

March 19, 2015

BY HAND DELIVERY AND ELECTRONIC MAIL

Luly E. Massaro, Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 4540 – National Grid’s Proposed FY 2016 Gas Infrastructure, Safety, and Reliability Plan
Responses to PUC Data Requests – Set 2

Dear Ms. Massaro:

I have enclosed ten (10) copies of National Grid’s¹ responses to the Rhode Island Public Utilities Commission’s Second Set of Data Requests issued in the above-referenced matter.

Pursuant to PUC Rule 1.2(g), the Company is seeking confidential treatment of customer-specific information in Attachments PUC 2-8-1 and 2-8-2. The Company is submitting a Motion for Protective Treatment and one (1) copy of the confidential attachments noted above in an envelope marked, **“Contains Confidential Information – Do Not Release.”**

Thank you for your attention to this transmittal. If you have any questions, please contact me at 781-907-2121.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Docket 4540 Service List
Steve Scialabba
Leo Wold, Esq.
Jim Lanni
Don Ledversis

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

Copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon

March 19, 2015

Date

Docket No. 4540 - National Grid's FY 2016 Gas Infrastructure, Safety and Reliability (ISR) Plan - Service List 1/8/15

Name/Address	E-mail Distribution	Phone
Raquel J. Webster, Esq. National Grid. 280 Melrose St. Providence, RI 02907	raquel.webster@nationalgrid.com	
	celia.obrien@nationalgrid.com	
	Joanne.scanlon@nationalgrid.com	
David Iseler Melissa Little National Grid	David.Iseler@nationalgrid.com	
	Melissa.Little@nationalgrid.com	
	Suhila.NouriNutile@nationalgrid.com	
Leo Wold, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	Lwold@riag.ri.gov	401-222-2424
	Steve.scialabba@dpuc.ri.gov	
	James.lanni@dpuc.ri.gov	
	John.spirito@dpuc.ri.gov	
	Don.ledversis@dpuc.ri.gov	
	dmacrae@riag.ri.gov	
	jmunoz@riag.ri.gov	
David Effron Berkshire Consulting 12 Pond Path North Hampton, NH 03862-2243	Djeffron@aol.com	603-964-6526
File an original & nine (9) copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick RI 02888	Luly.massaro@puc.ri.gov	401-780-2107
	Todd.bianco@puc.ri.gov	
	Patricia.Lucarelli@puc.ri.gov	
	Sharon.ColbyCamara@puc.ri.gov	
Christopher Kearns, OER	Christopher.Kearns@energy.ri.gov	
	Danny.Musher@energy.ri.gov	

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
RHODE ISLAND PUBLIC UTILITIES COMMISSION**

FY 2016 Proposed Gas ISR Plan

Docket No. 4540

**NATIONAL GRID'S MOTION FOR PROTECTIVE TREATMENT
OF CONFIDENTIAL INFORMATION**

National Grid¹ respectfully requests that the Rhode Island Public Utilities Commission (PUC) provide confidential treatment and grant protection from public disclosure certain confidential information submitted in this proceeding, as permitted by PUC Rule 1.2(g) and R.I. Gen. Laws § 38-2-2(4)(B). National Grid also respectfully requests that, pending entry of that finding, the PUC preliminarily grant National Grid's request for confidential treatment pursuant to Rule 1.2 (g)(2).

I. BACKGROUND

On March 19, 2014, National Grid filed with the PUC its responses to the PUC's Second Set of Data Requests in this matter. In PUC Data Request No. 2-8, the PUC requests that the Company provide a list of soft off closures for gas that are greater than one year and the total amount of dollars associated with these accounts. In responding to this data request, the Company has included two documents identified as Attachment PUC 2-8-1 and Attachment PUC 2-8-2. These attachments include confidential customer-specific information regarding meter numbers and premises - information that National Grid has used to identify customers and their accounts. Customer-specific

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

information is proprietary to the customer, and only customers have the right to indicate whether their information should be disclosed to the public. Therefore, the Company seeks protection for the customer-specific information included in Attachments PUC 2-8-1 and PUC 2-8-2. For the PUC's review, the Company has provided confidential versions and redacted public versions of these attachments.

II. LEGAL STANDARD

The PUC's Rule 1.2(g) provides that access to public records shall be granted in accordance with the Access to Public Records Act (APRA), R.I. Gen. Laws § 38-2-1 *et seq.* Under the APRA, all documents and materials submitted in connection with the transaction of official business by an agency is considered a "public record" unless the information contained in such documents and materials falls within one of the exceptions specifically identified in R.I. Gen. Laws. § 38-2-2(4). Therefore, to the extent that information provided to the PUC falls within one of the designated exceptions to the public records law, the PUC has the authority under the terms of the APRA to treat such information as confidential and to protect that information from public disclosure.

In that regard, R.I. Gen. Laws. § 38-2-2(4)(B) provides that the following types of records shall not be deemed public:

Trade secrets and commercial or financial information obtained from a person, firm, or corporation which is of a privileged or confidential nature.

The Rhode Island Supreme Court has held that this confidential information exemption applies where disclosure of information would likely either (1) impair the Government's ability to obtain necessary information in the future; or (2) cause substantial harm to the competitive position of the person from whom the information

was obtained. Providence Journal Company v. Convention Center Authority, 774 A.2d 40 (R.I. 2001).

The first prong of the test is satisfied when information is provided voluntarily to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. Providence Journal, 774 A.2d at 47. The customer-specific information included in Attachments PUC 2-8-1 and PUC 2-8-2 meets this test.

