BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of

Orange and Rockland Utilities, Inc.

Case 07-E-0949

December 2007

Prepared Testimony of:

Staff Infrastructure Panel

Jason Pause
Power System Operations Specialist 4
Electric Distribution Systems

Hebert Joseph
Power Transmission Planner 3
Bulk Electric Systems

Kenneth Schultz
Utility Engineer 3
Electric Rates and Tariffs

Office of Electric, Gas and Water
State of New York
Department of Public Service
Three Empire State Plaza
Albany, New York 12223-1350

Q. Please state your names, employer, and business address.

A. Jason Pause, Hebert Joseph, and Kenneth Schultz. We are all employed by the New York State Department of Public Service. Our business address is Three Empire State Plaza, Albany, New York 12223.

Q. Mr. Pause, what is your position at the Department?

A. I am a Power System Operations Specialist 4 assigned to the Electric Distribution Systems department in the Office of Electric, Gas, and Water.

Q. Please describe your educational background.

A. I received a Bachelor of Science degree in Electrical Engineering from Merrimack College in 1998.

Q. Please describe your professional experience and responsibilities with the Department.

A. I have been employed by the Department since November of 2004. My responsibilities include monitoring utility operations to determine if facilities are operated and maintained in accordance with appropriate codes and safe

operating practices, ensuring that utilities are adequately prepared to respond to emergencies by reviewing utilities' electric emergency plans and attending annual emergency drills, and monitoring utility operation and maintenance activities to ensure acceptable electric service reliability. For the past year I have been involved in and responsible for the Long Island City Network outages investigation and monitoring efforts. Prior to joining the Department I worked in the consulting engineering field on both commercial and industrial projects. This included building power, lighting, and systems design along with mission critical facilities design. Additionally, I was involved in both overhead and underground medium voltage systems design work before joining the Department.

Q. Have you previously testified before the Commission?

A. Yes, I testified in Case 06-E-1433, Orange and Rockland Utilities, Inc. – Electric Rates and Case 07-E-0523, Consolidated Edison Company of New York, Inc. – Electric Rates.

Q. Mr. Joseph, in what capacity are you employed by the Department?

A I am employed by the Department as a Power Transmission Planner III in the Bulk Electric Systems Section, Office of Electric, Gas, and Water.

Q. Please summarize your educational background and professional experience.

A. I earned a Bachelor’s Degree in Civil Engineering from the State University of Haiti in 1995, and a Master’s Degree in Electric Power Engineering from Rensselaer Polytechnic Institute in 2004. I am currently attending the State University of New York at Albany where I am pursuing a dual Masters in Urban and Regional Planning and Business Administration. I expect to complete both programs by 2009.

Q. Do you belong to any professional associations?

A. Yes, I am a member of the Institute of Electrical and Electronics Engineers (IEEE) and the IEEE Power Engineering Society.
In addition, I am a member of the American Planning Association (APA).

Q. Have you previously testified before the

Commission?

A. Yes. I testified in Case 06-T-0710 regarding the application of Consolidated Edison Company of New York, Inc. for a certificate of Environmental Compatibility and Public Need under Article VII of the Public Service Law, for its M29 Transmission Line Project.
I also testified in Case 06-E-1433, Orange and Rockland Utilities – Electric Rates.

Q. Mr. Schultz, in what capacity are you employed by the Department?

A. I am employed by the Department as a Utility Engineer 3 in Electric Rates and Tariffs, Office of Electric, Gas, and Water.

Q. Please summarize your educational background and experience.

A. I graduated from the City College of New York with a Bachelor of Engineering degree in Mechanical Engineering. I also attended Columbia University and completed selected graduate courses in the Department of Industrial and Management Engineering. In April 1970, I accepted employment with the Department of Public Service. My duties have involved the

investigation of consumer complaints, the analysis of engineering matters in utility rate proceedings, cost of service studies and electric rate and tariff matters. I have also participated in the implementation and administration of the Power for Jobs program.

Q. Have you appeared as a witness before this Commission?

A. Yes, I have testified in several electric rate proceedings. The most recent rate proceeding was Central Hudson Gas & Electric Corporation, Case 05-E-0934.

Overview

Q. What is the scope of your panel's testimony in this proceeding?

A. We will be addressing the Orange and Rockland Utilities, Inc. (Orange and Rockland or the Company) proposed transmission and distribution (T&D) capital budget and electric plant additions, proposed system improvement programs, along with other plans and initiatives that the Company has included within its rate filing.

Q. Do you have any adjustments to the Company's T&D capital construction projects or plant in-

service estimates?

A. No. We have reviewed and accept the Company's proposed T&D capital construction projects, and associated plant in-service estimates, as proposed for the rate year. We are not addressing in this testimony projects and programs that will be completed after June 30, 2009.

