

# Department of Energy 2009 National Electric Transmission Congestion Study

## COMMENTS OF CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. AND ORANGE AND ROCKLAND UTILITIES, INC.

Consolidated Edison Company of New York, Inc. (“Con Edison”) and Orange and Rockland Utilities, Inc. (“O&R”) (“the Companies”) submit these comments in response to the National Electric Transmission Congestion Study (“Study”) issued by the United States Department of Energy (“DOE”) Office of Electricity Delivery and Energy Reliability (75 Fed. Reg. 22770 (April 30, 2010)).<sup>1</sup>

### **I. Summary**

The Companies submit these comments because of the designation of the Mid-Atlantic Critical Congestion Area and specific concerns that were stated concerning southeastern New York. Relying on 2007 data,<sup>2</sup> the Study describes southeastern New York’s ability to meet its electricity needs in the years ahead as the single greatest challenge for the Mid-Atlantic region. But, the most recent studies that have resulted from the planning processes conducted by the New York Independent System Operator (“NYISO”) do not support this conclusion. Specifically, the NYISO planning processes studies have shown that no new resources are required for reliability for the next ten

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<sup>1</sup> The Companies have a direct interest in the DOE’s determinations in this proceeding. Con Edison is a regulated utility engaged in the generation, transmission, distribution and wholesale and retail sale of electric power, gas and steam in New York City and Westchester County. O&R is a regulated utility operating in Orange, Rockland, and part of Sullivan counties in New York State and in parts of Pennsylvania and New Jersey. O&R is engaged in the transmission, distribution and wholesale and retail sale of electric power and gas. Both Companies are participants in the NYISO electricity markets and O&R participates in PJM electricity markets through its subsidiary Rockland Electric.

<sup>2</sup> Study at x.

years and its economic planning process has demonstrated that it is unlikely that additional new transmission projects would economically address congestion.

The Study requests information concerning the impact of the recession.<sup>3</sup> The economy remains a concern and it is having an effect on our customers. We are mindful that utility customers will be required to support new investments and that we have lowered and continue to monitor our estimates of load growth and infrastructure needs in light of the economy. As important as the economy is, however, the decrease in natural gas prices that has occurred since 2007 is equally significant because this decrease has also resulted in a decrease in electricity market congestion. The Companies believe that the most significant long range impact has occurred and will occur from the changes in natural gas pricing that have taken place since 2007.

In addition, the Study repeats the unsupported allegations of certain PJM market participants that southeastern New York is inappropriately relying on PJM when southeastern New York relies mostly on its own resources and pays appropriate compensation to PJM for power that it imports from PJM.

In sum, the Companies support the building of transmission to import energy and reduce congestion when it is cost effective to do so. If the economics or reliability were different, the Companies would support a designation of southeastern New York as an area requiring transmission to meet reliability or aid their customers in receiving lower cost power. But such a designation is not supported by the current data.

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<sup>3</sup> Study at 52.

## II. Background

Section 216 of the Federal Power Act (“FPA”) authorizes the DOE to designate certain areas as National Interest Electric Transmission Corridors (“National Corridors”). In making the Corridor designation, the DOE must identify geographic areas where congestion is adversely affecting consumers. The designation is not a bright line determination that transmission must or even should be built. Rather, DOE’s role is to conduct a study<sup>4</sup> and identify congestion *that adversely affects consumers*<sup>5</sup> and name National Corridors, as needed, that could utilize Federal backstop siting authority. In addition, the American Reinvestment and Recovery Act of 2009 directed that the Study include an analysis of significant potential sources of renewable energy that are being constrained by a lack of adequate transmission.

The DOE has no role in determining the most appropriate project or solution to address such congestion. Instead, the need for such projects would be considered by the Federal Energy Regulatory Commission (“FERC”) should a transmission project be proposed. Developers of such projects would request such siting, with market participants involved in the process, along with Regional Transmission Organizations (“RTOs”), Independent System Operators (“ISOs”) and state utility commissions. It is because of its limited role that the Study does not propose solutions or perform a cost benefit analysis prior to making its National Corridor designations. Nevertheless, the Study should have taken into account recent NYISO planning studies, including the

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<sup>4</sup>The *National Electric Transmission Congestion Study*, Department of Energy, 71 Fed. Reg. 45047 (August 8, 2006) will be updated every three years.

