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December 11, 2014

VIA ELECTRONICALLY

Hon. Herbert H. Hilliard, Chairman
Tennessee Regulatory Authority
c/o Sharla Dillon, Dockets and Records Manager
502 Deaderick Street, 4th Floor
Nashville, TN 37243

RE: In Re: Petition of Piedmont Natural Gas Company, Inc. for Approval of a CNG Infrastructure Rider to its Approved Rate Schedules and Service Regulations, TRA Docket No. 14-00086

Dear Chairman Hilliard:

Attached for filing please find the *Testimony of Ron Jones* and the *Testimony of Scott M. Carr, Ph.D.*, witnesses for Tennessee Fuel and Convenience Store Association in the above-captioned matter.

As required, an original of this filing, along with four (4) hard copies, will follow. Should you have any questions concerning this filing, or require additional information, please do not hesitate to let me know.

Very truly yours,

BUTLER SNOW LLP

Melvin J. Malone

clw
Attachments

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Direct Testimony of Scott M. Carr, Ph.D.

Regarding

Petition of Piedmont Natural Gas, Inc. for Approval of a CNG Infrastructure Rider to Its Approved Rate Schedules and Service Regulations

Tennessee TRA Docket No. 14-00086

December 11, 2014

Direct Testimony
of
Scott M. Carr, Ph.D.

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Scott M. Carr, Ph.D.

I. Introduction

Q. Please state your name, business address, and business title.

A. My name is Scott M. Carr, Ph.D. I am a Director at Navigant Economics, a subsidiary of Navigant Consulting, which provides economic and financial analysis of legal and business issues to law firms, corporations, and government agencies. My business address is 1200 19th Street, NW, Suite 850, Washington, D.C. 20036.

Q. Please describe your educational and professional background.

A. I hold a Ph.D. in both Business Administration and in Industrial and Operations Engineering, an M.S.E. in Industrial and Operations Engineering, an M.S.E. in Construction Management and Engineering, and a B.S.E. in Mechanical Engineering, all from the University of Michigan. In my current position at Navigant Economics, I provide consulting and expert services on a variety of economic and engineering topics, often in the context of litigation. In particular, I regularly perform complex valuations and economic analyses, often using sophisticated computer and analytical tools. Prior to joining Navigant Economics, I was a Senior Managing Director at ARPC, a Principal at LECG, and a professor at the UCLA Anderson School of Management in the department of Decisions, Operations, and Technology Management. As a professor, I taught courses in the areas of Operations Management and Quantitative Analysis to M.B.A. and Ph.D.

students and to business executives. I also performed and published research related to Operations Management and Industrial Economics.

My relevant areas of expertise are operations research, competition economics, industrial organization, probability and statistics, optimization, modeling, simulation, and forecasting. I have analyzed gasoline and ethanol supply chain economics, analyzed natural gas pipeline leases for the U.S. Department of Justice, estimated damages due to the Deep Horizon oil spill, performed valuation and depreciation analyses for pipelines, and participated in the preparation of market-based rate applications for crude oil and refined products pipelines.

I have managed, advised, or performed strategic projects for firms/organizations including Rio Tinto Energy America, TRW Aerospace, Broadcom, Meade Instruments, Macy's, the Los Angeles Community Redevelopment Agency, the Los Angeles County Metropolitan Transportation Authority, Pilkington, and Six Flags.

As part of my consulting experience, I have provided expert testimony to federal courts, the Federal Energy Regulatory Commission, and arbitration panels. Exhibit 1 contains my current curriculum vitae.

Q. Have you previously testified before the Tennessee Regulatory Authority ("TRA")?

A. No, I have not.

Q. What is the purpose of your testimony?

A. On behalf of the Tennessee Fuel and Convenience Store Association ("TFCA"), I have been asked to prepare testimony regarding a petition[1] to the TRA by Piedmont Natural Gas Company ("Piedmont"), a regulated public utility. Piedmont is a supplier of both natural gas transportation, distribution and sales services ("Piedmont's natural gas distribution business") and compressed natural gas ("CNG") fueling services ("Piedmont's CNG fueling business") within its service territory in Middle Tennessee. In its petition, Piedmont proposes to incorporate into the rate base of its natural gas distribution business certain capital costs that have been or will be incurred by Piedmont to upgrade an existing CNG fueling station and to construct new CNG fueling stations.

I have been asked to evaluate Piedmont's petition in the context of Tennessee Code Annotated § 65-5-103(d) and its consistency with this new statute, including the statute's public interest requirement. In doing so, I have evaluated whether Piedmont's CNG fueling business can properly be considered a public utility service and whether Piedmont's proposal would result in cross-subsidization of its CNG fueling business by its natural gas distribution business. Moreover, I have evaluated and weighed the competitive implications of Piedmont's proposal; for example, whether Piedmont's proposal would provide Piedmont's CNG fueling business with a competitive advantage that would not be available to other CNG fueling suppliers and whether Piedmont's proposal is thereby anticompetitive.

II. Summary of Testimony

Q. Please briefly summarize the conclusions that you have reached in this matter

[1] Petition of Piedmont Natural Gas, Inc. for Approval of a CNG Infrastructure Rider to Its Approved Rate Schedules and Service Regulations, Tennessee TRA Docket No. 14-00086 ("Piedmont Petition").

A. I have reached the following conclusions in this matter:

1. Unlike Piedmont's natural gas distribution business, Piedmont's CNG fueling business does not have the characteristics of a public utility service.
2. Piedmont's proposal would result in the cross-subsidization of its CNG fueling business by its natural gas distribution business. That is, under Piedmont's proposal, its natural gas customers would experience higher prices in order to reduce the prices paid by its CNG fueling customers.[2] While Piedmont has offered some benefits that it maintains would accompany its proposal, the proffered reasons do not provide sufficient or reasonable justification for this cross-subsidization.
3. Piedmont's proposal would benefit Piedmont, but these same benefits would not be available to Piedmont's CNG competitors. As a result of these selectively-provided benefits, Piedmont would have an unfair competitive advantage in its CNG fueling business. Piedmont has not provided any reasonable justification for selectively receiving benefits that would provide its CNG fueling business with an unfair competitive advantage.
4. Piedmont's proposal is anticompetitive because the competitive advantage provided to Piedmont under its proposal would create a barrier to entry for other potential entrants in the CNG fueling industry and because the cross-subsidization of Piedmont's CNG fueling business would enable Piedmont to profitably engage in predatory pricing. As a result, Piedmont's proposal would tend to reduce the number of new entrant CNG fuel suppliers and is anticompetitive.

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[2] That is, Piedmont's CNG fueling rates would be reduced relative to the rates required to cover Piedmont's costs of providing CNG fueling services including an adequate return on investment of the CNG capital costs that would be incorporated into Piedmont's natural gas distribution rate base under the Piedmont proposal.

5. Based on conclusions one through four above, Piedmont's proposal would not serve the public interest and would fail the public interest standard set forth in § 65-5-103(d).

III. Piedmont's Proposal as it Relates to This Testimony

Q. Please briefly describe Piedmont's proposal at is relates to your testimony.

A. My testimony primarily focuses on one aspect of Piedmont's Petition, namely, its proposal to incorporate capital costs incurred in its CNG fueling business into the rate base of its natural gas distribution business. In its petition, Piedmont describes $4.7 million in capital costs that have already been spent to upgrade one CNG fueling station and to construct another. The petition also mentions the possibility of constructing at least two other CNG fueling stations at a cost of at least $4.6 million.[3] Together, the upgrade, current construction, and future construction would cost $9.3 million. These capital costs would initially be incorporated into Piedmont's natural gas distribution rate base via a "CNG Infrastructure Rider mechanism"[4] and would be explicitly included in its natural gas distribution rate base for Piedmont's next rate case.[5]

IV. Differences in Natural Gas Distribution Versus CNG Fueling

Q. What are the distinguishing characteristics of a public utility service?

A. It has long been recognized that public utilities are distinguished by two characteristics. As described by Professor James Bonbright, the first distinguishing characteristic is that public utilities provide services of "special public importance or necessity," and the

[3] Piedmont Petition, ¶ 8-10.

[4] Piedmont Petition, ¶ 5.

[5] Piedmont response to TFCA Data Request No. 17.

second is that public utilities have technical characteristics that lead "almost inevitably to monopoly."[6]

Q. Do natural gas distribution services display the distinguishing characteristics of a public utility service?

A. The two distinguishing characteristics of a public utility service clearly apply to natural gas distribution services. First, the necessity of natural gas distribution follows directly from natural gas' ubiquitous and economical use by residential, commercial, and industrial consumers. Second, the technical impracticality and economic infeasibility of having multiple overlapping natural gas distribution networks serving a group of consumers (*e.g.*, a residential neighborhood) establishes that it is almost inevitable that only a single firm – *i.e.,* a monopolist – would provide natural gas distribution services within a given area.

Q. Do CNG fueling services display the distinguishing characteristics of a public utility service?

A. No. Neither of the distinguishing characteristics of a public utility apply to CNG fueling services. That CNG fueling services are not necessary (although they may be useful and desirable) follows directly from Piedmont's statement that, currently, "The state of the CNG market in Tennessee (and in other states where Piedmont operates) is nascent."[7] That is, if CNG fueling services were truly necessary, the CNG fueling industry would not be nascent; it would already be well-established.

