Exhibit No. ___ (WBT-1)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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Maritimes & Northeast Pipeline, L.L.C.	§	Docket No. RP04-___-000
	§	

PREPARED DIRECT TESTIMONY
OF
DR. WILLIAM B. TYE
ON BEHALF OF
MARITIMES & NORTHEAST PIPELINE, L.L.C.

Q.1 Please state your name, business address, and affiliation.

A. My name is William B. Tye. My business address is *The Brattle Group*, 1133 Twentieth Street, NW, Suite 800, Washington, DC 20036. I am a principal with the firm.

Q.2 Please describe your educational and professional experience relevant to this proceeding.

A. I received my Bachelor of Arts in economics from Emory University and my Ph.D. in economics from Harvard University.

Upon leaving Harvard, I became an assistant professor of economics and management at the U.S. Air Force Academy. I taught qualitative economic theory, econometrics, policy issues in contemporary economics and quantitative decision methods. After leaving the service in 1972, I joined Charles River Associates, a Boston research and consulting firm, as a senior research associate and became program manager for transportation, and later vice president and a director of the company. I joined Putnam, Hayes & Bartlett, Inc. in 1980 as a Principal. In August 1990, I, along with six colleagues, founded *The Brattle*

Group, a successor firm resulting from the merger of *The Brattle Group, Inc.* and Incentives, Research, Inc.

I am presently a principal of *The Brattle Group*, an economic, management, and environmental consulting firm located in Cambridge, Massachusetts; Washington, D.C.; San Francisco, California; and London, United Kingdom. I have testified before regulatory commissions on the subjects of pipeline regulation generally and more specifically, rate design for regulated industries. These proceedings have involved matters before the Federal Energy Regulatory Commission ("FERC"), the Interstate Commerce Commission ("ICC," now the Surface Transportation Board ("STB")) and the Regulatory Commission of Alaska ("RCA"). I have also written numerous books and articles on these subjects. In addition, I will be publishing two chapters in *Transport Strategy, Policy and Institutions*, in a handbook forthcoming by Permagon/Elsevier.

These qualifications and experience are detailed in my resume, included as Exhibit No. __ (WBT-2) to this testimony. As the resume indicates, I have over thirty years experience as a transportation economist.

Q.3 What is the purpose of your testimony in this proceeding?

A. I have been asked by Maritimes & Northeast Pipeline, L.L.C. ("Maritimes") to address, from the perspective of an economist, the appropriate manner to allocate costs and design rates related to the Phase III Project. I conclude that Maritimes' decision to "roll-in" or include the costs of the Phase III Project with Maritimes' existing system costs, and recover those combined costs through the rates for the existing services provided by Maritimes, is consistent with economically rational rate design. My perspective as an economist witness is in addition to the support for the roll-in of Phase III costs provided by Mr. Christopher T. Ditzel (Exhibit No. ___ (CTD-1)) (Operational Benefits of Phase III); Mr. William C. Penney, Jr. (Exhibit No. ___ (WCP-1)) (Billing Determinants; Summary of Phase III Firm Subscriptions and Usage); and Mr. John J. Reed (Exhibit No. ___ (JJR-1)) (Benefits of Phase III; Canadian Market Demand). An understanding of the Maritimes pipeline system before and after the completion of the Phase III Project is provided by Mr. Richard J. Kruse in his prepared direct testimony (Exhibit No. __ (RJK-1)).

Q.4 Could you summarize your conclusions with regard to allocation of Phase III costs?

A. Yes. I have concluded that it is appropriate to continue to charge the system-wide rate for the Phase III facilities and, as a consequence, it is appropriate to "roll in" the costs of Phase III with existing system costs. I have also concluded that treating the Phase III Project costs as incremental would be inappropriate based on the facts of this case and would create a precedent which could have serious adverse policy consequences.

The Certificate Policy Statement Supports Roll-In

Q.5 How does the Commission justify incremental pricing in its Certificate Policy Statement?

A. Under the FERC's Statement of Policy concerning Certification of New Interstate Natural Gas Pipeline Facilities ("Certificate Policy Statement"),[1] the Commission

[1] Certificate Policy Statement, 88 FERC ¶ 61,227 (1999).

seeks to insulate existing shippers from rate increases caused by later pipeline investments that do not "benefit" such customers. The Commission does not want existing shippers to subsidize large costs of new construction when the new customers will be the only parties benefiting from the new facilities.

