

BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of

National Grid PLC and KeySpan Corporation - Proposed Merger

Case 06-M-0878

The Brooklyn Union Gas Company d/b/a KeySpan Energy Delivery
New York - Gas Rates

Case 06-G-1185

KeySpan Gas East Corporation d/b/a KeySpan Energy Delivery
Long Island - Gas Rates

Case 06-G-1186

January 2007

Prepared Testimony of:

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Power System Operations
Specialist IV
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Environment
State of New York
Department of Public Service
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1 Q. Please state your name and business address.

2 A. My name is David F. Reulet. My business address
3 is New York State Department of Public Service,
4 Three Empire State Plaza, Albany, New York
5 12223.

6 Q. By whom are you employed and in what capacity?

7 A. I am employed by the Department's Office of
8 Electricity and Environment as a Power System
9 Operations Specialist IV on the staff of the
10 Distribution Systems and Generation Section.

11 Q. Please state your educational background and
12 professional experience.

13 A. I received a Bachelor of Science in Electrical
14 Engineering from Union College. I work in
15 the Distribution Systems and Generation Section
16 and have held a position in Electric Rates in
17 the Office of Electricity and Environment. My
18 present responsibilities include the analysis of
19 electric utility operation and maintenance
20 activities as they relate to safety and
21 reliability. I have previously testified on
22 behalf of the Department.

23 Q. What is the purpose of your testimony?

24 A. The purpose of my testimony is to explain
25 staff's concerns about the electric reliability,
26 electric line workforce, and the maintenance
27 backlog of Niagara Mohawk Power Corporation,
28 d.b.a National Grid in light of the proposed

1 merger of National Grid with Keyspan
2 Corporation.

3 Q. Do you have any exhibits?

4 A. Yes, they are listed below,

5 Exhibit__(DFR-1) Interruption Frequency
6 1999-2006

7 Exhibit__(DFR-2) Interruption Duration
8 1999-2006

9 Exhibit__(DFR-3) Number of Electric Line
10 Mechanics from 1999-2006

11 Exhibit__(DFR-4) Equipment Caused
12 Interruptions

13 Exhibit__(DFR-5) Backlogged T&D Maintenance

14 Exhibit__(DFR-6) Interrogatory Response to
15 SRMT-4 Question 1

16 Exhibit__ (DFR-7) National Grid August 18,
17 2006 Letter to PSC
18 Chairman

19 Exhibit__ (DFR-8) Interrogatory Response to
20 DPS-12 Question 1(b)

21 Q. Please describe Niagara Mohawk Power
22 Corporation's electric reliability prior to its
23 merger with National Grid in 2002?

24 A. Exhibit__ (DFR-1) presents the interruption
25 frequency (System Average Interruption Frequency
26 Index) that measures the average number of
27 interruptions experienced by customers served by
28 the utility. For Niagara Mohawk from 1997 to
29 2001 the average frequency index for this period

1 was 0.91 interruptions per customer served.
2 Exhibit__(DFR-2) presents the interruption
3 duration (Customer Average Interruption Duration
4 Index) that measures the average time that an
5 affected customer is out of electric service.
6 From 1997 to 2001 the average duration index for
7 this period was 1.89 customer hours per
8 customers affected.

9 Q. What is your assessment of Niagara Mohawk's
10 reliability during the years of 1997 to 2001?

11 A. Niagara Mohawk customers experienced an
12 unacceptable system average interruption
13 frequency in 3 of 5 years. However, the system
14 average duration of interruption was at an
15 acceptable level.

16 Q. What was the basis for this conclusion?

17 A. My performance benchmarks were based upon the
18 minimum levels of acceptable reliability
19 performance as approved by the Commission in
20 Case 94-E-0098 for Niagara Mohawk's Power Choice
21 agreement from 1998 to 2002, and Case 01-M-0075
22 for the National Grid and Niagara Mohawk merger
23 agreement from 2002 to 2011. The minimal
24 acceptable level for average interruption
25 frequency is 0.93 and the minimum level for
26 average duration is 2.07. Based on these
27 benchmarks, the interruption frequency during
28 years 1997 through 2001 reached unacceptable
29 reliability levels of 0.93 or higher during

1 three of the five years. The interruption
2 duration stayed at an acceptable level below
3 2.07 all five years. However, there was a
4 negative trend in duration performance.