[6] Bonbright, James C., *Principles of Public Utility Rates*, 1961, p. 8. Also see Kahn, Alfred E., *The Economics of Regulation*, 1988, Vol. I, p. 11.

[7] Piedmont response to TRA Staff Discovery Request No. 5.

Neither does the second distinguishing characteristic of a public utility, the presence of technical characteristics that result in a monopoly (*i.e.*, a single supplier), apply to CNG fueling services. Specifically, CNG fueling services have relatively modest fixed costs of entry and few, if any, other barriers to entry. Indeed, there are currently at least three firms – Piedmont, Trillium CNG, and Waste Management – providing CNG fueling services in Piedmont's Tennessee service area.[8] Further, as Piedmont has conceded, "Anyone could be a potential competitor,"[9] and "Piedmont does not believe that the provision of CNG in Tennessee is a monopoly."[10]

Thus, unlike natural gas distribution, CNG fueling is a competitive industry that does not have the characteristics of a monopolistic public utility service.

V. Cross-Subsidization Under Piedmont's Proposal

Q. What is cross-subsidization?

A. Cross-subsidization is the practice of charging higher prices to one group of consumers in order to subsidize lower prices for another group.[11]

Q. Would Piedmont's proposal result in cross-subsidization?

A. Yes. Under Piedmont's proposal, its CNG fueling business would be cross-subsidized by its natural gas distribution business. This cross-subsidization would occur as follows: (1)

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[8] Piedmont response to TFCA Data Request No. 7.

[9] *Id.*

[10] Piedmont response to Consumer Advocate and Protective Division Supplemental Discovery Request No. 7.

[11] U.S. Congressional Research Service, "Agriculture: A Glossary of Terms, Programs, and Laws, 2005 Edition," p. 69.

the rates paid by Piedmont's natural gas customers would go up[12] as a result of moving Piedmont's CNG capital costs into its natural gas distribution rate base (*i.e.,* a larger rate base would mean higher rates); (2) the rates paid by Piedmont's CNG fueling customers would be reduced[13] because those rates would not need to fully cover the capital costs of Piedmont's CNG fueling business (*i.e.*, reduced capital costs that must be covered means lower prices can be charged).

Q. Does Piedmont provide a reasonable justification for this cross-subsidization of its CNG fueling business by its natural gas distribution business?

A. No. Piedmont attempts to justify this cross-subsidization by claiming that its natural gas distribution customers would benefit from growth in Piedmont's CNG fueling business. Piedmont claims that these natural gas distribution customers would benefit because sales of CNG fuel would increase Piedmont's natural gas sales. With higher natural gas volumes, Piedmont's costs of service would be spread over a higher volume, thereby lowering the rates paid by Piedmont's natural gas customers.[14] However, any such benefits would apply regardless of whether the additional natural gas volumes are due to retail CNG sales by Piedmont's CNG's fueling business or wholesale sales to its CNG competitors. Thus, this argument does not provide a reasonable justification for, as I

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[12] Specifically, the rates in the following Piedmont Rate Schedules would increase: 301 (Residential Customer Class); 302 and 352 (Commercial Customer Class); 303,313, and 310 (Firm Large General Customer Class); and 304 and 314 (Interruptible Large General Customer Class). (See Piedmont Service Schedule No. 318, CNG Infrastructure Rider (attached to the Piedmont Petition)).

[13] *I.e.*, Piedmont's CNG fueling rates would be reduced relative to the rates required to cover Piedmont's costs of providing CNG fueling services including an adequate return on investment of the CNG capital costs that would be incorporated into Piedmont's natural gas distribution rate base under the Piedmont proposal.

[14] Piedmont response to TRA Staff Discovery Request No. 6.

discuss below, *selectively* providing benefits to Piedmont's CNG fueling business that would not be provided to Piedmont's CNG competitors.

Q. Does Piedmont provide any other justification for this cross-subsidization?

A. Piedmont also attempts to justify its proposed cross-subsidization of its CNG fueling business by natural gas distribution customers by pointing out that the manner in which its costs of service are currently allocated "creates the potential for subsidization of one rate class by others."[15] However, as explained by TFCA's witness Mr. Ron Jones, Piedmont's current rate structure has been determined by the Authority to be just, reasonable, and in the public interest. However, the Authority has made no such determination regarding Piedmont's current proposal.

Thus, Piedmont is proposing a cross-subsidization of its CNG fueling business by its natural gas distribution customers, but it has failed to provide any reasonable justification for this cross-subsidization that would satisfy the statutes public interest requirement.

Q. In its petition, does Piedmont cite Tennessee House Bill No. 191, codified as T.C.A. § 65-5-103(d)?

A. Yes. Piedmont claims that the Authority is authorized to approve its petition under House Bill No. 191.[16]

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[15] Piedmont response to TRA Staff Discovery Request No. 6.

[16] Piedmont states that,

> The statute [House Bill No. 191] authorizes the Authority, among other things, to implement alternative regulation mechanisms, outside the context of a general rate case, allowing public utilities to recover the operational expenses, capital costs, or both associated with: (1) infrastructure and equipment associated with alternative motor vehicle transportation fuel; or (2) infrastructure that will provide opportunities for economic development benefits in the area to be

Q. Does the text of House Bill No. 191 indicate whether cross-subsidies of the type proposed by Piedmont are permissible?

A. No. It is certainly true that the language of House Bill No. 191 provides for the authorization of recovery of infrastructure-related capital costs related to alternative motor vehicle transportation fuel. However, the plain language of the statute is definitely silent on whether it is allowable to recover capital costs incurred to serve a competitive industry, such as the CNG fueling services, using the rate base and non-CNG customers of a public utility industry, such as natural gas distribution, given that doing so would result in cross-subsidization of the type proposed by Piedmont. Under the language of the statute, the authorization for such a cross-subsidy simply isn't clearly there.

Q. Does the legislative history of House Bill No. 191 indicate whether the statute is intended to authorize cross-subsidization of the type proposed by Piedmont.

A. Yes. The legislative history explicitly indicates that House Bill No. 191 is intended to disallow cross-subsidies of the type proposed by Piedmont. According to the legislative history,[17] House Bill No. 191 was a bill brought in cooperation with the Tennessee Regulatory Authority.[18] During a hearing of the Tennessee House of Representatives Finance Ways & Means Committee on House Bill No. 191 (March 13, 2013), then TRA Chairman James Allison was asked by members of the legislature, including the bill sponsor, about the intent of the legislation. In response, Chairman Allison testified that,

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directly served by the infrastructure, if the Authority finds that such mechanisms are in the public interest. (Piedmont Petition, p. 2)

[17] The legislative history cited here is attached to my testimony as Exhibit 2.

[18] "House Bill 191 is an administration bill in cooperation with the TRA." Statement of Representative Gerald McCormick, Tennessee General Assembly, House Finance Ways & Means Subcommittee, March 13, 2013.

"There is no intent in this legislation to allow any other class of consumers to subsidize the facilities that would go into providing natural gas as a motor fuel."[19] Later, Chairman Allison testified that "as the Regulatory Authority we will assure there is no cross-subsidization going on as we implement the various rates."[20]

At another time (March 6, 2013), during a hearing of the Tennessee General Assembly Utilities Committee regarding House Bill No. 191, then Chairman Allison was asked, "[I]s it the intent of this legislation to permit regulated, natural gas companies to subsidize their retail or wholesale alternative motor vehicle transportation fuel operations with rate payer funds?" Chairman Allison responded, "The answer to that is no."[21]

VI. The Benefits That Would be Selectively Provided to Piedmont Under its Proposal

Q. How would Piedmont benefit under its proposal?

A. Under its proposal, the Piedmont CNG capital costs in question (*i.e.,* the costs of upgrading and constructing CNG fueling stations) would be entirely or primarily paid for by Piedmont's natural gas distribution customers. As a result, Piedmont would be able to profitably charge reduced rates for its CNG fueling services because its prices would not have to fully cover its CNG capital costs in order for its CNG fueling business to be profitable. Piedmont's CNG business would thus benefit directly, via increased profits,

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[19] Testimony of James Allison, Tennessee General Assembly, House Finance Ways & Means Subcommittee, March 13, 2013.

[20] *Id.*

[21] Testimony of James Allison, Tennessee General Assembly, House Business and Utilities Sub Committee, March 6, 2013, p. 9.

and also indirectly, because Piedmont's ability to profitably charge lower prices would improve its ability to compete against other CNG fuel providers.

Q. Within its Tennessee service area, would these benefits be selectively provided to Piedmont, or would they also be available to Piedmont's CNG fueling competitors?

A. The benefits discussed above would only be available to Piedmont – *i.e.,* the benefits would be selectively provided – they would not be available to Piedmont's CNG fueling competitors. As the only natural gas distribution company in its service area, Piedmont is the only firm with a natural gas distribution rate base into which CNG capital costs could be incorporated.

VII. The Anticompetitive Implications of Piedmont's Proposal

Q. Would Piedmont's proposal provide it with a competitive advantage that would not be available to its CNG competitors?

A. Yes. Piedmont's proposal would provide it with a competitive advantage that would not be available to its CNG competitors; in other words, Piedmont's proposal would create an "unlevel playing field" in the CNG market. As discussed above, under Piedmont's proposal, its CNG rates would be cross-subsidized by its natural gas distribution business. This cross-subsidy would enable Piedmont to profitably charge rates lower than what would be sufficient to cover its CNG capital costs. Piedmont would thus enjoy a competitive advantage over its competitors because its competitors would have to charge rates high enough to fully cover all of their CNG capital costs in order to be profitable.