Q.6 How does it accomplish this objective?

A. The Certificate Policy Statement indicates that a "threshold" requirement is that new customers must be prepared to support pipeline expansions through rates, and that this requirement creates a presumption in favor of incremental pricing.[2]

Q.7 Is the "subsidy" rationale that the Commission uses to justify an incremental pricing approach applicable to projects such as Maritimes' Phase III?

A. No. If protecting existing customers from subsidizing projects that do not benefit them is a valid goal, no such subsidy is occurring in this case. In fact, the Commission states explicitly in the Certificate Policy Statement that the presumption favoring the incremental price approach does not apply where the construction project is intended to benefit existing customers. This is so even where rolling in the costs causes rates to increase generally on the system.[3]

Q.8 Can you please quote the portion of the Certificate Policy Statement that makes this point?

A. Yes. The Commission states:

> Projects designed to improve existing service for existing customers, by replacing existing capacity, improving reliability or providing flexibility, are for the benefit of existing customers. Increasing the rates of the existing customers to pay for these improvements is not a subsidy. Under current policy these kinds of projects are permitted

[2] ***See id.*** at p. 61,746.

[3] ***See id***. at p. 61,746 n.12.

> to be rolled in and are not covered by the presumption of the current pricing policy.[4]

Q.9 Is the Commission correct to carve out projects that have general benefits for existing shippers and to exclude such projects from the presumption in favor of incremental pricing?

A. Yes. It makes no sense to apply a bias in favor of incremental pricing to projects designed to benefit existing customers. Attempting to recover the costs of such projects from hypothetical incremental customers means that no one would pay, and therefore no such projects would ever be built, as explained more fully below.

Q.10 What is your view of the rationale for a bias in favor of incremental pricing as expressed by the Commission in the Certificate Policy Statement?

A. There are a number of reasons to question the presumption that sound economic analysis necessarily supports a bias towards incremental pricing. Among the reasons are:

(1) A bias in favor of incremental pricing is not consistent with economic efficiency, or letting the market decide, because many projects create significant benefits that go beyond just direct benefits to incremental customers;

(2) By failing to consider benefits to both new and existing customers, a policy favoring incremental pricing may discourage the investment in pipeline infrastructure necessary to achieve system benefits and grid efficiency;

(3) The reluctance of pipeline customers to sign long-term contracts and the burden of the risk of cost recovery on the pipeline under incremental pricing may discourage pipelines from incurring the costs of needed

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[4] *Id.*

capacity to prevent bottlenecks, assure system reliability, and to serve future demand additions; and

(4) Incremental pricing may not achieve an equitable sharing of the costs and benefits of new additions.

At this point, I would emphasize that we do not need to consider these arguments in this case since there are no "new customers" related to Phase III, and the Commission has stated explicitly that the presumption favoring incremental pricing does not apply to projects generally benefiting the system. This is a case, as noted by Mr. Penney in his testimony, where all of the existing long-term firm shippers have executed agreements for service on the Phase III facilities and gas is actually flowing under these agreements. As the Commission stated, "Maritimes' proposal does not add new load, but merely enhances its existing service to its existing customers."[5]

Q.11 Did the Commission expect Phase III to benefit existing shippers when it authorized the project?

A. Yes. Indeed, the Commission based its approval on the anticipated benefits to existing shippers. At that time, Maritimes, citing its market/benefit study, stated:

> [A] more efficient and direct access to a new source of supply . . .; lower natural gas costs to consumers by providing additional pipeline alternatives, thereby eliminating any bottlenecks and increasing the efficiency of the pipeline grid; and increase the reliability of service to LDC and electric generation markets, resulting in economic benefits to the Northeast as well as promote environmentally-sensitive energy consumption through the increased use of gas.[6]

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[5] *Maritimes & Northeast Pipeline, L.L.C.*, Preliminary Determinations on Non-Environmental Issues ("Preliminary Determination"), 95 FERC ¶ 61,077, at p. 61,228 (2001).

[6] Preliminary Determination, 95 FERC at p. 61,226.

The Commission agreed, noting that "[t]he evidence presented by Maritimes . . . demonstrates a need for [the] proposed project[]."[7] All of these benefits are discussed in greater detail in Mr. Reed's testimony.

