IN THE TENNESSEE PUBLIC UTILITY COMMISSION
AT NASHVILLE, TENNESSEE

IN RE:	)	
	)	
PETITION OF PIEDMONT NATURAL GAS, INC. FOR APPROVAL OF AN INTEGRITY MANAGEMENT RIDER TO ITS APPROVED RATE SCHEDULES AND SERVICE REGULATIONS	)	**DOCKET NO. 17-00138**

DIRECT TESTIMONY
OF
DAVID N. DITTEMORE

ON BEHALF OF

THE CONSUMER PROTECTION AND ADVOCATE DIVISION

OF THE

OFFICE OF THE TENNESSEE ATTORNEY GENERAL

February 22, 2018

IN THE TENNESSEE PUBLIC UTILITY COMMISSION
AT NASHVILLE, TENNESSEE

IN RE:	)	
	)	
PETITION OF PIEDMONT NATURAL GAS, INC. FOR APPROVAL OF AN INTEGRITY MANAGEMENT RIDER TO ITS APPROVED RATE SCHEDULES AND SERVICE REGULATIONS	)	**DOCKET NO. 17-00138**

AFFIDAVIT

I, David N. Dittemore, Financial Analyst, on behalf of the Consumer Advocate Division of the Attorney General's Office, hereby certify that the attached Direct Testimony represents my opinion in the above-referenced case and the opinion of the Consumer Protection and Advocate Division.

David N. Dittemore

DAVID N. DITTEMORE

EMILY KNIGHT NOTARY PUBLIC STATE OF TENNESSEE DAVIDSON COUNTY My Commission Expires MAY 6, 2019

Sworn to and subscribed before me this 22nd day of Feb., 2018.

Emily Knight

NOTARY PUBLIC

My commission expires: May 6, 2019

CONTENTS

Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION FOR THE RECORD.

A1. My name is David N. Dittemore. My business address is Office of the Tennessee Attorney General, UBS Tower, 315 Deaderick Street, Nashville, TN 37243. I am a Financial Analyst employed by the Consumer Protection and Advocate Division within the Office of the Tennessee Attorney General (Consumer Advocate).

Q2. PLEASE PROVIDE A SUMMARY OF YOUR BACKGROUND AND PROFESSIONAL EXPERIENCE.

A2. I received a Bachelor of Science Degree in Business Administration from the University of Central Missouri in 1982. I am a Certified Public Accountant licensed in the state of Oklahoma (#7562). I was previously employed by the Kansas Corporation Commission (KCC) in various capacities, including Managing Auditor, Chief Auditor, and Director of the Utilities Division. For approximately four years, I was self-employed as a Utility Regulatory Consultant representing primarily the KCC Staff in regulatory issues. I also participated in proceedings in Georgia and Vermont, evaluating issues involving electricity and telecommunications regulatory issues. Additionally, I performed a consulting engagement for Kansas Gas Service (KGS), my subsequent employer during this time frame. For eleven years, I served as Manager and subsequently Director of Regulatory Affairs for KGS, the largest natural gas utility in Kansas, serving approximately 625,000 customers. KGS is a division of One Gas, a natural gas utility serving approximately two million customers in Kansas, Oklahoma, and Texas. My responsibilities at KGS included the supervision of the filing of the Gas System Reliability Surcharge, which is very similar to the Infrastructure Mechanism Rider, the subject of the present proceeding. I joined the Office of the Tennessee Attorney General in September, 2017 as a Financial Analyst. Overall, I have over thirty years' experience in the field of public utility regulation. I have presented testimony as an expert witness on numerous occasions. Attached as Exhibit 1 is a detailed vitae of my professional background.

Q3. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION (TPUC)?

A3. Yes, I have filed testimony in TPUC Docket Nos. 17-00014, 17-00108, and 17-00124.

Q4. ON WHOSE BEHALF ARE YOU TESTIFYING?

A4. I am testifying on behalf of the Consumer Advocate.

Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A5. The purpose of my testimony is to support the Consumer Advocate's positions, concerns, and recommendations regarding the Petition of Piedmont Natural Gas Company for an approval of an increase in its Integrity Management Rider (IMR), Docket No. 17-00138.

Q6. PLEASE SUMMARIZE YOUR TESTIMONY.

A6. **BACKGROUND:** My testimony provides historic information on IMR rates. Specifically, the testimony documents how a significant portion of the IMR filing is attributed to capital expenditure cost over-runs incurred by Piedmont. My testimony also recommends modifications to subsequent IMR filings necessary to protect the public interest.

IMR MODIFICATIONS: Significant modifications to the IMR calculation are required to ensure the accuracy of the resulting IMR rates. I am proposing four modifications to the Company's current methodology used to determine the IMR revenue requirement going forward:

a. Application of a single Depreciation rate to all IMR assets is inappropriate. Subsequent Piedmont IMR Petitions should clearly separate and identify IMR plant by Federal Energy Regulatory

Commission (FERC) account and apply the TPUC approved Depreciation rates in determining the IMR Depreciation Expense.

b. In the next IMR filing the Company should address whether its method of capitalizing pension costs into IMR projects is consistent with the methodology approved by TPUC for recognition of pension expense in base rates.

c. The methodology used to allocate joint OASIS costs to the Tennessee IMR should conform to standard methodology used in allocating such costs within a rate case.

d. Piedmont should eliminate all Construction Work in Progress (CWIP) costs from the calculation of Depreciation Expense.

The changes recommended above have not been quantified as they represent modifications to the manner the IMR has historically been calculated. Therefore, I recommend TPUC require these changes be reflected in subsequent Piedmont IMR filings.

ADJUSTMENTS TO IMR CALCULATION

The IMR revenue requirement should be adjusted to reflect a sharing of costs between ratepayers and shareholders attributed to the significant cost over-runs associated with the Company's OASIS project. This sharing of costs is accomplished by permitting Piedmont to recover its full costs of the OASIS project through Depreciation Expense, but limiting its return (profit) on OASIS costs to that contained in its original budget. This adjustment reduces the IMR revenue requirement by [redacted]

The IMR revenue requirement should be reduced by [redacted] to account for the imputation of Operating and Maintenance (O&M) expense cost savings associated with the OASIS project. This imputation of O&M expense savings is necessary to match the O&M impacts of the OASIS project with the costs of the

project. Since ratepayers are incurring the costs of the OASIS project, they should likewise receive the benefit of the expense reductions associated with the project.

The IMR revenue requirement should be reduced by [redacted] to eliminate IMR calculated property tax expense on that property that in fact is exempt from property taxes.

Combined, these adjustments reduce the IMR revenue requirement $2,149,877.

IMPACTS OF THE TAX CUTS AND JOBS ACT (TCJA)

TPUC should require Piedmont to record a regulatory liability to account for the excess tax costs embedded within its current IMR rate for all sales volumes accrued from January 1, 2018, through the date the current IMR rates are in effect.

Piedmont has not fully reflected the impact of the recent federal tax legislation on its IMR revenue requirements. If not addressed in Docket No. 18-00001, TPUC should require Piedmont to preserve its excess Accumulated Deferred Income Taxes (ADIT) associated with its IMR investment on its books for future regulatory determination in the next IMR filing, or base rate case, whichever occurs first.

IMR RATE STRUCTURE

The IMR costs should be recovered through a fixed monthly rate set out separately on customer bills, rather than embedded within the volumetric rate. The title of the line item on the bill should clearly and conspicuously inform ratepayers of its purpose.

PIPELINE SAFETY METRICS

Service Metrics with a nexus to pipeline safety should be implemented to monitor Piedmont's operational performance under its IMR mechanism.

DEPRECIATION STUDY

TPUC should require that Piedmont conduct a Depreciation Study with the joint participation of interested stakeholders. The firm engaged to prepare the Study should be selected in consultation with TPUC staff, and the Consumer Advocate. The existing Depreciation rates are based upon a Depreciation Study that is now nearly nine years old and during a period in which Piedmont Tennessee's plant was half of its current value.

IMR TESTIMONY

Testimony supporting Piedmont's IMR Petition should be filed simultaneously with the initial Petition.

I. BACKGROUND

Q7. PROVIDE BACKGROUND INFORMATION TO PUT PIEDMONT'S IMR PROPOSAL INTO CONTEXT.

A7. The table below summarizes the approved rates per therm charged under the IMR since its inception.

PIEDMONT NATURAL GAS COMPANY CUMULATIVE RATE IMPACT FROM IMR RIDER FILINGS					
Effective Date	**Docket No.**	**Residential**	**Commercial**	**LGS Firm**	**LGS Interruptible**
1/1/2014	13-00118	$0.07018	$0.06130	$0.02723	$0.00681
2/1/2015	14-00147	0.09285	0.08111	0.03603	0.00901
1/1/2016	15-00116	0.10144	0.08861	0.03936	0.00984
5/1/2017	16-00140	0.13124	0.11465	0.05092	0.01273
Proposed	17-00138	0.16057	0.14027	0.06230	0.01557

The proposed rates in this Docket reflect revised schedules submitted by Piedmont on January 17, 2018. Rates listed above are measured per therm.

Q8. WHAT IS THE PROPOSED IMR CHARGE TO AN AVERAGE RESIDENTIAL CUSTOMER?