II. BASIS FOR CONFIDENTIALITY

As noted above, Attachments PUC 2-8-1 and PUC 2-8-2 are confidential because they include customer-specific information regarding meter numbers and premises - information that National Grid has used to identify customers and their accounts. The Company treats such information as confidential and proprietary and does not customarily disclose such information to the public. Indeed, the Company's customers expect that National Grid will maintain this type of information on a confidential basis and that it will not be subject to public disclosure. Moreover, the PUC has recognized customers' rights to control dissemination of their account information and other personal information and has therefore, granted protective treatment to customer-identifying information. In short, public disclosure of the customer-identifying information included in Attachments PUC 2-8-1 and PUC 2-8-2 would substantially harm National Grid's customers who have not consented to the public disclosure of their information.

III. CONCLUSION

Accordingly, National Grid respectfully requests that the PUC grant protective treatment to confidential Attachments PUC 2-8-1 and PUC 2-8-2.

Respectfully submitted,

NATIONAL GRID

By its attorneys,



Raquel J. Webster, RI Bar # 9064
National Grid
40 Sylvan Road
Waltham, MA 02451
(781)-907-2121

Dated: March 19, 2015

PUC 2-1

Request:

As requested in PUC 1-4 issued on January 28, 2015, please describe in detail the various methods used to detect leaks. Please be specific in describing the steps in the survey process and how that occurs. Include the steps taken after the survey is complete identifying individuals and/or job titles involved in the process.

Response:

The Company identifies gas leaks through two primary means: leak surveys performed by the Company and odor calls received from the general public. The Company performs a number of different types of leak surveys as identified in the Company's response to PUC 1-4.

Each year, the Company identifies the inventory of mains and services for the upcoming surveys and the Company and contractor resources required to conduct the annual leak surveys. The Company also provides training to the personnel who have been identified to perform the work. Next, the Company assembles work packages and provides them to the leak survey personnel performing the assigned work. Current resources consist of Leak Survey Technicians provided by Premier Utility Service's contractor and National Grid Construction & Maintenance and Customer Meter Service (CMS) Field Technicians. Work packages may consist of both electronic and paper-based information. These typically include electronic input devices to collect survey data and Geographical Information System maps for reference. The Company also provides various blank forms to the personnel performing the leak surveys for input purposes, such as leak reports for ground leaks, monitoring sheets for leak surveillance, service orders, and other miscellaneous forms.

Personnel conducting leak surveys use mobile and/or handheld leak detection equipment, as more specifically described below. Personnel drive the route of gas facilities assigned for survey using vehicles upon which mobile equipment is mounted. Personnel performing a walking survey use handheld equipment as they walk the route of facilities assigned or to provide more detailed leak investigation.

Specifically, the mobile leak detection equipment used is:

- 1) Flame Ionization Unit (FIU) – Parts per million (PPM) – external use only
 - Heath model DP3 or DP4
 - Dafrol FIU

PUC 2-1, page 2

Handheld leak detection equipment includes the following:

- 1) Flame Ionization Unit (FIU) – Parts per million (PPM) – external use only
 - Heath model DP3 or DP4
 - Dafrol FIU
- 2) Bascom Turner Rover – PPM and Percent Gas – internal and external use
- 3) Combustible Gas Indicator (CGI) - Percent Gas – internal and external use
 - Bascom Turner - Sentry, Ranger or Explorer
 - Gas Measurement Instruments (GMI) - Gas Surveyor

The Company further investigates gas leaks that are identified by leak survey and grades them based on the Company's leak grade procedures. The Company provides leaks requiring immediate attention to a first responder for remediation at the time the leaks are discovered. Completed paperwork is provided to the appropriate Company personnel. Non-emergency underground leak and meter information is provided to a designated CMS Supervisor or a designated Corrosion employee for follow-up.

The Company's CMS personnel respond to odor calls received from the general public. CMS personnel responding to odor calls perform an investigation and classify and respond to leaks in accordance with relevant procedures outlined in the Company's response to PUC 1-5.

PUC 2-2

Request:

Why has the Company only received 50% of the reimbursements it is entitled to for 2015? Does the Company anticipate receiving the remaining 50% and if so, when?

Response:

The Company has performed work associated with reimbursable projects throughout the course of the construction season. During the course of the construction period, the Company reviews, processes, and approves all relevant project information, including vendor and contractor invoices along with Company charges. Following completion of the work and final review of all relevant project information, the Company compiles a reimbursement request and issues it to the applicable organization. Upon receipt of payment, the Company credits the funds to the project. The Company typically receives payment for reimbursements six to twelve months following full completion a project, resulting in a lag between the time of project spend and the receipt of payment.

Further, the rates of reimbursement (e.g., 50%, 100%) for specific projects vary depending on the project sponsor and legal and contractual obligations. As a result of the lag in the billing cycle and the execution of partial reimbursement contracts, the annual reimbursement amount does not traditionally align with the spending schedule. The Company anticipates receiving the majority of outstanding payment for the work performed in fiscal year 2015 over the period of the next six to twelve months.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4540
In Re: FY2016 Proposed Gas ISR Plan
Responses to Commission's Second Set of Data Requests
Issued February 25, 2015

PUC 2-3

Request:

Please provide a CSV file with the information requested in PUC 1-16 from 2013 to the present, per the Company's ENG04030 prioritization procedure.

Response:

Please see Attachment PUC 2-3.