The Commission also found that there were no adverse impacts of the Phase III Project that needed to be mitigated, and in any event, the project will "provide benefits that outweigh any adverse impacts."[8]

Q.12 Have existing customers benefited from the addition of Phase III?

A. Yes. They clearly have. Maritimes shippers now have the benefit of an important additional delivery point at Beverly. This has greatly expanded shipper delivery options, and has allowed them to take advantage of the often higher price increment in this new market, as discussed in the testimony of Mr. Reed (Exhibit No. ___ (JJR-1)). The new delivery option also makes the shippers' released capacity more valuable to a replacement shipper. This is a benefit that also flows to existing shippers, since their released capacity will tend to be more attractive to replacement bidders, improving the net present value received under the release. Maritimes' shippers have been able for some time to utilize this new service at no additional charge. They are now getting the benefit of paying rates based on Maritimes' last rate case, despite the added cost to Maritimes to finance this new service capability. This is in addition to the reliability and efficiency inherent in having these additional facilities available. As discussed by Mr. Reed in his testimony, all of these benefits flow not only to the shippers, but to the indirect recipients of service as well.

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[7] *Id.*

[8] *Id.* at p. 61,229.

Q.13 What is the relevance of the fact that existing shippers have executed new Exhibit Bs to their firm agreements for service on Phase III?

A. Their use, as discussed by Mr. Penney in his testimony, of the Phase III system corroborates the predictions of Maritimes and the Commission that existing shippers would benefit from the new facilities. The shippers should, therefore, be obligated to pay for the cost of those facilities.

Incremental Cost Allocation is Inappropriate For Phase III

Q.14 Would incrementally pricing the Phase III facilities create economic inefficiencies?

A. Yes. Indeed, in this case, there is no way to incrementally price the Phase III Project. There are no new shippers. The Phase III Project was built to benefit the existing shippers, the service on the Phase III facilities is the same as on the existing facilities, and the existing customers all amended their contracts to take service on the Phase III facilities. In these circumstances, incrementally pricing the Phase III facilities as discussed in the Certificate Policy Statement makes no sense, and is not a valid concept. Any decision to incrementally price the Phase III facilities would not result in new shippers paying the cost of the new facilities, which is the whole purpose of incremental pricing. The result of incremental pricing, as applied to Phase III, would be that existing shippers would get the significant benefits of the Phase III facilities without having to pay for those facilities. This would create a serious “free rider” problem for the Maritimes system and would have adverse policy implications that would discourage the development of needed pipeline infrastructure.

Q.15 What is a "free rider" problem?

A. In this context, a free rider takes a project's benefits but does not shoulder the costs of its use of the resource. Free riding is usually considered to be an economic problem when it leads to market inefficiencies.

Q.16 Would the application of an incremental pricing regime to Phase III create a free rider problem?

A. Yes. The Phase III facilities are integrated into the entire Maritimes system. Every shipper elected to add the Phase III facilities as a primary service point under its contract. But, even if they had not, the Beverly delivery point is nonetheless available to all of Maritimes' firm shippers on a secondary basis. As explained in more detail below, under the Commission's Order No. 637 policies, shippers will have the option to use the Phase III facilities. The service associated with deliveries to Algonquin at the Phase III interconnection in Beverly is basically the same service as the one Maritimes provides for deliveries to Tennessee at Dracut. Both services move gas utilizing the same pipeline and compression facilities in an intermingled fashion from the Sable Offshore Energy Project ("SOEP") fields to New England markets. Both services are provided at identical firm service levels, are subject to the same balancing, curtailment, and other generalized terms and conditions of service, and utilize shared amounts of fuel, O&M costs, A&G costs, and other overhead costs of running the Maritimes system. Shippers are able to go back and forth between the Dracut and Beverly delivery points. Since Maritimes cannot exclude existing customers from the Phase III facilities, and since there are no new customers to pay incremental rates, rolled-in prices are needed to prevent free riding by pre-existing customers.

Q.17 Would the creation of such free rider problems affect pipeline investment?

A. Yes, very much so. The interstate natural gas pipeline business is extremely capital intensive and, once those costs are sunk, the investment decision is impossible to reverse. Infrastructure investments in the pipeline grid entail high fixed costs that private investors are reluctant to sink unless the beneficiaries of those investments contribute to cost recovery. If all construction costs were allocated incrementally, and if repaired or upgraded facilities were available to all customers—paying or not paying—no party would opt to pay. There would be nonpaying parties using upgraded infrastructure, *i.e.*, getting a free ride. Under a purely incremental regime, private investors would under-invest in infrastructure maintenance and in long-term improvements that benefited the system as a whole.