Q. Please describe Orange and Rockland's proposed overall T&D capital budget and electric plant additions.

A. Historically, Orange and Rockland has budgeted $32.6M, $41.0M, $50.3M, and $64.2M for the respective years of 2004 through 2007, for total T&D capital expenditures. In comparing what was budgeted and what was actually spent, the amount of capital dollars actually spent during those same years was $26.3M for 2004, $49.2M for 2005, and $57.7M for 2006. The year to date (1/01/07 through 8/31/07) amount spent for 2007 is $29.2M. Therefore, with the exception of 2004, the Company has historically exceeded its proposed capital budget. As indicated by the Company's November 15 update to its rate filing,

Orange and Rockland proposes total T&D electric capital expenditures of approximately $84M from July 2008 through June 2009 (Rate Year), $72M from July 2009 through June 2010, and $65M from July 2010 through June 2011. The Company's T&D budgets and expenditures have steadily increased since 2004 and are expected to reach a peak of approximately $84M in the rate year before starting to decrease in the following two rate years. This upward spending trend in capital T&D expenditures has been driven mainly by the Company's overall plan to upgrade its existing T&D facilities as well as building new facilities to satisfy increasing load growth experienced throughout its service territory over the last five years. Orange and Rockland forecasts load growth rates within each of its three New York State (NYS) operating divisions (Eastern, Central, and Western), as well as a combined load growth rate for all three divisions every year in order to prepare for the upcoming year's load. This process uses historical weather-normalized loads and temperature readings from each of the five

previous years. Weather normalizing is performed in order to provide a more accurate account of the actual load growth by removing the effects of above or below average summer temperatures, which directly affect electric load. For the years 2004 through 2007, Orange and Rockland has experienced peak load growth rates for its entire service territory between 3.3% and 3.6%. In specific area load pockets within its NYS territory, much higher peak load growth rates have been experienced. For example, a 5.64% annual peak load growth rate was experienced in the area where the Monroe substation (Central Division) upgrades are currently in progress. The Company's Central Division has also experienced above average peak load growth rates with values ranging from 4.87% in 2004 to 5.33% in 2007. Again, in response to these load growth rates, Orange and Rockland has been steadily ramping up the number of both transmission and substation projects over the last several years. Since 2004, the Company has completed approximately two to three major transmission projects and three to four major

substation projects each year. Many of these projects take more than a year to complete and typically have multiple phases of construction before final completion. As we will describe in more detail later, the Company is currently working on five major transmission and substation projects along with many other smaller projects. The Company is approaching its largest capital investment construction phase, which will continue through the year 2008 and into 2009, before ramping back down in later years. This type of capital spending trend is typical within the electrical utility industry as major capital expenditures tend to ramp up for a period of time to meet anticipated demands and then ramp back down after the capital investment projects are completed and in service with capacity in place for the foreseeable future loads.

Q. What are some of the major projects identified during the rate year?

A. With respect to transmission system projects, the Company has identified the following projects going into service within the rate

year: Line #60 upgrade, Shoemaker Bank 811, Line #11 upgrade, Line #77A, Line #18 upgrade, and the spare transformer program. With respect to the distribution system, the Company has identified the following projects going into service within the rate year: the upgrading of three existing substations (Tallman, Monroe, and Port Jervis) along with the addition of two new substations (Little Tor Rd. and Snake Hill Rd.).

Q. Please explain the review process the panel used to determine if each project and/or program proposed by the Company is justified and necessary.

A. To determine that each of these proposed projects are justified and necessary, we reviewed the justification provided by Company Witness Regan and the expenditure amounts proposed in Company Exhibit___(E-6) and its November 15 update. Additionally, we requested and reviewed current working estimates, detailed cost breakdowns, and project construction schedules. We met with the Company to review each project that is scheduled to be placed in service prior to and within the rate year.

Lastly, we requested and reviewed annual planning and budget reports and associated documents provided to the Company's Board of Directors and its Capital Project Prioritization Committee for approvals. We also reviewed the following annual reports for years 2004 through 2007: Summer Peak System Operating Study, 2-year and 5-year Distribution Forecast Reports, 5-year Distribution Contingency Analysis Report, Capital Funding Requests, and 5-year Capital Budget Reports. As will be explained in more detail, our review found these specific T&D projects, as well as the overall direction of the Company's capital T&D investments, to be reasonable and necessary.

Q. In your opinion, is it reasonable to assume that the Company can spend the dollar amounts allocated and complete the proposed T&D projects previously mentioned within the rate year as detailed by the Company?