A8. The proposed Residential rate of .16057 per-therm translates to an annual charge of **$118.02** for an average Residential customer using 735 therms per year. Thus, in the five years the IMR has been in effect it has grown to become a **very** significant component of customers' bills. In this Docket, Piedmont is requesting an annual increase in Residential charges averaging $21.56 per customer.

Q9. WHAT ARE PIEDMONT'S ANNUAL CAPITAL EXPENDITURES ASSOCIATED WITH IMR OVER THIS FIVE-YEAR PERIOD?

A9. The table below sets out the annual IMR related capital expenditures:

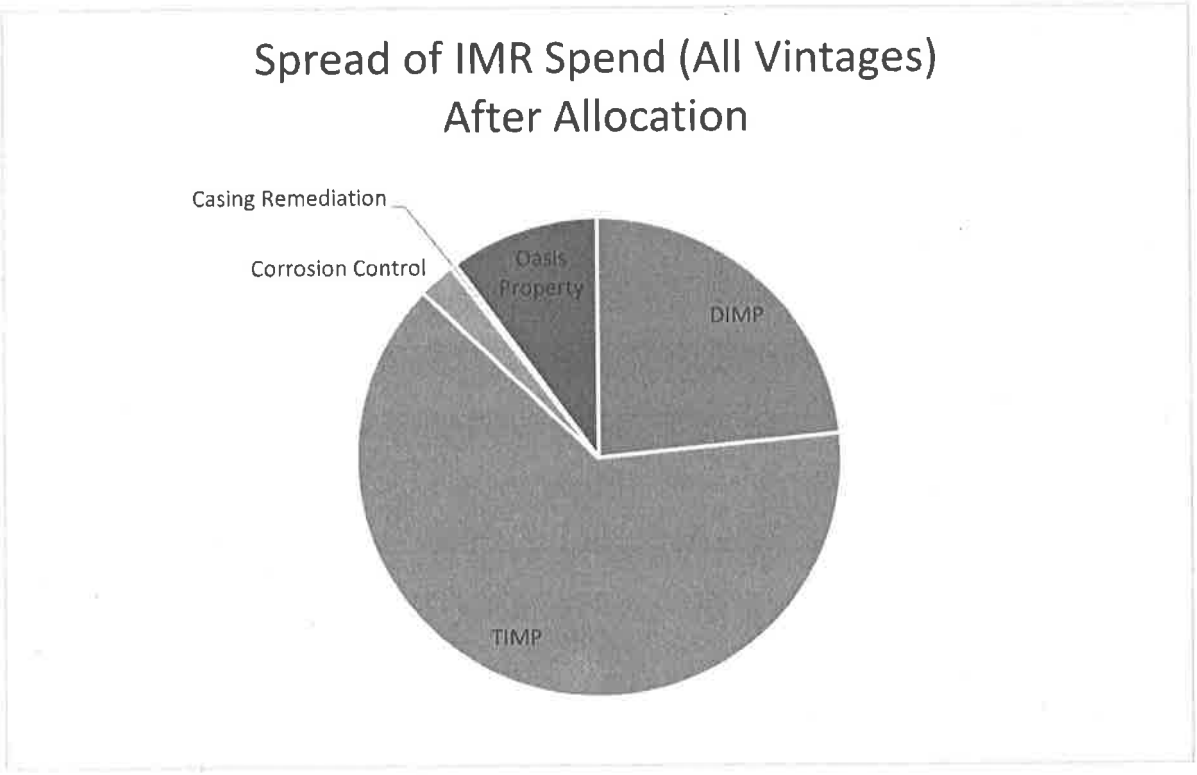
PIEDMONT NATURAL GAS COMPANY CUMULATIVE TENNESSEE IMR CAPITAL EXPENDITURES			
12 Months Ended October 31	**Tennessee Direct**	**OASIS Indirect**	**Total Tennessee**
2013*	$ 92,925,523	$ 7,380,758	$ 100,306,281
2014	141,513,685	12,767,273	154,280,958
2015	156,537,789	16,185,065	172,722,854
2016	172,856,659	19,942,912	192,799,571
2017	207,924,331	23,119,493	231,043,824
*2013 Includes 20 Months of Capital Spend			

The OASIS project is a work and risk management tool used by all three states in which Piedmont does business. The $23.1 million shown above represents the Tennessee jurisdictional portion of OASIS asset cost.

Q10. CAN YOU PROVIDE THE MAGNITUDE OF IMR INVESTMENT BY TYPE?

A10. Yes. The following chart segregates the cumulative IMR investment by category. Note: DIMP = Distribution Integrity Management Program and TIMP =

Transmission Integrity Management Program. The OASIS portion of IMR investment is reflected on an allocated Tennessee basis.



[1]

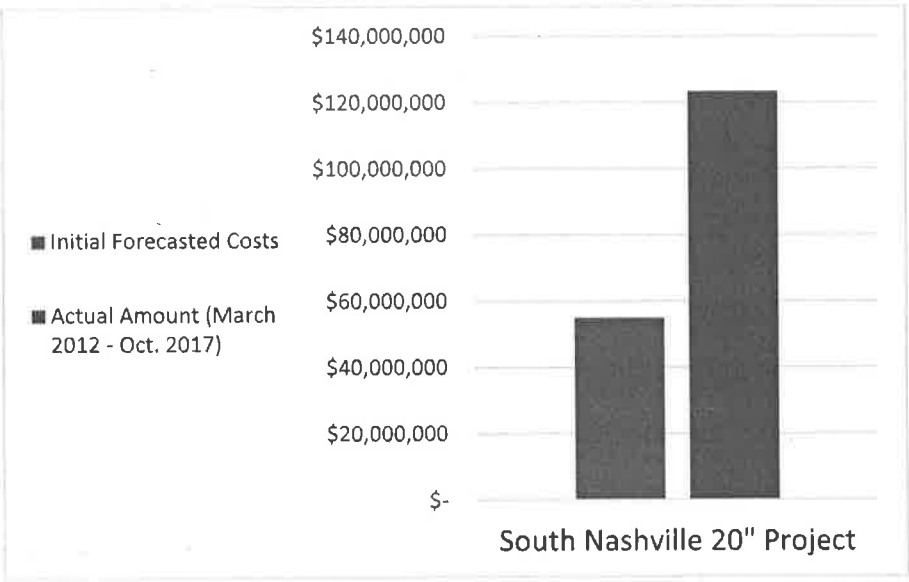
As the chart indicates, Transmission expenditures have comprised the majority of IMR expenditures, with Distribution-related costs making up the second largest portion of expenditures. The dark blue area represents allocated OASIS expenditures comprising the third-largest category of expenditures.

Q11. HOW HAVE FORECASTED IMR COSTS COMPARED WITH ACTUAL IMR PROJECT COSTS ON MAJOR PROJECTS?

A11. Piedmont has a history of incurring IMR costs on major projects which greatly exceed forecasted costs. The two graphs below compare the budgeted and actual

[1] Information compiled from Piedmont IMR expenditures in TPUC Docket Nos. 13-00118, 14-00147, 15-00116, 16-00140, and 17-00138.

costs associated with the two largest IMR projects. The largest single project within its IMR relates to Piedmont's South Nashville 20" Transmission line replacement which included original forecasted costs of $55 million, while the final cost was $123.5 million[2].



Q12. WHAT IS THE REASON PROVIDED BY PIEDMONT FOR THE SIGNIFICANT COST OVER-RUNS ASSOCIATED WITH ITS SOUTH NASHVILLE TRANSMISSION PROJECT?

A12. The Company's response to CPAD Request #1-56 contains the following explanation for the significant cost over-runs.

> The initial estimate for the South Nashville project was $55M. The cumulative actual cost for the project to date is $123.5M. The original estimate contemplated utilizing industry standard construction practices. The South Nashville project was very sensitive to the community and in order to meet the social expectations, we employed certain construction practices that were very costly to implement. As we moved through the engineering phase of the project, there were several delays and challenges

[2] Company response to CPAD Request # 1-56. Piedmont indicated expensive construction practices were required due to meeting community "social expectations".

with the original pipeline route plans. The final route selected had significantly higher easement costs including legal expenses. We had to utilize horizontal directional drilling throughout much of the install, including the Radner Lake portion, which contributed to the higher costs due to the a more complex installation method. These circumstances were not foreseen at the time the original estimate and scope of project was prepared.

Q13. DO YOU HAVE ANOTHER EXAMPLE OF A LARGE PROJECT WHERE COSTS GREATLY EXCEEDED THE BUDGET?

A13. Yes. The OASIS project was initially forecasted to cost [redacted] million.[3] As of October 31, 2017, the total cost of the OASIS project was [redacted] million, resulting in a total cost over-run of [redacted]%.

Q14. WHAT IS THE TENNESSEE JURISDICTIONAL PORTION OF THE OASIS COST OVER-RUN?

A14. The allocation portion of the OASIS projects actual costs to Tennessee operations is $23.1 million, while the budgeted portion of the OASIS project allocated to the Tennessee jurisdiction is [redacted] million, resulting in a cost over-run allocated to the Tennessee jurisdiction of [redacted] million. The following graph depicts the Tennessee jurisdictional portion of the budget and actual costs.

[3] Company response to CPAD Request #1-14, TPUC Docket No. 16-00140, Confidential Supplemental Attachment 1 of 2, pdf page 20 of 229.