Q.18 You stated earlier in your testimony that, in general, a bias towards incremental pricing had shortcomings as a policy, but that it was not necessary to consider those criticisms because the Commission's Certificate Policy Statement made it clear that the presumption in favor of incremental pricing does not apply in the facts of this case. In the event it is argued that incremental pricing should nevertheless be applied to the Phase III facilities, can you describe the problems that such an application would create?

A. Yes. To begin with, a bias in favor of incremental pricing is not necessarily consistent with economic efficiency, because many projects create significant benefits that go beyond direct benefits to incremental customers. The difficulty with a bias in favor of incremental pricing may be seen by examining the Certificate Policy Statement's "threshold requirement" as cited by the Commission in Maritimes' Preliminary Determination:

> Under this policy, the threshold requirement for pipelines proposing new projects is that the pipeline must be

> prepared to support the project financially without relying on subsidization from the existing customers.[9]

As the Commission stated, normally the threshold requirement would create a presumption in favor of incremental pricing. However, project benefits often go beyond those that can be captured from new shippers via long-term contracts, as the Commission itself stated:

> The reliance solely on long-term contracts to demonstrate demand does not test for all the public benefits that can be achieved by a proposed project. The public benefits may include such factors as the environmental advantages of gas over other fuels, lower fuel costs, access to new supply sources or the connection of new supply to the interstate grid, the elimination of pipeline facility constraints, better service from access to competitive transportation options, and the need for an adequate pipeline infrastructure. The amount of capacity under contract is not a good indicator of all these benefits.[10]

A policy biased in favor of incremental pricing would never account for such public benefits if the "threshold question" is "whether the project can proceed without subsidies from their existing customers," [11] which creates a presumption in favor of incremental pricing.

Q.19 How can this problem be solved?

A. Rather than impose a "threshold" requirement that creates a bias towards projects that can only be financed incrementally, the appropriate test is to ensure that total benefits justify the project. Looking at benefits only to incremental customers under the "threshold test" of the incremental pricing standard is too narrow. If all

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[9] ***Id***. at p. 61,227.

[10] Certificate Policy Statement, 88 FERC ¶ 61,227, at p. 61,744.

[11] ***Id.*** at p. 61,745.

of the benefits of a project are considered, rolled-in pricing may prove to be a better approach because it requires both new and pre-existing customers to pay for the benefits they receive.

Q.20 Would a policy biased in favor of incremental pricing tend to discourage worthy pipeline investments?

A. Yes. By failing to consider benefits to both new and existing customers, a policy favoring incremental pricing may discourage investment in pipeline infrastructure necessary to achieve system benefits and grid efficiency. The Certificate Policy Statement explains that the bias toward incremental pricing did not apply to "facilities constructed solely for flexibility and system reliability" under the 1995 Pricing Policy for New and Existing Facilities Constructed by Interstate Natural Gas Pipelines, nor would the bias apply under the 1999 Certificate Policy Statement where facilities were designed to improve service by improving reliability or flexibility for existing customers.[12] But, this begs the question of what to do with hybrid projects. If they generate benefits both to new and pre-existing customers, they may never get constructed if there is a bias in favor of incremental pricing, because it requires that only new customers pay for the benefits they receive.

Q.21 Could incremental pricing discourage pipelines from incurring the costs of needed capacity to prevent bottlenecks, assure system reliability, and serve future demand additions?

A. Yes. The Certificate Policy Statement intends that the pipeline and its new customers, not old customers, should bear the risks of new projects. As the

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[12] *See id*. at p. 61,746 n.12 (citing *Great Lakes Gas Transmission Limited Partnership*, 80 FERC ¶ 61,105 (1997).

Certificate Policy Statement explains, "the industry has been moving to a practice of relying on short term contracts."[13] These two factors substantially increase the risks to pipelines from adding new capacity, and therefore will discourage needed investments.

Q.22 Why is that?