Q. Has Piedmont provided any reasonable justification for selectively receiving benefits that would provide its CNG fueling business with a competitive advantage?

A. No. Piedmont claims that there are environmental and economic advantages to using CNG as a transportation fuel. First, I note that Piedmont has not provided any reason why a policy objective of promoting the CNG fueling industry could not be achieved through incentives or other governmental or economic mechanisms that would be available to all CNG market participants rather than granted selectively to Piedmont as would be the case under its proposal. Second, notwithstanding any potential environmental and economic benefits that may flow from Piedmont's proposal, these benefits must be considered alongside the downsides and disadvantages of the proposal to determine whether the proposal sufficiently satisfies the public interest standard explicitly set forth in the statute.

Q. Please give an example of how the CNG fueling industry could be promoted by providing an incentive that would be available to all CNG market participants.

A. An example of this type of incentive appears in Tennessee's Energy Independence Act of 2013 which Piedmont cites in support of its proposal.[22] As Piedmont states, this act "ordered positive tax treatment for alternative fueling sites" in order to promote the use of CNG as a transportation fuel. As I understand the legislation, this "positive tax treatment" amounts to a cap on or reduction in the property taxes to be paid for CNG fueling sites, and this incentive would be available to all suppliers of CNG fueling services.

[22] Piedmont Petition, ¶ 7.

Q. How would the unlevel playing field created by Piedmont's proposal affect the market for CNG fueling services?

A. Under Piedmont's proposal, the cross-subsidization of its CNG fueling business would enable Piedmont to undercut its CNG competitors' pricing. Potential competitors, who would anticipate Piedmont's ability to profitably undercut their prices and factor it into their market entry and investment decisions, would become less likely to enter the market. In this manner, Piedmont's proposal would create an anticompetitive "barrier to entry" that would tend to reduce the number of CNG fuel suppliers.

Q. Has the Tennessee General Assembly previously considered the competitive implications of allowing pricing subsidization, such as the cross-subsidization you describe above, in the sales of other motor vehicle fuels?

A. Yes. In the Statement of Purpose for the Petroleum Trade Practices Act,[23] the Tennessee General Assembly stated that, "Subsidized pricing is inherently unfair and destructive to, and reduces competition in, the motor fuel marketing industry, and is a form of predatory pricing." In fact, one of the stated purposes of the Petroleum Trade Practices Act is "to prevent and eliminate subsidized pricing of petroleum and related products."

Q. What does the term "predatory pricing" mean in the quotation above from the General Assembly?

A. Predatory pricing occurs when a firm sets its prices below its costs of providing goods and services; such low pricing lures customers away from the firm's competitors thereby

[23] Tenn. Code Ann. § 47-25-603(b).

rendering the competitors unprofitable. As a result, predatory pricing removes competitors from a market (because the competitors find themselves to be unprofitable) or keeps potential competitors from entering the market (because it becomes impossible for would-be competitors to be profitable). In both of these cases, predatory pricing reduces the number of competitors in the market and is thus anticompetitive.

Q. Can predatory pricing occur in a regulated industry?

A. Yes. "In fact, regulation can make predatory pricing easier, since it often provides the barriers to entry necessary for a potential predatory pricer to succeed" according to U.S. Supreme Court Justice Stephen Breyer.[24] Indeed, as described above, Piedmont's proposal would provide exactly the sort of barrier to entry described by Justice Breyer.

Q. Under Piedmont's proposal, would Piedmont be able to engage in predatory pricing?

A. Yes. Given the cross-subsidization that would occur under Piedmont's proposal, its regulated CNG rates would be less than its costs of providing CNG fueling services, and it could profitably engage in predatory pricing. Further, Piedmont's Revised Rate Schedule 342 and New Rate Schedule 343 would provide Piedmont with the option of discounting its CNG rates below the rates specified in those rate schedules without public notice or TRA approval.[25] Finally, if Piedmont were to instead operate its CNG fueling

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[24] Breyer, Stephen, *Regulation and its Reform*, 1982, p. 32.

[25] Piedmont's Revised Rate Schedule 342 and New Rate Schedule 343 both include the a paragraph that states,

> "The company may at its discretion offer a rate discount on a not unduly discriminatory basis to customers, … , in order to compete with alternative fuel providers and further develop the market demand for natural gas vehicular fuel or the facilities available to serve such demand."

business as an unregulated business, it would have even greater flexibility in reducing its rates.

Q. Would Piedmont's proposal affect suppliers of non-CNG transportation fuels?

A. Yes. Competition exists between CNG suppliers and suppliers of other transportation fuels because vehicle buyers decide whether to buy CNG-fuel vehicles based, in part, on the relative prices of CNG and other fuels and because some vehicles are capable of burning both CNG and other fuels. Also, CNG is (or is expected to be) sold in the same locations as gasoline and diesel fuel. Thus, cross-subsidization of CNG fueling prices would place downward pressure on the prices of other transportation fuels as well as on non-CNG suppliers' profits.

Q. Please summarize your conclusions about how Piedmont's proposal would affect the competitiveness of the CNG market.

A. Under Piedmont's proposal, the cross-subsidization of Piedmont's CNG fueling business by its natural gas distribution business would selectively provide Piedmont with a competitive advantage, would create a barrier to entry for other potential entrants in the CNG fueling industry, and would enable Piedmont to profitably engage in predatory pricing. As a result, Piedmont's proposal would tend to reduce the number of CNG fueling competitors and is anticompetitive.

Q. Has Piedmont conceded that its proposal could raise anticompetitiveness concerns – *i.e.,* concerns about creating an unlevel playing field – in the CNG fueling market? If so, did Piedmont suggest how the anticompetitiveness concerns could be addressed?

A. Yes. In response to a TFCA discovery request, Piedmont admitted that, in the future, "tension could arise between the provision of CNG service on a regulated basis … and the unregulated offering of that service by competitors."[26] Piedmont then stated that, it believes, "[T]hose concerns could be addressed in one of two ways: (1) by ensuring that Piedmont's CNG services are provided on a pure cost basis, or (2) by converting Piedmont's sales of CNG to the public to an unregulated service."[27]

Q. Would either of these suggestions by Piedmont alleviate the anticompetitiveness concerns that you describe above?

A. No, for several reasons. First, Piedmont's response fails to recognize that the fundamental cause of the anticompetitiveness concerns is the cross-subsidization that would occur under its proposal and that, absent an appropriate remedy, would remain even if Piedmont's CNG fueling business was unregulated. Second, Piedmont did not provide any details in its answer, so it's impossible to conclude that its suggestions alleviate the anticompetitiveness concerns that I describe. Third, Piedmont's suggestions, as stated, fail to address the inclusion of its CNG capital costs in its natural gas distribution rate

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[26] Piedmont response to TRA Staff Discovery Request No. 46. This entire Discovery Request and Response are as follows:

> TFCA Discovery Request 46: If Piedmont's Petition is approved as submitted, is there a possibility that such an approval might have a negative impact on the future ability of non-public utility entities to compete on a level playing field in the provision of CNG for alternative motor vehicle transportation fuel? Please explain in detail and with specificity.
>
> Piedmont Response: Piedmont is fully cognizant that at some future time, if the CNG market develops as hoped, that tension could arise between the provision of CNG service on a regulated basis (as Piedmont is and has provided it for some time) and the unregulated offering of that service by competitors. In the event of such eventuality then Piedmont believes that those concerns could be addressed in one of two ways: (1) by ensuring that Piedmont's CNG services are provided on a pure cost basis, or (2) by converting Piedmont's sales of CNG to the public to an unregulated service.

[27] *Id.*

base. Fourth, Piedmont's suggestions would be implemented at some indefinite time in the future, and, until that time, Piedmont would be free to build market share by exploiting the competitive advantage provided by its proposal. Fifth, Piedmont's suggestions fail to state if and how its natural gas distribution ratepayers would be repaid for CNG capital costs recovered prior to the suggestions' implementation.

Further, Piedmont's suggestion of converting its CNG fueling business to an unregulated service would result in cross-subsidization of an unregulated business (Piedmont's CNG fueling business) by a regulated business (Piedmont's natural gas distribution business), a situation that the Tennessee Court of Appeals has determined to be anticompetitive. The court explained,

> The use of revenues from the sale of services in a regulated market to subsidize the cost of providing the services in the unregulated market is a cross-subsidy. The practice is anti-competitive and produces two negative effects. First, it results in the enterprise's customers in the regulated market being overcharged for their services because they are paying the cost of the subsidy of the unregulated service. Second, the enterprise engaging in cross-subsidization gains an unfair competitive advantage in the unregulated market because the cross-subsidy enables the enterprise to provide the unregulated service below its actual cost.[28]

Q. Would Piedmont's proposal serve the public interest?

A. No. Based on my other conclusions in this matter – namely that: (1) unlike Piedmont's natural gas distribution business, its CNG fueling business does not have the characteristics of a public utility service; (2) Piedmont's proposal would result in the cross-subsidization of its CNG fueling business by its natural gas distribution business;

[28] *US LEC of Tenn., Inc. v. Tenn. Regulatory Auth.*, No. M2004-01417-COA-R12-CV, 2006 Tenn. App. LEXIS 243, at *19 (Tenn. Ct. App. Apr. 16, 2006).

