

**BEFORE
THE TENNESSEE REGULATORY AUTHORITY**

PETITION OF PIEDMONT NATURAL GAS
COMPANY, INC. FOR AUTHORIZATION TO
AMORTIZE AND REFUND TO CUSTOMERS
EXCESS ACCUMULATED DEFERRED
INCOME TAXES

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DOCKET NO. 14-00017

PRE-FILED DIRECT TESTIMONY OF

CHRISTOPHER C. KLEIN, PH.D.

**ON BEHALF OF THE TENNESSEE ATTORNEY GENERAL
CONSUMER PROTECTION AND ADVOCATE DIVISION**

November 30, 2015

**BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE**

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DR. CHRISTOPHER C. KLEIN**

1 **Q. Please state your name and your current position.**

2 **A.** My name is Christopher C. Klein and I am a Professor in the Economics and Finance
3 Department at Middle Tennessee State University (MTSU) in Murfreesboro, Tennessee.

4 **Q. What is your educational background?**

5 **A.** I received a B. A. in Economics from the University of Alabama in 1976 and I received a
6 Ph. D. in Economics from the University of North Carolina at Chapel Hill in 1980.

7 **Q. What is your professional experience involving regulated industries?**

8 **A.** I was employed as an Economist in the Antitrust Division of the Bureau of Economics at
9 the Federal Trade Commission (FTC) in Washington, D.C., for six years starting in 1980.
10 In 1986, I was hired as the first Economist for the Tennessee Public Service Commission
11 (TPSC). Although my title changed over the years, I functioned as the Chief Economist
12 for the TPSC and, after 1996, the Tennessee Regulatory Authority (TRA), until August of
13 2002, when I moved to MTSU.

14 **Q. What were your duties at the FTC?**

15 **A.** I performed the economic analysis in antitrust investigations involving more than 20
16 industries and contributed to staff reports on mergers in the petroleum industry,
17 competition in grocery retailing, and the economics of predatory or sham litigation.

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1 **Q. What was your primary responsibility at the TPSC?**

2 **A.** I was an expert witness for the staff of the TPSC in rate cases and other similar
3 proceedings involving telecommunications, natural gas, electric and water utilities, as
4 well as motor carriers. I testified in 36 dockets before the TPSC on the issues of cost of
5 capital, rate design, and competitive effects. I also filed testimony before the Federal
6 Communications Commission (FCC).

7 **Q. How did your responsibilities change when the TRA supplanted the TPSC?**

8 **A.** I oversaw the Utility Rate Division and then the Economic Analysis Division. The TRA
9 staff no longer testified in proceedings before the agency, but provided analysis and
10 advice to the TRA Directors. I was responsible for all such advice and analysis provided
11 to the Directors by these Divisions, either individually or in concert with other TRA staff,
12 in all proceedings that came before the agency for resolution. These proceedings
13 included rate cases and tariff filings by public utilities, as well as those associated with
14 the implementation of the federal Telecommunications Act of 1996.

15 **Q. Were you a member of any regulatory committees or boards while you worked for**
16 **the TPSC and the TRA?**

17 **A.** Yes. I was a member of the National Association of Regulatory Utility Commissioners
18 (NARUC) Staff Subcommittee on Gas. I was a member of, and Chaired, the Research
19 Advisory Committee to the Board of Directors of the National Regulatory Research
20 Institute (NRRRI). I also served on the State Staff of the FCC's Federal-State Joint Board
21 in CC Docket Number 80-286 (the "Separations" Joint Board) and as a Group Leader on
22 the NARUC Staff Subcommittee on Accounts Multi-state Audit Team that produced the
23 1988 Report on Bell Communications Research.

1 **Q. What are your responsibilities at MTSU?**

2 **A.**I teach classes in the general area of applied microeconomics, including Principles of
3 Microeconomics, Intermediate Microeconomic Theory, Managerial Economics,
4 Economics of Antitrust and Regulation, and Econometrics, as well as undertaking
5 scholarly research, participating in various university committees, and serving on
6 dissertation committees.

7 **Q. Have you taught at any other universities?**

8 **A.**I taught classes in the Economics of Regulation and in Antitrust Economics in the
9 Economics Department at Vanderbilt University for several years while I was employed
10 at the TRA.