[redacted]

Q15. COMPARE THE COST OVER-RUNS FOR THESE TWO PROJECTS TO THE TOTAL IMR INCLUDED IN THE CURRENT PIEDMONT REQUEST.

A15. The total cost over-runs for these two projects total approximately [redacted] million on a Tennessee jurisdictional basis, which compares to the total IMR investment for the five-year period of $231 million. Thus, approximately [redacted] of the proposed IMR capital can be attributed to cost over-runs[5].

Q16. DOES PIEDMONT HAVE A DISINCENTIVE TO CURTAIL COST OVER-RUNS ON ITS IMR PROJECTS?

---

[4] Source: Confidential Response to CPAD Discovery Response #1-14, TPUC Docket No. 16-00140; Piedmont IMR expenditures provided in TPUC Docket Nos. 13-00118, 14-00147, 15-00116,16-00140, and 17-00138.
[5] The current IMR filing contains $264 million of total investment. The existing base rates contain $33 million of this IMR investment for a net IMR investment of $231 million.

A16. No. Absent regulatory modification to the IMR filings, there is no financial harm or disincentive incurred by Piedmont for the significant cost over-runs. Instead, the opposite is true, and the cost over-runs increase the IMR rate base, which translates to an increase in earnings.

II. IMR MODIFICATIONS

Q17. EARLIER YOU IDENTIFIED FOUR ISSUES WITH THE CALCULATION OF THE IMR. COULD YOU EXPLAIN THESE BEGINNING WITH A DISCUSSION OF PIEDMONT'S CALCULATION OF ITS DEPRECIATION EXPENSE?

A17. Piedmont applies only one Depreciation rate to all IMR investments within its present filing. This over-simplistic calculation has resulted in an understated level of Depreciation Expense and an overstated balance of IMR rate base.

Q18. DOES TPUC HAVE AUTHORITY OVER DEPRECIATION RATES APPLIED BY ITS JURISDICTIONAL UTILITIES USED IN ITS BOOKS AND RECORDS ASSOCIATED WITH TENNESSEE-BASED ASSETS?

A18. Yes.

Q19. HAS TPUC APPROVED DEPRECIATION RATES FOR PIEDMONT?

A19. Yes. TPUC approved Piedmont's Depreciation rates in TPUC Docket No. 11-0144.

Q20. WHAT DEPRECIATION RATE DOES PIEDMONT USE WITHIN ITS IMR FILING?

A20. Piedmont uses the Depreciation rate of 1.45% applied to all IMR assets. This rate was the TPUC approved Depreciation rate for Transmission Mains.

Q21. DOES PIEDMONT HAVE A SIGNIFICANT AMOUNT OF IMR ASSETS THAT ARE CLASSIFIED AS SOMETHING OTHER THAN TRANSMISSION MAINS?

A21. Yes. The table below outlines the gross IMR plant contained in its filing split between Transmission and non-Transmission plant.

Plant Type	
Total Transmission Plant	$ 147,270,010
Total Non-Transmission Plant	$ 83,773,816
Total Plant	$ 231,043,826

Therefore, nearly $84 million of IMR plant is applied to an incorrect Depreciation Rate. It's important to point out that approximately $57 million of this total relates to Distribution Mains. The TPUC approved Depreciation rate for Distribution Mains is 1.49%, which is not substantially different from the single rate of 1.45% used by Piedmont. Nevertheless, the residual IMR plant of approximately $27 million is applied to Depreciation rates that are significantly different from the TPUC approved rates, producing a material misstatement of IMR Depreciation Expense. Exhibit-2 sets out the TPUC-approved Depreciation Rates by FERC account for the accounts included in the Piedmont IMR.

Q22. WHAT IS THE BASIS FOR THE USE OF THE DEPRECIATION RATE OF 1.45% APPLIED TO ALL OF PIEDMONT'S IMR INVESTMENT?

A22. Piedmont indicated that its use of the 1.45% Depreciation rate is consistent with the terms of its approved Service Schedule #317, an aspect of the Stipulation and Agreement in TPUC Docket No. 13-00118, and that the rate was supplied to the Consumer Advocate within an excel file at that time.[6]

[6] See Company's Response to CPAD Request #2-2.

Q23. DO YOU AGREE THAT THE USE OF THE SINGLE DEPRECIATION RATE IS CONSISTENT WITH PIEDMONT'S TARIFF SHEET #317?

A23. No. The terms Depreciation Expense and Accumulated Depreciation are defined within the original Sheet #317 as based upon "…rates approved in the Relevant Rate Order." The rates approved in the relevant rate order are those Depreciation rates (plural) set forth by FERC account as contained in the 2009 Depreciation Study, supplied as a response to CPAD Discovery Request # 2-2.

Q. DID THE 2013 STIPULATION AND AGREEMENT MANDATE THE USE OF THE 1.45% DEPRECIATION RATE?

A. No, but the 1.45% rate has been contained in each of the previous IMR filings.

Q24. NOTWITHSTANDING THE ISSUE OF WHETHER THE RATE OF 1.45% WAS ALLEGEDLY "AGREED TO" IN PREVIOUS PIEDMONT IMR DOCKETS, BASED UPON YOUR EXPERIENCE, IS IT LOGICAL TO APPLY ONE DEPRECIATION RATE TO ALL SUBSEQUENT IMR INVESTMENT, REGARDLESS OF THE FERC ACCOUNT CLASSIFICATION?

A24. Absolutely not. There are at least two reasons why the use of a single Depreciation rate is not appropriate.

First, the use of a single rate is at odds with the straightforward regulatory requirement to use TPUC-approved Depreciation rates to compute Depreciation Expense associated with utility assets. It is not logical to require the use of a set of Depreciation rates for financial reporting purposes, but then ignore that requirement for purposes of computing the IMR revenue requirement.

Second, the use of one Depreciation rate results in differences between the net plant associated with net plant reflected in the IMR and the net plant balance reflected on Piedmont's regulatory books for the same asset. This asymmetrical

treatment of Depreciation Expense between that recorded for financial statement purposes and that used within the IMR calculation produces differing accounting results. This discrepancy raises the question of whether such differences will be reconciled and if so, how such reconciliation would occur. The IMR has produced a significant revenue stream for Piedmont, but if it files a base rate case in the future, this accounting inconsistency raises questions as to how such differences would be treated for ratemaking purposes.

Q25. DO YOU HAVE AN EXAMPLE OF HOW SUCH DIFFERING ACCOUNTING TREATMENT RESULTS IN ASSYMETRICAL IMR ASSET BALANCE BETWEEN WHAT IS REFLECTED ON PIEDMONT'S BOOKS AND VERSUS WHAT IS CONTAINED IN ITS IMR FILING?

A25. Yes. In Confidential Response to CPAD Request #1-11, Piedmont indicates that the OASIS Accumulated Depreciation balance is [redacted] million as of October 31, 2017, accrued based upon the use of the TPUC-approved Depreciation rate of 7.49% associated with account 39140 – Client Server Applications.[7] This compares with a calculated Accumulated Depreciation balance within its IMR Petition of nearly $6.8 million, accrued based upon the Company's incorrect use of the 1.45% Depreciation rate. Both amounts are stated on a total company basis before allocation to Tennessee. This discrepancy between its book and IMR balances will only grow over time, and has implications for Piedmont ratepayers. In the short run, the IMR revenue requirement is understated due to the understatement of OASIS Depreciation.

It is not reasonable to believe that the OASIS asset will have a useful life of 69 years.[8] In the long run, ratepayers will likely pay for the OASIS asset long after its true useful life is complete. The book life implied in the use of a 7.49%

[7] Piedmont's Response to CPAD Discovery Request #1-10 indicates the depreciable life of the OASIS project is ten years. Given there would not be any removal costs associated with the OASIS project, it is unclear how the 7.49% Depreciation rate is reconciled with the 10-year identified life.

[8] The implied useful life of an asset with a Depreciation rate of 1.45% (excluding implications of net negative salvage, which is not an issue with the OASIS asset), is calculated as the product of 1/.0145% resulting in a life of 69 years.

Depreciation rate for book purposes implies an asset life of 13 years[9]. At the termination of the OASIS assets useful life it would have a net book value for financial reporting and regulatory books of zero, while its net book value for IMR purposes would be approximately $107 million. Piedmont would undoubtedly make a request for the recovery of the balance of the remaining IMR net book value, resulting in a return on the asset which could continue for many years. The likely result would be that ratepayers would pay a return on the asset well after its useful life. It is important to note my review simply used the OASIS asset as an example. The same discrepancy between book and IMR Depreciation and Accumulated Depreciation balances occurs with all non-Transmission IMR assets.

The asset balances included in the IMR filing should be consistent with the corresponding asset and Accumulated Depreciation balances contained on Piedmont's books and records.

Q26 DO YOU HAVE ANOTHER EXAMPLE HIGHLIGHTING THE PROBLEM WITH THE APPLICATION OF A SINGLE DEPRECIATION RATE TO ALL IMR ASSETS?

A26. Yes. Piedmont has calculated Depreciation Expense on Land within the IMR Petition; however, land is not a depreciable asset. The balance of land subject to Depreciation Expense within the Piedmont IMR is nearly $2.7 million. This issue should be corrected in future filings.

