Q. Please state your name and business address.
A. My name is Troy Devries and my business address is 4 Irving Place, New York, New York 10003.

Q. By whom are you employed and in what capacity?
A. I am employed by Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Company") as the Director of Research and Development ("R&D").

Q. Please describe your educational background.

Q. Please describe your work experience.
A. I have been employed by Con Edison since 1990 and have held various engineering and managerial positions in Electric Construction, Emergency Operations, Engineering, and Research and Development.

Q. Please generally describe your current responsibilities.
A. As the Director of Research and Development, I am
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responsible for developing products to enhance the
safety, productivity, and the operations for Con
Edison. I oversee eleven engineers dedicated to R&D
project management that undertake R&D to benefit
Company electric, gas, and steam business units plus
several administrative personnel. I guide their
development and manage the overall R&D budget.

Q. What is the purpose of your testimony?

A. My testimony explains the forecasted level of Gas R&D
expenditures of $1.23 million, excluding Company
labor, for the twelve months ending on December 31,
2014 (“Rate Year”) and discusses our research program
areas on page 14, past successes on page 20, and
several major projects being undertaken in the Rate
Year on page 23. My testimony presents details of R&D
expenditure levels for the Rate Year and also the two
following twelve-month periods of the twelve months
ending December 31, 2015 (“Rate Year 2” or “RY 2”) and
the twelve months ending December 31, 2016 (“Rate Year
3” or “RY 3”).

Q. Is Con Edison projecting R&D expenditures for the Rate
Year, RY2, and RY3 beyond the level of expenditures in
the twelve months ending June 30, 2012 (“Historic Year”)?

A. The proposed R&D expenditure level for the Rate Year, RY2, and RY3 of $1,232,000 for gas R&D projects is a decrease to annual R&D expenditures, excluding labor, of $80,000.

Q. Was a document, entitled “CONSOLIDATED EDISON COMPANY OF NEW YORK GAS RESEARCH & DEVELOPMENT PROGRAMS,” EXHIBIT ___ (TD-1), prepared under your direction and supervision?

A. Yes, it was.

MARK FOR IDENTIFICATION EXHIBIT ___ (TD-1)

Q. Please explain this exhibit.

A. As shown on Exhibit ___ (TD-1), planned expenditures, excluding labor, for the Rate Year are estimated to be $1,232,000, a decrease of $80,000, from the Historic Year. Additionally, we plan on spending approximately $1.96 million each year from the Millennium Fund to fund projects, a decrease of approximately $218,000 below the Historic Year. This planned level of Millennium Fund spending closely matches the level of annual collections for the fund. The Millennium Fund
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itself is described below in my testimony.

Q. Please explain the reasons for maintaining this level of funding.

A. We believe that the planned level of expenditures is the appropriate level of investment needed to pursue projects that are necessary for safe and reliable service and otherwise address the R&D needs of the Gas Operating Department at this time. R&D’s mission is to be an agent of change that drives timely innovation of technological solutions addressing strategic and operational needs. We seek to serve the operational and medium-term (three to five years) research for the gas business unit, as well as address both longer-term (beyond five years) strategic needs and enterprise risk issues of the entire corporation. R&D does this by identifying, developing, demonstrating, and providing such tools as advanced equipment, hardware, and software methodologies to Company operations that allow for long-term sustainability.

Q. Why does Con Edison need to continue to develop and demonstrate new technologies?

A. Con Edison has long maintained an R&D program. Our gas
system requires continuing modernization,

reinforcement, and expansion at the transmission and
distribution levels. As such, in order to meet the
Company’s future needs while at the same time
controlling costs, maintaining reliability, enhancing
safety, and sustaining the environment the Company
needs to undertake the development and demonstration
of new technologies.

Q. What is the purpose of Con Edison’s gas R&D program?

A. The purpose of Con Edison’s gas R&D program is to
continue developing and demonstrating new
processes/methods and cutting-edge gas delivery
technologies that will improve the Company’s gas
system operating and business practices. The program
is a combination of research undertaken
collaboratively with others as well as projects
developed and conducted internally. The program is
continually refined to recognize new challenges to
Company operations, to better define our new needs,
and to evaluate past successes and/or failures.