A. Yes, based on our review of each project, discussions with Company personnel involved and responsible, and associated site visits, the Company seems prepared and capable of meeting

the proposed construction schedules and budgets. However, the level of proposed expenditures and the impact of the Company's proposed T&D budget on rates demonstrate a need to ensure that the Company is held accountable to ratepayers for the incremental rate allowance associated with these electric infrastructure improvements. Orange and Rockland should be required to file with Staff quarterly reports providing detailed information comparing, project-by-project, actual construction progress relative to Orange and Rockland's previous projected schedules and actual expenditures compared with rate year allowances. Justification should be provided for any discrepancies on a project-by-project basis, as well as in aggregate. If the rate year end review of these projects reveals that the Company has completed less than the levels allowed in its rates, we would propose that the Company be required to defer such variance for future return as a ratepayer credit, with interest accruing at an appropriate rate. Such report should be provided within 45 days of the end of the rate year.

Transmission Capital Projects

Q. Please briefly describe the transmission line upgrades and new substations Orange and Rockland includes in its capital construction budget through the end of the first rate year ending June 30, 2009.

A. **Transmission Line #60:** Transmission Line #60 was upgraded with higher capacity conductor, from 100 MW to 400 MW capability, to meet the Company's reliability planning and operating criteria, and satisfy load growth. The eastern area of Rockland County currently depends on Orange and Rockland's internal transmission system, which includes Transmission Lines #59, #60 & #652 and the 345 kV/138 kV transformers at West Haverstraw and Bowline, as well as the operation of the Lovett Generating Station. This project schedule was accelerated in order to assure its completion and energization prior to the retirement of Mirant Lovett Units 3 and 4 and so maintain system reliability. As a result of this upgrade, #59, which operated at 69 kV, has been retired. Transmission Line #60 project was completed and energized in April 2007 and

the cost added to plant in-service was $10.1M.

Shoemaker Bank 811: A new 175 MVA 138-69 kV transformer, designated Shoemaker Bank 811, was installed in parallel with the existing Shoemaker Bank 711, a 175 MVA 138-69 kV transformer, for increased reliability in the area. Based on current peak load forecasts, a contingency on Bank 711, with the western hydros and Shoemaker gas turbine (GT) off-line, would result in the overloading of various critical lines. With the addition of Bank 811, a contingency on either Bank 711 or 811 will allow the remaining bank to pick up the load in order to serve the Shoemaker Substation. The Shoemaker Bank 811 project was completed and energized in June 2007 and the cost added to plant in service was $1.2M.

Transmission Line #11: Transmission Line #11 upgrade converted a 34.5 kV line to a 69 kV double circuit feeder to provide increased capacity to serve local load. The project also increased the capacity of the Shoemaker and Westtown Substations and establishes a new tie to the soon-to-be upgraded Port Jervis

Substation. The first phase of this project (Transmission Line #11 Upgrade – Part 1), from the Shoemaker Substation to the new Westtown Substation, was completed and energized in 2006. The second phase of this project calls for the continuation of the construction (Transmission Line #11 Upgrade – Part 2) from the new Westtown Substation to the Port Jervis Substation. Once completed, Transmission Line #11 will permit a complete rebuild of the existing Port Jervis Substation and support the area capacity transfer requirements and the Company's distribution and transmission planning criteria as well as the reliability and redundancy of the transmission system in the Company's Western Division. This project is expected to be completed by June 2008 at an estimated cost of $12M.

Transmission Line #77A: Transmission Line #77A will serve the Company's service territory west of the Sugarloaf Substation and will replace Central Hudson's 115 kV SL line as a supply to local area load. The SL line was built in the 1940's and Orange and Rockland considers the

line no longer adequate to reliably supply current load requirements. Orange and Rockland contends that the new line will improve transmission reliability to its Central and Western Divisions. This new line will be installed in an open position on existing transmission towers owned by Consolidated Edison for 15 of the 25 miles between the Ramapo and Rock Tavern Substations. The line will be constructed to 345 kV specifications, but operated at 138 kV until such time as operation at a higher voltage is required to serve load. Utilizing the existing open circuit position on the Line #77 towers eliminates the need to acquire and clear additional right-of-way and construct approximately 15 miles of 138 kV structures between the Ramapo and Sugarloaf substations. With the addition of the new 138 kV transmission line between Ramapo and Sugarloaf, new 138 kV bus work will be required to accommodate the new connection into the Sugarloaf Substation. The total cost of this project is approximately $14.9M with an anticipated completion date of December 2008.

Transmission Line #18: Transmission Line #18 project upgrades existing Line #18 from 34.5 kV to 69 kV. This project creates a strong 69 kV transmission loop in the southern area of the Company's Western Division, providing improved transmission system reliability. It also satisfies the Company's transmission planning criteria for this area and accommodates future load growth. The proposed project has an in-service date of June 2009 with a plant addition cost of $1.5M.