Q27. WHAT IS YOUR RECOMMENDATION CONCERNING HOW THE IMR'S DEPRECIATION EXPENSE SHOULD BE CALCULATED?

A27. The Company should identify its IMR investment by FERC plant account and apply the TPUC-approved Depreciation rates to such balances in arriving at the total IMR Depreciation Expense. Land should be excluded from the balance of

[9] Equals 1/.0749, the book Depreciation rate applied to the OASIS asset.

depreciable assets, consistent with NARUC Accounting principles as well as Generally Accepted Accounting Principles.

Q33. CONTINUE WITH A DISCUSSION OF YOUR CONCERNS REGARDING PIEDMONT'S METHOD OF ACCOUNTING FOR PENSION COSTS WITHIN THE IMR.

A33. The method by which capitalized pension costs are incorporated within the IMR revenue requirement should be consistent with the methods approved by TPUC for recognition of pension costs in rates. Piedmont capitalizes pension costs pursuant to requirements of the former Financial Accounting Standards Board No. 87 (GAAP Method)[10], including costs added to IMR plant. Based on my review, TPUC has previously determined in ratemaking decisions that pension costs reflected in utility rates should be based upon the level of cash contributed by the utility to its pension fund, not the GAAP method used by Piedmont. The accounting method used to capitalize pension costs for all plant, including IMR plant, should be identical to TPUC-approved methodology for recognition of pension expense. I recommend that Piedmont correct this issue in the next proceeding and document that it is using the same method to account for pension costs, whether capitalized to the IMR, or charged to O&M expense, and that such method is consistent with prior TPUC orders. This accounting review should be conducted from the first date of IMR investment. In summary, Piedmont should not be capitalizing pension costs pursuant to GAAP method accounting if TPUC has previously adopted the cash contribution method of accounting within any base rate proceeding.

[10] Response to CPAD Request #1-57.

Q34. ADDRESS YOUR CONCERNS WITH PIEDMONT'S METHOD USED IN THE ALLOCATION OF OASIS COSTS TO THE TENNESSEE JURISDICTION.

A34. Piedmont uses a "layered" approach to allocate the OASIS asset to the Tennessee jurisdictional IMR. This layered methodology applies one allocation ratio for 2013 OASIS investment, another ratio for 2014 OASIS investment, and so on. These annual allocated net plant amounts produce an annual revenue requirement by "vintage" year, which are then summed to arrive at the total OASIS revenue requirements. Instead of this layered approach, OASIS costs should be allocated to the Tennessee IMR based upon the applicable ratio determined at the end of the IMR calculation period. My recommendation is consistent with the allocation methods used within a base rate proceeding. Piedmont's ratepayers should not incur costs based upon historic allocation ratios. Instead the balance of the OASIS asset should be allocated to Tennessee based upon ratio(s) derived from current information, determined as of the end of the measurement period.

Q35. ADDRESS YOUR CONCERN WITH THE CALCULATION OF DEPRECIATION EXPENSE ON CONSTRUCTION WORK IN PROGRESS.

A35. Piedmont calculates Depreciation Expense on all plant, including plant that is still under construction. Plant under construction is not subject to Depreciation Expense for financial accounting purposes. I recommend that IMR Depreciation Expense be calculated based upon Plant in Service, similar to the manner in which it is calculated for financial accounting purposes.

III. ADJUSTMENTS TO IMR PETITION

Q36. PROVIDE BACKGROUND INFORMATION ON THE OASIS PROJECT

A36. CPAD Discovery Request #1-14 requested, among other items, a description of the OASIS project. Piedmont indicated that; "(t)he OASIS system is designed to

provide a single platform resource for the management of information relevant to the location, condition, maximum operating pressures, and physical properties of Piedmont's system." Piedmont goes on to indicate that the OASIS system was undertaken to comply with the Pipeline and Hazardous Materials Safety Administration (PHMSA) requirements contained within both TIMP and DIMP to know, maintain, and operate natural gas systems in a manner designed to maximize public safety.

Piedmont continues by stating:

> The primary benefit of OASIS is increased safety and reliability of Piedmont's transmission and distribution systems and the avoidance of incidents (like that of San Bruno) where the LDC's lack of readily available knowledge of its system contributes to a catastrophic failure of that system. Secondary benefits include increased efficiency in accessing records and, once the system is up and fully operational cost savings in accomplishing required system reviews and maintenance.[11]

Q37. HAVE YOU REVIEWED THE INTERNAL BUSINESS CASE PROVIDED TO EXECUTIVE MANAGEMENT IN SUPPORT OF THE OASIS PROJECT WHEN IT WAS PROPOSED?

A37. Yes.

Q38. IS THE RESPONSE ABOVE CONSISTENT WITH INFORMATION PROVIDED TO EXECUTIVE MANAGEMENT?

A38. Generally, yes. However, in addition to complying with integrity management plans, the business case also points to the [redacted] that would result from OASIS implementation. Further, the business case identifies the two overarching goals of the OASIS program are:

[11] Response to CPAD Request #1-14, TPUC Docket No. 16-00140

[redacted] is generally a code term implying cost reductions.

Q39. EARLIER YOU INDICATED THE OASIS PROJECT EXPERIENCED A TOTAL COST OVER-RUN OF APPROXIMATELY [redacted]. WHAT REASONS HAS PIEDMONT PROVIDED FOR THE OVER-RUNS?

A39. In its Response to CPAD Request #1-14, the Company indicated the following concerning the reasons for the delay in OASIS implementation:

[redacted]

The Company also responded to questions concerning OASIS' prudency in response to CPAD Request #1-16 (referencing also CPAD Request #2-21 in TPUC Docket No. 16-00140) by stating the following:

[redacted]

[12] Response to CPAD Request#1-14, P. 13, TPUC Docket No. 16-00140.

[redacted]

Q40. HAVE YOU CONDUCTED A PRUDENCE REVIEW OF THESE COSTS?

A40. No. I am not taking a position in this Docket concerning the prudence or imprudence of the OASIS project's costs. I believe the cost over-runs are of such significance, this issue can be addressed without a prudence review at this time. It is clear that Piedmont did not fully understand the complexity of the project when it was undertaken. This conclusion is drawn from the simple fact that the costs exceeded the budget by [redacted] for this major project[13]. A more cost-effective method of complying with PHMSA requirements may have been selected had Piedmont had a better understanding of the complexity of the project when it was initiated.

Q41. WHAT IS YOUR RECOMMENDATION REGARDING THE APPROPRIATE REGULATORY TREATMENT OF THESE COSTS?

A41. I recommend that the IMR revenue requirement be reduced [redacted] to eliminate the return on those OASIS asset costs in excess of the initial budget. I am not adjusting the Depreciation Expense associated with the OASIS project; I am only addressing the return component. Therefore, Piedmont will continue to

[13] Response to CPAD Discovery Request #1-4 provides a general overview of why the costs exceeded the original budget.

recover the Depreciation Expense attributed to the full cost of the OASIS asset. This proposal permits Piedmont to recover a return of the asset cost, but not a return on the 'excess' over-run cost. This recommendation represents an appropriate sharing of the excess costs between ratepayers and Duke's shareholders. I do not believe it is equitable for ratepayers to bear the full costs (return of and return on) of the asset given the significant over-runs. The return disallowance on the excess costs is a risk of doing business for which Piedmont is compensated within its authorized Return on Equity.

Q42. HAS PIEDMONT GENERATED OPERATING MARGINS TO DATE ASSOCIATED WITH THE OASIS PROJECT?

A42. Yes. Piedmont has recovered IMR returns from its Tennessee customers on previously incurred OASIS costs of approximately $4.8 million to date. Piedmont has also recorded Allowance for Funds Used During Construction (AFUDC) returns of approximately [redacted] on a total company basis, or approximately [redacted] on a Tennessee jurisdictional basis for total jurisdictional returns of [redacted] million. Under my proposal, Piedmont will continue to generate returns equal to those originally anticipated at the outset of the project attributed to its Tennessee jurisdiction.

Q43. PLEASE TURN TO YOUR NEXT OASIS RELATED ISSUE AND EXPLAIN THE BASIS FOR YOUR ADJUSTMENT.

A43. I recommend that the IMR revenue requirement be reduced by [redacted] in order to properly match the estimated net O&M Savings accruing in 2018 from the OASIS project. Ratepayers have incurred OASIS costs, and as a matter of regulatory symmetry they should be assigned the net cost benefit of the project.

Q44. HOW DID YOU CALCULATE THE ADJUSTMENT?

A44. The Company's Response to CPAD Request #1-14 (Confidential) in TPUC Docket No. 16-00140[14] contains the forecasted operational impacts from OASIS implementation. The sum of OASIS' cost increases and decreases is netted to [redacted] per year. This total OASIS net O&M benefit is then applied to the jurisdictional ratio used by Piedmont to allocate the asset to Tennessee, resulting in a jurisdictional cost savings of [redacted]

Q45. IS IT POSSIBLE TO DETERMINE THE ACTUAL OASIS O&M SAVINGS?

A45. No. The actual O&M impact is not subject to quantification due to its complexity. The true measure of savings is what O&M is with the implementation of OASIS versus what it would have been if OASIS had not been implemented. There is no definitive way to confirm the latter part of that equation.

Q46. DOES THIS INDICATE THAT SUCH O&M SAVINGS SHOULD NOT BE IMPUTED INTO THE IMR REVENUE REQUIREMENT?