HIGHEST RANKED RISKS and DIMP Factor-2013

Updated as of 11/25/2014

STATE: RHODE ISLAND
REGION: ALL
FACILITY: MAINS

Mitigation Will Be As Per Appendix D, Except As Otherwise Indicated In Notes

Material	Pressure	Diameter	Mileage	Risk Score	Threat Category	Additional Mitigation Notes	DIMP Factor
Cast Iron	LP	4" Thru 8"	701.77	2.05	NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	3.00
Wrought Iron	LP	4" Thru 8"	0.14	2.05	NATURAL FORCE / CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	3.00
UnprotectedBare Steel	> 60 PSI,Not T	Upto 4"	1.64	3.77	CORROSION / NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	3.00
UnprotectedBare Steel	> 60 PSI,Not T	Over 4" Thru 8"	0.87	3.77	CORROSION / NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	3.00
UnprotectedBare Steel	> 60 PSI,Not T	Over 8"	2.05	3.77	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	3.00
UnprotectedBare Steel	HP	Upto 4"	176.76	2.98	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	2.37
UnprotectedBare Steel	HP	Over 4" Thru 8"	29.55	2.98	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	2.37
UnprotectedBare Steel	HP	Over 8"	4.01	2.98	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	2.37
Cast Iron	HP	Under 4"	0.01	2.70	NATURAL FORCE	Schedule replacement when Exposed Or within Public works. An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	2.15
Wrought Iron	HP	Under 4"	0.12	2.70	NATURAL FORCE	Schedule replacement when Exposed Or within Public works. An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	2.15
Cast Iron	HP	4" Thru 8"	8.70	2.68	NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	2.13
UnprotectedCoated Steel	> 60 PSI,Not T	Upto 4"	1.57	2.25	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.79
UnprotectedCoated Steel	> 60 PSI,Not T	Over 4" Thru 8"	1.42	2.25	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.79
UnprotectedCoated Steel	> 60 PSI,Not T	Over 8"	4.22	2.25	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.79
Plastic	> 60 PSI,Not T	Upto 4"	46.37	2.20	MATERIAL/WELD	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.75
Plastic	> 60 PSI,Not T	Over 4" Thru 8"	21.57	2.20	MATERIAL/WELD	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.75
Plastic	> 60 PSI,Not T	Over 8"	0.15	2.20	MATERIAL/WELD	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.75
Ductile Iron	HP	Over 4" Thru 8"	0.81	2.20	NATURAL FORCE / CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.75
Cast Iron	LP	Under 4"	7.73	2.13	NATURAL FORCE	Schedule replacement when Exposed Or within Public works. An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.70
Wrought Iron	LP	Under 4"	1.19	2.13	NATURAL FORCE	Schedule replacement when Exposed Or within Public works. An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.70
UnprotectedBare Steel	LP	Upto 4"	53.69	2.08	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.66
UnprotectedBare Steel	LP	Over 4" Thru 8"	47.81	2.08	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.66
UnprotectedBare Steel	LP	Over 8"	3.47	2.08	CORROSION	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.66
Cast Iron	HP	Over 8"	16.45	2.01	NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.60
Ductile Iron	LP	Upto 4"	6.89	1.71	NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.36
Ductile Iron	LP	Over 4" Thru 8"	7.78	1.65	NATURAL FORCE	An additional factor will be applied to the replacement qualification and prioritization algorithm to account for this asset's DIMP risk ranking	1.31

Project #	Slotted FY	Work Order #	Initial Date of Identification	Date of Analysis	Evaluating Engineer	Division	Town	Street	From	To	Address Range	System Pressure (PSIG)	CP System	Exst. Diameter L (Inches)	YOI	Relay Footage Length of main to be Installed	Install Footage Length of main to be installed	Abandon Footage Length of main to be abandoned	Cluster Footage Distance from first leak to the last leak in the 'cluster'	Building Consequence Factor If there are no buildings in the area = 0 If there are only single family homes = 1 If there are small builindgs (multi-family, strip malls, etc) = 1.2 If there are public buildings (school, church, hospital, etc) = 1.5	DIMP Factor see DIMP Factors List (updated 11/25/2014)	X Total Leak Repairs	Total Open Workables	Total Open Non-Workables	Prioritization Factor (Pr) If the Pr Factor is greater than 12, the segment is considered 'actively corroding'.
1539			4/4/2014	4/4/2014	N VanWinkle	RI	Providence	Pomona Ave	Carleton St	Academy Ave	10-83	LP		4	1893	2925			500	1.5	3.0	4	3	0	9.00
			1/16/2015	1/16/2015	N VanWinkle	RI	Providence	Providence St	Pearl St	Dudley St	68-126	LP		4	1884	1420	1420	1420	500	1.2	3.0	1	0	0	7.40