A. Incremental pricing is not necessarily consistent with economic efficiency, because projects that are intended to benefit the system as a whole do not generally have "incremental customers," as distinguished from those customers existing prior to the beneficial system repair, enhancement or addition. Such projects may create significant benefits that go beyond direct benefits to incremental customers. A bias in favor of incremental pricing could also discourage pipelines from incurring the costs of needed capacity to prevent bottlenecks, assure system reliability, and serve future demand additions. Incremental pricing, combined with the lack of long-term contracts, would place all the risk on the pipeline investor with little hope of recovering project benefits from any group except incremental customers. Obviously, the result would be to discourage investments in projects where benefits flowed to existing customers and the public at large, rather than to a discrete class of incremental customers. Adding new capacity under these circumstances and not charging the existing customers for those benefits creates a "free rider" problem, where pipelines and their customers would have little incentive to invest in worthwhile projects that could not be financed solely out of incremental revenues from new customers.

[13] *Id*. at p. 61,744.

Such a result would run contrary to the stated goals of the Commission to encourage the development of a "robust natural gas pipeline infrastructure . . . critical for the reliability of the Nation's energy supply and for competitive market development."[14]

Q.23 Could incremental pricing fail to achieve an equitable sharing of costs and benefits of new projects?

A. Yes. Incremental cost allocation can lead to unfair and arbitrary rate differences between similarly situated shippers. This is assuming that the new facilities in question are built *at all* since there is an incentive for under-investment in infrastructure when a purely incremental approach is imposed. Incremental pricing may create artificial distinctions among customers based on the order in which they arrive on the system. From an economic perspective, such distinctions are not cost-based. In reality, all customers are incremental in the sense that existing customers are continuing to use a service which they might elect to forgo if they were required to pay its incremental costs.[15] This is just one example where an incremental pricing policy might create inequitable distinctions among customers that incur the same costs to the system but that pay different rates.

Q.24 Is there a problem if the "threshold" test it taken too literally?

A. Yes. The "threshold" test, if taken literally, means that benefits to existing ratepayers are not taken into account in evaluating the economic feasibility of the

[14] *See* FY 2005 Congressional Performance Budget Request of the FERC, at 4 (Feb. 2004). The Commission went on to explain that: "Our policies must provide a fair opportunity for cost recovery, allowing those who propose expansion projects to gain access to capital markets. Without such assurances, investors will bear greater risks, find it more difficult to obtain financing, and invest in fewer projects than the Nation needs." *Id*. at 17.

[15] Of course, there may be legitimate reasons for differing treatment based on order of arrival. The point is that incremental pricing necessarily enforces these differences.

project. If the test is taken literally, any project that passes the threshold would confer benefits to existing ratepayers at no risk or cost, while new customers would shoulder the entire burden of the expansion. It is easy to imagine circumstances where such an unequal burden of costs and benefits is inequitable.

Q.25 Do the exceptions to the policy of a bias in favor of incremental pricing solve these problems?

A. Not necessarily. In practice, the Certificate Policy Statement has often been applied in a manner that confers all the benefits of successful expansion projects on pre-existing ratepayers via rolled-in pricing and imposes the costs of unsuccessful projects on investors through incremental pricing with no compensation for the additional risk. This occurs in certificate cases when it appears that the inexpensive expansibility test has been reduced to merely testing whether rolling in the costs of successful projects would lower rates for existing ratepayers because project revenues exceed project costs.

In this way, a policy that was designed to prevent subsidies from existing ratepayers to new construction has materialized into a policy that at times appears to require subsidies from new ratepayers to existing customers.

Q.26 What is the consequence for incentives to investment?

A. The policy exposes investors to asymmetric risk with no upside compensation. If a pipeline is required to roll-in the revenues and costs of successful projects and bear the risks of unsuccessful projects through incremental pricing, clearly existing ratepayers can only win. Conversely, pipeline investors can only lose.

Q.27 Has the pendulum swung too far in the direction of favoring incremental pricing?

A. Yes. The Commission in 1999 was clearly worried about potentially misguided incentives resulting from a "bias for rolled-in pricing" in the previous method. The Certificate Policy Statement made references to incentives for "overbuilding of capacity and subsidization of an incumbent pipeline."[16] The proposed cure for this "bias" was apparently a bias in the other direction, in favor of incremental pricing. This new bias works in the opposite direction, potentially discouraging economically worthy projects.

Q.28 Have circumstances changed since 1999?