<sup>5</sup> FPA Section 216 (a)(2). As discussed, the Companies do not believe that the Study demonstrates that congestion is adversely affecting customers in southeastern New York, including New York City, especially with the current low natural gas prices. Significant changes in natural gas pricing or other prices could result in a different designation, but such changes do not appear likely at this time.

economic studies, which found that transmission is unlikely to be cost-beneficial for the three studied New York state transmission constrained areas, including New York City as well as two upstate areas.

In determining which areas of the country should be designated as National Corridors, the Study did not perform an independent analysis, as it did in the first study conducted following the adoption of the 2005 Energy Policy Act. Rather, this time the DOE conducted a public outreach program among various governmental and industry officials and reviewed existing studies that were in the public domain. This approach led the DOE to identify the Mid-Atlantic region, including southeastern New York, not as a “National Corridor” but rather as a “Critical Congestion Area.”<sup>6</sup> In 2007, the DOE had classified the Mid-Atlantic/New York area as a National Corridor. In this Study, the DOE reserved the right to take additional steps concerning the designation of National Corridors.<sup>7</sup> The Study explicitly states that it “refrains from addressing the issue of whether transmission expansion would be most appropriate solution” and does not determine whether or not the congestion is “adversely affecting” customers. The Companies agree with the Study’s determination in this regard, but submit these comments because the designation of southeastern New York as a Critical Congestion Area is not justified by current data or forecasts.

### **III. Discussion**

#### **1. There is Insufficient Evidence to Support Southeastern New York’s Inclusion as a Part of the Mid-Atlantic Critical Congestion Area.**

The Study designates the Mid-Atlantic region as a Critical Congestion Area and states that it is based “on consideration of the totality of the various kinds of information

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<sup>6</sup> Study at vii and 2.

<sup>7</sup> Id.

presented, rather than on whether specific congestion metrics have been met or exceeded.”<sup>8</sup> The precise import of this designation is unclear, but it is clearly intended to raise a level of concern, and the Study notes a particular concern with the southeastern New York market. In making this designation, the Study relies on three principal factors: (1) reliability concerns; (2) economic cost of congestion; and (3) a concern that New York leans on PJM.<sup>9</sup> As demonstrated below, these contentions, which generally relied on 2007 data and interviews with certain market participants, do not withstand scrutiny in light of the most current data.

**A. New York State and New York City Have No Forecasted Reliability Needs for the Next Ten Years.**

NYISO reliability studies have found, and the Study confirms, that New York is not forecasting any reliability needs for the next 10 years and that there have been significant increases in generation and demand response resources in New York.<sup>10</sup> The Study specifically notes that while less transmission has been built in New York, “its market mechanisms is causing more generation and demand-side resources to be built close to southeast load centers.”<sup>11</sup>

Nevertheless, the Congestion Study finds that slow development of new generation and new backbone transmission facilities could compromise continued reliability in the Washington, Baltimore, New Jersey and New York City areas.<sup>12</sup> But this would be true for any area if it experienced higher than forecasted load growth and slower than expected development of the necessary infrastructure. The Study does not identify any

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<sup>8</sup> Study at x.

<sup>9</sup> Id. at 50-52.

<sup>10</sup> Id. at 41-43.

<sup>11</sup> Id. at 51.