Spare 138-69 kV 175 MVA Transformer: The Company's existing transformer banks average age is approximately 25 years. This is a concern because normal equipment degradation over time can result in equipment failures and customer outages. The Company actually used its only spare 138-69 kV MVA transformer for the previously mentioned Bank 811 addition in the Shoemaker substation in June 2007. A new 138 kV 175 MVA transformer was ordered in 2007. The expected delivery date for this new transformer is June 2009 at an estimated cost of $2M.

Q. Has Orange and Rockland justified the need for

projects you have just described?

A. Yes, based on our review of the need for these projects (Transmission line #60, Shoemaker Bank 811, Transmission line #77 associates with Ramapo 138 kV terminal and Sugarloaf 138 kV expansion, Transmission line #18 and the Spare 138-69 kV, 175 MVA Spare Transformer project) as provided in Company witness Regan's testimony and electric capital expenditures by project amounts proposed within Company Exhibit___(E-6), its November 15 filing, and the information set forth in Company responses to Staff information request Nos. 49, 50, 51, 52, 53, 54, 55, 56, 130, 131, 132 and 133. In addition, we have requested and reviewed each project construction schedule and detailed cost breakdown by project. We also reviewed Orange and Rockland peak load projections for the next six years from the Company's 2007 Summer Peak System Operating Study. Based on our review, we are satisfied that each of these projects is needed and justified for Orange and Rockland to meet its reliability planning criteria and satisfy load growth delivery service needs. We conclude,

therefore, that these substation and transmission line upgrades are reasonable and appropriate for Orange and Rockland to pursue.

Q. In your opinion, is it reasonable to assume the Company can in fact complete the proposed transmission and substation infrastructure projects that you just described on their projected schedules?

A. Yes, based on site visits and ongoing discussions with Company personnel involved, it is our understanding that Orange and Rockland is actually ahead of schedule on some of the projects. There is no known reason to suspect the Company will not be able to complete the work as currently scheduled.

Q. What is your assessment of the cost estimates for the projects?

A. The cost estimates for these projects are reasonable based on a comparison with estimated costs for transmission facilities proposed by other upstate utilities.

Q. Do you support the major transmission plant additions proposed for the rate year by Orange and Rockland?

A. Yes, based on the documentation ultimately provided by the Company in this proceeding, it has provided adequate support for those projects.

Distribution Substation Capital Projects

Q. Please briefly describe the distribution substation upgrades and new substations Orange and Rockland has included in its capital construction budget through the end of the first rate year ending June 30, 2009.

A. **Tallman Substation Upgrades:** Project's scope of work includes upgrading the substation from 69 kV to 138 kV operation, which became necessary with the retirement of the old 69 kV transmission line #59 previously feeding the substation and the installation of the new 138 kV transmission line #60 now supplying this substation. Additionally, due to above average peak load growth projections in the area supplied by the substation (3.89%), the capacity of the substation transformers were also increased from 25 MVA to 50 MVA. These upgrades will also improve reliability within the area. The Tallman substation upgrade project was

completed and placed in service last May (2007) at a cost of $6.6M.

Monroe Substation Upgrades: Project includes upgrading the existing single 25 MVA transformer to two 50 MVA transformers with additional distribution circuits to address the significantly above average peak load growth (5.64%) in this supply area. This upgrade also includes new indoor switchgear, which will eliminate a recurring animal contact problem with existing outdoor distribution switchgear, thereby improving service reliability in the area. The Monroe substation upgrade project has a projected completion and in-service date of October 2008 at a cost of $7.5M.

Port Jervis Substation Upgrades: Scope of work includes upgrading the substation from 34.5 kV to 69 kV operation, because the transmission sources (lines #11 & #18) feeding this substation are also being upgraded to 69 kV operation. Additionally, due to above average peak load growth projected for the area supplied by the substation (3.62% within the Western Division), the existing 25 MVA transformer will

need to be upgraded to a new 35 MVA transformer with additional distribution circuits. These upgrades will also include new indoor switchgear to eliminate a recurring animal contact problem with existing outdoor distribution switchgear, as such improving service reliability within the area. The Port Jervis substation upgrade project has an expected in-service date of May 2009 at a cost of $9.7M.

Snake Hill Rd. Substation Construction: Scope of work includes the construction of a new 138-13.2 kV substation with three 35 MVA transformers and eight new distribution circuits. The Company identified the need for this new substation due to peak load growth in the area, mainly attributed to a new industrial/commercial customer. This new substation will also improve reliability in the surrounding area, reducing loads on several other substations in the Company’s Eastern Division. The Snake Hill Rd. substation project has an expected completion and in-service date of May 2009 at a cost of $10.0M.

Little Tor Rd. Substation Construction: Scope

of work includes construction of a new 138-13.2 kV substation with two 50 MVA transformers and eight new distribution circuits. Due to above average peak load growth in the local area (3.5%), including the incremental load requirements of another large industrial/commercial customer, the Company justifies the need for this new substation. This substation will also improve service reliability in the surrounding area and permit reduced loadings on several other substations within the Eastern Division of the Company. The Little Tor Rd. substation project has an anticipated completion and in-service date of February 2009 at a cost of $9.2M.