A. Yes. To begin with, starting with statements by the Chairman of the Federal Reserve, the most serious concern is over the effect of natural gas spikes on the economic recovery (see Greg Schneider, *Natural Gas Imports Key, Greenspan Says*, Wash. Post, April 28, 2004, at E2). A lack of pipeline infrastructure and the effect it may have on commodity prices is a much more serious concern now than it was five (5) years ago.

Q.29 Are there other changes in the natural gas industry that affect the rolled-in vs. incremental debate?

A. Yes. As mentioned above, the unwillingness of customers to sign long-term contracts was discussed in the Certificate Policy Statement. Another significant development is the increasing contracting flexibility granted shippers during the last five (5) years, particularly under Order No. 637.

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[16] Certificate Policy Statement, 88 FERC ¶ 61,227, at 61,745.

Q.30 What is the significance of this contracting flexibility?

A. The entire premise of incremental pricing is that there exists a group of incremental customers who can be identified and required to pay all the costs under incremental pricing. However, increased contractual flexibility which began with Order No. 636 and increased with Order No. 637 greatly undermines the contractual restrictions on shippers by allowing them discretion to effectively modify the terms of their contracts. Given all this flexibility, shippers have an incentive to either “wait and see” rather than commit to pay for incremental projects, or to look for opportunities to avoid paying for higher cost new capacity by effectively modifying the terms of their contracts. In this environment, pipelines can have less confidence that shippers can be required to pay the cost of more expensive incremental capacity.

Q.31 Has retail unbundling affected this as well?

A. Yes. When natural gas was being purchased from pipelines at bundled prices by Local Distribution Companies (“LDCs”), direct competition among pipeline customers may have been minimal. But, if much of the demand is among competing customers, such as gas-fired electricity generation, customers may simply be unable to compete on equal terms if they are paying different prices to transport the gas.

Q.32 Are these changed circumstances necessarily a bad outcome?

A. No. But, they may indicate that the expectation that incremental projects can be financed by incremental rates higher than rates paid by pre-existing customers may not be realistic; and they indicate that the factual circumstances that motivated the Certificate Policy Statement no longer apply.

Q.33 Since the 1999 Policy Statement, the FERC has issued a number of notices of inquiry, rules, and policy statements on the matter of heightened concerns related to pipeline infrastructure and the issue of safeguarding "Critical Energy Infrastructure Information" ("CEII"). Does the threat of terrorist attacks represent a changed circumstance since 1999?

A. Yes. Shortly after the September 11, 2001 attacks, the Commission immediately recognized that publicly available information might be of use by terrorists in identifying critical links in the energy supply infrastructure. In its Statement of Policy in Docket No. PL01-6-000, Extraordinary Expenditures Necessary to Safeguard National Energy Supplies, September 14, 2001, the Commission assured the companies it regulates that it would approve recovery of "prudently incurred costs necessary to further safeguard the reliability and security of our energy supply infrastructure" (96 FERC ¶ 61,299). Increased reliability of service means decreasing reliance on critical links in the grid system that are potentially vulnerable to a terrorist attack. By the same token, costs of projects to eliminate such reliance may not be recoverable from incremental customers alone, nor should they be if all customers benefit from increased system reliability. Rolling in the costs may be the only feasible way of recovering the costs.

Q.34 Can you please summarize your conclusions?

A. Yes. I have concluded that treating the Phase III Project costs as incremental in this case would be inappropriate. I conclude that it is instead appropriate, given the benefits to existing customers brought about by the addition of the Phase III facilities, to "roll in" the costs of Phase III with existing system costs.

Q.35 Does this conclude your testimony?

A. Yes, it does.

UNITED STATES OF AMERICA
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Maritimes & Northeast Pipeline, L.L.C.	§ § §	Docket No. RP04-

AFFIDAVIT OF DR. WILLIAMS B. TYE

DR. WILLIAM B. TYE, being first duly sworn, on oath states that he is the witness whose Prepared Direct Testimony is filed herein; that, if asked the questions which appear in the text of aforesaid Prepared Direct Testimony, affiant would give the answers that are herein set forth; and that affiant adopts the aforesaid Prepared Direct Testimony as his sworn, direct testimony in this proceeding.

William B. Tye

DR. WILLIAM B. TYE

District of Columbia, ss:
Washington, DC

SUBSCRIBED AND SWORN TO before me, this __ day of June, 2004.

Notary Public
Deborah Bailey

Deborah Bailey
Notary Public District of Columbia
My Commission Expires: April 14, 2008

My commission expires: ______________________