Q. Why must the Company itself undertake R&D?

A. No other gas utility in the nation faces the
congestion challenges faced by the Company or the challenge of multiple oil-to-gas conversions in such a densely populated area. The congestion manifests itself in two ways: service density and utility congestion.

Q. Please explain.

A. By service density, I mean the number of customers who take service from a gas main. For example, most gas utilities that need to excavate a main on a typical city-size street may have to shut off fourteen customers (assuming average frontage of one hundred feet) while, for the same length of main, we may have to shut off sixty customers (assuming average frontage of thirty feet). This level of density has significant operational and cost implications.

Q. Please continue.

A. The second type of congestion refers to the physical concentration of various utility lines, including ours, under the streets. In New York City streets, our gas lines are in close proximity with underground electric lines, steam lines, water lines, telecommunication lines, sewer piping, subway

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infrastructure, vehicular infrastructure, old trolley tracks, and various auxiliaries that support traffic lights and street lighting. While other gas utilities face some similar types of physical congestion, none compares with the degree of congestion under which Con Edison operates. Our neighboring gas utility, National Grid, faces similar, but not as challenging, problems as those posed in Manhattan.

Q. Can you be more specific as to the implications of this congestion?

A. Yes. The New York City Building Code and the New York City Fire Department Code require that no plastic piping be installed within thirty-five feet of a steam main. For a large part of Manhattan, this means that the Company can never replace steel mains or steel services with plastic pipe which is less expensive to purchase, install, and maintain, and instead must continue to work with steel mains and services and cast iron mains. Steel mains suffer from corrosion which leads to gas leaks, and cast iron mains are subject to leaks at joints, graphitic corrosion, and breakage. The difference in these characteristics
between plastic and metallic piping greatly increases maintenance and replacement costs, and requires additional efforts to assess and monitor their conditions, which add to costs.

Q. Are there other consequences?

A. Yes. As I noted above, New York City wishes to reduce traffic congestion, while at the same time encouraging bicyclists, by opening bike lanes, thereby reducing lanes available for automotive traffic. New York City prefers that the Company limit opening up streets to access its gas system. The City’s Department of Transportation (“DOT”) has very restrictive requirements for street access. The Company must often work underground during limited time frames, generally at night or on weekends. In addition, due to heightened noise restrictions, the opportunity to work at night has become even more limited. At the same time, the Company’s workload underground has increased with the need to maintain and, in some cases, replace our infrastructure. Thus, it is increasingly challenging for the Company to physically do that work. These are the driving factors of R&D’s
effort to develop the tools to work underground
without digging an open trench.

Q. You also mentioned oil-to-gas conversions. What are
the challenges related to this issue?

A. Due to air quality and public health concerns, New
York City has recently-enacted PlaNYC Clean Heat
regulations (see 15 RCNY § 2-15) that phase out the use
of #4 (Year 2030) and #6 (Year 2015) heating oil. All
new construction or boiler replacements must be
natural gas, biodiesel, steam, or ultra-low sulfur #2
heating oil. More than 7000 buildings, primarily in
Manhattan and the Bronx, in the Con Edison service
territory are affected by this regulation. The
increase in demand would require the Company to make
the gas infrastructure improvements that are needed to
both deliver the gas to newly converted customers and
to reinforce the overall gas system so that it can
handle the increased load.

Q. Please continue.

A. Because it would be far too costly as well as too
disruptive to replace the existing infrastructure, we
need to seek solutions that will provide for this
increased demand with minimal investment. These challenges are the impetus for the development and deployment of trenchless and other advanced technologies. For example, a trenchless technique uses a pipe-splitting devise that is inserted into an existing pipe, splits the pipe, and drags a new plastic pipe of the same or larger pipe diameter through the space created from splitting the existing pipe. The R&D effort is to study the effects of this technique on the surrounding utilities and on the pavement because the forces required to accomplish this would push earth away from the newly-installed plastic and up against surrounding facilities which may damage them.

Q. Please describe what you mean by trenchless technology.

A. Trenchless technology repairs or rehabilitates gas mains without the need to excavate and create an open trench. An example of a trenchless technology is Cured In Place Lining ("CIPL"), which entails insertion of a collapsible polyurethane liner into an existing main via one or two small excavations, and
pressurizing the liner so that it adheres itself against the host pipe and seals it from leaking.