A46. No. Recognition of OASIS savings within the IMR revenue requirement is necessary to properly match the impact of the OASIS asset with its income statement impact. Ignoring the O&M savings from the OASIS program would be a one-sided approach where Duke's shareholders would receive both a return on the OASIS asset and retain the O&M savings resulting from the project. The ratepayers are entirely bearing the costs of the OASIS project, and likewise, they should retain the benefits of O&M cost reductions.

[14]Confidential Response to CPAD Request #1-14, p. 20/229. This PDF was prepared at the initiation of the OASIS' project.

Q47. IS YOUR POSITION THAT THIS ADJUSTMENT IS NECESSARY TO PROPERLY MATCH COSTS WITH BENEFITS CONSISTENT WITH STANDARD RATEMAKING PRINCIPLES?

A47. Yes. This recommendation is consistent with the "matching principle" of ratemaking. This issue is set out in Leonard Saul Goodman's book, The Process of Ratemaking:

> From the broadest perspective, the 'matching principle' in ratemaking requires that all related revenue and expenses shall be considered in the same proceeding. Consistent with this principle, an increase in revenue implies an increase in taxes, and a decrease in revenue implies a decrease in taxes.
>
> In other formulations of the principle, it is a commonly followed ratemaking principle that costs, including deferred costs, should be matched with benefits. Otherwise, a substantial non-recurring net expense will be embedded in rates; and all future benefit will rebound to shareholders.[15]

In this same fashion, the matching concept is the rationale for annualizing Depreciation Expense on IMR plant based upon its test period-end balance. Just as the matching principle appropriately annualizes Depreciation Expense to match test period-end IMR plant balances (for Plant-In-Service), this concept also requires the recognition of O&M savings arising as a result of the OASIS asset be included in the IMR Rate Base.

Q48. IS YOUR RECOMMENDATION THAT DUKE'S SHAREHOLDERS FORGO A RETURN ON EXCESS OASIS ASSET COSTS IN CONFLICT WITH THE ASSIGNMENT OF O&M SAVINGS TO RATEPAYERS?

[15] LEONARD SAUL GOODMAN, THE PROCESS OF RATEMAKING, 285 (Vol. 1 1998)

A48. No. My recommendation only relates to the return on the excess costs. The return on the budgeted cost of the asset is retained by Duke's shareholders. The O&M savings are not enhanced as a result of the increased asset costs. Both the budgeted OASIS asset costs and the O&M savings were derived from the same budget developed prior to initiation of the OASIS project.

Q49. CONTINUE WITH AN EXPLANATION OF YOUR ADJUSTMENT TO PROPERTY TAX EXPENSE.

A49. My third adjustment eliminates [redacted] of IMR calculated Property Tax applied to property that is tax exempt. The Company's Response to CPAD Request #3-14 indicates that [redacted] of OASIS costs is exempt from Property Tax Expense based upon expenditures as of December 31, 2016, the latest information available. Since this property is exempt from Property Tax Expense, it should not be reflected in the calculation of IMR Property Tax Expense.

Q50. WHAT IS YOUR RECOMMENDATION FOR THE IMR REVENUE REQUIREMENT BASED UPON YOUR THREE ADJUSTMENTS AND HOW DOES IT COMPARE WITH THE PIEDMONT PROPOSAL?

A50. As shown in CPAD Exhibit No. 3[16], the Consumer Advocate recommended IMR revenue requirement is $27,813,732, which compares with the proposed IMR of $29,963,610 contained in Piedmont's testimony submitted on January 17, 2018.

Q51. HAVE YOU DETERMINED THE VOLUMETRIC IMR RATES THAT RESULT FROM YOUR ADJUSTMENTS?

[16] Workpapers supporting the individual adjustments are contained in Workpaper 3.1 through 3.3 attached to Exhibit 3.

A51. Yes. CPAD Exhibit No. 4 sets forth the proposed volumetric rates based upon the class allocation percentages and billing determinants as contained in Piedmont's testimony. Later in my own testimony, I support the recommendation that IMR costs be recovered through a fixed line item charge rather than volumetric rates.

IV. IMPACTS OF THE TAX CUT AND JOBS ACT (INCOME TAXES)

Q52. TURN TO THE ISSUE OF INCOME TAXES AND PROVIDE A BRIEF OVERVIEW OF THE RECENTLY PASSED TAX LEGISLATION.

A52. The Tax Cut and Jobs Act (TCJA) was signed into law on December 22, 2017. The legislation impacts utilities costs in several ways, including:

a. Reducing the federal income tax rate from a maximum graduated rate of 35% to a flat rate of 21%.
b. Accumulated Federal Tax Liabilities and Deferred Tax Assets previously measured using the 35% rate will be re-measured to reflect the 21% rate. The result of this re-measurement process is that a significant balance of liabilities representing funds provided by ratepayers to utilities for taxes to be paid in the future are cancelled. The net liabilities eliminated as a result of the reduction in the tax rate (Excess Accumulated Deferred Income Taxes, or ADIT) represent ratepayer provided capital and should be returned to ratepayers.
c. The TCJA requires that the portion of such excess ADIT attributed to book and tax timing differences on property shall be flowed back to ratepayers using the Average Rate Adjustment Method (ARAM). This method essentially flows back the tax over-payments over the lives of the assets giving rise to the deferred liability.[17]

[17] Notwithstanding the other issues addressed earlier in my testimony.

d. Excess ADIT attributed to accounting (book) and tax timing differences on items other than property may be flowed back to ratepayers over a period that is determined at the discretion of state regulators[18].

Q53. CAN YOU IDENTIFY THE MAJOR IMPLICATIONS OF THE TCJA IN THIS DOCKET?

A53. Yes. There are three general implications of the TCJA relating to the IMR mechanism:

a. Reflecting the reduction in income tax expense embedded in IMR rates on a prospective basis.

b. Capturing the reduced tax expense embedded in current IMR rates from January 1, 2018 through the date new rates become effective.

c. Recognizing that a portion of ADIT attributed to IMR investment, now represents 'excess' ADIT resulting from the reduction in the tax rate. This excess should flow back to ratepayers in some identifiable fashion.

Piedmont has accurately addressed item (a) within its updated information filed January 17, 2018, but Piedmont has not addressed items (b) and (c) within its Amended Petition.

Q54. FIRST TURN TO THE ISSUE OF THE IMPACT ON PIEDMONT'S CURRENT IMR RATES IN LIGHT OF THE REDUCTION IN THE INCOME TAX RATE.

A54. Piedmont has properly revised the IMR income tax expense due to the reduction in the federal tax rate from 35% to 21% on a prospective basis. The reduced federal tax rate became effective January 1, 2018. Piedmont has not addressed the impact of the reduced tax rate on its IMR revenue stream from January 1, 2018, through

[18] There are other provisions that of the TCJA that impact utilities, but I will not go into those details as they are not as significant and do not impact the current IMR Petition.

the date new rates become effective within its testimony filed on January 17, 2018. Therefore, it is unclear what Piedmont's position is regarding the appropriate assignment of tax savings accruing from January 1, 2018. Without regulatory intervention Duke's shareholders will retain these interim savings to the detriment of Piedmont's ratepayers.

Q55. HAVE YOU REVIEWED THE TPUC ORDER ISSUED FEBRUARY 6, 2018, OPENING AN INVESTIGATION IN DOCKET NO. 18-00001?

A55. Yes.

Q56. BASED UPON YOUR REVIEW OF THE ORDER, DO YOU BELIEVE IT IS THE INTENT OF TPUC TO CAPTURE THE TAX SAVINGS FOR RATEPAYERS FROM JANUARY 1, 2018, FOR ALL REGULATED REVENUE STREAMS?

A56. Yes, that is my interpretation of the Order opening an Investigation and Requiring Deferred Accounting Treatment in TPUC Docket No. 18-00001. I am offering the recommendations below to clarify the Consumer Advocate's position on the assignment of tax savings in the event TPUC intends to limit the tax issue to base rate impacts.

Q57. WHAT IS YOUR RECOMMENDATION FOR ADDRESSING THE EXCESSIVE TAX COLLECTIONS WITHIN THE IMR RATES EFFECTIVE JANUARY 1, 2018?

A57. I recommend TPUC require Piedmont to record a regulatory liability to capture excess revenue, defined as the difference between current IMR rates and the recalculated rates adopted in the last proceeding reflecting the 21% federal tax rates[19]. The basis for the re-calculated rates is the approved IMR revenue requirement in the last IMR case, adjusted for the reduction in income tax expense.

[19] If deferring a regulatory liability to capture tax savings from January 1, 2018, is the intent of TPUC in the initiating order in Docket No. 18-00001, then my recommendation becomes unnecessary.

The table below compares the rates adopted on TPUC Docket No. 16-00140, with those that would have been in effect with a 21% federal tax rate, and calculates the difference by rate class. This volumetric rate difference should be applied to all billed volumes from January 1, 2018, through the last date the current IMR rates in are effect. These amounts should be accumulated on the books of Piedmont, and recorded to a regulatory liability for appropriate treatment in a future IMR or base rate proceeding, whichever occurs first.