Q. Has Orange and Rockland Utility, Inc. justified the need for the projects you just described?

A. Yes, based on our review, we have determined that each of these projects is needed and justified for Orange and Rockland to meet its reliability planning criteria, satisfy load growth and improve reliability. We conclude that these distribution substations projects are reasonable for Orange and Rockland to pursue.

Q. In your opinion, is it reasonable to assume the Company can complete and put in service the proposed distribution substation infrastructure projects on its projected schedules?

A. Yes, based on site visits and discussions with involved Company personnel, it is our understanding that the Company is actually somewhat ahead of schedule on some of the projects and there is no known reason to project the Company will not be able to complete the work as currently scheduled at this time.

Q. What is your assessment of the cost estimates for the projects?

A. The cost estimates for these projects are reasonable based on comparisons with historical costs for similar substation projects previously undertaken by the Company and with substation projects at other upstate utilities.

Q. Do you support the plant additions for major distribution substation projects proposed in the rate year by Orange and Rockland?

A. Yes, based on the documentation provided in this proceeding the Company has provided adequate support for those projects.

Q. Are there any other major capital programs you would like to discuss?

A. Yes, the Distribution Engineering Workstation (DEW). The DEW is circuit analysis software program originally developed by the Electric Power Research Institute (EPRI) as a classical engineering analysis tool. Since 2003, the Company has been striving to integrate this analysis tool into its system as a virtual Supervisory Control and Data Acquisition (SCADA) system that can simulate electrical system problems in seconds using real time data from substations and field devices. DEW will be utilized by all areas within the Company, such as engineering, electric operations, and the distribution control center. It will also be an integral part of implementing a Smart Grid system within the Company's territory. The DEW is scheduled to be fully operational and completed within the first quarter of 2008. The Company lists expenditures associated with the implementation of the DEW program since its inception in 2003 of $2,082,000.

Q. Has the Company demonstrated a need for the DEW

program?

A. Yes. To determine whether this program is warranted, we reviewed the justification provided within Company Witness Regan's testimony and expenditure amounts proposed within Company Exhibit___(E-6). Additionally, we met with Company personnel to obtain a complete understanding of exactly what DEW does, why the Company is implementing DEW, how it will be used, along with the program's integration requirements, status, and expenditures. Based on that review, we found the DEW program to be justified.

Proposed System Improvement Programs

Q. Please explain Orange and Rockland's proposed system improvement programs.

A. In Mr. Regan's testimony, he discusses several additional programs, aside from the electric plant additions, which he says improve and enhance service throughout the entire system. The specific programs, which we will discuss in more detail, are Enhanced Distribution Automation, Advanced Metering Infrastructure (AMI), Smart Grid, Field Automation Technology

Support, Danger / ROW Tree Program, Proactive Service Reliability Initiatives, Work Management System Initiatives, and System Compliance.

Enhanced Distribution Automation: The Company plans to expand its existing enhanced distribution automation program. Currently, there are approximately 120 existing distribution automation devices on the system. Historically, the Company has installed 10-15 devices annually on the system since the mid 1990's. The Company plans to accelerate this rate, adding another 20 devices per year to the system in addition to improving and expanding the required communication systems for operation. These devices are designed to minimize the number of customers interrupted during main line faults, better isolating the problem and the number of customers affected, and allowing the remainder of customers to regain service as final repairs are made to the isolated damaged portion of the line. We feel these devices provide significant improvements to customer reliability and are warranted. The program's expansion and acceleration entails

incremental expenditures of $1.0M in the rate year.

Advanced Metering Infrastructure (AMI): In its Order issued August 1, 2006 in Cases 94-E-0952, 00-E-0165, and 02-M-0514, the Commission directed each utility to develop and file comprehensive plans for deploying, to the extent feasible and cost effective, advanced metering infrastructure throughout their service territory. In supplemental testimony, Mr. Regan summarizes the Company's plan for developing and deployment of advanced metering infrastructure as required in the metering proceeding. He states that although the actual metering equipment is the largest cost element of an AMI system, the most crucial and relatively un-tested aspect of the technology is the communications infrastructure used to transmit the data. According to Mr. Regan's testimony, the overall benefits of implementing AMI would be: reduced Company O&M costs; improved outage detection; improved customer satisfaction and service reliability; customer control over their usage and costs; and the ability to incorporate

demand response and demand-side management programs. In order to further study the feasibility, costs, and benefits of deploying advanced metering infrastructure throughout their service territory, the Company proposed two field demonstrations or pilot programs within its service territory. According to the Company, one field demonstration of 5,000 metering points would take place in the Company's Western Division, and the other field demonstration of 5,000 metering points would take place in the Company's Eastern Division. The total metering points (10,000) would consist of 70% electric and 30% gas meters. According to the Company's filing, spending for these demonstration projects would span from late 2007 through 2009, and it estimates total electric costs associated with these projects of $2.375M in capital and $359,000 in operations and maintenance (O&M) expense.