Project #	FY	WO#	Initial Date of Identificati on	Date of Analysis	Evaluating Engineer	Division	Town	Street	From	To	Address Range	System Pressure (PSIG)	CP System	Exst Diamet er	YOI	Relay Footage Length of main to be replaced	Install Footage	Abandon Footage	Cluster Footage Distance from first leak to the last leak in the 'cluster'	Building Consequence Factor If there are no buildings in the area = 0 If there are only single family homes = 1 If there are small buildngs (multi-family, strip malls, etc) = 1.2 If there are public buildings (school, church, hospital, etc) = 1.5	DIMP Factor see DIMP Factors List (updated 11/25/2014)	X Total Leak Repairs	Total Open Workables	Total Open Non- Workables	Prioritization Factor (Pr) If the Pr Factor is greater than 12, the segment is considered 'actively corrodina'.
1622	2015	90000146434	9/17/2014	9/17/2014	N VanWinkle	RI	Warwick	Meadow St	Centerville Rd	EOM	100-135	35		2	1958	575	575	575	500	1.2	2.4	4	2	0	19.00
1579	2015	90000142591	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Northup St	Okland Beach Ave	Shore View Rd	9-193	35#		2	1952	3105	3105	3105	500	1.0	2.4	5	1	0	14.90
1623	2015	90000146431	9/17/2014	9/17/2014	N VanWinkle	RI	Warwick	Palm BL	Post Rd	#1	1-70	35		2	1938	900	900	900	550	1.2	2.4	7	3	0	20.40
1582	2015	90000142605	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Pritan Dr -Elmwood Ave	Post Rd	Puritan Dr	2168-2238	35#		2	1930	1820	1820	1820	500	1.0	2.4	7	0	0	15.57
1583	2015	90000142613	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Red Chimney Dr	Timberline Dr	EOM	35-129	35#		2	1956	1810	1810	1810	500	1.5	2.4	4	1	0	17.40
1584	2015	90000142619	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Sweet St	Victory St	#41	41-81	35#		2	1954	840			500	1.0	2.4	6	2	0	13.90
1588	2015	90000142632	5/13/2014	1/21/2015	N VanWinkle	RI	Warwick	Tennyson Rd	Post Rd	EOM	1344-261	35#		2	1946	3025	3045	3045	500	1.0	2.4	7	1	0	17.57
1589	2015	90000142638	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Timan Ave	Davidson Rd	Darrow Dr	5-30	35#		2	1957	405	405	405	405	1.0	2.4	3	3	0	15.36
1587	2015	90000142625	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Trinity St	Natick Ave	Hillard Ave	23-131	35#		2	1950	2235	2335	2670	500	1.0	2.4	5	0	0	14.90
1592	2015	90000142640	5/13/2014	5/13/2014	N VanWinkle	RI	Warwick	Warwick Neck Ave	Rock Point Ave	Blackstone Ave	351-588	35#		6,4	1956	4020	4050	4050	500	1.5	2.4	4	4	0	18.65
1619	2015	90000146427	9/18/2014	9/18/2014	N VanWinkle	RI	West Warwick	Coogan Ct	Clyde St	EOM	7-12	35		2	1940	205	205	205	205	1.0	2.4	1	1	0	22.73
1219	2015	90000142434	5/13/2014	5/13/2014	N VanWinkle	RI	West Warwick	Elbow St	Phenix Ave	Angell St	23-27	35#		2	1965	210	210	210	210	1.0	2.7	1	0	0	16.99
1547	2015	90000142427	5/9/2014	1/22/2015	N VanWinkle	RI	West Warwick	Epworth Ave	Main st	EOM	8-50	35#		2	1965	535	535	535	500	1.2	2.4	4	0	0	20.97
1220	2015	90000142421	5/13/2014	5/13/2014	N VanWinkle	RI	West Warwick	Main St	Washington St	Robert St	1277-1321	35#		2	1960	741	775	775	500	1.0	2.7	1	1	0	10.03
1620	2015	90000146429	9/18/2014	9/18/2014	N VanWinkle	RI	West Warwick	Manchester St	Pulaski St	#16	16-47	35		2	1962	665	665	665	500	1.2	2.4	1	0	0	6.00
1618	2015	90000146444	9/18/2014	9/18/2014	N VanWinkle	RI	Westerly	Bradford	S Main St	Woody Hill Rd	275-360	60		4	1940	2825	2825	2825	500	1.0	2.4	3	3	0	11.07
1615	2015	90000145784	9/8/2014	9/8/2014	N VanWinkle	RI	Westerly	Dayton St	Pierce St	Pleasant St	3-25	#60		3	1940	665	665	665	500	1.2	2.4	1	1	0	9.20
1223	2015	90000130954	1/1/2013	9/18/2014	N VanWinkle	RI	Westerly	East St 2	Riverview Ave	Sosoa Ln		LP		4	1940	3425	3425	3425	500	1.0	1.7	3	1	0	15.70
1611	2015	90000145676	8/1/2014	8/1/2014	N VanWinkle	RI	Westerly	Joseph	Brenden	Henery	1-22	35		4,2	1940	3550	3550	3550	500	1.2	2.4	1	2	0	10.80
1616	2015	90000146446	9/1/2014	9/1/2014	N VanWinkle	RI	Westerly	Margin St	Greenman Ave	beach St	2-19	LP to 60#		4,3	1940	2960	2960	2960	500	1.2	1.7	2	0	0	8.50
1617	2015	90000146450	9/17/2014	9/17/2014	N VanWinkle	RI	Westerly	Yankee	Netherwood	Davenport St	12-42	21		2	1940	1590	1590	1590	500	1.2	2.4	3	1	0	12.40
1645	2016	90000150292	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Ardway Ave	#86	EOM near # 46	46-86	35		2	1929	320	320	320	320	1.0	2.4	2	0	0	19.33