	Docket 16-00140					
	Approved Revenue Requirement	Approved Rates	Tax Change Revenue Requirement	Rates with Tax Change	New Revenue Requirement Difference	New Rate Difference
Residential	$ 14,607,538	$ 0.13124	$ 13,068,114	$ 0.11741	$ (1,539,425)	**$ (0.01383)**
Commerical	7,641,416	0.11465	6,836,120	0.10257	(805,296)	**(0.01208)**
LGS-Firm	1,211,419	0.05092	1,083,753	0.04556	(127,666)	**(0.00537)**
LGS-Int	1,030,871	0.01273	922,232	0.01139	(108,639)	**(0.00134)**
Totals	**$ 24,491,244**		**$ 21,910,219**		**$ (2,581,025)**	

Q58. IF TPUC ADDRESSES THE IMPACTS OF THE TCJA ON ALL REVENUE STREAMS BEGINNING ON JANUARY 1, 2018, INCLUDING IMR REVENUE, DOES THIS IMPACT YOUR RECOMMENDATION REGARDING THE MANNER IN WHICH THE REGULATORY LIABILITY WOULD BE CALCULATED?

A58. No. If TPUC requires that the impacts of the TCJA on all regulated revenue streams be identified, this issue could be addressed in the Docket No. 18-0001. However, the calculation method described above is the appropriate manner to quantify tax savings within the IMR, regardless of the Docket in which this is addressed.

Q59. CONTINUE BY ADDRESSING YOUR POSITION ON THE FLOWBACK OF EXCESS ADIT TO PIEDMONT RATEPAYERS RELATED TO THE IMR.

A59. There are $34 million in tax liabilities accrued on the books of Piedmont associated with its $231 million of IMR assets, as set out in Exhibit A of Ms. Pia Powers' Direct Testimony (Powers Direct Testimony). Piedmont has not reflected the impact from the TCJA on its IMR ADIT in its January 2018 Amended Petition. It is unclear whether Piedmont intends to flow back the excess IMR deferred taxes for the benefit of customers in some future proceeding. The calculations necessary to amortize the excess ADIT in accordance with the provisions of the TCJA are admittedly complicated, but there is no question from a theoretical ratemaking perspective that the excess ADIT is properly attributed to ratepayers and should not accrue to Duke shareholders.

Q60. WHAT IS YOUR RECOMMENDATION FOR THE TREATMENT OF EXCESS ADIT ASSOCIATED WITH THE IMR?

A60. TPUC should require Piedmont to preserve the excess ADIT associated with IMR property effective December 22, 2017, the date the TCJA was signed into law.

Q61. IS YOUR RECOMMENDATION ON THIS TREATMENT OF EXCESS ADIT DEPENDENT UPON WHETHER TPUC APPLIES THE IMPACT OF THE TCJA ON BASE RATES OR MORE BROADLY ON ALL REGULATED REVENUE?

A61. Yes. If TPUC determines that Docket No. 18-00001will be the venue to address the impact of the TCJA on all TPUC-authorized revenue streams, then this issue would properly be addressed there. However, if TPUC determines it will limit Docket No. 18-00001 to the impact on base rates, the excess ADIT issue should be addressed both in Piedmont's testimony filed with its next Piedmont IMR Petition or rate case filing, whichever occurs first.

V. IMR RATE STRUCTURE

Q62. HOW DOES PIEDMONT CURRENTLY COLLECT ITS IMR REVENUE REQUIREMENT?

A62. Piedmont recovers its IMR charges through a volumetric rate that includes various other charges including the volumetric base rate, the purchased gas adjustment (PGA) clause, the annual cost adjustment associated with the PGA, and Piedmont's incentive mechanism.

Q63. WHAT IS YOUR POSITION REGARDING THE STRUCTURE OF IMR RATES?

A63. IMR costs should be recovered through a fixed separate line item monthly charge. The charge should be clearly identified on customers' bills so they can be aware of the charge and its purpose. The title of the line item should clearly identify its purpose. There are a number of advantages from collecting these costs through a fixed charge contrasted with a volumetric rate. These advantages include:

a. Increased rate transparency for Piedmont customers.

b. Reduces the magnitude of over/under recovered IMR costs, thereby producing benefits to both Piedmont and its customers.

c. Better matches cost recovery with the manner in which costs are incurred by Piedmont.

d. Reduces bill impacts during the winter, the period with the highest customer bills.

Q64. WHAT IS THE RECOMMENDED FIXED IMR CHARGES YOU ARE SUPPORTING, INCLUSIVE OF THE ADJUSTMENTS YOU SPONSORED ABOVE?

A64. CPAD Exhibit No. 5[20] sets out the proposed IMR fixed charges by customer class incorporating the IMR adjustments identified above.

Q65. HOW WERE THESE RATES DEVELOPED?

A65. The rates were developed using the adjusted IMR revenue requirement supported earlier in my testimony. The Consumer Advocate revenue requirement was then assigned to the rate classes in the same manner as supported by Piedmont (that is, across the board). The revenue requirement by class was then divided by customer counts to arrive at the fixed monthly charge.

Q66. WOULD PIEDMONT CONTINUE TO RECORD AN OVER-UNDER RECOVERED BALANCE ASSOCIATED WITH THE IMR CHARGES?

A66. Yes. Piedmont will continue to record over-under recovered balances just as it has done in the past. I would recommend that these over-under recoveries be tracked by customer class, such that these variations will occur to the extent actual customer counts vary from those used in the development of the fixed charges.

Q67. CONTINUE BY ADDRESSING EACH OF THE ADVANTAGES OF RECOVERING IMR COSTS THROUGH A FIXED CHARGE, IDENTIFIED SEPARATELY ON CUSTOMERS' BILLS.

A67. The requested IMR surcharge applied to residential customer totals, on average, $118 per year. Thus, total IMR charges are a very significant portion of a customer's bill. The size of the IMR has grown to such an extent that the charges justify distinct recognition on a separate line item of the customers' bills. The separate identification of such charges increases customer transparency.

The volumetric method for recovery of IMR charges has led to a $6 million under-recovered balance. This represents approximately 20% of the requested surcharge, or approximately $23 per year per residential customer. The growth of the IMR,

[20] Workpaper 5.1, attached sets out the billing determinants used within Exhibit 5.

coupled with weather volatility, magnifies the problem of the over-under recoveries. The fixed cost recovery approach limit over-under recoveries to variations in customer counts. Changes in customer counts will be substantially less than the comparable variations in consumption, which are primarily weather-driven.

Q68. WILL MOVING TO A FIXED IMR RATE REDUCE BILL VOLATILITY FOR CUSTOMERS?

A68. Yes. The volumetric method translates to greater bill volatility for customers since a significant portion of the bill relates to prior period under-recoveries. The move to a fixed IMR rate would greatly reduce future over-under recovered balances and as a result, reduce bill volatility.

Q69. ADDRESS HOW A FIXED IMR CHARGE WILL ENHANCE THE PRICE SIGNALS SENT TO CUSTOMERS.

A69. The majority of costs associated with Piedmont's safety expenditures will not vary with the system demand or volume of gas transported over the system. Therefore, these IMR costs incurred by Piedmont are primarily fixed in nature. Recovery of fixed costs through fixed charges enhances the price signal sent to customers as it limits the customer costs associated with incremental usage. The current practice of collecting IMR costs through a volumetric rate artificially inflates the cost of incremental usage, therefore sending an incorrect price signal to customers relating to the true cost of natural gas consumption.

Q70. EXPLAIN HOW YOUR PROPOSAL THAT THE IMR COSTS BE RECOVERED VIA A FIXED RATE WILL REDUCE WINTER BILLS.

A70. I estimate that the average residential customers incurs IMR charges of $20 in the month of January alone, a period in which bills will be the highest due to the heavy reliance upon volumetric rates incurred during the coldest month of the year. A

fixed IMR charge would increase affordability, by shifting cost recovery from the winter period to a level charge incurred throughout the year.

VI. PIPELINE SAFETY METRICS

Q71. WHAT IS THE BASIS FOR RECOMMENDING THE REPORTING OF OPERATING METRICS IN CONJUNCTION WITH COLLECTION OF THE IMR?

A71. The IMR charges incurred by residential customers are approaching $120 annually. I believe it is in the public interest to require the reporting of basic metrics related to pipeline safety in conjunction with the collection of a safety surcharge of this magnitude. The reporting of safety metrics will introduce a level of public accountability associated with the surcharge and will allow TPUC and the Consumer Advocate to evaluate Piedmont's performance in two critical safety areas in conjunction with its collection of the IMR revenue stream.

Q72. PLEASE IDENTIFY AND DISCUSS THE TWO METRICS YOU ARE RECOMMENDING.

A72. The two safety metrics I recommend are the response time to emergency odor calls and a report identifying the number and age of leaks identified by grade and class.

The response time to emergency odor calls (emergency response time) can be measured by the time between a customer contacting Piedmont with an odor report or reporting a potential leak, and the time the Piedmont employee or contractor arrives at the scene. This metric is an indication of the responsiveness of Piedmont to incidents that could possibly impact customer safety. The Company's response to CPAD Request #2-9 indicates that the OASIS asset has not impacted Piedmont's metrics since the system was not completely deployed until November of 2017. The implication of the response is that Piedmont does maintain this metric.

