

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 Exhibits of:

SAFETY PANEL

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Cases: 06-M-0878
06-G-1185
06-G-1186

National Grid/KeySpan Merger

Interrogatory/Document Request

Response of National Grid/KeySpan

Re: Replacement Cost of Bare Steel Pipe

Request #: DPS-244

Response Date: December 9, 2006

Respondent: A. Dinkel

Q:

1. Provide the total estimated annual cost for bare steel pipe replacements for KEDLI at the indicated levels:

- A. 21 miles
- B. 30 miles
- C. 40 miles
- D. 50 miles
- E. 80 miles
- F. 100 miles

A.

The total estimated annual cost for bare steel pipe replacement for KEDLI at the 21 mile, 30 mile and 40 mile levels are \$19.1M, \$27.2M and 36.3M respectively. This is based on \$172 per foot average as previously reported.

Increases in volumes to 50 mile levels and above offer unit cost opportunities and risks. We have not fully assessed the costs, benefits and risks at these levels.

The analysis we have completed predicts that the 21 mile replacement level results in stable workable leak backlog and the 40 mile level results in stabilization of all leaks in backlog including Type 3 leaks.

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National Grid/KeySpan Merger

Interrogatory/Document Request

Response of National Grid/KeySpan

Re: Bare Steel Replacement

Request #: DPS-301

Response Date: December 29, 2006

Respondent: A. Dinkel

Q:

For KEDLI:

1. Describe and quantify the "unit cost opportunities and risks" that are involved in replacing bare steel pipe up to, and above, 50 miles per year. Specify if these costs and opportunities vary at differing replacement rates.

A:

Unit cost opportunities and risks must be evaluated in a number of areas. If contractors are utilized, will they offer lower unit pricing for higher volumes? In consideration of such discounts there would need to be assurances that this would be a multi-year, long term program and that utilization of equipment and personnel would be sustained over the entire year to justify the investments in equipment and personnel. To support this higher level of contractor activity, KEDLI would need to increase management and contractor support activities. These would increase both capital costs and O&M expenses. If all or a portion of this work were to be assigned to in-house crews, the associated short and long term impacts of an added workforce on capital costs and O&M expenses must be evaluated. Concomitant with main replacements are other work requirements, such as service disconnects and reconnects, that will increase capital and O&M expenditures. Construction work cannot be performed at steady levels throughout the year due to weather and other constraints. The utilization or re-deployment of equipment and personnel when construction work cannot be scheduled is a factor. Finally, a benefit analysis of higher replacement levels would need to demonstrate value considering leakage reduction, future cost avoidance and improvements in system reliability.

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National Grid/KeySpan Merger

Interrogatory/Document Request

Response of National Grid/KeySpan

Re: Cost of Pipeline Installations

Request #: DPS-286

Response Date: January 5, 2007

Respondent: A. Dinkel

Q:

1. For both KEDNY and KEDLI, provide the cost per foot for both company installation and contractor installation of new and replacement gas pipeline projects included in the rate year broken down between labor, materials, other capital costs, and applicable overheads separately in a digital Excel spreadsheet format with full access.
2. Provide the calculation and breakdown of the overheads applied to the projects included in question 1 above.

A:

1. and 2.

The rate year costs of new and replacement mains for both KEDNY and KEDLI were not developed broken down by cost component or the type of labor used to perform the installation. For main replacements, the 2 year historical average total cost per foot for the 2004 – 2005 period was used to develop the rate year capital expenditure forecast for that category of work. The rate year capital expenditure forecast for new mains was based on the 2005 historical average total cost per foot for that type of work.

KEDNY & KEDLI LEAK BACKLOG - EXCLUDING EXCAVATION DAMAGES

YEAR - END BACKLOG

NYC

	WORKABLE LEAKS			Total	Type 3	TOTAL
	Type 1	Type 2A	Type 2	Workable		BACKLOG
2006	28	27	103	158	2891	3049
2005	22	60	84	166	3383	3549
2004	38	65	94	197	3434	3631
2003	41	50	48	139	3170	3309
2002	81	44	110	235	2768	3003
2001	55	30	74	159	4579	4738

LI

	WORKABLE LEAKS			Total	Type 3	TOTAL
	Type 1	Type 2A	Type 2	Workable		BACKLOG
2006	4	14	125	143	11017	11160
2005	0	18	133	151	8360	8511
2004	0	54	123	177	8297	8474
2003	0	110	309	419	10095	10514
2002	N/A	N/A	N/A	334	8584	8918
2001	N/A	N/A	N/A	290	9932	10222

KEDLI			
Year	Overall Damages per 1000 OCT	Mismark Damages per 1000 OCT	Company and Company Contractor Damages per 1000 OCT
2002	8.08	1.34	N/A
2003	8.99	0.99	0.34
2004	7.75	1.06	0.41
2005	8.25	1.22	0.17
2006	6.53	0.85	0.17

Notes: One-Call Ticket = "OCT"