1644	2016	90000150295	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Creston Wa	Crestwood Rd	Weschester Wa	6-60	35		2	1940	1615	1615	1615	500	1.0	2.4	4	0	0	18.73
1640	2016	90000150297	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Foxcroft Ave	Lindbrook Dr	Peabody Dr	3-67	35		2	1959	3620	3620	3620	500	1.0	2.4	4	0	0	13.40
1642	2016	90000150299	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Hedgerow Dr	LadderLook Dr	Major Potter Rd	65-155	35		2	1965	910	910	910	500	1.0	2.4	3	0	0	16.07
1646	2016	90000150306	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Love Ln 2	#425	#437	425-437	35		8	1958	65	65	65	65	1.0	2.4	3	0	0	67.78
1641	2016	90000150315	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Manning St	Wilson Ave	Brushneck Ave	112-178	35		2	1948	2735	2735	2735	500	1.0	2.4	4	0	0	13.90
1638	2016		11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Marquette St	Farnum Rd	EOM	1-47	35		2	1949	1145	1145	1145	500	1.0	2.4	3	0	0	13.23
1639	2016	90000150290	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Vaughn Ave	Post Rd	Sharon St	18-111	35		2	1929	1100	1100	1100	500	1.0	2.4	3	2	0	13.40
1643	2016	90000150285	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Vineyard Rd	Burgoyne Dr	#248	165-248	35		2	1958	2310	2310	2310	500	1.2	2.4	5	1	0	16.20
1637	2016	90000150287	11/12/2014	11/12/2014	N VanWinkle	RI	Warwick	Vineyard Rd 2	Ticonderoga Dr	Burgoyne Dr	303-332	35		2	1958	615	615	615	500	1.2	2.4	3	2	0	13.00
867	2019	9000118523	1/1/2013	1/6/2014	N VanWinkle	RI	Westerly	Spruce	Park	End		Low to 60#		4	1940	2250	2250	3810	600	1.2	1.7	1	0	0	8.37
1098	2020	9000118311	1/1/2013	1/7/2014	N VanWinkle	RI	Cranston	Broad St	Chiswick Rd	Tucker Ave		LP		6	1960	1570	1570	1570	500	1.2	2.4	6	0	0	21.40
	2020		1/20/2014	1/20/2014	N VanWinkle	RI	Newport	Whitwell Ave	Bliss Rd	Watson Rd	2-52	LP		4	1933	1200	1200	1200	500	1.0	1.7	2	0	0	4.53
932	2020	9000112036	1/1/2013	2/13/2015	N VanWinkle	RI	North Kingstown	Post Rd	#6000	#5941	5941-6000	35#		8	1954	1784	1784	1784	500	1.0	0.0	0	0	0	2.67
			9/17/2014	9/17/2014	N VanWinkle	RI	Barrington	Brentwood	Rumstick rd	EOM	4-23	25		2	1937	1550	1810	1550	500	1.0	2.4	1	3	0	7.90
			1/20/2014	1/20/2014	N VanWinkle	RI	Barrington	George Finnerty Rd	New Meadow Rd	#5	#5	25		2	1961	215	215	215	400	1.0	2.4	3	0	0	10.53
1157			1/1/2013	3/21/2014	N VanWinkle	RI	Barrington	Lantern Ln	Rumstick Rd	Lantern Ln	9-27	35		2	1950	2496			500	1.0	1.7	3	0	0	6.70
1161			1/1/2013	3/21/2014	N VanWinkle	RI	Barrington	Washington Rd	Milton Rd	Brook St	48-110	25		2	1961	1900			500	1.0	1.7	1	1	0	4.53
			1/20/2014	1/20/2014	N VanWinkle	RI	Bristol	State St	High St	Wood St	131-173	LP		4	1940	670	670	670	500	1.5	1.7	1	0	0	5.70
			1/20/2014	1/20/2014	N VanWinkle	RI	Central falls	Budlong Rd	Midvale Ave	Farrar St	185-305	LP		6	1961	3450	3450	3450	500	1.2	1.7	4	0	0	13.50
			9/17/2014	9/17/2014	N VanWinkle	RI	Central falls	Walnut St	Broad St	#60	14-60	LP		4	1940	670	670	670	500	1.2	1.7	1	0	0	6.10
1166			5/5/2014	5/5/2014	N VanWinkle	RI	Central Falls	Emmett St	Lonsdale Ave	Townline		Low to 99#		2	1910	1023			500	1.0	0.0	0	0	0	0.00
1165			5/13/2014	5/13/2014	N VanWinkle	RI	Central Falls	King St, Summer St	Washington St	Perry St		Low		3	1940	1107			500	1.0	0.0	0	0	0	0.00
1164			5/13/2014	5/13/2014	N VanWinkle	RI	Central Falls	Lonsdale Ave	Dexter St	Althea Ave		Low & 60#		4	1911	2512			500	1.0	0.0	0	0	0	0.00
1169			3/21/2014	3/21/2014	N VanWinkle	RI	Coventry	Anderson	Raymond St	EOM	19-37	35		2	1961	620			500	1.0	1.7	1	0	0	3.16
1169			5/13/2014	5/13/2014	N VanWinkle	RI	Coventry	Anderson Ave	Yates Ave	Raymond St	19-37	35#		2	1961	623			500	1.0	2.4	1	0	0	5.40
1170			5/13/2014	5/13/2014	N VanWinkle	RI	Coventry	Manor Dr	S Main St	end	1-23	35#		2	1965	982			500	1.0	0.0	0	0	0	0.00
1550			5/9/2014	5/9/2014	N VanWinkle	RI	Cranston	Angell Ave	Overbrook Dr	#126	126-208	35#		2	1958	1590			500	1.0	2.4	4	0	0	6.40
1176			5/13/2014	5/13/2014	N VanWinkle	RI	Cranston	Blais Ave	#21	#229 East St	11-21	35#		2	1963	215			500	1.0	0.0	0	0	0	0.00
1180			5/13/2014	5/13/2014	N VanWinkle	RI	Cranston	New London Ave	Townline	Warfield Ave	1330-1414	35#		6	1958	1250			500	1.2	1.7	0	3	0	4.50
			1/20/2014	1/20/2014	N VanWinkle	RI	Cranston	Woodridge Ave	Reservior Ave	EOM		LP		6	1963	245	245	245	245	1.5	1.7	7	0	0	52.72