The second metric requires the reporting of the number of leaks identified within the system (leak inventory) at the end of a twelve-month reporting period by grade and class.[21] The report should also identify the overall average age of leaks in inventory on a comprehensive basis. The grade of leak is in accordance with measurement guidelines used within the natural gas industry.[22] As of December 31, 2016, the number of known leaks scheduled for repair was 861[23]. The report should further identify these leaks by class location (Class 1 to 4), which is an identifier related to population density. [24] The combination of the Grade and Class identifiers provides some indication of the level of risk to public safety. The Business Case[25] initiated in support of the OASIS project indicates [redacted] Therefore, there is a strong link between this proposed metric and one of the stated benefits of the OASIS project.

Q73. HOW WILL PERFORMANCE BE MEASURED OR EVALUATED WITH THE SUBMISSION OF THESE METRICS?

A73. I recommend simply focusing on ensuring there are no major changes in performance from year to year. Hypothetically, if emergency response times increase significantly within a given year compared to prior period performance, TPUC and the Consumer Advocate would have an opportunity to make an inquiry as to the cause of the decrease in performance.

Q74. WHAT IS YOUR RECOMMENDATION REGARDING THE TIMING OF THE SUBMISSION OF THE METRICS?

---

[21] Leak definitions used herein are from the Gas Piping and Technology Committee of the American Gas Association.

[22] Grade 1 leaks are those that pose an existing or probable hazard to persons or property and require immediate repair, while Grade 2 leaks are deemed non-hazardous at the time of detection, but justify a scheduled repair based upon the likelihood that it could turn hazardous in the future. Grade 3 leaks are non-hazardous and are expected to remain non-hazardous.

[23] Piedmont's Department of Transportation Report (TN), for the year ended 2016.

[24] Class Locations, 49 CFR § 192.5 (1998). Class 1 is a measure of the least density, and increases to a Class 4 identifier based on population density.

[25] : Confidential Response to CPAD Discovery Response #1-14 in TPUC Docket No. 16-00140

[26] Confidential CPAD Discovery Response No 1-14; Docket No. 16-00140, p. 18.

A74. I recommend the reports be filed within the Annual Docket, and verified by an officer of Piedmont. If Piedmont is submitting an annual IMR filing, the metrics should be incorporated within that filing. If Piedmont is not submitting an annual IMR, the metrics should be submitted within the previous IMR docket and made part of the record in that Docket.

VII. DEPRECIATION STUDY

Q75. NOTWITHSTANDING THE DEPRECIATION RATE DISPARITY DISCUSSED EARLIER IN YOUR TESTIMONY, DO YOU HAVE OTHER CONCERNS WITH PIEDMONT'S DEPRECIATION RATES?

A75. Yes. The Response to CPAD Request #1-6 in Docket No. 16-00140 contains the October 31, 2009 Depreciation Study (2009 Depreciation Study) supporting the current TPUC approved Depreciation rates. This 2009 Depreciation Study is now nearly eight and a half years old. One of the recommendations within the 2009 Depreciation Report was to conduct a Depreciation Study every five years. The recommendation section also refers to a time and motion study that is to occur within the next year (2010) to be incorporated into the next Depreciation Study. In summary, the Depreciation Study underlying the existing Depreciation rates is very stale.

Q76. WHAT WAS THE AMOUNT OF GROSS PLANT CONTAINED IN THE STUDY?

A76. The balance of gross plant contained in the 2009 Depreciation Study was just under $550 million[27].

Q77. WHAT IS THE CURRENT BALANCE OF PIEDMONT'S GROSS PLANT?

A77. The current balance of gross plant as reported in the September 2017 surveillance report filed with TPUC is $1.12 billion. Thus, gross plant has doubled in eight

[27] The Study contains balances of Tennessee's depreciable assets as of October 31, 2009.

years. The growth in plant over this period is another factor justifying the need for a new Depreciation Study.

Q78. IS THE OASIS PROJECT CONTAINED WITHIN IN THIS STUDY?

A78. No. The OASIS project was undertaken after the 2009 Depreciation Study was prepared and, in any event, would not qualify for the Study since it is not a Tennessee asset. In its Response to CPAD Request #2-2, Piedmont provided an October 2009 Study conducted for North Carolina and South Carolina assets, identifying it as the source for the Depreciation rate applicable to the OASIS asset, account 39140 Client Server Applications.[28] Therefore, the Depreciation rate applied to this common asset was based upon plant balances for an account that did not include the eventual $131.3 million in OASIS costs. The OASIS costs dwarf the prior balance of Account 39140, further demonstrating that the 2009 Depreciation Study is outdated.

Q79. WHAT IS YOUR RECOMMENDATION REGARDING THE NEED FOR A DEPRECIATION STUDY?

A79. I recommend TPUC require Piedmont to conduct a Depreciation Study on its Tennessee assets. Also, I recommend the OASIS asset be made part of the Study given its significance. The costs of the study should be captured on the books of Piedmont Tennessee as a regulatory asset, for eventual recovery in base rates. Upon completion of the Study, the results should be presented to TPUC along with a recommendation from the parties as to how such rates should be implemented in the IMR, the books of Piedmont, and in base rates. Rather than the typical regulatory process involving the potential litigation of Depreciation rates, the Consumer Advocate recommends a collaborative process where interested stakeholders, including the Consumer Advocate, would be involved in developing the scope of work for the project as well as the ability to interact with the Depreciation consultant through the work process. Thus, the Depreciation rates

[28] The balance in this account at October 31, 2009 was $56.5 million.

would be determined through this collaborative process, subject to the ultimate approval of TPUC. TPUC would then determine the timing and method of implementing the new Depreciation rates, considering recommendations from all stakeholders.

VIII. IMR TESTIMONY

Q80. DO YOU HAVE A RECOMMENDATION REGARDING THE SUBMISSION OF TESTIMONY IN FUTURE IMR PETITIONS?

A80. Yes. I recommend that TPUC require the submission of testimony in conjunction with the filing of future IMR Petitions. The testimony of the Company's supporting witness should be simultaneously filed as a part of the filing of the Petition, consistent with similar TPUC filings made by other Tennessee jurisdictional utilities. The Company's testimony accompanying the next IMR Petition should address the issues raised in my testimony.

Q81. DO YOU HAVE ANY FINAL COMMENTS CONCERNING THE RECOMMENDATIONS CONTAINED IN YOUR TESTIMONY?

A81. Yes. Any aspect of the Piedmont IMR not addressed in my testimony does not constitute support of the methodology or issue in question. I reserve the right to file supplemental testimony related to late-filed discovery responses or additional information.

Q82. DOES THIS CONCLUDE YOUR TESTIMONY?

A82. Yes.

Exhibit-1

David Dittemore

Experience

Areas of Specialization
Approximately thirty-year experience in evaluating and preparing regulatory analysis, including revenue requirements, mergers and acquisitions, utility accounting and finance issues and public policy aspects of utility regulation. Presented testimony on behalf of my employers and clients in natural gas, electric, telecommunication and transportation matters covering a variety of issues.

Tennessee Attorney General's Office; **Financial Analyst September, 2017 – Current**
Responsible for evaluation of utility proposals on behalf of the Attorney General's office including water, wastewater and natural gas utility filings. Prepare analysis and expert witness testimony documenting findings and recommendations.

Kansas Gas Service; **Director Regulatory Affairs 2014 – 2017; Manager Regulatory Affairs, 2007 - 2014**
Responsible for directing the regulatory activity of Kansas Gas Service (KGS), a division of ONE Gas, serving approximately 625,000 customers throughout central and eastern Kansas. In this capacity I have formulated strategic regulatory objectives for KGS, formulated strategic legislative options for KGS and led a Kansas inter-utility task force to discuss those options, participated in ONE Gas financial planning meetings, hired and trained new employees and provided recommendations on operational procedures designed to reduce regulatory risk. Responsible for the overall management and processing of base rate cases (2012 and 2016). I also played an active role, including leading negotiations on behalf of ONE Gas in its Separation application from its former parent, ONEOK, before the Kansas Corporation Commission. I have monitored regulatory earnings, and continually determine potential ratemaking outcomes in the event of a rate case filing. I ensure that all required regulatory filings, including surcharges are submitted on a timely and accurate basis. I also am responsible for monitoring all electric utility rate filings to evaluate competitive impacts from rate design proposals.

Strategic Regulatory Solutions; 2003 -2007
Principal; Serving clients regarding revenue requirement and regulatory policy issues in the natural gas, electric and telecommunication sectors

Williams Energy Marketing and Trading; 2000-2003
Manager Regulatory Affairs; Monitored and researched a variety of state and federal electric regulatory issues. Participated in due diligence efforts in targeting investor owned electric utilities for full requirement power contracts. Researched key state and federal rules to identify potential advantages/disadvantages of entering a given market.

MCI WorldCom; 1999 - 2000

Manager, Wholesale Billing Resolution; Manage a group of professionals responsible for resolving Wholesale Billing Disputes greater than $50K. During my tenure, completed disputes increased by over 100%, rising to $150M per year.