Q. How do you recommend Orange and Rockland's advanced metering infrastructure proposal be handled within this rate case proceeding?

A. Orange and Rockland's AMI plan, which has much

more information pertaining to the specifics of their plans, than was filed in this proceeding with the Commission on March 29, 2007. This filing, in addition to each of the other utilities' AMI plans, filings is being addressed in Cases 94-E-0952, 00-E-0165, and 02-M-0514. Therefore, it is our recommendation that the advanced metering infrastructure and associated costs be excluded from the current Orange and Rockland electric rate case, and revisited in the context of the existing AMI proceeding already in place.

Smart Grid: The Smart Grid program includes a pilot project that involves the installation of new advanced system monitoring, computer analysis, controls, enhanced distribution automation devices, and AMI initiatives which provide customer specific energy usage information to customers and the Company from the customer's meter. The Company contends that incorporating these features and tools into one system will dramatically improve system reliability, minimize the extent of interruptions, improve service quality, and

expand the overall control and monitoring of the system. However, it should be recognized that although the Smart Grid program is designed to be compatible with and use AMI technology and devices, the program is not dependant on AMI. Therefore, even if there isn't a decision by the Commission pertaining to the direction and progress of the AMI initiatives described previously, the Smart Grid program still provides improved reliability monitoring and service quality improvements and benefits. This program is considered a beneficial research and development program and the first step to implementing some of today's technology and improved devices in to the electrical system with hopes of full deployment in the coming years. Therefore, this program is warranted; and by incorporating $1.0M of proposed funding from a recent NYSERDA program, the program's total estimated capital cost of $4.42M will be reduced to $3.42M. Costs within the rate year will be reduced from the original amount of $2.12M. The program is reasonable and scheduled to start in July 2008.

Field Automation Technology Support: In addition to the three programs just described, the Company is proposing to institute a field automation technology support group. This group will include four technicians, a supervisor, and an engineer. Mr. Regan states that this group will help install, troubleshoot, repair, and maintain all devices and equipment associated with the proposed programs previously described in this testimony. With the increasing number of automated devices being installed by the Company and the technical expertise required to install and maintain these new high tech devices, additional personnel above and beyond existing staffing is required. Therefore, we believe this group is needed to support the programs targeted at improving system reliability. The start up cost for this program is $1.175M ($988,300 in Capital, $187,200 in O&M). Projected expenses thereafter are approximately $1.06M ($684,300 in Capital, $376,600 in O&M) annually. The program is scheduled to start in the beginning of 2009.

Distribution Danger / Off-ROW Tree Program: The

Company is seeking to expand its existing danger tree program for the distribution system to help reduce the frequency of interruptions associated with major tree interference incidents. In 2006, the Company experienced a total of 779 tree caused interruptions, second only to equipment failures. Outages related to trees have been a major contributor to customer interruptions in recent years. We support the annual costs projected for this program of $750,000, with the understanding that any expenditure shortfalls in program's spending levels shall be deferred for customer credit. This is consistent with the Commission's October 2007 decision in Case 04-E-1433.

Proactive Service Reliability Initiatives: The Company proposes adding one reliability engineer / analyst position whose principle task would be to better understand the types and causes of outages, and what programs are available and could be implemented to reduce future occurrences. This position is proposed in order to allow the Company to proactively review and analyze increasing amounts of outage data being

compiled by many of the new monitoring tools and controls, in addition to determining what actions may help reduce the number of outages and interruptions. With the implementation of global information systems (GIS) into the Company's outage management system (OMS), there are many more opportunities to track and analyze outage events and where they are occurring. This type of incremental reliability data and its analysis would be the sole responsibility for this new position. We, therefore, support this position and the associated O&M costs, approximately $58,000 per year.

Work Management System Initiatives: The work management system (WMS) is a computer based software tool used by all of the operations field forces to manage, report, and control costs associated with daily work activity. Over the next several years the Company plans to improve and expand the systems' ability to manage day-to-day work by employees. The Company is proposing to add a WMS support technician to help support the new system improvements and assist the one existing WMS

technician. We have determined that this additional position is warranted. The associated O&M costs are approximately $52,000 annually.