[illegible]

[illegible]

[illegible]

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4540
In Re: FY2016 Proposed Gas ISR Plan
Responses to Commission's Second Set of Data Requests
Issued February 25, 2015

PUC 2-4

Request:

On the attachment to PUC 1-16, in the column "Slotted FY", identify what that column indicates.

Response:

The column labeled "Slotted FY" on Attachment PUC 1-16 represents the targeted fiscal year of the project's approval and field execution.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4540
In Re: FY2016 Proposed Gas ISR Plan
Responses to Commission's Second Set of Data Requests
Issued February 25, 2015

PUC 2-5

Request:

On the attachment to PUC 1-16, in the column "Work Order", please provide whether that means a project has begun or is complete.

Response:

The column labeled "Work Order" on Attachment PUC 1-16 represents the work order for tracking the project from identification through completion. It does not represent a project status.

PUC 2-6

Request:

With respect to PUC-1-17, please provide a history of all performance metrics the Company uses to evaluate the effectiveness of the program including leaks per mile.

Response:

Attachment PUC 2-6 contains data relative to Rhode Island extracted from the National Grid 2013 Gas Distribution Systems Trend-Based Integrity Analysis. The trend-based analysis provides a view of gas system main and service performance trends over a ten-year period. The analysis includes, in part, metrics related to the inventory of facilities, leak receipts, and leak repairs.

2013 SYSTEM INTEGRITY REPORT nationalgrid

Enterprise ***Gas Distribution Systems*** **Trend-Based Integrity Analysis**

RI

Gas Distribution Engineering
Network Strategy – Gas Systems Engineering

2013 SYSTEM INTEGRITY REPORT

Table of Contents

	Page
Tab-1 Overall Regional Gas Distribution Integrity Assessment Summary	4
1.1 Overall Regional Distribution Integrity Assessment Summary.....	5 - 6
Tab-2 Leak Management Analysis	7
2.1 Total Leak Receipts.....	8
2.2 Leak Receipts per mile of pipe (Main & Services).....	9
2.3 Leak Receipts by Source.....	10 - 11
2.4 Leak Receipts by Original Type.....	12 - 13
2.5 Main & Service Leak Repairs (combined) by Repaired Type.....	14 - 15
2.6 Year-End Workable Leak Backlogs.....	16 - 17
2.7 Year-End Open Type-3 Leaks.....	18 - 19
Tab-3 Main Inventory Analysis	20
3.1 RI Main Inventory.....	21
3.2 US-Nationalgrid Main Inventory.....	22
3.3 2013 Percentage of Main Inventory by Material.....	23 - 25
3.4 Main Age Analysis by Region.....	26 - 28
3.5 Average Age of Distribution Main.....	29 - 30
3.6 Leak-Prone Pipe Inventory and Main Replacement Program	31 - 34
Tab-4 Main Leak Repairs	35
4.1 Main Leak Repairs (Including 3rd party damage).....	36 - 37
4.2 Main Leak Repairs (Including 3rd party damage) Vs Main Inventory by material.....	38 - 39
4.3 Main Leak Repairs by Repaired Type.....	40 - 41
4.4 Main Leak Repairs (Excluding 3rd party damage) by material.....	42 - 43
4.5 Main Leak Repairs (Including 3rd party damage) by Cause (same as DOT leak report).....	44
4.6 Main Leak "RATE" (Including 3rd party damage) with percent of LPP.....	45 - 47
4.7 Main Leak Repairs "RATE" (Excluding 3rd party damage) by Material.....	48 - 49
4.8 Comparison of 2013 Main Leak Repairs "RATE" by Material & Region.....	50 - 51

2013 SYSTEM INTEGRITY REPORT

Table of Contents

	Page
Tab-5 Material-Cause Matrix (Main Leak Repairs)	52
5.1 RI Main Leak Repairs.....	53
5.2 US-NationalGrid Main Leak Repairs.....	54
Tab-6 A Closer Look at Cast Iron Mains	55
6.1 RI 10-Year Cast Iron Main Inventory & Attrition "RATE".....	56
6.2 US-NationalGrid 10-Year Cast Iron Main Inventory & Attrition "RATE".....	57
6.3 10-Years Cast Iron Main Breaks.....	58 - 59
6.4 10-Years Cast Iron Main Break "RATES".....	60 - 62
6.5 Cast Iron Main Break "RATES" by Diameter for 2013.....	63
Tab-7 A Closer Look at Steel Mains	64
7.1 RI 10-Year Unprotected Steel Main Inventory & Attrition "RATE".....	65
7.2 US-NationalGrid 10-Year Unprotected Steel Main Inventory & Attrition "RATE".....	66
7.3 10 - Years Main Corrosion Leak "RATE".....	67 - 68
Tab-8 Service Inventory Analysis	69
8.1 RI Service Inventory.....	70
8.2 US-NationalGrid Service Inventory.....	71
8.3 Percentage of Service Inventory by Material.....	72 - 74
8.4 Service Age Analysis by Region.....	75

2013 SYSTEM INTEGRITY REPORT

Table of Contents

		Page
Tab-9	Service Leak Repairs	
		76
9.1	Service Leak Repairs (Including 3rd party damage).....	77 - 78
9.2	Service Leak Repairs (Including 3rd party damage) Vs Service Inventory by Material.....	79 - 80
9.3	Service Leak Repairs by Repaired Type.....	81 - 82
9.4	Service Leak Repairs (Excluding 3rd party damage) by Material.....	83 - 84
9.5	Service Leak Repairs (Including 3rd party damage) by Cause (same as DOT Leak Report).....	85
9.6	Service Leak Repairs "RATE" (Including 3rd party damage)	86 - 89
9.7	Service Leak Repairs "RATE" (Excluding 3rd party damage) by Material.....	90 - 91
9.8	Comparison of 2013 Service Leak Repairs "RATE" by Material & Region.....	92 - 93
Tab-10	Material-Cause Matrix (Service Leak Repairs)	94
10.1	RI Service Leak Repairs	95
10.2	US-NationalGrid Service Leak Repairs.....	96
Tab-11	2012/2013 Distribution DOT Report data Comparisons	97
11.1	RI.....	98
11.2	US-NationalGrid.....	98
Tab-12	National Grid-US 2013 Gas Distribution System Statistics	99
12.1	2013 Gas Distribution System Statistics.....	100 - 101
12.2	Separate Leak-Prone Pipe Analysis.....	102
12.3	Leak and Repair Analysis.....	103
Tab-13	Findings and Explanations	104
13.1	2013 System Integrity Report Analysis (Findings and Explanations fro Rhode Island only).....	105 - 110

2013 SYSTEM INTEGRITY REPORT

Overall Gas Distribution Integrity Assessment Summary for Rhode Island

2013 SYSTEM INTEGRITY REPORT

Overall Regional Distribution Integrity Assessment Summary

Distribution Engineering has reviewed all of the findings in the annual Trend-Based Distribution System Integrity Analysis (*System Integrity Report*) in accordance with our Distribution Integrity Management Plan, and finds the overall results to be good. There are no immediate causes for concern that would warrant changes to DIMP. Some anomalies were found and either explained as non-systemic or set up for continued research and/or monitoring. These will be explained in notes to this report. It is noted here that CI main break rates increased in every region and this is believed to be weather dependent.