Q. Why is the Company interested in trenchless technology?

A. Obviously, trenchless technology greatly reduces the need to excavate, which provides a variety of benefits. Besides the cost savings by avoiding excavation, there are other social benefits like reducing traffic congestion and combustion emissions (from trenching equipment as well as passenger vehicles stuck in traffic), reducing impacts on local businesses, as well as improving safety for pedestrians and workers. Deployment of this technology serves the City, State, and national goals of reducing greenhouse gases. Investment in this technology is also consistent with the goal of DOT to reduce traffic interruptions and noise due to excavation activities.

Q. Please continue.

A. Trenchless technologies employ gas construction activities using “no-blow” tools and methods that eliminate the release of methane. Not only is this
safer for workers and pedestrians, it mitigates the environmental concerns associated with the release of methane. Methane, which comprises approximately 95 percent of natural gas, is 21 times the greenhouse gas equivalent of carbon dioxide. Considering the amount of excavation work in the City, the Company wishes to push forward to achieve these benefits by seeking to develop and deploy these technologies now, instead of waiting for others in our industry.

Q. Please describe the Company’s collaborative research efforts.

A. We work with the Gas Technology Institute (“GTI”), NYSEARCH (a gas research consortium started in New York but currently national), Operations Technology Development (“OTD”), Sustained Membership Program (“SMP”), American Gas Association (“AGA”), American Gas Foundation (“AGF”), Water Research Foundation (formerly “AWWARF”), various national and international utilities including National Grid, PSE&G, PECO, Gaz de France, and Tokyo Gas, the Federal government (DOT PHMSA), and private corporations, both national and international. In addition, R&D
employees maintain regular contacts with other utilities, gas trade groups, universities, and technology developers as a further source for new ideas.

Q. Please describe some of the Gas R&D projects that have been identified as a result of working with other institutions.

A. There are several of these, but probably the most important current one for the Company is our collaborative effort to develop the EXPLORER and TIGRE robots for in-line inspection of our transmission mains, which I discuss below. These tools are a result of an ongoing twelve-year program managed by NYSEARCH and co-funded by fifteen utilities throughout the nation as well as several federal government agencies.

Q. Please continue.

A. Recently, we have embarked on several projects with GTI through its OTD program that is intended to improve gas operations. The OTD program is a collaborative program with over twenty utilities participating in the funding and technical guidance of
various projects. A few of the more recent projects are the acoustic pipe locator for locating plastic or metallic mains; portable ethane and methane sensors; and a metallic joint locator tool which could be used to pinpoint the location of, for example, metallic joints, tees, valves, and couplings.

Q. Please describe the Company’s internal program.

A. Con Edison’s internal R&D program primarily focuses on problems that are unique to the Company’s system with its very high densities of energy consumption and congestion of the delivery system. This program also focuses on the development of selected products that the Company may need to deploy in a timeframe that is earlier than that required by others in our industry.

Q. Please explain how Con Edison’s R&D portfolio is established and managed.

A. The process of selecting R&D projects depends heavily on the experience of the Company’s professional staff both in R&D and within the Company’s gas business unit. The goal is to match the needs of the Company’s operations to opportunities for solutions using advanced technology. In all cases, the first step is
to determine whether the project meets the New York State Public Service Commission’s definition of R&D. An analysis of candidate projects is then made, with potential advantages being reviewed against financial resources required for successful development. The probability of achieving success in a reasonable time is also considered. Finally, the benefits of conducting the project are detailed. This general approach facilitates a comparison of various candidate technologies and aids in project selection and prioritization.

Q. How often is the portfolio reviewed?

A. On an annual basis an analysis of candidate projects, both those already authorized and new conceptual ideas, is developed and prioritized in conjunction with our operating organizations. We seek to work on projects that have combinations of attributes for cost, probability for success, and potential benefit in providing service to customers that make them attractive candidates. Electric and steam R&D activities, the programs and budgets of which are concurrently being developed, are reviewed to avoid
possible duplications and to identify potential synergies. Emphasis is placed on projects that show near and mid-term benefits, as well as long-term programmatic issues that directly impact the Company. This list is then reviewed with senior management against available financial resources.

Q. How does the Company consider the benefits of the projects?

A. A review of the benefits of candidate projects is an integral part of the review process and project selection. A cost benefit analysis is prepared for each individual project when seeking funding authorization. These analyses range from qualitative reviews for small projects to detailed quantitative cost benefit analyses for larger projects.