(3) Piedmont's proposal would benefit Piedmont, but these same benefits would not be available to Piedmont's CNG competitors; and (4) Piedmont's proposal is anticompetitive – Piedmont's proposal would not serve the public interest.

Q. Does this conclude your testimony?

A. Yes.

Exhibit 1

Curriculum Vitae

NAVIGANT
ECONOMICS

Scott Carr, PhD
Director, Navigant Economics

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Expertise
- Supply chain management, logistics, production and operations management
- Energy economics, competition economics, industrial organization
- Probability and statistics
- Optimization, modeling, simulation, forecasting
- Options, derivatives, risk analysis and management
- Engineering, product design, project management, construction engineering and management
- Production and service systems, distribution networks

Doctoral Degree
PhD, University of Michigan, Ann Arbor, Michigan, 1999
Business Administration and Engineering
- Doctorate jointly conferred by the Ross School of Business (Operations Management) and the College of Engineering (Industrial and Operations Engineering)

Other Degrees
MS Engineering, Industrial and Operations Engineering, University of Michigan, 1994
MS Engineering, Construction Management and Engineering (Civil and Environmental Engineering), University of Michigan, 1993
BS Engineering, Mechanical Engineering, University of Michigan, 1986

Faculty and Expert Services Experience
Director, Navigant Economics, 2014

Senior Managing Director, ARPC, 2012 – 2013

Managing Director, ARPC, 2011

Principal, LECG, 2006 - 2010

Faculty, UCLA Anderson School of Management – Decisions, Operations, and Technology Management, 1999 - 2007

Professional Activities – representative examples
- Economic modeling and analysis including:
    - Preparation of market based rate applications for crude oil and refined products pipelines
    - Testimony for Tyson Foods regarding procurement and supply chain practices in U.S. Dept. of Agriculture litigation brought under the Packers and Stockyards antitrust act
    - Forecasting of the future incidence of diseases and cognitive impairments due to concussions for the National Football League players

  - Testimony to Federal District Court regarding a new business valuation in a breach of contract matter
  - Testimony to the Federal Energy Regulatory Commission regarding credit issues in electricity markets for Constellation Energy and other electricity generators
  - Arbitration testimony regarding supply chain management for a Tier-1 automotive supplier
  - Estimation of lost income and other financial damages due to the BP oil spill in the Gulf of Mexico for the $20 billion Gulf Coast Claims Facility
  - Probabilistic modeling of future mass tort litigation at environmental contamination sites for Anadarko Petroleum Corporation
  - Financial analysis of natural gas pipeline leases for the U.S. Department of Justice
  - Estimation of the likelihood of injury from home electrical devices for Underwriter Laboratories
  - Probabilistic modeling of private equity funds' performance
  - Analysis of demand variability within the automobile supply network for Brembo Brakes
  - Analysis of gasoline and ethanol supply chain economics for Tesoro Corporation
  - Analysis of the financial impact of automotive emissions control regulations for the Alliance of Automobile Manufacturers
  - Valuation and depreciation analysis of crude oil pipelines for Imperial Oil
  - Bond, stock, and derivative analyses for bankruptcy litigation in the electricity industry
  - Valuation of supply contracts for a new mining venture
  - Analysis for class-certification and merits stages of antitrust litigation for Dow Chemical
  - Analysis of alleged monopolization of industrial chemicals for Honeywell
- Managed, advised, or performed strategic projects for firms/organizations including:
  - Rio Tinto Energy America (coal mining)
  - TRW Aerospace (semiconductor manufacturing technology and equipment)
  - Broadcom (Bluetooth chipsets)
  - Meade Instruments (night vision technology)
  - Macy's (retail clothing)
  - Los Angeles Community Redevelopment Agency
  - Los Angeles County Metropolitan Transportation Authority
  - Pilkington (glass manufacturing)
  - Deutsch Advertising
  - Six Flags (amusement parks)
- Speeches/presentations delivered regularly at academic conferences
- Principal investigator in a project and grant to improve small enterprises' access to business expansion capital
- Member of editorial board for *Decision Sciences Journal* and frequent reviewer for *Management Science, Operations Research,* and other academic journals

Professional Affiliations

- American Bar Association – Antitrust Law Section, Economics Committee, Intellectual Property Committee
- Institute for Operations Research and the Management Sciences (INFORMS)
- Institute of Industrial Engineers
- LECG, Los Angeles (Affiliate) – Professional services for antitrust litigation and competition policy, 2005–2006

Graduate-Level Courses Taught at the UCLA Anderson School of Management

Competition and Industrial Organization [PhD] – Game theoretic models of inter-firm interaction. Classic and seminal oligopoly models. Advanced game theory. Models of strategic interaction within complex production networks. Antitrust. Analysis and proof techniques, 2006

Managerial Model Building [MBA] – Mathematical modeling, analysis, and optimization. Linear, non-linear, and integer programming/optimization. Monte-Carlo simulation. Forecasting methods. Project Management models and tools. Application of optimization models in business settings, 2005-2006

Simulation Theory and Applications [PhD] – Monte-Carlo, discrete event, and agent-based simulation for finance, marketing, and operations. The use of simulation in empirical research. Simulation of stochastic processes. Option valuation (both financial and real) using simulation. Applications (e.g., simulation of intellectual property piracy across the Internet), 2004-2006

Management in the Information Economy [MBA] – Internet and telecommunication technology. Internet business models and strategy. Economics of information products and processes, 2003

Fundamentals of Operations Management [MBA] – Analysis of business processes. Formulating and executing business strategy. Service and performance measurement and metrics. Managing risk, variability, and uncertainty. Management of supply chains and production processes. 1999-2003, 2006

Dynamic Programming and Sequential Optimization [PhD] – Dynamic programming, Markov chains and decision processes, solution and proof techniques, and structural results and proofs, 2000

Other Teaching
PhD Dissertation Committees (including Dissertation Advisor) – topic areas including: competition economics, operations management, information technology, international business, simulation

Executive Education at UCLA Anderson – Various topics in the following programs (1999 to 2007):

- Managing the Information Resource
- Creating and Leading the Project-Centered Organization (faculty director)
- Supply Chain Management
- Head Start – Johnson & Johnson Management Fellows Program
- UCLA Strategic Leadership Institute
- California HealthCare Foundation's Health Care Leadership Program
- Johnson & Johnson Healthcare Leadership Program

University of Michigan, Ross School of Business [BBA] – Operations Management, 1997

University of Michigan, College of Engineering [BSE] – Computer Programming, 1995

Research

Sriram Dasu, Reza Ahmadi, and Scott Carr, "Gray Markets, A Product of Demand Uncertainty and Excess Inventory," *Production and Operations Management*, vol. 21, April 2012, 1102-1113.

Guillaume Roels, Uday Karmarkar, and Scott Carr, "Contracting for Collaborative Services," *Management Science*, 56:5, May 2010, 849-863.

Ram Bala and Scott Carr, "Usage-based Pricing of Software Services," *Journal of Revenue and Pricing Management*, 9:3, 2010, 204-216.

Ram Bala and Scott Carr, "Pricing Software Upgrades: The Role of Product Improvement and User Costs," *Production and Operations Management*, September-October 2009, 560-580.

Scott Carr, Uday Karmarkar, and Deming Zhou, "Competition in Multi-Echelon Distributive Supply Chains," under revision for *Manufacturing and Service Operations Management*.

Scott Carr and Uday Karmarkar, "Competition in Multi-Echelon Assembly Supply Chains," *Management Science,* vol. 51, January 2005, 45-59

Scott Carr, "Online Auctions with Costly Bid Evaluation," *Management Science* (special issue on e-Business) vol. 49, November 2005, 1521-1528

Dissertation Advisor for Ram Bala, PhD (faculty, Santa Clara University), Dissertation title: *Pricing and Contracting Strategies for Software Products and Services,* 2004

Scott Carr and William Lovejoy, "Choosing an Optimal Demand Portfolio for Capacitated Resources," *Management Science*, vol. 46, July 2000, 912-927

Scott Carr and Izak Duenyas, "Optimal Admission Control and Sequencing in a Make-to-Stock/Make-to-Order Production System," *Operations Research*, vol. 48, Sept.-Oct. 2000, 709-719

Scott Carr, *Essays on the Allocation of Scarce Capacity Among Multiple Market Segments*, PhD dissertation.

Other Relevant Experience
Automotive Supply Chain and Manufacturing – Libbey-Owens-Ford (1995–1998)

- Consulting and research related to contracting and demand management, information systems, data-mining, production planning and scheduling, demand forecasting, and materials management

Legal – Case management and expert-witness preparation (1995–1998)

- Researched case and administrative law on employers' and owners' safety responsibilities in multi-employer construction jobsites
- Developed case theories and strategies, wrote briefing materials, and engaged in trial preparation

Finance – Traded and managed portfolios of foreign exchange and Treasury bond options (1986–1991)

- Member of Chicago Board of Trade
- Member of Chicago Mercantile Exchange

Information Technology – Computer Associates, Chicago Illinois (1991–1992)

- Mainframe software systems (datacenter management, security, database management, finance and production applications)

Exhibit 2

House Bill No. 191 Legislative History

TENNESSEE GENERAL ASSEMBLY

House Finance Ways & Means Subcommittee, March 13, 2013

Chairman Michael Harrison: Okay we'll take item 39, House Bill 191 out of order. Leader McCormick you're recognized.