11 **Q. Are you a member of any professional organizations?**

12 **A.**I am a member of the American Economic Association, the Southern Economic
13 Association, the Industrial Organization Society, and Alpha Pi Mu: the National
14 Industrial Engineering Honor Society, as well as Beta Gamma Sigma: the International
15 Honor Society for Collegiate Schools of Business.

16 **Q. Have you published articles in professional or academic journals and presented**
17 **papers at professional meetings?**

18 **A.**More than 30 of my articles have appeared in professional or academic journals such as
19 *Energy Economics*, *Utilities Policy*, *The Electricity Journal*, *The Journal of Applied*
20 *Regulation* and many others. I have made more than 50 presentations at professional
21 meetings.

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1 **Q. Have you testified before any other governmental bodies in Tennessee?**

2 **A. Yes. I have testified before various committees of the Tennessee General Assembly on**
3 regulatory issues, especially telecommunications issues and competition in the
4 telecommunications industry, as well as before the Tennessee Advisory Commission on
5 Intergovernmental Relations and the Tennessee Regulatory Authority.

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7 **PURPOSE OF TESTIMONY AND RECOMMENDATION**

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9 **Q. What is the purpose of your testimony?**

10 **A. I will address some public interest aspects of the settlement agreement in this proceeding.**

11 **Q. Can you summarize your recommendation?**

12 **A. Yes. I recommend that the TRA accept the settlement agreement.**

13 **Q. What is the basis of your recommendation?**

14 **A. The settlement agreement will result in the refund of \$4,667,413 to Piedmont's customers**
15 over a 12 month period in order to remove \$2,836,621 in accumulated deferred income
16 taxes (ADIT) from the company's books. In short, these are sums that would be returned
17 to customers in the ordinary course of events at some later date. Due to the time value of
18 money, returning these sums to customers now rather than later creates a higher value for
19 consumers and makes them better off.

20 **Q. What is the time value of money?**

21 **A. The time value of money is an economic principle by which a dollar today is worth more**
22 to an individual than the same dollar at any future date. This is the basis for interest
23 payments on loans. In order to induce someone to lend money today for repayment at a

1 later date, interest must be paid to compensate the lender for giving up the use of the loan
2 amount for a specified period of time. Similarly, if an individual receives a payment
3 today that was expected on some future date, that early payment has more value to the
4 individual than would the later payment of the same dollar amount. This is what the
5 settlement agreement does.

6 **Q. Does the refund set out in the settlement agreement reduce the balance of ADIT,**
7 **such that the rate base is not decreased by as much as it has been reduced by the**
8 **ADIT?**

9 **A. Yes.**

10 **Q. Does that mean that rates could increase at the next rate case based on that higher**
11 **rate base?**

12 **A. Yes.** The reduction in ADIT will effectively increase the rate base (by decreasing the
13 ADIT reduction in rate base) and rates could rise in the next rate case as a result. The
14 net effect is that the individual receiving a refund now (as set out in the settlement
15 agreement) will be better off. Because of the time value of money, the refund received
16 now will more than offset the amount that such individual's rates would increase in a
17 future rate case as a result of the increased rate base.

18 **Q. Is it possible to quantify the positive net benefit to the individual receiving the**
19 **refund now as compared to the amount that rates could increase in a future rate**
20 **case as a result of the increase in rate base created by the refund?**

21 **A. Practically speaking,** there are too many variables to quantify the net benefit. It is
22 possible, however, that the benefit could be greater for lower income individuals who
23 may value money today more highly relative to money tomorrow than higher income

1 individuals. Differences in time preferences such as this across individuals means that
2 each individual may benefit differently from the refund. Those with high time preference,
3 valuing today more highly relative to tomorrow, will benefit more than those with lower
4 time preference. There is no easy way to discover and measure these time preferences.
5 Nevertheless, the one conclusion that holds true in any case is that the refund
6 contemplated in the settlement agreement gives net benefits to those receiving it, even if
7 rates go up in a future rate case as a result of the refund.

8 **Q. In sum, do you expect Piedmont's customers to benefit from the settlement**
9 **agreement?**

10 A. Yes.

11 **Q. Does this conclude your testimony at this time?**

12 A. Yes.

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