Q. Please describe the areas of research conducted by the Company’s internal program.

A. The internal gas research program is divided into three main research areas: distribution (including transmission), EH&S, and the Millennium Fund program.

Q. Please describe each of these areas.
A. The distribution/transmission R&D program is directed toward improving the reliability, upgrading the capacity, and extending the life of Con Edison’s gas distribution and transmission piping systems. R&D activities in this program include deployment and advancement of trenchless technologies, development of techniques and equipment to expedite detection and pinpoint location of natural gas pipe leaks that migrate through the soil, development of pipe repair and rehabilitation systems, research and development of non-destructive testing methods for plastic joints, demonstration of corrosion-resistant coatings for steel mains and structures, development of methods and equipment to mitigate third-party damage, development of methods and equipment to detect, measure, and monitor corrosion in cased piping, and development of methods and equipment to better locate and map underground facilities.

Q. You referred above to efforts to mitigate third-party damage. Please describe what you mean.

A. R&D is working on various projects that investigate the feasibility of deploying acoustic and vibration
sensors near our transmission mains to alert us whenever digging operations begin.

Q. Please continue with your description of the R&D program.

A. The EH&S R&D program focuses on developing and demonstrating new technologies that will improve worker and pedestrian safety, and promote environmental excellence. R&D activities include developing and field testing jackhammer and rock hammer lift-assist devices; developing and deploying no-blow equipment; demonstrating and testing various safety-related tools that are designed to improve worker safety, such as a lightweight jackhammer; and researching methods and equipment to reduce truck idling.

Q. Please continue.

A. The third research area is the millennium program, which contains projects that are funded through the Millennium Fund. In April 2000, the New York State Public Service Commission approved the Millennium Fund surcharge to be collected via the Monthly Rate Adjustment Surcharge to support long-term (greater
than two years) gas distribution research. This surcharge replaced a reduction in research funding when the Federal Energy Regulatory Commission eliminated a surcharge on gas pipeline deliveries. The Commission requires that over 80 percent of these funds be directed at collaborative research. Accordingly, most of the millennium program falls under the collaborative research discussed in my testimony. A few of the millennium activities that are performed by R&D internally are evaluation of cured-in-place liners for applications in sewer pipes to reduce interference costs, researching and testing new in-line inspection technologies, and developing a smart infrastructure management system for gas.

Q. Have there been successful R&D projects through the years?

A. Yes. The Company has a long history of successful R&D project completions.

Q. Are all R&D projects successful?

A. No. Because of the nature of R&D, some projects do not result in a successful product. To address that challenge, most projects are conducted in phases to
reduce the risk that would be otherwise associated with over-committing in advance to work that reveals itself to be unfruitful at some point during the course of the project. However, the Company can never be sure of the final outcome for any project. Q. Please describe some recent successful projects conducted under the current program. A. Recent successful Gas R&D projects include the following:

1. Development of in-line inspection tools such as EXPLORER and TIGRE for pipeline integrity assessment. These robotic tools enable the inspection of un-piggable transmission mains without disruption in service. Un-piggable mains are those that are designed with plug valves and/or complex pipe bends that make use of standard smart pig inspections impossible. Without these new in-line inspection tools, the Company would have to excavate to conduct assessments and verify the condition of the pipe, which would be extremely costly. The development of these tools has been ongoing for 12 years and is supported by 15 utilities as well as government agencies such as Department of Energy
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1. (“DOE”) and Department of Transportation – Pipeline and Hazardous Materials Safety Administration (“DOT PHMSA”). The Company has been able to take advantage of the highly leveraged funding of these tools, and will benefit from the savings expected during the inspection of our pipelines.

2. Field demonstration of lightweight jackhammers showed that there are immediate and long-term ergonomic benefits associated with using lighter weight jackhammers. The workers who participated in the testing indicated that they could work longer using these tools without being fatigued. The long-term benefits are expected to be reduction in soft-tissue injuries to the operators, as well as enabling those unable to pass the current test to enter the workforce in this job classification.