Representative Gerald McCormick: Thank you Mr. Chairman. House Bill 191 is an administration bill in cooperation with the TRA. It has several components but basically it realigns the TRA's funding mechanism which will result in over $1 Million in fee reductions passed down to utilities and hopefully to the consumers too. It also enables the adoption of best practices for more efficient rate reviews which means we're going to bring in and see...

Chairman Michael Harrison: Bill's been moved and properly seconded. Do we have questions on the bill? Chairman Sargent, you're recognized.

Representative Charles Sargent: thank you Mr. Chairman. Leader McCormick, let me, I have two questions I'd like to ask and I think you probably know what they are. One of these, we're going to do an annual rate review and normally we did a review after 4 or 5 years and they had a full blown hearing. When we do this will there actually be a review or is it just going to be that they ask for a half percent or a ¾ percent of an increase is that going to be automatic or will they actually have an annual review and see why they need that increase?

Representative Gerald McCormick: That's a good question. What they're going to do, as you know in the past, they'd wait several years, 3 to 5 years and longer sometimes and then go in and have a full blown case where a lot of lawyers were hired and a lot of fights and negotiating positions and that type thing. What this does is gives the TRA the ability to really on a constant basis keep an eye on these companies and give them some rate, usually increases I suspect, based on some expenses that they really don't have any control over. It'll be more of, I'd say, a CPA driven process rather than a legal driven process but with the clear understanding that it could turn into a legal process if the system breaks down. So, it has the safeguards of the old system but some efficiencies in the new system.

Representative Charles Sargent: You feel doing it like this, the consumers are still going to be protected and have all the protections they had before?

Representative Gerald McCormick: I do feel like it and I had some questions myself. I'm carrying the legislation but I think we need to ask tough questions about legislation that we carry not just other people's legislation and something that keeps cropping up that reassures me is that the Commission will have the ability and as the words are written to act in the public interest. Which is vaguely defined which I think gives them a lot of authority to go in if the system is being abused to step in and change things if they need to in the public interest.

Representative Charles Sargent: Chairman, thank you for that. For those, I just wanted to make sure that we had that on the record. The other question I have is under Section 5. Section 5 as you know where natural gas companies would be able to set up, and there's been a lot of talk about this, set up their own substation or sell natural gas for cars and trucks. Is that, do you see that as the intent of the legislation?

Representative Gerald McCormick: You know Chairman, this is one that just came up yesterday and I hate to make this last any longer but I don't want to give you the wrong answer. If I have the Committee's permission I'd like to call up possibly Chairman Allison to address that question, if that's okay with the Chairman too and both Chairmen.

Chairman Michael Harrison: Without objection we're out of session. If you would, come forward and state your name for the record.

Jim Allison: I'm Jim Allison, I'm the Chairman of the Tennessee Regulatory Authority. The answer to your question is what it deals with is a procedural change in how we will go about looking at those rates. It does not guarantee recovery, it does not say that there will be any cross- subsidization of the fuel, motor fuel dispenser by residential consumers or anything of that nature but the alternative rate making procedures, all of them, are permissive and it would require that finding that the public interest, like the Leader stated.

Chairman Michael Harrison: You're recognized.

Representative Charles Sargent: Thank you Mr. Chairman. My question is, is it the intent of natural gas companies to go into set up, I'll say natural gas stations through-out the state and have the rate payers paying for that infrastructure and not as a commercial entity? Is there, I want to make sure we don't have rate payers paying for infrastructure where we have commercial entities out there that have to basically pay for their own infrastructure.

Jim Allison: There is no intent in this legislation to allow any other class of consumers to subsidize the facilities that would go into providing natural gas as a motor fuel.

Representative Charles Sargent: And is also your understanding that natural gas companies do not intend to set up stations throughout the state? And they're going to lead back to the retailers of the Mapcos and the Exxons and the Shell stations of the world to do that?

Jim Allison: I can't really address what the intentions of the natural gas companies are but as the Regulatory Authority we will assure there is no cross-subsidization going on as we implement the various rates.

Representative Charles Sargent: Okay. Thank you. Thank you Mr. Chairman.

Chairman Michael Harrison: Representative Armstrong, you're recognized.

Representative Joe Armstrong: Thank you Mr. Chairman and Chairman Sargent brings up a very interesting question as it relates to, you know, natural gas vehicles and of course, realizing that natural gas is becoming the transportation fuel. Certainly I didn't know if the agency had looked at the conversion from petroleum based fuel to natural gas and setting up the rules and regulations along that line. Even if you look at the available information that's out there, all our utilities, they're converting the coal fired plants, the TVA's just converted to natural gas at some of their largest, some of their largest facilities over to natural gas and then with all of the reports about how much natural gas is available in this country with all the finings (?) or the shale gas and the fracking and all of this, have we looked at a comprehensive study of Tennessee looking at the use of natural gas and also as a transportation fuel? Because I think the last statistic that I saw that natural gas on a BTU level would cost about $1.29 per gallon if we switched over from gas that's costing what $4.40 a gallon now. Has this agency looked at going in that direction for natural gas fueling and for providing those infrastructures?

Jim Allison: There's a lot of talk nationally about, not only natural gas, but other alternative fuels. For example, I drove up here from Shelbyville in an electric car yesterday. So, it's an emerging part of the technology of our country. At the TRA we have had some limited experience with natural gas as a motor fuel, we do have at least one and I think perhaps 2 natural gas companies that have established refueling stations. They are not on the side of the interstate where everybody knows where they are but they are for people who have limited natural gas vehicles already and we've established tariffs for those dispensing facilities already so we have looked at it in a limited sense but I would have to say in a comprehensive sense we have not had a formal study like you're suggesting.

Representative Joe Armstrong: And when you mention tariffs, we know we've got taxes on our fuel to pay for road costs but when it comes to electric vehicles, when it comes to natural gas vehicles, there's no money being collected for the infrastructure and I'm kind of following along with the Chairman was talking about. Certainly we can even get into how other states actually distribute gas to not only commercial but to residential, you know, in Georgia an individual gets to choose which company, which market they buy gas from and the utility is only the deliverer of that. In Tennessee we've got a different type of structure and I didn't know if you were looking at that, where the utility only charges you for the transportation but you pay a commodity price from someone else. And Texas has a totally deregulating both electric and natural gas. Are we looking at some of these because there's a significant difference in natural gas prices to consumers in Georgia is a big difference than what we pay here in Tennessee. In Tennessee we pay different rates in between different consumers. The only ones subject to any type of hedge, whether it's low or high, are the private companies but certainly those utilities out here that are making money off the commodity price, have we looked at basically talking to them and saying, hey, put in your infrastructure cost and let the consumer have a choice and let the businesses have a choice where they buy their natural gas?

Jim Allison: There is some of that going on in the natural gas industry all, already in Tennessee. For example, we have a number of large users of natural gas that buy directly from alternative sources and then use the local distribution company just for a delivery mechanism so there are situations in place in Tennessee where that's occurring as well. It hasn't been penetrated to the individual homeowner level. I used to work in Georgia it's got its plusses and minuses, to deal with that. It becomes a very complex arena but it hasn't penetrated down to the individual level here in Tennessee yet but we do have a number of large consumers who already do just that.

Representative Joe Armstrong: Okay, but your experience in Georgia, certainly, I think it would benefit the residential consumers to look at that option and see if it would be some savings on that residential user. And I didn't know if you had plans within the TRA to look at things of that nature.

Jim Allison: We don't have anything specifically planned but we'll certainly talk about it after the discussion today.

Chairman Michael Harrison: Any further questions for the Chairman? Seeing none. Thank you for being with us today. Without objection, we're back in session. Leader McCormick?

Representative Gerald McCormick: I renew my motion Mr. Chairman.

Chairman Michael Harrison: Any further questions. Seeing none. Is there objections to questions? Hearing none, all in favor of moving house bill 191 to full finance, say aye, those opposed. Bill moves out.

TENNESSEE GENERAL ASSEMBLY

House Business and Utilities Sub Committee, March 6, 2013

Chairman Pat Marsh: Alright, we'll go to item number seven, House Bill 191. Leader McCormick, you're recognized.

Representative Gerald McCormick: thank you Mr. Chairman and I thought I'd come up here because we'll probably need to call on a couple of folks to come up here and give their opinions on the Bill, of course, with the permission of the Committee. This is the TRA Bill that's brought really jointly by the Administration and the TRA and it does several things and if I could, I'll go over the basic outline of it and focus in on one section that I think will have the most discussion on but I think this is the place to have the discussion. There are basically 5 sections that make changes, Section 1 would say that the TRA Directors are eligible for state employee health insurance benefits and those type things. That was the original intention and this makes that more clear. The second Section also clarifies some, there's actually some ambiguity relative to the conflict of interest prohibitions for the Directors, this does not make it easier, it just makes it clearer what they can and can't do and it's clean up language. Section 3 talks about implementing optional cost based services at the request of the utility and cover the cost for doing so. Again, that's not a huge change. Section 4 will realign the fee structure basically to reflect who is being regulated and let them pay the fees rather than have companies that are not being regulated, any or very much, and reduce their fees. This will also result in a savings of a little over a million dollars a year in the budget, which the TRA has worked very hard to make sure they could meet that and hopefully save rate payers over a million dollars a year in the process. Now, Section 5 is the section that I'm sure that our folks here will a want to focus in on and what this does, it creates a new section authorizing the implementation of alternative regulatory methods for utility rate reviews and cost recovery. And this is in lieu of the current process where they have general rate cases every few years. Sometimes they settle them, sometimes they hire lots of lawyers and spend lots of money and take a lot of time and we read a lot about it in the newspaper and they have very contentious issues. Basically, what they are wanting to do in this is have more of an annual review and rather than having those big rate cases. Now, it won't keep us from having rate cases, we can still have them, but hopefully, we'll have less of them. In my opinion, I think a good way to say it is, is we're bringing in CPAs to review it more regularly and probably not using lawyers as much to have big rate review cases.