5 Q. Describe Niagara Mohawk's electric reliability
6 history for the five years after its merger with
7 National Grid in 2002.

8 A. Exhibit__(DFR-1) presents the system wide
9 interruption frequency performance of Niagara
10 Mohawk from 2002 to 2006. It shows an average
11 frequency index of 0.95. Exhibit__(DFR-2)
12 presents the system wide interruption duration
13 performance from 2002 to 2006. It shows an
14 average duration index of 2.08.

15 Q. What is your assessment of Niagara Mohawk's
16 reliability, as a National Grid Company during
17 the years of 2002 to 2006?

18 A. In three of the five years, Niagara Mohawk
19 d.b.a. National Grid exceeded the minimally
20 acceptable reliability limit for the system
21 average interruption frequency (0.93). The
22 interruption frequency during this period was at
23 a higher 5-year average of 0.95 than the
24 previous 5-year average of 0.91 doing business
25 as Niagara Mohawk. In one year the company also
26 exceeded the minimal acceptable limit for system
27 average duration performance 2.07. Compared to
28 years 1997 through 2001 reliability has
29 continued to decline in the last five years.

1 Q. Has Niagara Mohawk been assessed any negative
2 revenue adjustments as a result of poor
3 performance?
4 A. Yes. For the year ending August 31, 2001
5 Niagara Mohawk failed to meet the minimum
6 acceptable level of interruption frequency and
7 distribution momentary interruptions under its
8 Power Choice agreement and a negative revenue
9 adjustment was assessed of \$2.86 million post
10 tax. Because the 12 month assessment period for
11 reliability changed from 12-months ending August
12 2001 to a calendar year in 2002 per the Niagara
13 Mohawk/National Grid merger, the months
14 between September 1 and December 31, 2001 were
15 considered transitional and reliability was
16 independently assessed. During that four month
17 period Niagara Mohawk failed to meet the minimum
18 level of interruption frequency and was assessed
19 negative rate adjustment of \$880,000 post tax.
20 In 2004, as a merged company with National Grid,
21 Niagara Mohawk failed to meet the minimum level
22 of interruption frequency and was assessed a
23 negative revenue adjustment of \$4.4 million pre
24 tax. In 2005, the company failed to meet both
25 minimum levels for interruption frequency and
26 duration and was assessed a negative revenue
27 adjustment of \$8.8 million pre tax. In 2006,
28 the company failed to meet the minimum level for
29 interruption frequency for the third straight

1 year. Niagara Mohawk could be assessed a
2 negative revenue adjustment of \$8.8 million pre
3 tax that is double the normal \$4.4 million per
4 the National Grid and Niagara Mohawk merger
5 agreement in Case 01-M-0075.

6 Q. Does this litany of revenue adjustments concern
7 staff?

8 A. Since, National Grid merged with Niagara Mohawk
9 poor reliability performance and revenue
10 adjustments have increased significantly in
11 recent years with the company having three
12 consecutive years of increasingly larger revenue
13 adjustments. Staff's concern is that Niagara
14 Mohawk is not maintaining an acceptable level of
15 system wide reliability. The proposed merger
16 with Keyspan could negatively affect efforts to
17 improve Niagara Mohawk's reliability by
18 diverting National Grid's focus and diluting
19 resources as the company strives for future
20 synergy or efficiency gains.

21 Q. Please explain how storms are accounted for in
22 the reliability statistics?

23 A. The reliability statistics represent the
24 utility's performance under normal operating
25 conditions. Major storms require utilities to
26 operate their systems beyond what would be
27 considered a normal operating condition. These
28 storms negatively influence the reliability
29 statistics heavily, and therefore the storm data

1 is excluded from the reliability statistics. A
2 major storm is defined in 16 NYCRR Part 97 -
3 Notice of Interruptions of Service as
4 interruptions that affect at least 10% of the
5 customers in an operating area and/or result in
6 customers being without electric service for
7 durations of at least 24 hours.