Below is a summary of the individual key integrity measure results for the eight (8) federal (PHMSA) filing entities that constitute National Grid-US.

NATIONAL GRID								
2013 System Integrity Report Summary								
REGIONS	KEDNY	KEDLI	NMPC	BGC	EGC	CCC	CLW	RI
ITEMS								
• Leak Receipts	↓	↓	↓	↑	↓	↓	↑	↓
• Workable Leak Backlog	↓	↓	↓	↑	↑	—	↑	↓
• LPP Main and Service Inventories	↓	↓	↓	↓	↓	↓	↓	↓
• Overall Main Leak Rate	↑	↓	—	↓	↓	↓	↓	↓
• Cast Iron Main Break Rate	↑	↑	↑	↑	↑	No CI	↑	↑
• Steel Main Corrosion Leak Rate	↑	↓	↓	—	↓	↓	↑	↓
• Service Leak Rate	↑	↓	↓	↑	↓	↑	↑	↑

2013 SYSTEM INTEGRITY REPORT

Overall Regional Distribution Integrity Assessment Summary

Rhode Island (RI)

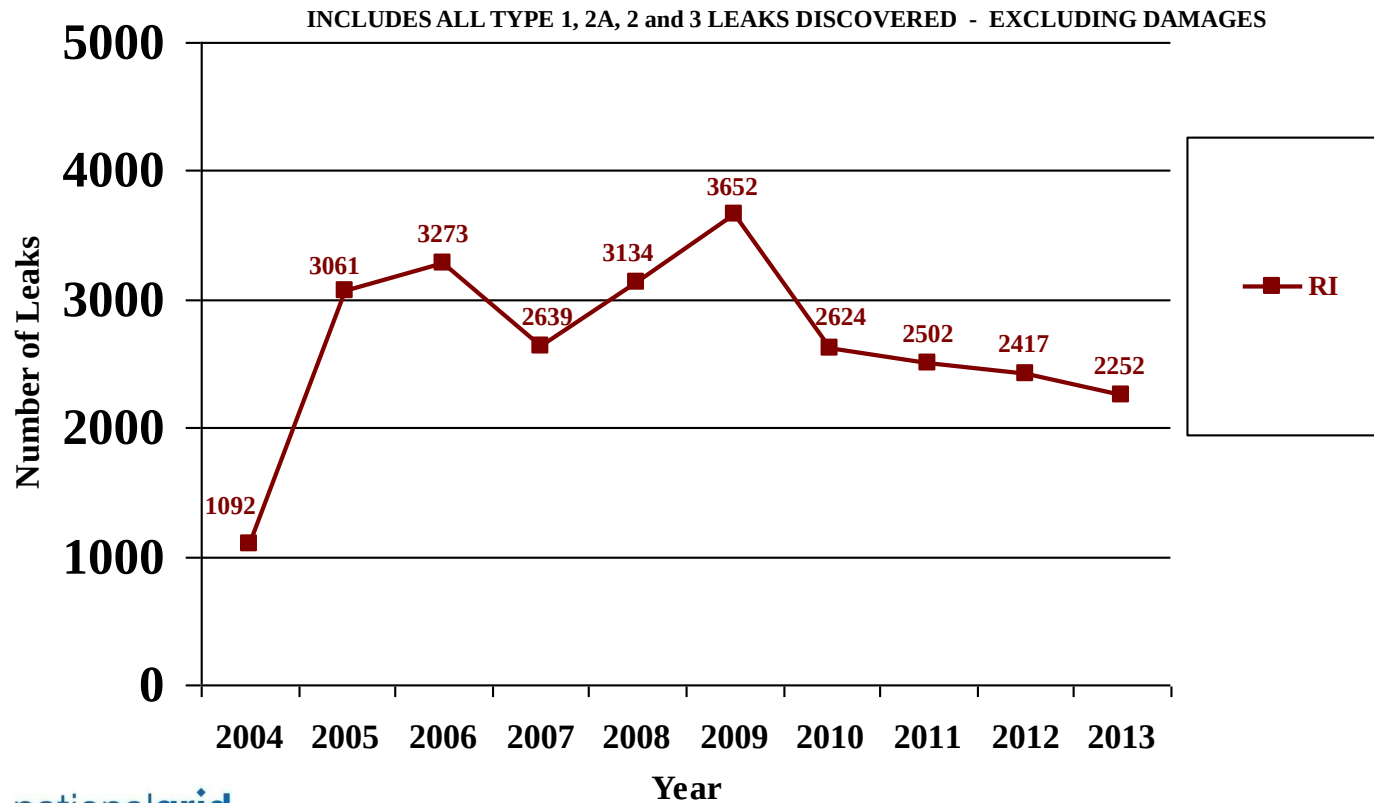
- Leak receipts decreased.
- Workable leak backlog decreased.
- Leak prone main and service inventories continue to decline steadily.
- Overall main leak rate and Steel main corrosion rate all decreased . Cast iron main break rate increased.
- Service leak rate increased.