System Compliance: The Company is proposing to add a compliance specialist whose function would be to ensure compliance with mandated reliability standards. The Compliance Specialist position is a direct response to Section 39.2 of the Federal Electric Reliability Corporation (FERC) Order 672, 18 C.F.R. § 39.2 (issues April 19, 2007) that requires each owner, operator, and user of the bulk power system to register with the Electric Reliability Organization (ERO) and the appropriate regional entities. With new compliance requirements mandated by the entities listed above, we feel that this new position is needed to assure complete compliance by the Company. The associated O&M costs for this position are approximately $52,000 annually.

Q. Has the Company justified the need for the proposed system improvement programs that you just described?

A. Yes, with the exception of its AMI proposal. To confirm that each of the proposed programs is warranted, we reviewed the justification provided in Company Witness Regan's testimony along with the proposed expenditure amounts. Additionally, we requested detailed descriptions/justifications, budgeted and actual expenditures since the program's inception, priority rankings, and a detailed cost break-down for each program. Based on our review of that material, we conclude that each of the programs and associated expenditures, with the exception of its AMI proposal, is justified and needed to ensure the Company to improve safety and reliability throughout its system.

Orange and Rockland's November 15, 2007 Update

Q. Are there any other topics you would like to discuss?

A. Yes. On November 15, 2007 the Company updated its original filing, including updates of cash flows and in-service dates for capital T&D projects. The following is a list of the major project changes provided by the Company's update:

Monroe Substation Upgrades: Project cost increased from approximately $6.8M to $7.5M due to higher costs of the underground circuit exit cables and civil construction fees resulting from unanticipated interference with buried structures during excavation.

Snake Hill Rd. Substation Construction: The original in service date of December 2008 slipped to May 2009 due to local permitting issues. Original project cost of approximately $7.0 M increased to $10.0M. The original estimate was based on a large up-front customer contribution to accept transmission service rates and the customer has now opted for more expensive service which essentially eliminates the customer's up-front contribution in exchange for the higher rates.

Q. Please continue.

A. As part of the update, the Company provided an explanation for the changes, along with a complete cost breakdown of the cost increases related to each project. After reviewing this additional information, we continue to believe that the projects are still warranted and

justified.

Q. Are there any other items identified in the Company's update you would like to address?

A. Yes. The Company's update included the addition of several (13 total) new employee positions to address workload and attrition. There was no back-up information or justification associated with these additional positions and O&M costs. Without additional information and/or testimony provided to support or justify these positions and programs, we can not support them.

Service Reliability Performance Goals

Q. Please describe the service reliability performance goals pertaining to Orange and Rockland.

A. Each New York State electric utility has service reliability performance goals or targets set by the Commission that the utility must meet or be subject to negative revenue adjustments. Specifically, the targets are System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI). SAIFI is a measurement of the frequency or average number of times an electric

customer experiences an electric interruption. CAIDI is a measurement of the restoration or average amount of time (measured in hours) that it takes to restore power to an electric customer following an interruption. In the Order issued in October 2007 in Case 06-E-1433, the Commission adopted the reliability targets proposed by Orange and Rockland, reducing the prior SAIFI target of 1.70 times to 1.36 times and increasing the CAIDI target of 1.54 hours to 1.70 hours. The Commission, however, also increased the negative revenue adjustment that the Company is responsible for if the targets are not met. This included increasing the existing 4 basis points per target (possible 8 basis points total) to 10 basis points per target or a possible 20 basis points total negative revenue adjustment. The Commission noted that the change in this revenue adjustment would bring Orange and Rockland more in line with other New York State utilities and make its performance mechanism more meaningful.

Q. Did the Company propose any changes to the service reliability performance goals in its

filing in this case?

A. Yes, the Company advocates a symmetrical mechanism be established, which would reward Orange and Rockland for reliability performance above the targets instead of only applying negative revenue adjustments when the Company fails to meet the reliability targets. Orange and Rockland also proposes a three-tiered negative revenue adjustment process for each target, where the negative revenue adjustment increases depending upon how poor the actual reliability index value is compared to the annual target value. The proposal was outlined in pages 43 and 44 of Company witness Regan’s prefiled testimony. The Company also suggests that the Commission use the System Average Interruption Duration Index (SAIDI) as a “referee” against the Company’s overall system performance with respect to SAIFI and CAIDI, before determining that negative revenue adjustments are assessable. For example, if the Company were to fail the SAIFI target, but met both the CAIDI and SAIDI targets, no revenue adjustment would be assessed. The Company

proposes using a SAIDI performance goal of 139.3 minutes or 2.32 hours.