<sup>12</sup> Id.

factor that makes it more likely that this would occur in New York or the Mid-Atlantic rather than other areas of PJM and New England. The only distinguishing factor appears to be that New York has built or authorized less transmission than these other areas, but the NYISO has the only planning process that unequivocally compares transmission to generation and/or DSM to fulfill reliability and/or economic needs.<sup>13</sup> As the Study recognizes, this has resulted in more generation and DSM built in constrained areas in New York. Indeed, notwithstanding the recession, important projects are underway to address the needs of southeastern New York, including the 575 MW SCS Astoria Phase 2 generating unit located in New York City. The NYISO's draft 2010 reliability needs assessment shows even lower needs than previous assessments -- it projects that no new resources are required to meet reliability needs until 2020.<sup>14</sup>

In addition, the Con Edison M29 transmission line from Westchester to northern Manhattan in New York City could ultimately add up to 500 MW of import capacity into New York City. It is projected to come on line in May 2011. The Companies are also participating in a study to develop a thorough assessment of the transmission system and suggest long-range plans (beyond the NYISO ten-year planning horizon) for coordinated infrastructure investment in the state's power system. One of the goals of the study is to support the growth of renewable energy sources. At the same time, the Companies also support the fostering of local resources to meet load requirements -- demand response

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<sup>13</sup> The NYISO tariff explicitly provides that all resources (generation, transmission and demand response) will be evaluated on a comparable basis when considering economic and reliability needs. NYISO OATT, Attachment Y, §§ 8.1, 11.3c. Section 11.3c provides that "All resource types shall be considered on a comparable basis as potential solutions to the congestion Identified: generation, transmission and demand response."

<sup>14</sup> NYISO (2010) *Draft 2010 Reliability Needs Assessment*. (Rev 7), p. 6-1. This draft report also finds that the 512 MW Bayonne Energy Center should also be included as a power plant that will provider power to New York City because it has met the criteria for being included in the base case.

and energy efficiency and additional supply sources close to the load center can be more reliable because they are affected by inter-zonal or inter-regional transmission outages.

**B. New York City has Lower Congestion Due to Lower Natural Gas Prices -- There is Currently Not a Demonstrated Need for Additional Transmission Facilities to Relieve Economic Congestion.**

The Study states that in the Mid-Atlantic region the “load centers continue to experience the impact of significant levels of transmission congestion, measured in terms of economic costs and reliability.”<sup>15</sup> This statement is incorrect as it applies to New York City. In the past these price disparities have resulted from the significant price differentials between natural gas and other energy sources that generate electricity, such as coal-fired PJM generation. In New York City, natural gas is on the margin more than 90% of the time.<sup>16</sup>

But as a result of recent increases in shale gas production, the market price of gas has dropped significantly and it is not expected to increase significantly. These shale gas developments have repeatedly been described as a “game changer.” Moreover, shale gas production has contributed to the dissipation of natural gas price differences between regions. *See* FERC State of the Markets Report 2009 (April 15, 2010).<sup>17</sup> The report states: “The United States is closer than ever before to being a single natural gas market with congestion limited to a few markets for a few periods during the year.”<sup>18</sup>

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<sup>15</sup> Study at 51.

<sup>16</sup> *See, e.g.,* NYISO, *Fuel Diversity in the New York Electricity Market*, at 3-5 (2008). While this Fuel Diversity shows dual fueled natural gas/oil plants to be on the margin much of time, those plants are burning natural gas almost exclusively due to price differentials and environmental limitations. Accordingly, the Study is currently incorrect to the extent that it states (at 38) that New York has problems because it relies on high priced oil as a generation fuel. Moreover, it should be noted here that New York City in particular relies on natural gas because it banned coal-fired generation in 1972. The federal government should not undermine New York’s environmental policies by providing the City with access to low cost coal generation when the emissions from those plants will ultimately reach New York.

<sup>17</sup> Available at <http://www.ferc.gov/market-oversight/st-mkt-ovr/som-rpt-2009.pdf>.

<sup>18</sup> FERC State of the Market Report, notes to slide 13.