Chairman Pat Marsh: We have a motion on the Bill, do I hear a second? We have a motion and second. And we do have an amendment on it; do you want to talk about it?

Representative Gerald McCormick: I believe that's what I just explained, was the amendment.

Chairman Pat Marsh: Ok, alright do we have a motion on the amendment? We have a motion and second on the amendment. Does anybody have any questions on the amendment? Representative Pody?

Representative Mark Pody: Uh, yes, I've got one. Where it says it's going to empower the TRA to make these rules, are these rules come before Gov Ops? Who oversees the rules that they're making to make sure, who check them?

Representative Gerald McCormick: I think all rules have to come through Gov Ops at some point for review.

Representative Mark Pody: Even the TRA, so these rules will come? Okay.

Representative Gerald McCormick: Yes, they'll come through and I'll let them, if that's not correct they'll get a chance in a second. That is correct. And Mr. Chairman, I think it's only fair, we have had some objections to the Bill, especially for that last Section, from the Attorney General's office and with your permission I'd like to have them come up and state their case and then hopefully have the TRA Directors come up and state theirs.

Chairman Pat Marsh: We want to go ahead; do we have any more questions on the amendment? If not, I think we're going to go ahead and vote the amendment. Without objection, we'll go ahead and vote on the amendment. All in favor say aye, opposed? And that is amendment number 3640. The amendment passes, now we're back on the Bill. I think if it's okay with you Leader we'll go out of recess and hear from whoever you want to bring up or however you want to work it. We want to hear from the Attorney General? Is anybody here from the Attorney General's Office? Would you all like to come up and let us hear from you please? If you wouldn't mind stating your name and your position and then we'll hear your testimony. Turn your microphone on please sir.

Vance Broemel: My name's Vance Broemel, I'm with the Consumer Advocate and Protection Division of the Office of the Attorney General and with me here today is Ryan McGehee who is also from the Consumer Advocate and Protection Division and under the statute that created us we have the duty and authority to have cases at the Tennessee Regulatory Authority and also to participate in legislative and judicial proceedings and that's why we're here today here on this House Bill 191 and in particular, Section 5. As Leader McCormick pointed out there are numerous sections here. We are not speaking on the inspection fee portion of the Bill which has to do with fees paid by regulated companies, they're going down for some and up for others but we're not speaking on that. We simply note that those fees whatever they are can be recovered by the companies by rate payers. We're here today to speak on Section 5 which changes greatly the way rates will be set in Tennessee if it's passed. What this does, in our opinion, is make it more likely that rates will increase for businesses and households who are customers of regulated companies. And the reason for this is that this Bill greatly reduces the risk that the regulated companies/utilities, gas and water in particular, will have as businesses because they'll be allowed to recover, virtually immediately, their expenses in capital investments. Now heretofore, as was pointed out by Leader McCormick we had rate cases and in that you have a general hearing, you consider all the expenses, all the capital investments of a company and then you project going forward what they think their expenses will be for the coming year and a rate is set on that with the addition that any investment that the company has made they get to recover a rate of return on that. And this is similar to any business. If you have a start-up company and it's difficult to attract capital you would want a high rate of return. Similarly, if you had a safe investment in bonds or a CD the rate of return would be less. What the TRA does is look at the company and decide what level of risk does it have and then that's expressed as a percentage, usually, let say just take a round figure, a utility could get a rate of return of 10%, that means that on all their investments, if they have $50 million in investments, they get their projected expenses plus a rate of return on that $50 million and each side presents testimony, our group has accountants that we have, now they are contract accountants and they present testimony, the TRA has a hearing and then decides the case, sets the rates. What this Bill does, is it takes the last rate case and that's still in effect, that's still there but in addition it allows companies to come and say we want recovery for this expense, we had some new project or whatever, well in traditional rate cases all those things are suppose to be figured into their projected rates and they're covered in the rates. Here what we're afraid of is that the risk, since the company is recovering these expenses virtually immediately, the risk should go down but there's nothing in the Bill to reflect that decrease or decline in risk. Therefore, we think rates will be unnecessarily high for consumers. We would point out that the TRA has full authority to do this without this Bill. They have set what's called alternative rate making mechanisms in the past, they could do this today and we think it would be better to do that because then you'd have input from concerned persons. You would have more flexibility and it wouldn't necessarily be the Legislature's framework, it would be the TRA, who, that's their responsibility to set rates and they have expertise to say how this should be done. We think it would be better in that kind of hearing. We would also point out, and I know this is fairly complicated, this Office did send a letter with a memo attached and we hope you all have it and if not we'd be glad to get it to you and the idea is that we are concerned about this potential increase in rates and we would also point out that by and large, the utilities of Tennessee, particularly the larger ones are doing very well financially. If you look at their stock prices from 2008 to the present in some cases it's virtually doubled and so they're not under financial stress, there's no idea in the Bill that that is the reason it is being done. Our concern, another one of our major concerns is not only will this likely increase rates but the way rate cases work, once this rate is set and you have a rate of return on it, if the company can become more efficient they get the benefit of the savings. In other words if you set a rate and the customer is charged say $50 a month and the company gets real efficient and can do things for, you know, it costs them less than they projected, they get that savings. Under this system where they just simply submit a Bill and say we want reimbursement, we think they'll lose that efficiency. So in summary, that's our concern that this is a really big shift in the way rates are set. I know there's been some concern about rate case expense we agree that that can be a problem. We think that can be addressed at the TRA. I would point out that we've had three major cases with Tennessee American Water, Atmos, and Piedmont in the last few years. We've settled them. There were no hearings. The expenses were rather minimal. The expenses come when there's problems in discovery as we call it, it's kind of a legal term, we try to get information from the company. But that, we're very aware of that, we're very conscious of it and we do try to hold the expenses down. So, if there are any questions, we'd be glad to entertain them. Either myself or Mr. McGehee. That concludes our remarks.

Chairman Pat Marsh: Okay. Mr. Broemel, in your testimony I thought you just said that they can currently do this now?

Vance Broemel: Yes.

Chairman Pat Marsh: If they can do it now, why do you object to them doing it in the Bill?

Vance Broemel: Well, because we think that it would be more input from more concerned parties and there could be more flexibility. In the Bill itself, it states that they can develop rules and procedures. We think it would be better to do that all at the same time. in the past, there was a Bill here about something called decoupling where the idea was that if consumers conserve there was concern that the companies would not be making their projected rate of return, the Legislature made a general policy statement about the TRA should hear cases where the companies can present this concern with conservation and then they will make a determination and they did that and they developed a system to cover those cases. So in other words until you really have a full case with all the implications, we think it is not a wise idea to set this kind of framework as it were in a vacuum. It would be better to have them do it when there's much more to consider.

Ryan McGehee: If I may, if you lock in the specific mechanisms that you have here now, with the guaranteeing the return on equity along those, the procedures that encompass that, it makes it difficult for the TRA and our office to present safeguards for consumers, to prevent over-earning, to adjust the return on equity because the risk is being shifted to the customers. Here you're locking them in under the old system when they were slightly more riskier. Here we're moving to a system where you are shifting the risk and there should be an adjustment there, the return on equity. We actually had a company on the record agree with us in the past case that these things do shift risk but this Bill does address that and does not allow for that flexibility. Another aspect of this, of the Bill, is that it does not have a rate cap which previous legislation, in 2009, legislation or this Committee or the Commerce Committee chose to put a summer study. There was a rate cap in there but there's not one here so there are some things that are locked-in that are going to limit flexibility in the future.

Chairman Pat Marsh: I believe we have a question from Representative Curtiss?

Representative Charles Curtiss: Thank you Mr. Chairman. Toward the end of your statement you made the, I believe I heard this correctly, that in estimating what their expenses are going to be they could end up overestimating what their expense is going to be and if they were to conserve and had a savings they would keep that, retain that profit.

Vance Broemel: Right.

Representative Charles Curtiss: Then I understood that correctly. Is there anything that you can think of, we're giving through the rule making authority; the TRA is going to have to go through rule making procedures. Is there anything in this statute that's being proposed that would prevent them through rule making to recapture that money?

Vance Broemel: I don't, it's ah, I suppose they could try it but it, there's nothing in the statute that allows them to do that and we just don't know how that would work.

Representative Charles Curtiss: I'll just ask that question when they're presenting.

Chairman Pat Marsh: Leader McCormick.

Representative Gerald McCormick: Thank you Mr. Chairman and I've got a couple of questions. Did y'all say that the TRA could do this without legislation? They could basically implement this program right now? Or just that Section?

Vance Broemel: A large part, Section 5, in the past they have done extensive regulation in I believe it was the early 90s with phone companies going to what we would call an alternative form of rate making where they allowed them to have a projected rate of return and if they were over earning then they would have a review of that and recapture it. They did that all without legislation, yes.