8 Q. How has Niagara Mohawk performed during storm
9 restorations?

10 A. Major storm restorations (since they are
11 excluded from the reliability statistics) are
12 monitored and reviewed by staff. Storm
13 restorations vary and lessons can usually be
14 learned from each storm to improve the
15 restoration process. Staff has made
16 recommendations on storm restorations in the
17 past. In fact, in a report to the Commission on
18 the February 17, 2006 Windstorm Staff
19 identified the company workforce as an issue
20 in its poor restoration response. Staff
21 recommended the company review its overall line
22 crew needs to improve its storm restoration
23 response and reliability. This large regional
24 storm resulted in Niagara Mohawk having to wait
25 for mutual assistance of line crews from other
26 utilities and contractors thereby delaying its
27 restoration efforts.
28 Storms that don't qualify as a major storm are
29 included in the reliability statistics. Niagara

1 Mohawk's 10-year decline in interruption
2 duration performance could be caused in part by
3 a declining restoration response to these
4 storms. Staff is concerned that, since the
5 merger with National Grid, the reduction in the
6 number of line mechanics has contributed to
7 this decline in performance.

8 Q. Are there any trends that negatively impact
9 reliability?

10 A. Yes. The system wide interruption duration from
11 1997 to 2006 shown in Exhibit__(DFR-2) indicates
12 an increasing trend in the amount of time
13 required to restore service after an
14 interruption.

15 Q. What would cause the interruption durations to
16 increase?

17 A. Increases in interruption durations may be
18 attributable to many factors. However, there is
19 one variable that has the greatest likely impact
20 on the length of interruption durations.

21 Q. What is that variable?

22 A. An adequate workforce is imperative to restoring
23 interruptions in a timely manner.

24 Q. How have the levels of Niagara Mohawk's
25 electric field personnel workforce changed over
26 time?

27 A. The company had reduced the number of qualified
28 electric line mechanics between 1999 and 2003
29 from 659 to 539 (-18%) respectively as shown in

1 Exhibit__(DFR-3). From 2004-2005 the total
2 number of qualified line mechanics increased to
3 583 (+8%), however, it still represented an 11%
4 decrease from 1999. Staff continues to meet
5 periodically with Niagara Mohawk regarding
6 this issue to discuss staff's concerns and
7 monitor the changes.

8 Q. Does Niagara Mohawk use contractor line
9 crews to supplement its workforce?

10 A. Yes. Contractor line crews are hired on an "as
11 needed" basis, therefore, the number of
12 contractors working at any time for the company
13 can vary. Prior to September 2004, contractor
14 headcount data was not collected on a systematic
15 basis. From September 2004 to August, 2005
16 there were an average of 63 full time contractor
17 employees. From September 2005 to August 2006
18 there were 94 full time contractor employees.

19 Q. Does Niagara Mohawk currently have an adequate
20 electric line mechanic workforce now?

21 A. No, we think that the reduced qualified company
22 line mechanic workforce is a significant
23 contributing factor to the increasing
24 interruption durations.

25 The contractor line workforce is not a
26 replacement for the company's line workforce.
27 While the contractor line crews are qualified
28 line mechanics, they normally work four 10-hour
29 days Monday-Thursday and are not required to

1 reside in the operating region. This makes
2 weekend restorations problematic. Additionally,
3 the number of available contractors can vary and
4 hiring additional contractors can be delayed as
5 a result of the bidding process.

6 While there are other factors that can affect
7 interruption restoration durations, the
8 fact is that Niagara Mohawk's company qualified
9 line mechanic headcounts have decreased and the
10 company's interruption duration performance also
11 declined since it merged with National Grid
12 despite the supplement of contractor line crews.

13 Q. Are there any other negative trends in
14 reliability?

15 A. Yes. The number of equipment-caused
16 interruptions has trended upwards since 1996 as
17 shown in Exhibit__(DFR-4) and is the largest
18 cause of interruptions system wide (excluding
19 major storm caused interruptions). The 10-year
20 average for equipment-caused interruptions is
21 3,831 per year, which represents about 27.8% of
22 interruptions during this time period. The
23 second largest cause of interruptions over the
24 last 10 years relates to trees. The 10-year
25 average of interruptions caused by trees is
26 3,292 per year, which represents about 23.9% of
27 all interruptions over this period. These two
28 types of interruptions combined to account for

1 51.7% of all customer interruptions over the
2 last 10-years.