KEDNY			
Year	Overall Damages per 1000 OCT	Mismark Damages per 1000 OCT	Company and Company Contractor Damages per 1000 OCT
2002	9.57	2.35	N/A
2003	8.89	1.67	0.21
2004	8.18	1.80	0.14
2005	7.99	1.25	0.12
2006	6.49	1.23	0.06

Notes: One-Call Ticket = "OCT"

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National Grid/KeySpan Merger

Interrogatory/Document Request

Response of National Grid/KeySpan

Re: Emergency Response

Request #: DPS-296

Response Date: January 9, 2007

Respondent: A. Dinkel

Q:

For KEDNY:

1. Provide an analysis showing how the addition of 22 employees (as indicated in a meeting with the company) will enable KEDNY to reach the 75% in 30 minutes response goal.
2. If the company does not have dedicated personnel used to respond to leak and odor calls, how does it know that the addition of 22 employees will allow it to reach the 75% in 30 minutes response goal?
3. Has KEDNY performed an analysis to determine whether the implementation of GPS technology for dispatching would offset the need to obtain incremental personnel?
4. If KEDNY has performed an analysis as described in 3. above, provide a detailed summary of the results. If KEDNY has not performed such an analysis, explain why not.

A:

1. & 2.) See the attached capacity utilization analysis.

3. & 4.) KEDNY has not performed such an analysis. KeySpan will be implementing a GPS pilot program to assess the impact of GPS enabled dispatching on emergency response time.

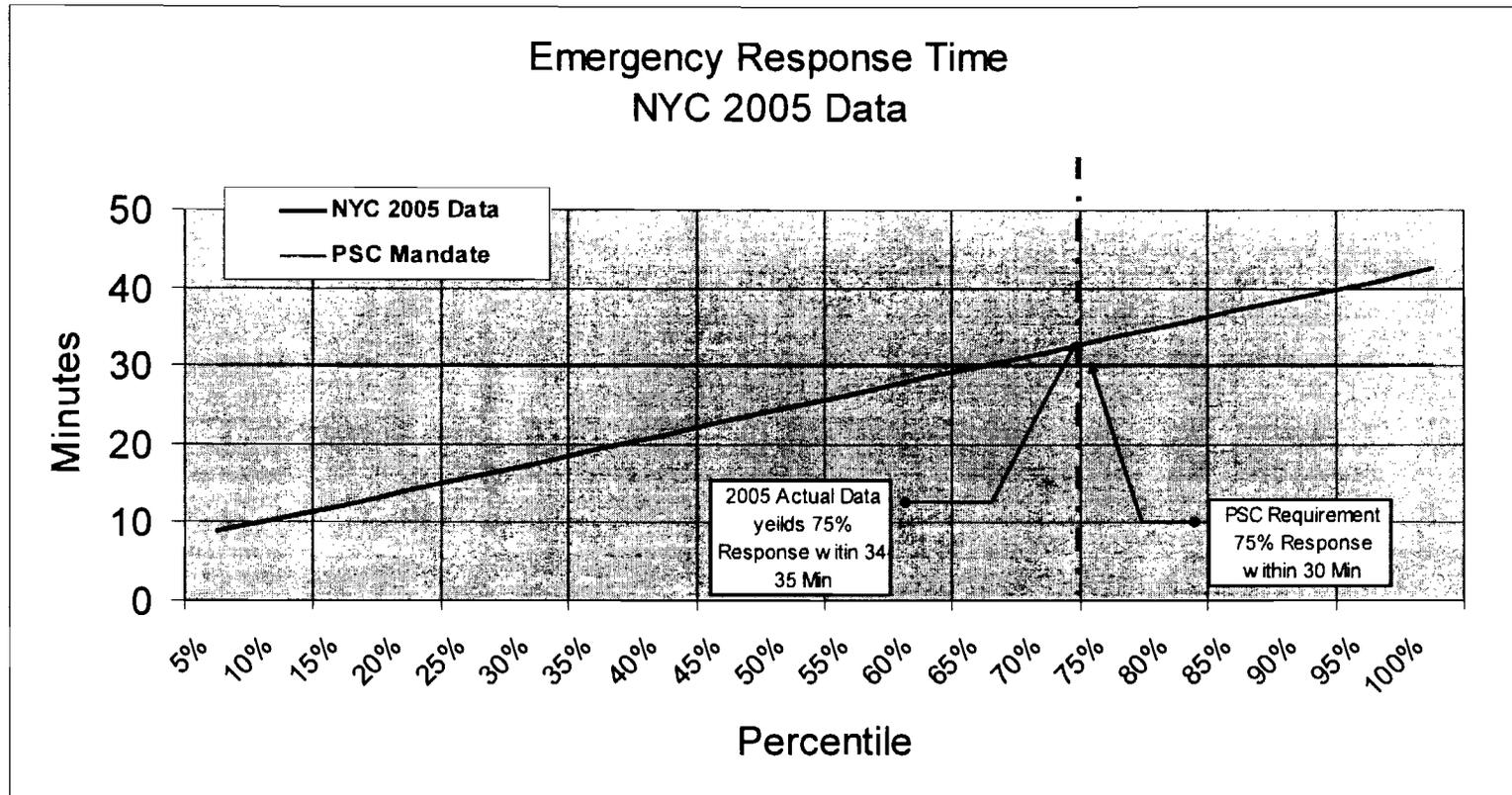
KEDNY Emergency Response Analysis “Appendix A”