Representative Gerald McCormick: Okay.

Ryan McGehee: There are a number of items they've already done as well like the commodity cost of gas is passed on to consumers, rates are adjusted annually for gas companies based on the weather, you know if you have a mild winter the rates go up if you have a very cold winter the rates can go down. There are already a number of pass-throughs already in effect and that's all without legislative authority. Specific, ...

Representative Gerald McCormick: And I'll ask the same question when the TRA folks get up but if they can go ahead and implement this without legislation I'd rather get 3 votes than 50 so we'll see what the TRA folks say about that. I know in Section c of 5 it says, talking about recovery operational expenses, capital cost or both associated with the investment in other programs including the rate of return approved by the Authority at the public utility's most recent general rate case, now could I take that to mean that if, let's say that the water company's electric rates go up because TVA raises them and the power board raises them in return, and they have to pay an extra $10,000 you know, in their Bill next year, are you saying that they'll be able to charge $11,000 if they get a 10% rate of return on a simple Bill, a simple expense like that? Or is it just things that have to do with capital improvements.

Vance Broemel: Yeah, I think it would be capital improvements and they would get a recovery of that increase, perhaps, depending on the circumstances and that's one of our concerns. When you have a rate case you take into consideration all the expenses.

Here they're singling out one that went up but see they may have gotten more efficient with their labor cost and that's gone down but there's no provision in this Bill to look at what went down. It's only what goes up and that's our concern. In a rate case you look at all expenses, some go up, some go down, you come to a global understanding but here, that's a good example. Say if electric went up they could come in with a high electric Bill and say we need to raise rates but they wouldn't be telling you that they've got a new computer system or smart meters that read meters more efficiently and they don't need as many people doing that and there's no off-set. So that's the very kind of thing we're very concerned with. About just looking at what goes up.

Representative Gerald McCormick: Would the TRA not be able to take that into account? Or would they be legally prohibited from taking that into account?

Vance Broemel: Well, there's nothing in the Bill, it just talks about you're authorized to get this expense. And in fact, it just says you look at the rate of the last rate case, there's nothing about other expenses. That's another concern, when you quoted the last rate case, we all know that capital markets can change. Some of these companies haven't been in for years and years, they might have a rate of return of say 12% and the TRA is prohibited from adjusting that and so you need, this Bill says you look at what happened at the last rate case and as we all know with the economy you need much more current financial data. And that's another concern of ours.

Representative Gerald McCormick: Okay so you're saying if a company had a good rate case 5 or 6 years ago they might never want a rate case.

Vance Broemel: Right.

Representative Gerald McCormick: But I suppose you guys could initiate a rate case, couldn't you?

Vance Broemel: We have in the past, I mean it's getting into kind of history I suppose, but we did it once with Atmos, it was expensive and very contentious, if I can use that word in the sense that they were over earning some $5 or $6 million a year. We did do that and brought it in and did reduce their rates so we do have that power at the current time but with this annual rate review and these trackers, it's to me, very unclear whether we'll be able to do that in the future.

Ryan McGehee: and Leader McCormick another big concern here is that not every company can decide to do annual rate review. They can cherry pick with a specific tracker and the rest of their rates would not be looked at, it would just be those expenses that flow into that tracker and the return that's guaranteed on that.

Representative Gerald McCormick: But you could still initiate a rate review but you're saying it would be very expensive and very…

Vance Broemel: Well, and it would really be a cross-purpose with this Bill. I think the company's would complain that they've chosen an annual rate review and these trackers and they don't need to have a rate case and I, you know, I guess it just would be up in the air what would happen. We would probably ask for one but whether we would get it, I'll point out with the Atmos case, our initial request that those rates be reduced was dismissed and we had to come back again so if anybody knows the law you can make an argument, whether the agency will accept it, I don't know.

Representative Gerald McCormick: Okay. I would certainly want to have the legislative intent that a company couldn't take advantage, well for instance we had a long period of low interest rates and cheap capital and if somebody's hanging on to 14% rate of return from ten years ago, that's something we'd need to guard against and make sure in the legislative intent and if this were to pass we would want to do that. One other question is the rate cap you're talking about, what would be a reasonable rate cap as far as annual increases go, do you think? And again, put it in the law.

Ryan McGehee: I would like to see or at least I would, this is me speaking, I haven't discussed this with General Cooper specifically, you know, a rate cap not only on the annual rate review but also on the trackers themselves and you know I think just off the top of my head, a 3% cap would be good.

Representative Gerald McCormick: Well, you're not old enough to remember the 70s but if you'd done that in 1974 you could have wiped out some of these, even being monopolies, you could have wiped them out based on that.

Ryan McGehee: I know a lot of people speculate that we're heading back that way but you know we're not in that kind of inflationary period just yet.

Representative Gerald McCormick: It's coming. Thank you Mr. Chairman.

Chairman Pat Marsh: Representative Pody.

Representative Mark Pody: Thank you Mr. Chairman. I want to go back to the TRA. I thought if somebody came for a rate increase the TRA had the right to look at their entire budget, their entire profit/loss, they're not going to just look at one section so I'm not following where this would happen. If they had a profit in one area because they recouped that money, the next time they came for a rate increase that would be taken into account. Is that not correct?

Vance Broemel: That's correct under the current situation; under a rate case but this Bill changes that entirely. It, for 2 or 3 pages, it goes on and on about all, you can recover for a singled out expense, it will not look at its total expense, no.

Representative Mark Pody: So if this goes though the TRA would not have that authority?

Vance Broemel: No. I mean, whether they have the, under this Bill they wouldn't. We were speaking to Leader McCormick I suppose we could ask for an entirely new rate case but the intent of this Bill is to avoid or not have rate cases which means you would not be looking at their entire expenses.

Ryan McGehee: And there are several mechanisms under the Bill, not just annual rate review that would allow the company to cherry pick where you don't look at the other operations and revenues.

Representative Mark Pody: Thank you.

Vance Broemel: I'd just like to point out that this Office is very concerned about investments in Tennessee and to the best of my recollection we've never opposed a capital project to put in pipes, valves, whatever, particularly with a water company in Chattanooga, so it's not that we want to cut down on recovery of capital expenses we just want to do it in a way that we think is fair to all parties.

Chairman Pat Marsh: Okay. Do we have any other questions? If not, we will let you all go back and ask the other side to come up and give their side. Is it going to be you Mr. Allison? And Tim?

Jim Allison: I'm Jim Allison, I'm the Chairman of the Tennessee Regulatory Authority and with me today are Jean Stone, our General Counsel and Ed Taylor, our Executive Director. I'll make some comments and we'll do our best to answer any comments you may have. This Bill basically does 2 things. The first thing it does is reduce the regulatory burden on the utility companies in the state of Tennessee by about $1.1 million a year by reducing our regulatory fees. The second primary piece of the Bill is what was just discussed, the alternative regulation. I want to make it clear to the Committee that this is not new stuff. Georgia, South Carolina, Mississippi, Alabama, Virginia and a whole host of other states across this country have already done a number of these things. It's procedural in nature. It does not substantively change what the TRA can do or cannot do. Now the Attorney General's office is focused in a very narrow sense of what the Bill says on the rate of return. What they've missed is that before the Regulatory Authority will allow a company to enter into one of these alternative rate making processes is that we have to go through a process to establish and conclude that going into one of these alternative methods is in the public interest. In doing that, we will look at a whole variety of things, including the rate of return. Now, there's another piece of the alternative field that will permit company's and it's all permissive, none of the company's have to do any of this and the TRA does not have to accept any of this, we have to agree that it's in the public interest before we enter into any of these alternative methods. But another piece of the Bill would require, if a company opts into it, is annual rate, an annual rate filings. By making an annual rate filing, it will keep up more up to date on the cost, the returns, the expenses of all of these companies so that when we're dealing with the rate of return issue that was brought up earlier we're not going to being a apposition of not having looked at it for 5 or 6 or 8 years, in fact, the law requires them to have a general rate case in the last 5 years to enter into this rate review, so we'll be looking at their rates every year if they opt into this annual rate review. If their rate of review gets out of kilter with the current market conditions then the Authority can, and we have in the past, brought proceedings to open up the entire rate spectrum and we can do that here even if they go into this. As far as the trackers are concerned, again these are in wide use around the country, it's an effort to streamline the regulatory process, the example that was used here earlier was a good one. If a water company uses a lot of power to pump their water, has a major rate increase from TVA, why open up every piece of their rates just to look at that? Now, again we would have to certify that it's in the public interest before we do that, but why not have a proceeding that would allow you to just look at that one piece. You may have just had a general rate increase last year, again we can stay on top of that on a regular basis by this annual review and we will look at that. We've got a staff that will be looking at that on a regular basis. If the rate of return gets out of kilter we can open up a rate case to look at the rate of return. There's nothing in here that prohibits us from doing that and we will continue to do that just like we've done in the past. I'm going to kind of shut-up and try to answer any questions you have but the bottom line is that the Authority has looked at this we're very comfortable that we can continue to carry out our responsibilities with this Bill as it's written. Again, it's permissive, both on the part of the utility system to opt into it and it's permissive on our part to allow them to opt into it because we have to certify that it's in the public interest.