3. Development of non-interruptible meter change out kits that will enable replacement of meters without interruption to the customers, and in some cases without release of methane to the atmosphere. These tools will improve productivity, worker safety, and reduce costs associated with customer relights.
4. Development of special tools for the no-blow deployment of plugs, stoppers and standpipes in 3-inch, 4-inch, 6-inch, 8-inch, and 12-inch diameter metallic low pressure mains, as well as development of a no-blow by-pass system for use during cut-out procedures. These tools will allow workers to safely replace service tees or valves without release of methane to the atmosphere which occurs during current operations. These tools will improve worker and pedestrian safety by reducing chances of gas ignition, as well as reduce greenhouse gas by reducing methane emissions.

5. Development of a large Cast Iron Sealing Robot ("CISBOT") for sealing of 16-inch to 36-inch cast iron joints in live gas mains. This is a trenchless rehabilitation tool that will reduce the costs of sealing leaky cast iron joints.

6. Development of a prototype Emergency Main Shut-Off System ("EMSOS") for a 24-inch diameter low-pressure metallic main that could be used in lieu of installing shut-off valves. The EMSOS stations will be placed in strategic locations in the distribution system where construction is
ongoing, and will be available to provide for isolation during emergencies.

Q. Please describe the ongoing gas R&D projects.

A. Some of the Gas R&D projects planned for the rate year are:

1. Commercialization of various robots and auxiliary equipment for pipeline assessment. The robotics effort is needed to comply with upcoming federal regulations that require integrity assessment of transmission mains.

2. Technology Deployment and Implementation ("TDI") program Phases II & III focus on further development and deployment of trenchless technology. This program is designed to demonstrate more advanced trenchless technologies and methods, and can provide Gas Operations with field experience in deploying these.

3. Commercialization of facility locators for plastic, steel, and cast iron mains. Advancements in facility locators will help minimize third-party damage through more accurate mark outs, and research in GPS equipment and GIS mapping technology will further address this concern.
4. Investigating distribution pressure enhancements for oil-to-gas conversions may help us minimize investment in infrastructure.

5. The Gas Control Simulator project will be designed as training and engineering tool used by Gas Operations to react more quickly during emergency situations.

6. The Polyurea Liner project, currently ongoing, will demonstrate the capability of a polyurea liner to act as a structural liner that will boost the use of trenchless rehabilitation methods on our system.

7. The Remote Drip Pot Monitor project, currently ongoing, will deploy several field-ready monitoring units to detect water collecting in a main. Deployment of drip pot monitors will provide gas operators with advanced notice that water is collecting in the main. Water in the gas system can build up and close off the flow of gas to a customer’s service extinguishing pilot lights and requiring the Company to re-light the pilot of each home’s appliances.
8. The Micro-Excavation for Cathodic Protection Stations Project, currently ongoing, will develop tools and methods to locate and re-establish cathodic protection stations and valve boxes that have been buried during repaving projects.

9. The Protection of Plastic Gas Pipe from Electric Arcing and Burnouts Project, currently ongoing, will investigate different products that could withstand electric arcs and could be used to protect plastic gas pipes.

10. The Liners for Transmission Mains Project, to be started in the current rate year, will investigate composite materials that may be used to rehabilitate transmission mains.

11. The Knowledgekeeper® system which video records the tasks performed by an operator and stores these in a library for reference by operators as they prepare for certification or prepare to perform a task.

12. Developing an automated gas leak survey mapping system that records leak surveys directly onto electronic maps.
13. Demonstrating a new tapping machine that is designed to cut into lined mains without affecting the integrity of the liner, and which is lighter and makes hot taps on mains faster than current machines.

14. Demonstrating an acoustic leak detection system for transmission mains.

15. Testing a broadband electromagnetic technology on cast iron mains to determine if this technology can detect the presence of graphitic corrosion.

Q. Moving to the Millennium Fund, please explain the planned level of expenditures.

A. As depicted on Exhibit __ (TD-1), the planned level of expenditures for the Millennium Fund of $1.96 million is lower than the historic year spending of $2.178 million, and closely approximates the amounts being collected from our customers ($1.95 million) for the Fund. The planned spending level is nearly identical to that amount provided by the rate plan adopted by the Commission in Case 09-G-0795. In the last several years, our Millennium expenditures on average have exceeded the planned level. We were able to spend
more than what we collected during the Historic Year because we had a prior surplus in the Fund.