This decline in natural gas prices has been and is expected to continue to be a significant development for energy markets. For example, the Study cites a statement by the NYISO that the congestion reducing benefits of the new transmission that has been built to date in New York has “been offset by higher fossil fuel prices.”<sup>19</sup> This statement was made in 2008 and unquestionably, this should no longer be forecasted to be a material concern based on current data and this should be taken into account in determining whether economic congestion is a concern for southeastern New York. For example, transmission congestion decreased by 61% in New York from 2008 to 2009.<sup>20</sup> (Congestion in New Jersey, which is wholly situated in the Critical Congestion Area, has also decreased to a small percentage of values seen previously.<sup>21</sup>)

Finally, in considering natural gas, it should be taken into account that Con Edison has recently entered into a precedent agreement with developer of the Spectra New Jersey – New York Expansion Project that will supply 800,000 Dekatherms per day of new supplies to and diversify the natural gas supply sources for New York, helping to reduce natural gas prices and electric prices. See <http://nj-nyproject.com/>. The Study should recognize that increased gas pipeline capability can serve the same electric supply objective as added electric transmission capability and that additional pipeline capability makes additional natural gas supply available to supply generation located in or in proximity to load centers.

In addition, the Study also correctly notes that eliminating congestion is often times more expensive than the actual cost of the congestion. If congestion can be eliminated

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<sup>19</sup> Study at 45. This statement raises the question as to whether transmission can be economically beneficial and reduce congestion if, for example, natural gas will remain the fuel on the margin during all congested periods in southeastern New York.

<sup>20</sup> Patton (2010), “2009 State of the Market Report New York ISO Electricity Markets.”

<sup>21</sup> Kormos, Herling (2010), New Jersey Power Supply Presentation

economically by a generation or energy efficiency project or initiative -that is a good result that should not be undermined by the designation as a Critical Congestion Area that could lead to an unwarranted designation as a National Corridor requiring transmission.

The NYISO's most recent economic planning study showed that transmission was marginally cost beneficial (benefit to cost ratio was 1.07<sup>22</sup>) for the lowest cost transmission cost estimate only;<sup>23</sup> it was less than 1.0 for all other transmission cost estimates, demonstrating that transmission is not likely to be cost effective to address congestion. Moreover, this analysis was completed before the significant decrease in natural gas prices, which results in lower electricity prices in areas where natural gas is on the margin (and thus lower congestion) and would further reduce the benefits.<sup>24</sup> Of course, the NYISO process will continue to assess the viability of transmission investment in the future, and should conditions change and transmission investment become an economic solution, such investment could be authorized for recovery through the NYISO comprehensive planning process.

Finally, while the study seeks to identify areas of congestion, the conclusion should not be that investment in transmission is needed, or that the congestion always needs to be reduced or eliminated. The Companies further submit that the existence of congestion, in and of itself is not harmful if there are no reliability violations and the cost to consumers to relieve the congestion can be greater than the cost of congestion itself.<sup>25</sup>

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<sup>22</sup> The ratio is based on the net present value of the production cost savings divided by the estimated cost of the transmission project.

<sup>23</sup> NYISO (2009) *2009 Congestion Assessment and Resource Integration Study*, at v. Report available at [http://www.nyiso.com/public/webdocs/services/planning/Caris\\_Report\\_Final/CARIS\\_Final\\_Report\\_1-19-10.pdf](http://www.nyiso.com/public/webdocs/services/planning/Caris_Report_Final/CARIS_Final_Report_1-19-10.pdf).

<sup>24</sup> The NYISO study states that "With natural gas being the fuel of marginal units in the vast majority of the hours, especially during high-load periods, changes in its price has an obvious impact on the congestion component of the zonal Locational Based Marginal Price." *Id.* at ii.

<sup>25</sup> Study at 40.

The Study correctly notes that although congestion “is a reflection of legitimate reliability or economic concerns, not all transmission congestion can or should be reduced or ‘solved.’”<sup>26</sup>

**C. The Study Incorrectly Implies that New York is Inappropriately Relying on New Jersey and PJM.**

The Study states that “there will continue to be tension between New York’s needs and PJM, and significant price differentials across the region.”<sup>27</sup> In making this determination, the Study appears to rely more on interviews than precise market data. For example, the Study cites a New Jersey Public Utility Commissioner for the proposition that 3000 MW of new generation will be sited in New Jersey and will sell into the New York energy market.<sup>28</sup> In addition, relying on one PJM officer, the Study states that PJM does not want New York to “leverage” the PJM “solutions” unfairly.<sup>29</sup> These conclusions form part of the basis for including southeastern New York as a part of the Mid-Atlantic Critical Congestion area.