Chairman Pat Marsh: Thank you very much. I have a question, when I heard about some of the parts of this Bill I understood that this change should help do away with a lot of legal expenses on both sides by bringing up a host of lawyers to argue and all that savings, as I understand it will go back to the rate payers? Is that correct?

Jim Allison: That's correct. The intent of this Bill is to make the process more accounting driven, analyst driven more than it is attorney driven. Again, I know there's a lot of attorneys in the Legislature so I don't want to say too much bad about attorneys but, I've been on both sides of rate cases now. I've spent my career working in the utility district, I've testified before regulatory agencies in 6 states. I know how frustrating it is to write those million dollar checks to the law firms and I also know how frustrating it is on the part of the regulator for us to have to say, okay, it's okay for you to go recover that million dollar check that you wrote to the law firm from your rate payers and what we're interested in doing is trying to make government more efficient, more streamlined and we're prepared to do everything we can at the Tennessee Regulatory Authority to make that happen and we think this Bill moves us in that direction.

Chairman Pat Marsh: I have one other question that might be a little off. I was asked to ask this by the Fuel and Convenience Store Association, is it the intent of this legislation to permit regulated, natural gas companies to subsidize their retail or wholesale alternative motor vehicle transportation fuel operations with rate payer funds?

Jim Allison: The answer to that is no. The Bill, again, is procedural in nature, there's no substantive change to policy to the State of Tennessee other than the fact that it will hopefully streamline the regulatory process.

Chairman Pat Marsh: Thank you. Leader McCormick.

Representative Gerald McCormick: Thank you Mr. Chairman and I need to ask some questions. I'm the sponsor of the Bill and I support the Bill but also have an obligation, well not only to the rate payers of my area but to the members of my caucus and the General Assembly so I want to ask a couple of questions along those lines. You talked a minute ago, let's say about Chattanooga, the water company had a bigger electric Bill and it went up and you can look at the line item and see where it went up, would that be considered an operational expense?

Jim Allison: That is an operational expense, yes sir.

Representative Gerald McCormick: Well the law says that any operational expenses can be recovered plus the rate of return so if they're going to make it 10% or 12% profit on paying their water Bill? That's what I'm reading here.

Jim Allison: No sir. The rate of return is on invested capital. It's intended to cover for the cost of the capital, is the way we apply it to a rate case so if there is a capital component to that and I don't specifically what section you're looking at but it involves operating expenses as well as capital expenditure but the rate of return is on capital expenses not operating expenses.

Representative Gerald McCormick: Well I better read it to you then, it's in Sections 5 c and it says the Authority shall grant recovery and shall authorize a separate recovery mechanism or adjust rates to recovery operational expenses, capital costs, or both, association with the investment of other programs. So maybe that's how you get out of just paying the Bill, but certainly if I were the company I would say that my light Bill is associated investment and other programs including the rate of return approved by the Authority at the public utility's most recent rate case. Maybe we need to get somebody from the industry to come up here and say that if your light Bill goes up by $10,000 are you going to give us a Bill for $11,000 and let the rate payers pay for it, that's the real question.

Jim Allison: If you want the industry to address it you're welcome but it's well settled in rate case methodology that the rate of return is applied only to capital expenditures and it involves both debt as well as equity return so you have both elements of the return in there.

Representative Gerald McCormick: It may be well settled but we're changing it with this right here from the way I'm reading it, but I'm not a lawyer we may need to go to the senate and find some lawyers to come over here but I mean that's what it says so I think we probably need to find out if it says what it means or if it means something else but it specifically says recover operational expenses including the rate of return approved by the Authority of a public utility's most recent general rate case so I'll ask some of the people that are with some of these companies maybe after the meeting if they can give me some feedback.

Jim Allison: Well our attorney is here with us, she can address it more detailed if you wish too but the rate of return is intended to apply to the capital cost piece of that paragraph. It says to recover operational expenses capital cost or both including the rate of return approved by the Authority at the public utility's most recent general rate case pursuant to, that rate of return would apply only to the capital investment not the operation expenses.

Representative Gerald McCormick: Okay. Thank you very much.

Chairman Pat Marsh: Representative Curtis.

Representative Charles Curtiss: Thank you Mr. Chairman. You heard the question I asked the Attorney General's office, they made the comment that an entity before the TRA on a rate review case they would say they were going to do some capital expenditures, there's going to be X amount of dollars and the rate was based upon that but through efficiencies they brought in way under the budget uh, you would have the ability to still look at that, that they calculated that incorrectly? I mean without that ability the incentive would be to always overestimate your expenditures to have a higher rate and reap the profits.

Jim Allison: Not only will we still have the opportunity we'll have an enhanced opportunity with the annual rate filing. Otherwise in the current situation we may look at it every three, four, five, six years now all of our utilities except 1 have been in within a fairly recent period of time for a general rate case so we don't have anybody out there that's gone 20 years without a general rate case or anything like that but this Bill would give us an enhanced opportunity to look at those expenses.

Representative Charles Curtiss: Right. The other thing that occurred to me while they were testifying, you're not preventing the Attorney General's office to ask questions about a rate setting or something of that nature? They're still going to have the ability to bring something to your attention, am I correct?

Jim Allison: That's correct and at any time and we focused earlier on some comments on the rate of return, anytime they feel like a company's rate of return is excessive they are certainly permitted by statute to file a petition requesting us to look at that and we have historically have always accepted those.

Representative Charles Curtiss: Thank you sir. I think the fact there's a little bit, it seems like it's vague, the Bill, in places but the fact that you're going to have rule making authority, that's not preventing you from being able to address all these areas that are not spelled out.

Jim Allison: That's correct sir.

Representative Charles Curtiss: Thank you.

Chairman Pat Marsh: Representative Hill.

Representative Hill: Thank you Mr. Chairman and of course Mr. Chairman thank you so much for being here and I appreciate the intent of the legislation. Just a couple of quick questions, you said earlier in your statement, you said that this is really conforming into what other states are doing? And that, you know I think some of the questions on, I believe it's Section 5 of the legislation, do other states do that as well? As it sits?

Jim Allison: Yes, they, and I don't have the exact number but it's a long list of states that have entered into some of these alternative rate making and the Attorney General quoted our last audit report in theirs with some comments. If you read the entire paragraph it will say in there that this is clearly a national trend to move in this direction.

Representative Hill: Okay. Thank you so much.

Chairman Pat Marsh: Representative Pody.

Representative Mark Pody: Two questions. One, what would you say is a good rate of return right now that would be approved?

Jim Allison: The overall rate of return will reflect both the cost of debt as well as the cost of equity. The debt cost right now are fairly low, we've seen some rate cases and I'm going to look to staff to correct me if I misspeak here, where the overall rate of return in around 6-7% but the debt component of that is on the low end of that, the equity number's up on the higher end of that. It's set in an individual case depending on the riskiness of it. We've got some utilities that are well established with relatively low equity numbers, return numbers. We've got others that are fairly risky propositions. We've got one that just bought a company out of bankruptcy and it's a pretty risky proposition and has a higher equity rate of return than the others.

Representative Mark Pody: Ok and my last question, you said that most of the utilities are fairly current in their, you've audited and such, what's the one that's oldest? What's the longest one out there?

Jim Allison: Again, I'm going to ask the staff to correct me if I misspeak but I believe it's Kingsport Power, the electric utility we regulate up in upper East Tennessee and I believe they are somewhere around 8 or 9 years out.

Jean Stone: I believe they are more like 18 or 19 years at this point but they're rates are extremely low in comparison with other electric rates in that area.

Chairman Pat Marsh: Do we have any other questions while we're out of session? Leader McCormick.

Representative Gerald McCormick: Thank you Mr. Chairman and one more and you may have answered this and I was in a sidebar conversation but my question is in Section 5 can the TRA, do you have the authority to this without a vote of the Legislature? To make these changes?

Jim Allison: We have instituted some trackers in some fairly limited situation and again I'll defer to our attorney to comment on the legalities of it, but we feel like it's prudent to clarify the nature of these and get legislative authorization before we go further with it and that's the reason we're supporting the Bill. We think it clarifies it and resolves any questions about whether or not instituting some of these trackers is appropriate or not but I would invite Ms. Stone to comment on the legality piece of it.

Jean Stone: I think that's absolutely correct and I will just add that rate setting is traditionally a legislative function and so it is entirely appropriate in my opinion to come to the Legislature to ask you all to set the policy and the perimeters for rate setting including alternative methods.

Representative Gerald McCormick: Thank you.

Chairman Pat Marsh: Do we have any other questions while we're out of session? If not, we'll go back in session. Thank you all for coming up. Representative Towne's we're glad to see you come in today. Welcome. We're back on the Bill do we have any other discussions on the Bill? If not, are we ready to vote on the Bill? All in favor please say aye, opposed? Aye's have it. This Bill moves out to Finance Ways and Means.

WASHINGTON, DC

DISTRICT OF COLUMBIA: SS

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and Country aforesaid, personally came and appeared Scott M. Carr, being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of the Tennessee Fuel and Convenience Store Association before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his testimony would set forth in the annexed transcript.

Scott M. Carr

Sworn to and subscribed before me
this 5th day of December 2014.

Janet P. Cashion

Janet P. Cashion
Notary Public, D.C.
My Commission Expires July 14, 2017

JANET P. CASHION
NOTARY PUBLIC
MY COMMISSION EXPIRES 7/14/2017
DISTRICT OF COLUMBIA