Q. What are some of the projects currently funded by the Millennium Fund?

A. Page 2 of Exhibit __ (TD-1) lists some R&D projects that are underway and associated with the Millennium Fund, to show the types of projects being undertaken.

Q. Please describe some of the more significant Millennium Fund efforts that are listed in the exhibit.

A. As I described earlier, 80 percent of these funded projects require collaboration and NYSEARCH and OTD each manage a multitude of these projects directed at our needs. Each year, we select projects in these two collaborative programs that are mid- to long-term in nature and benefit our operations through reliability and safety improvements, or efficiency gains. Between these two collaborative programs, we are invested in almost 70 projects that address problems in the areas of pipeline integrity assessment, facility locating, leak detection, pipe materials, repair and rehabilitation of pipes, third-party damage, gas
interchangeability, and EH&S. Historically, our expenditures for these two collaborative programs have been approximately $1.3 million annually. The following are examples of some of the more significant Millennium Fund projects included in the exhibit that are not part of the collaborative work with NYSEARCH or OTD:

1. Research, Develop, and Demonstrate In-Line Inspection Technologies – Although we have recently developed the first prototypes of the EXPLORER and TIGRE robots for inspecting our transmission mains, we need to think further ahead to the improvement of these tools by reducing their deployment costs, making the tools more reliable, and by incorporating the latest technologies into their design. In effect, we are seeking to develop a second generation of these inspection tools to meet the requirements of the next required inspection cycle seven years from now. In other words, we would like to ultimately inspect these lines passively using
above-ground techniques. Because the technology does not currently exist, we hope to develop it.

2. Evaluation of CIPL liners for application in sewer pipes. This work is a joint effort with New York City Department of Design and Construction (“NYCDDC”) to determine if CIPL lining of sewer pipes is feasible in light of the high temperature condensate that is introduced into the sewers by the Company and its steam customers. If successful, this would greatly reduce our gas system interference costs associated with replacement of sewer pipes in the vicinity of our gas mains, because the sewer pipes would be rehabilitated in place and not replaced, which would result in costly relocations of utilities (such as electric, gas, and steam) to accommodate the installation of new sewer mains.

3. Smart Infrastructure Management System for Gas is an effort to create a strategic and operational management system that integrates information from operating sources and current management
systems to enable Gas Operations to plan,
operate, and execute its tasks in a more
informed, and expedient manner while reducing
risk.

Q. Is the Rate Year’s funding level the total cost to
develop and demonstrate these projects?

A. No. Many of the projects are multi-year and the
amount only represents what will be spent during the
Rate Year. In addition, these are estimates of Con
Edison’s share of the costs. In many cases, these
represent only a portion of the total costs, with the
rest being made up by co-funding, which we expect will
be provided by government and industry partners.
Should this expected funding not materialize as
projected, we may need to adjust development schedules
accordingly and shift the funding to different
projects.

Q. Is gas R&D funding currently subject to a
reconciliation mechanism?

A. Yes, under the current Gas Rate Plan, Gas R&D funding
is subject to a downward-only reconciliation mechanism.
Q. Is the Company proposing that R&D expenditures continue to be subject to reconciliation during the Rate Year?
A. No.

Q. Please explain why.
A. The Company does not believe that there is a reasonable basis for subjecting this individual element of Company expense to reconciliation and certainly not to downward-only reconciliation.

Q. Didn’t the Company propose, along with other signatory parties, downward-only reconciliation for R&D expenses as part of the Joint Proposal made to the Commission in the prior gas rate case?
A. Yes. The Company agreed to this provision as part of the give-and-take of the rate settlement process. However, downward-only reconciliation is particularly unreasonable when setting rates for a single year.

Q. Please explain why.
A. R&D’s estimate of expenditures is subject to variation as a result of unanticipated events and opportunities during the course of the Rate Year. A downward-only reconciliation mechanism fails to recognize that there
is a reasonable likelihood that actual R&D expenses in any one year can be higher than forecasted and that it is in customers’ interest for the Company to make such expenditures to take advantage of R&D opportunities. The current mechanism, which is applicable to a multi-year period, provides some recognition of the annual variability of such expenditures by permitting the Company to accommodate the uncertainties inherent in undertaking and managing R&D projects. A one-year, downward-only reconciliation would fail to address this annual variability in a reasonable manner.

Q. Does this conclude your testimony?

A. Yes, it does.