Kansas Corporation Commission; 1984- 1999

Utilities Division Director - 1997 - 1999; Responsible for managing employees with the goal of providing timely, quality recommendations to the Commission covering all aspects of natural gas, telecommunications and electric utility regulation; respond to legislative inquiries as requested; sponsor expert witness testimony before the Commission on selected key regulatory issues; provide testimony before the Kansas legislature on behalf of the KCC regarding proposed utility legislation; manage a budget in excess of $2 Million; recruit professional staff; monitor trends, current issues and new legislation in all three major industries; address personnel issues as necessary to ensure that the goals of the agency are being met; negotiate and reach agreement where possible with utility personnel on major issues pending before the Commission including mergers and acquisitions; consult with attorneys on a daily basis to ensure that Utilities Division objectives are being met.

Asst. Division Director - 1996 - 1997; Perform duties as assigned by Division Director.

Chief of Accounting 1990 - 1995; Responsible for the direct supervision of 9 employees within the accounting section; areas of responsibility included providing expert witness testimony on a variety of revenue requirement topics; hired and provided hands-on training for new employees; coordinated and managed consulting contracts on major staff projects such as merger requests and rate increase proposals;

Managing Regulatory Auditor, Senior Auditor, Regulatory Auditor 1984 - 1990; Performed audits and analysis as directed; provided expert witness testimony on numerous occasions before the KCC; trained and directed less experienced auditors on-site during regulatory reviews.

Amoco Production Company 1982 - 1984

Accountant Responsible for revenue reporting and royalty payments for natural gas liquids at several large processing plants.

Education

- B.S.B.A. (Accounting) Central Missouri State University
- Passed CPA exam; (Oklahoma certificate # 7562) – Not a license to practice

Board Member, Financial Research Institute – 2007 - 2017

Piedmont IMR
Docket No. 17-00138
TPUC Authorized Depreciation Rates

Exhibit 2

FERC Account	FERC Acccount #	Depreciation Rate	Reference
36511 Land, Transmission	36511	#N/A	A/
36512 Land Rights, Transmission	36512	1.25%	A/
36700 Transmission Mains	36700	1.45%	A/
36900 Meas & Reg Station Equipment	36900	#N/A	A/
37410 Land, Distribution	37410	#N/A	A/
37420 Land Rights, Distribution	37420	#N/A	A/
37600 Distribution Mains	37600	1.49%	A/
37800 M&R Station Equip, General	37800	3.08%	A/
37900 M&R Station Equip, City Gate	37900	2.08%	A/
39140 Client Server Applications	39140	7.41%	B/

A/ TPUC Docket 11-0144 Rhonda Watts Testimony Exhibit RW-1
B/ TPUC Docket 17-00138 DR 2-2 Attachment (Appendix A)

Piedmont IMR
Docket No. 17-00138
Summary of CPAD Adjustments

Confidential Information Used Subject to Protective Order

Exhibit 3

Description	Total Request Per Piedmont	Adjustments: Eliminate Return On Excess Oasis Costs	Adjustments: Imputed Oasis Net O&M Savings	Adjustments: Exempt Property Taxes	Total Revenue Requirement Recommended by CPAD
Plant	$ 231,043,826				
Accumulated Depreciation	(11,236,181)				
Net Plant	219,807,645				
Net Plant	219,807,645				
ADIT	(55,532,659)				
NOL Benefit	21,449,590				
Net Investment	185,724,577				
Net Investment	185,724,577				
Pre-Tax ROR	9.878%				
Pre-Tax Return	18,345,789				
Depreciation Expense	3,350,135				
Property Tax Expense	1,686,620				
O&M Savings					
Net Revenue Requirement	23,382,544				
Uncollectible Factor	1.000308				
Gross Revenue Requirement	23,389,748				
Deferred Account Adjustment	6,573,862				
Total Amount Recovery in this Rider	$ 29,963,610				$ 27,813,732

Piedmont IMR
Docket No. 17-00138
Reduction in Return on Oasis Asset

Confidential Information Used Subject to Protective Order

Workpaper 3.1

	Amount		Source
Tennessee Jurisdictional Portion of Oasis Costs contained in IMR Petition	$ 23,119,493		IMR Monthly Report, October 2017
Total OASIS Budgeted Costs			Confidential Response 1-14, Docket No. 16-00140
Tennessee Jurisdictional Percentage		16.30%	October, 2017 TN Allocation Ratio, IMR Report October 2017
Less: Tennessee Budgeted OASIS Asset			
Excess OASIS Costs			
Revised Pre-Tax ROR	9.878%		Testimony of Pia Powers p. 8.
Reduction in IMR Revenue Requirement to reflect return on excess costs			

Piedmont IMR
Docket No. 17-00138
Imputation of Net Oasis Savings

Confidential Information Used Subject to Protective Orde

Workpaper 3.2

FY Budgeted O&M Savings	
FY Budgeted Ongoing O&M Costs	
Net Forecasted Savings	
Allocation of OASIS Plant to Tennessee Jurisdiction	16.30%
Imputed Tennessee Jurisdictional O&M Savings	

Source: CPAD Request #1-14 (Confidential) in Docket No. 16-00140

Piedmont IMR
Docket No. 17-00138
Reduction In Property Tax Expense on Exempt Property

Confidential Information Used Subject to Protective Order

Workpaper 3.3

Line No.	Item		Source
1	OASIS Property Exempt from Ad-Valorem Tax		CPAD Discovery 1-14
2	Tennessee Jurisdictional Portion of OASIS Asset	16.30%	CPAD Discovery 1-34
3	Tennessee Jurisdictional Portion of Exempt OASIS Asset		
4	Property Tax Rate	0.73%	CPAD Discovery 1-34
5	Reduction in Property Tax Expense		

Development of Property Tax Rate From Settlement Attachment A; TRA Docket No. 11-00144			
Property Taxes	$	5,218,572	
Plant In Service - Does Not Include CWIP	$	713,852,981	(CWIP is a separate line item within the Settlement Attachment A)
Property Tax Ratio - Agrees with Piedmont Petition		0.73%	

Piedmont IMR

Docket No. 17-00138

CPAD Proposed Rates
Volumetric

Exhibit 4

Line	January 1, 2017 - December 31, 2017	Residential	Commercial	LGS-Firm	LGS-Int	Total
1	Customer Class Apportionment Percentage	59.64%	31.20%	4.95%	4.21%	100.00%
2	IMRR for Recovery, excluding Refund Adjustment	12,668,292	6,626,968	1,050,595	894,016	21,239,871
3	Deferred Account Adjustment	3,920,909	2,051,084	325,165	276,703	6,573,862
4	Total Amount Recovery in this Rider	**16,589,201**	**8,678,052**	**1,375,761**	**1,170,719**	**27,813,732**
5	Proposed CPAD Revenue Requirement From Exhibit 3	$ 27,813,732				

5	Volumetric Rate Design	Residential	Commercial	LGS-Firm	LGS-Int	Total
6	Throughput from Relevant Rate Case Order (Dkt)	11,130,214	6,664,960	2,378,880	8,098,026	28,272,080
7	IMR Surcharge Rate per Dekatherm	**1.49047**	**1.30204**	**0.57832**	**0.14457**	
8	IMR Surcharge Rate per Therm	**0.14905**	**0.13020**	**0.05783**	**0.01446**	

Piedmont IMR
Docket No. 17-00138

CPAD Proposed Rates
Fixed

Exhibit 5

Line	Reference	January 1, 2017 - December 31, 2017	Residential	Commercial	LGS-Firm	LGS-Int	Total
1		Customer Class Apportionment Percentage	59.64%	31.20%	4.95%	4.21%	100.00%
2		IMRR for Recovery, excluding Refund Adjustment	12,668,292	6,626,968	1,050,595	894,016	21,239,871
3		Deferred Account Adjustment	3,920,909	2,051,084	325,165	276,703	6,573,862
4		**Total Amount Recovery in this Rider**	**16,589,201**	**8,678,052**	**1,375,761**	**1,170,719**	**27,813,732**
5		**Proposed CPAD Revenue Requirement** From Exhibit 3	$ 27,813,732				

9		**Fixed Charge Rate Design**	**Residential**	**Commercial**	**LGS-Firm**	**LGS-Int**	**Total**
10	A/	**Customer Counts**	162,490	17,539	127	56	180,212
11		**IMR Surcharge Rate per Customer**	**102.09**	**494.79**	**10,811.48**	**21,030.88**	
12		**IMR Surcharge Rate per Customer per Month**	**8.51**	**41.23**	**900.96**	**1,752.57**	

A/ WP 5.1

Piedmont IMR
Docket No. 17-00138
Determination of Billing Determinants

Workpaper 5.1

Line		A/ **Residential**	A/ **Commercial**	B/ **LGS-Firm**	B/ **LGS-Int**	**Total**
1	Throughput from Relevant Rate Case Order (Dkt)	11,130,214	6,664,960	2,378,880	8,098,026	28,272,080
2	Applicable Service Schedules	301	302, 352	303, 313, 310	304, 314	
3	Customers	162,490	17,539	127	56	180,212

A/ Customer counts for Residential and Commercial based upon Piedmont's TN 303 Report 09-2017, Page 1B
B/ Settlement Attachment B, Schedule 1 in TPUC Docket #11-00144

LGS-Firm Rate Codes - From Settlement B		Throughput	Bills
	303	562,848	475
	313	1,805,720	1021
	310	10,312	31
Total		2,378,880	1,527
Customers			127

LGS - Interruptible Codes - From Settlement B			
	304	1,928	15
	314	8,096,099	653
Total		8,098,027	668
Customers			56