Q. Do you agree with the Company's proposed service reliability performance goal adjustments?

A. No. We do not agree with either of the Company's proposals. The negative revenue adjustments were recently adopted by the Commission to bring this company more in line with the other New York State utilities and to make its performance mechanism more meaningful. We note that in its October Order issued in Case 06-E-1433 the Commission stated that it would consider further increasing the amounts the Company is at risk in the future. Therefore, the three-tiered process proposed by the Company, which effectively softens the existing one-time revenue adjustments for performance failures, contradicts previous Commission intent and should, therefore, be rejected. In regard to the use of SAIDI as a referee for the SAIFI and CAIDI targets, again we do not agree with the Company. The main reason for reliability performance goals is to maintain electrical service reliability for the customers of New

York State. Incorporating SAIDI as a referee for SAIFI and CAIDI could operate to allow the Company to avoid a revenue adjustment where the Company excels in one category, such as interruption frequency, while slipping in the other category such as customer restoration, because the overall product of the SAIFI and CAIDI did not exceed the SAIDI target. Clearly, it is not the goal of the reliability performance targets to allow avoidance of a revenue adjustment simply by satisfying only one of the targets, SAIFI or CAIDI. Therefore, this proposal should not be adopted.

Q. Are there any positive incentives proposals by the Company that you would like to discuss?

A. Yes. The Company proposed both an annual reliability incentive and a summer reliability incentive.

Annual Reliability Incentives:

In terms of annual reliability performance, Orange and Rockland proposes that if it achieves exceptional results in all reliability performance categories (SAIFI, CAIDI, and SAIDI), it would be entitled to a positive

incentive of $350,000. The Company defines exceptional results to be: SAIFI<=1.26; CAIDI<=94.7 minutes or 1.58 hours; and SAIDI<=119.3 minutes or 2.0 hours.

Summer Reliability Incentives:

To support its request for summer reliability incentives, the Company claims that the onset of hot weather during the summer months results in additional stress to the electric delivery system, as well as significant efforts and costs for it to maintain system availability and respond to operating issues. Orange and Rockland asserts that with the implementation of a revenue decoupling mechanism (RDM), a strong positive incentive should be put in place to compensate it for extraordinary costs of reliably meeting the challenges of these high load periods. The Company proposes that for any calendar year where the number of 90° days equals or exceeds 8, it will earn an additional 70 basis points on return on equity (ROE) if the system performs reliably. For any calendar year where the number of 90° days equals or exceeds 11, the Company requests an additional 5 basis

points for each additional 90° day. The Company states that it would need to meet a SAIFI target of 0.176 times and CAIDI of 117.4 minutes or 1.96 hours during the summer months of June, July, and August to be eligible for the incentives.

Q. Do you agree with the Company's positive incentive proposals?

A. No. We do not agree with the annual or the summer reliability incentives. In terms of the annual reliability incentive of $350,000 for meeting reliability indexes defined by the Company as exceptional, we continue to oppose the use of SAIDI as a referee for the existing SAIFI and CAIDI indexes as stated earlier. Again, the use of SAIDI could allow avoidance of a revenue adjustment simply by satisfying only one of the targets. The intent of the service reliability performance goals is to maintain electrical service and reliability to the customers, not to reward utilities for providing such services. Additionally, in Case 06-E-1433 and this rate proceeding, the Company identified several major transmission and distribution

projects under construction or to be constructed that should improve reliability throughout the entire Orange and Rockland service territory. The Company has also proposed several smaller programs aimed at improving electric service and reliability for customers. As stated previously, this panel has determined that all of these projects and programs to be justified and necessary in order for Orange and Rockland to satisfy system load growth and continue to improve reliability in these areas. Therefore, to establish a positive incentive for performance reliability where substantial rate payer dollars are already being provided for system improvements would not be reasonable. Ratepayers should not have to pay twice, once for the projects to improve reliability and again for the reliability to be maintained.

Q. Please continue.

A. In terms of proposed summer reliability incentives, the substantial investments in transmission and distribution projects and programs maintain and improve summer reliability. Each year the Company prepares for

the upcoming summer months by reviewing the previous summer's loads, incorporating any new business loads, and finally calculating what the upcoming summer's peak load is expected to be. This process is how the Company determines what projects and programs are needed to support the upcoming summer's forecasted peak load conditions. In other words, prior to each summer period, the entire electrical system, and associated equipment, has been reviewed and determined to meet peak load conditions for the upcoming summer loads. As such, there continues to be no justification for such incentives. The Company has argued that the onset of hot weather during the summer months results in additional stress to the electric delivery system, as well as significant efforts and costs to the Company to maintain system availability and respond to operating issues. In discovery, we requested a detailed cost breakdown of the additional and/or incremental work required during periods of high load and temperatures. In the Company's response, which we are sponsoring as Exhibit___(SIP-1), Page 1 of 2, Orange and

Rockland stated that the costs attendant for this exacerbated workload are not available. The Company only provided examples of how the number of incidents and overtime costs increase during the summer months. Orange and Rockland's failure to substantiate its claim demonstrates that there is no basis for adopting summer reliability incentives for Orange and Rockland operations, and therefore should be rejected.

Q. Does this conclude your testimony?

A. Yes.