The Study should have clarified the reasons why transmission is being built in PJM and more closely evaluated New Jersey’s and PJM’s concerns. PJM uses a planning process known as the Regional Transmission Expansion Plan (“RTEP”) to determine if transmission projects should be constructed. Under the RTEP process, PJM determines whether there will be any reliability deficiencies in PJM where new transmission facilities to be constructed to resolve a PJM reliability problem are a solution. When PJM is making this reliability determination, it does not consider any New York reliability issues. Under the RTEP process, PJM can also require new transmission facilities to be

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<sup>26</sup> Id. at viii.

<sup>27</sup> Study at 51.

<sup>28</sup> Study at 40.

<sup>29</sup> Id. at 40, 41.

constructed if it determines that this new facility would create economic benefits for some or all of PJM's load (*i.e.*, benefit/cost ratio better than 1.25). Again, the issue of whether New York could or would benefit is not considered in the decision. Thus, PJM is building transmission solely for the economic benefits or reliability needs of PJM, not because of New York.

Importantly, the PJM processes explicitly allocate cost responsibility. It should be noted that the new transmission lines connecting PJM to New York, such as the Neptune line and the Linden VFT facility, are considered to be PJM transmission facilities. Neptune is a transmission line connecting New Jersey to Long Island and Linden VFT connects New Jersey to New York City. As transmission facilities, these lines are assigned their share of PJM's transmission upgrade costs through the RTEP process based on the capacity delivered.

The suggestion of certain PJM market participants that New York is somehow inappropriately relying on PJM implies an inappropriate subsidy when New York is appropriately establishing new interconnections with a neighboring region and paying its share of resulting costs, actions that should be encouraged. In addition, the price of electric energy from these PJM facilities into New York also includes their share of the costs to build these new PJM transmission facilities. Moreover, if New York wishes to utilize additional PJM supply, it must construct additional transmission lines connecting New York to PJM.<sup>30</sup> These future transmission lines would also be subject to PJM cost allocation rules. One such project that is in the queue and being considered is the Hudson

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<sup>30</sup> If New Jersey's concern is related to economic impacts, it is an indication that markets are working correctly if generation enters into New York when it is economic to do so. And New Jersey obtains the benefit of the local tax revenues and employment.

Transmission Partners' 660 MW line. This merchant transmission line, if developed, would pay its appropriate interconnection costs in both PJM and NYISO regions.

Likewise, the Study's implication that New York electric reliability depends on imports from PJM<sup>31</sup> is incorrect. Presently, NYISO market rules require that for New York City, 80% of the installed capacity obligation must be purchased from In-City supply sources, and for Long Island 104.5% of its installed capacity obligation must be purchased from resources located on Long Island. While a small portion of these "local" resources is provided by capacity delivered from the PJM area,<sup>32</sup> reliability for both New York City and Long Island is being maintained largely by New York resources, and not from PJM. It should also be recognized that NYISO, PJM (and ISO-NE) conduct joint cross border studies that to date do not show any joint reliability needs.<sup>33</sup> Moreover, the transmission lines into New York City typically have higher utilization rate at off-peak as compared to on-peak, mitigating any claim that New York City is "leaning" on PJM for reliability during peak periods.<sup>34</sup>

Thus, the concern that New York is "leveraging" or taking "unfair" advantage of PJM is misplaced and provides no basis for designating southeastern New York or New York City as a Critical Congestion Area or area of significant concern.

## **2. The NYISO Planning Processes Have Appropriately Applied Reliability and Economic Planning Criteria to Date for All Projects.**

The NYISO's Comprehensive System Planning Process identifies both reliability needs as well as projects that will provide economic benefits to customers. The

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<sup>31</sup> Study at x.

<sup>32</sup> Moreover, some of these are units physically located in PJM but electrically connected only to New York. These facilities, of course, do not rely on the PJM transmission grid in any way.

<sup>33</sup> Even if it were correct that New York were relying on PJM for reliability, that should be not a basis for designation because it somehow suggests that interconnected operations with a neighboring region is inappropriate, when that is precisely what the federal government is seeking to encourage.