3 Q. What is staff's concern with the equipment
4 failure issue?

5 A. Niagara Mohawk internal processes have found
6 approximately, 680,000 components of its
7 distribution system are in an abnormal condition
8 along with 52,000 transmission components, and
9 13,000 underground components. Despite this
10 fact, the company has no specific requirement in
11 place that it correct these conditions within a
12 specific time frame for 99.9% of the components.

13 Q. What is the basis for this conclusion?

14 A. Niagara Mohawk conducts electric line
15 inspections and identifies equipment that is
16 damaged, deteriorated, has a tree condition, or
17 needs to be updated to a new construction
18 standard (summarized in Exhibit__(DFR-5). The
19 company prioritizes these items for repair or
20 replacement as A, B, C, or E. Priority A items
21 must be repaired as soon as practical
22 (conditions identified prior to November 1 must
23 be replaced/corrected by November 30). Priority
24 B items are considered for repair/replacement as
25 the feeder is scheduled for maintenance by
26 Distribution Planning and Engineering. These
27 conditions will be corrected as preventive
28 maintenance and/or facility life extension.
29 There is no specific repair time within which

1 the repair must be completed. Priority C items
2 are identified for trend analysis and reviewed
3 by Distribution Planning and Engineering that
4 may require replacement through the engineering
5 process (requires project/capital expenditures).
6 Non-capital conditions identified under this
7 priority will be corrected at the discretion of
8 field operations. Again, no specific repair
9 time requirement is present. Currently there
10 are approximately 680,000 distribution overhead
11 priority B and C items which are identified as
12 an abnormal condition, but do not have any
13 specific repair time requirement. Priority E
14 items must be replaced/repared immediately to
15 address public safety or system reliability

16 Q. Is there any benefit to reliability if all the
17 components identified under A, B, or C
18 priorities were corrected in a timely manner?

19 A. Yes, these facilities or components are already
20 identified as damaged, deteriorated, or in a
21 condition that increases its probability of
22 failure. While it is true that under normal
23 conditions the components are somewhat
24 functional, these components have been
25 structurally or operationally weakened in some
26 way and therefore could fail prematurely and
27 more frequently during high stress conditions
28 like storms or peak loading.

- 1 Q. Does National Grid consider the components
2 identified for priority B or C maintenance
3 legitimate reliability risks?
- 4 A. The lack of a specific repair time requirement
5 for B and C priority maintenance would suggest
6 that the company did not consider the 680,000 of
7 weakened components as an immediate or high
8 probability risk to reliability. It should be
9 noted, however, that the company has recently
10 made a proposal to improve reliability and is
11 implementing a feeder hardening program starting
12 in 2007 that is intended to complete all the B
13 priority maintenance on selected poor performing
14 feeders to aide in improving reliability. The
15 feeder hardening program suggests the company
16 does in fact recognize that B priority
17 maintenance is a significant factor in improving
18 reliability. However, the timing of this
19 program, in light of the merger petition, raises
20 questions about National Grid's true commitment
21 to this subject.
- 22 Q. Will all the B priority maintenance items
23 already identified have an established
24 completion time under the new feeder hardening
25 program?
- 26 A. No. Only annually targeted poor performing
27 feeders will have the B priority maintenance
28 completed. The company has not proposed that
29 the feeder hardening program reduce the

1 B priority maintenance list to zero within a
2 specific time frame.

3 Q. How do your concerns related to Niagara Mohawk's
4 electric reliability relate to the proposed
5 merger with Keyspan?

6 A. An adequate T&D electric operations workforce is
7 essential to effectively respond to emergencies,
8 storm restorations, and completing maintenance
9 and repairs in a timely manner. The current
10 adequacy of Niagara Mohawk's electric line
11 personnel workforce is already in doubt, as
12 illustrated by declines in Niagara Mohawk's
13 reliability since its merger with National Grid
14 and the daunting magnitude of infrastructure
15 maintenance backlogs. Given the problems that
16 already exist, we have a major concern that
17 management pressure to achieve post merger
18 synergy gains could further dilute the
19 workforce, thereby hindering any recovery in
20 reliable electric service and potentially
21 continuing the downward trends.

