,826	15,965	23,723	30,896	37,658	44,715	51,275	57,631	63,778	69,717	75,453
LVGSS/LECTS	110	224	326	411	489	563	636	705	773	838	900
GTS/TS	361	735	1,069	1,347	1,597	1,836	2,072	2,287	2,515	2,725	2,928
DTS	243	484	717	901	1,086	1,224	1,378	1,526	1,689	1,807	1,889
TOTAL	8,540	17,448	26,848	33,858	41,110	48,340	55,380	62,160	68,735	75,086	81,219

ANNUAL COST PER CUSTOMER

of Customers

GSS/ECTS	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801	1,207,801
LVGSS/LECTS	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248
GTS/TS	2,810	2,810	2,810	2,810	2,810	2,810	2,810	2,810	2,810	2,810	2,810
DTS	78	78	78	78	78	78	78	78	78	78	78
TOTAL	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037	1,213,037

DTS Volume:

Annual DTS Volume
60,368,614

DTS Volume:	\$0.0046	\$0.0098	\$0.0142	\$0.0179	\$0.0212	\$0.0243	\$0.0273	\$0.0303	\$0.0331	\$0.0359	\$0.0385
MONETARY COST PER CUSTOMER	\$0.54	\$1.10	\$1.64	\$2.14	\$2.62	\$3.09	\$3.54	\$3.98	\$4.40	\$4.81	\$5.21
LVGSS/LECTS	\$4.07	\$8.23	\$12.06	\$15.25	\$18.12	\$20.86	\$23.56	\$26.15	\$28.65	\$31.08	\$33.38
GTS/TS	\$10.35	\$21.06	\$30.62	\$38.58	\$45.74	\$52.64	\$59.32	\$65.79	\$72.02	\$78.03	\$83.80
DTS	\$258.90	\$527.87	\$788.30	\$982.94	\$1,138.66	\$1,307.83	\$1,471.77	\$1,630.24	\$1,783.11	\$1,930.32	\$2,071.86