<sup>34</sup> "2009 State of the Market Report New York ISO Electricity Markets," at slide 142 (April 2008).

Congestion Assessment and Resource Integration Study (“CARIS”) estimates the economic benefits of relieving congestion by studying the effect of integrating potential transmission, generation and demand response resources. CARIS builds on the NYISO’s Comprehensive Reliability Planning Process that addresses reliability needs. To date, this process has not found significant reliability needs or the need for transmission to relieve economic congestion. But different data (e.g., higher load growth or natural gas prices) could produce different results. In addition, the NYISO has recently completed a wind integration study that shows no need for major backbone transmission to achieve New York State’s ambitious renewable power goals. *See pp. 14-15 infra.*

The American Reinvestment and Recovery Act of 2009 directed the DOE to analyze the extent to which legal challenges filed at the state and federal level are delaying the construction of transmission necessary to access renewable energy. The New York Regional Interconnect (“NYRI”) was cited by the Study as being the “closest” example of this. The Companies would like to note that this proposed project, which sought regulated cost-of-service cost recovery, may have been withdrawn because (1) the proposed project would have reduced import capability to NYC<sup>35</sup> thus reducing overall reliability of the system; and (2) the costs would have exceeded the benefits of the project.

The Companies further submit that just because this project did not proceed, it should not be construed as a delay in construction of what would have been a useful and valuable project. The Companies believe that any action or report that follows the Study

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<sup>35</sup> Import capability is determined under contingency conditions. In this case, the NYRI project increased pre-contingency flows on certain facilities reducing their ability to pick-up redistributed flows for some of the contingencies studied.

disregard the citing of the NYRI project as a viable renewable project that was terminated due to legal challenges, as it is not clear that this was the case and citing this example as the “closest” example is inappropriately misleading. Again, an appropriate transmission project that has clear economic value for customers in New York would be able to proceed using the NYISO comprehensive planning process as described above.

### **3. Comments on Future Analysis**

DOE states that it will sponsor future analysis, which will focus on the merits of developing high-potential renewables in remote areas as compared to the merits of developing other renewable resources closer to load centers. New York has been very proactive in the integration of wind resources on to the electric system. New York has made a major commitment to development of renewable resources, with the objective of renewable energy being 30 percent of the State’s supply by 2015. As the Study notes, approximately 1,300 MW of wind has been connected to the New York system, with 6500 MW more in the planning queue.<sup>36</sup> This includes a potential 700 MW offshore wind farm situated to meet New York City and Long Island’s needs. Moreover, the NYISO has recently completed its wind integration study and found less than 10% bottling will occur with the expected integration of enough wind to reach the New York State RPS goal of 30% renewable resources by 2015. The NYISO study also indicates that area specific transmission investment at 115kV would be sufficient to overcome that bottling.<sup>37</sup>

New York's “45x15” clean energy goal includes obtaining 30 percent of its forecasted electric energy needs in 2015 through renewable energy. As such, New York is a model

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<sup>36</sup> Study at 43.

<sup>37</sup> NYISO (2010), *NYISO Wind Generation Study*, p. 87

for meeting its own needs in the development of renewable resources. New York is also seeking to encourage solar energy resource development around the state, including in New York City. The many flat roofs across the Bronx, Brooklyn, Queens and Staten Island are suitable for solar panel installations and may be more beneficial than seeking to connect remote renewable resources.

#### **IV. Conclusion**

The Companies thank the Department for its consideration of these comments and look forward to the continued opportunity to be part of this important process. As discussed herein, the Companies submit that the Study does not support the designation of designation of New York as a Critical Congestion Area at this time, but also understand that a material change in energy economics, *e.g.*, a significant increase in natural gas prices, could produce a different result.

Respectfully submitted,

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Richard B. Miller, Esq.  
Director, Energy Markets Policy Group  
Consolidated Edison Company  
Of New York, Inc.  
4 Irving Place  
Room 2315-s  
New York, New York 10003  
Phone: (212) 460-3389  
Email: millerrich@coned.com