22 Q. Does Niagara Mohawk indicate that any T&D
23 personnel will be eliminated as a result of the
24 merger?

25 A. There are no assurances from National Grid that
26 synergy savings will not be gained as a result
27 of workforce reductions in Niagara Mohawk's T&D
28 field personnel.

29 Q. What is the basis for this statement?

1 A. The synergy savings in the Mercer Management
2 Consulting report did not identify any potential
3 T&D field personnel reductions in Niagara Mohawk
4 electric T&D field personnel (Mercer Report
5 Exhibit 1 page 9). However, National Grid's
6 response to Request #SRMT-4 question 1 shown in
7 Exhibit__ (DFR6) states that:

8 "National Grid does not expect that there
9 will be a change as a result of the merger
10 to the number of electric field operations
11 personnel in New York. As a combined
12 company, however, it will seek continuously
13 to improve all of its operations, including
14 the areas of electric system maintenance
15 and emergency restoration, there could be
16 changes in the future."

17 This statement indicates that the company
18 has not ruled out future cuts in New York and it
19 suggests that while staffing in New York may
20 remain steady at least in the short run, the New
21 York staff levels may be required to perform
22 work elsewhere to offset T&D personnel cuts in
23 other states.

24 Q. Did National Grid identify any potential savings
25 in T&D personnel?

26 A. Yes. On December 14, 2006 direct testimony was
27 submitted by Alan Feibilman and Richard Levin
28 on behalf of National Grid plc and Keyspan
29 Corporation, which presented potential electric

1 T&D operation and maintenance savings with full
2 time employees.

3 Q. Was there any proposed changes in T&D field
4 personnel?

5 A. Yes. They propose to evaluate the size of the
6 relay technician group and contractor usage to
7 reduce unit costs and increase service levels
8 (e.g. tree trimming). Both are considered by
9 them to have a high probability of achieving
10 savings. Niagara Mohawk uses contracted
11 electric linemen as well as tree trimmers,
12 therefore, it is likely that the company is
13 considering changes in T&D field personnel.

14 Q. Have Mr. Feibelman and Mr. Levin's proposed T&D
15 synergy savings measures been approved by the
16 executive leadership of National Grid?

17 A. No, these proposed synergy savings are scheduled
18 to be presented to the company's executive
19 leadership in the first quarter of 2007. The
20 response of the company's executive leadership
21 to the issues in this area should be indicative
22 of their true commitment to improving the
23 quality and reliability of service in New York.

24 Q. Has National Grid made any commitment to
25 improve Niagara Mohawk's electric reliability?

26 A. Yes. In an August 18, 2006 letter shown in
27 Exhibit__ (DFR7) to the Public Service
28 Commission Chairman William Flynn from William
29 Edwards, National Grid President New York

1 Distribution, is a commitment from the company
2 to undertake a \$1 billion Reliability
3 Enhancement Program to be implemented over five
4 years. However, in response to Request# DPS-12
5 question 1(b) shown in Exhibit__ (DFR-8) on
6 September 12, 2006 National Grid committed to
7 investing only \$750 million in the electric
8 reliability enhancement program over five years.
9 In less than one month, National Grid's stated
10 commitment to improving Niagara Mohawk's
11 reliability dropped by 25%. A deteriorating
12 commitment from National Grid to reliability
13 does not instill confidence regarding the
14 actions the company might take after the merger
15 to squeeze more synergy savings from its T&D
16 operations at the expense of further
17 deterioration of reliability.

18 Q. What is your overall conclusion regarding the
19 electric reliability effects of National Grid's
20 merger with Keyspan?

21 A. While the merger could offer opportunities for
22 National Grid to achieve some efficiencies in
23 Niagara Mohawk's electric operations, we are
24 concerned that the proposed transaction will
25 lead to the continued degradation in electric
26 reliability. Our concerns are significant
27 because Niagara Mohawk's electric reliability
28 has already declined after its merger with
29 National Grid in 2002 and there is no evidence

1 from National Grid indicating that staff's
2 existing concerns regarding adequacy of line
3 operation workforce, backlogged maintenance, and
4 improving electric reliability would not be
5 worsened after the merger with Keyspan.

6 Q. Does that conclude your testimony?

7 A. Yes.