Executive Summary

- ✓ The PSC has established Leak Response performance measures as a means of assessing Operator performance in responding to leak and odor calls in a timely manner. Those performance measures include the standard of 75% of all calls* within 30 minutes.
- ✓ The process currently achieves 75% response rate between 34-35 min (vs. 30 min PSC mandate) based on the leak response calls that are reported to the PSC.*
- ✓ If we are to meet the 30 minute performance measure we will need to increase the capacity of the process.
- ✓ A capacity utilization analysis was conducted using 2005 data. Response time trade-off models help design process capacity for a required time performance

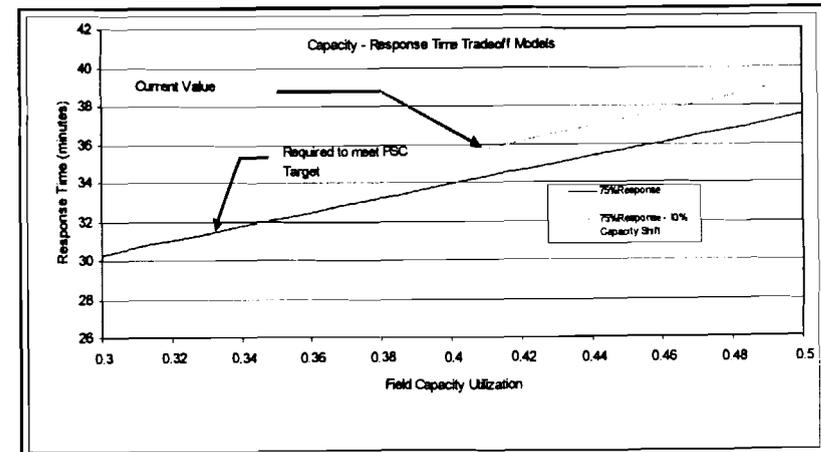
The process currently achieves 75% response rate between 34-35 (vs. 30 min PSC mandate)



See Appendix "B" for detailed data filed with the Public Service Commission

Capacity Utilization Analysis

- Capacity Utilization(CU) – Response Time Trade-off Models help design process capacity for a required time performance
- Capacity Utilization was defined as the ratio of [demand]/[capacity]
- The capacity utilization model, developed a mathematical relationship between response time and the capacity utilization ratio. Our findings indicate that as the CU ratio increases, so does Response Time. Based upon this model, we are able to predict the optimum level of CU which will yield the desired response time level.
- The model assumes that all other variables are held constant and only capacity is modified (i.e. travel time, time on job, etc.).
- A relatively mild slope of the 75-percentile model translates into a steep required capacity addition (24%) to reduce Response Time by 4-5 minutes to get to the desired 30 minute response.
- Utilization analysis indicates that 24% increase in staffing would be needed to achieve the 30 minute response goal.



Capacity Requirements		
=	0.41	= Current Utilization
=	0.33	= Required Utilization
=	24 %	Delta Utilization

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National Grid/KeySpan Merger

Interrogatory/Document Request

Response of National Grid/KeySpan

Re: Leak and Odor Calls

Request #: DPS-300

Response Date: January 9, 2007

Respondent: A. Dinkel

Q:
For KEDNY:

1. Based on the data provided in response to DPS-241, explain why KEDNY has experienced an approximate 23% reduction in annual leak and odor calls from 2002 through 2006 while its emergency response performance has only improved approximately 3% over the same time period.
2. Provide all work papers and other pertinent data supporting this phenomenon.

A:

- 1.) The decline in annual leak and odor calls is believed to be attributable to a reduction in false leak calls, weather, preventive maintenance and infrastructure replacements. Response time is impacted by many variables including, but not limited to, the weather, peak call volumes, time of receipt, travel time, type of leak and leak investigation time.
- 2.) Due the variability and unpredictability of the numerous uncontrollable factors described above, KeySpan has not conducted an analysis that would establish a relationship among all the variables that impact odor and leak call volumes and emergency response times.

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National Grid/KeySpan Merger

Interrogatory/Document Request

Response of National Grid/KeySpan

Re: GPS Technology

Request #: DPS-298

Response Date: January 9, 2006

Respondent: A. Dinkel

Q:

For KEDNY:

1. Since KEDNY has met with vendors and other companies that have utilized GPS technology, has the company performed an analysis into its expected cost savings through gains in efficiency and quantified its overhead and labor savings?
2. If so, provide a detailed analysis as far into the future as computed.
3. If not, explain why the company has not performed such a cost-benefit analysis.

A:

1., 2. & 3.) The analysis conducted to date by KEDNY has been based on hypothetical efficiencies. Because response time is influenced by many factors – dispatch wait time, travel time, demand fluctuations, etc. – it is difficult to accurately assess the impact of GPS technology on operational efficiencies without field testing the technology. KEDNY expects that the GPS pilot program will provide substantive data upon which to conduct an empirical analysis.