2013 SYSTEM INTEGRITY REPORT

LEAK MANAGEMENT ANALYSIS

2013 SYSTEM INTEGRITY REPORT

TOTAL LEAK RECEIPTS



2013 SYSTEM INTEGRITY REPORT

2013 LEAK RECEIPTS AS A FUNCTION OF TOTAL SYSTEM PIPE MILEAGE

NY State

8,064 Leak Receipts

20,621 miles of Main
1,650,236 Services
(18,788 miles)

39,409 total miles of
pipe

*0.20 Leak Receipts
per Mile of Pipe*

MA State

6,424 Leak Receipts

11,021 miles of Main
720,001 Services
(7,522 miles)

18,544 total miles of
pipe

*0.35 Leak Receipts
per Mile of Pipe*

RI

2,252 Leak Receipts

3,179 miles of Main
192,931 Services
(2,415 miles)

5,593 total miles of
pipe

*0.40 Leak Receipts
per Mile of Pipe*

US-NGrid

16,740 Leak Receipts

34,821 miles of Main
2,563,168 Services
(28,725 miles)

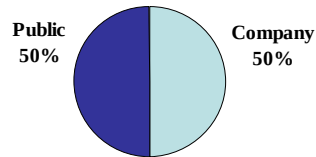
63,546 total miles of
pipe

*0.26 Leak Receipts
per Mile of Pipe*

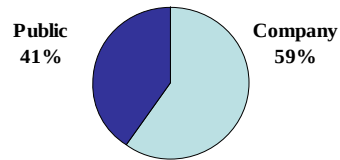
2013 SYSTEM INTEGRITY REPORT

2013 LEAK RECEIPTS BY DISCOVERY SOURCE (EXCLUDING DAMAGES)

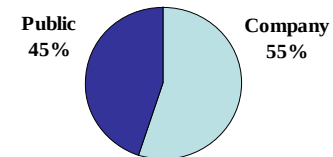
NY State



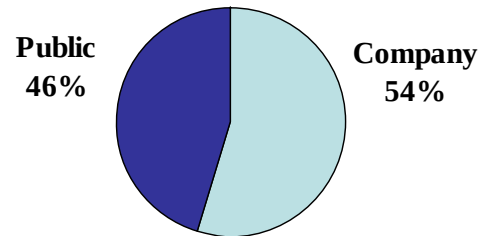
MA State



RI



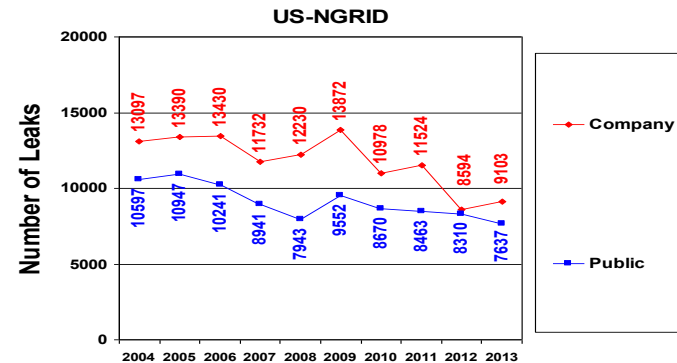
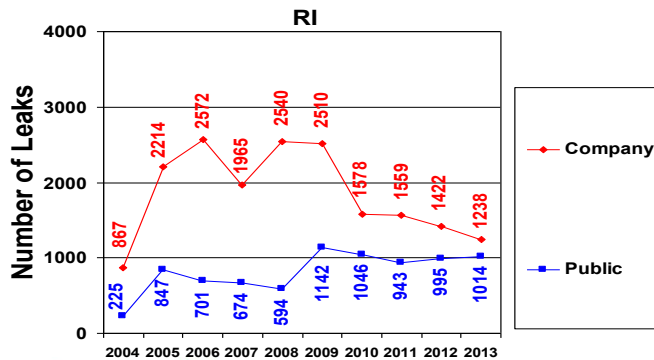
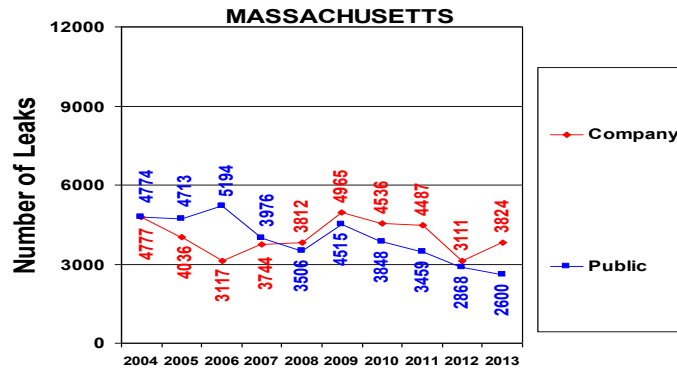
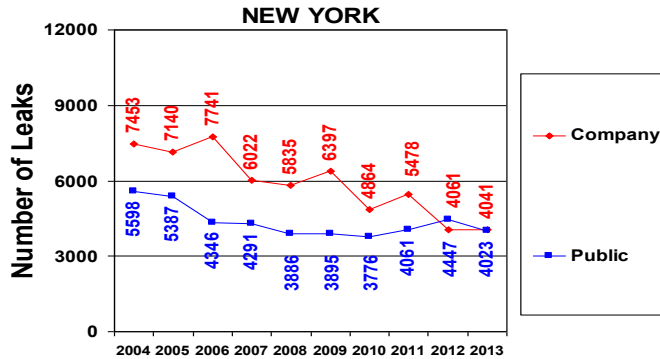
US-NGrid



2013 SYSTEM INTEGRITY REPORT

2004 - 2013 LEAK RECEIPTS

By Discovery Source (Excluding damages)



nationalgrid

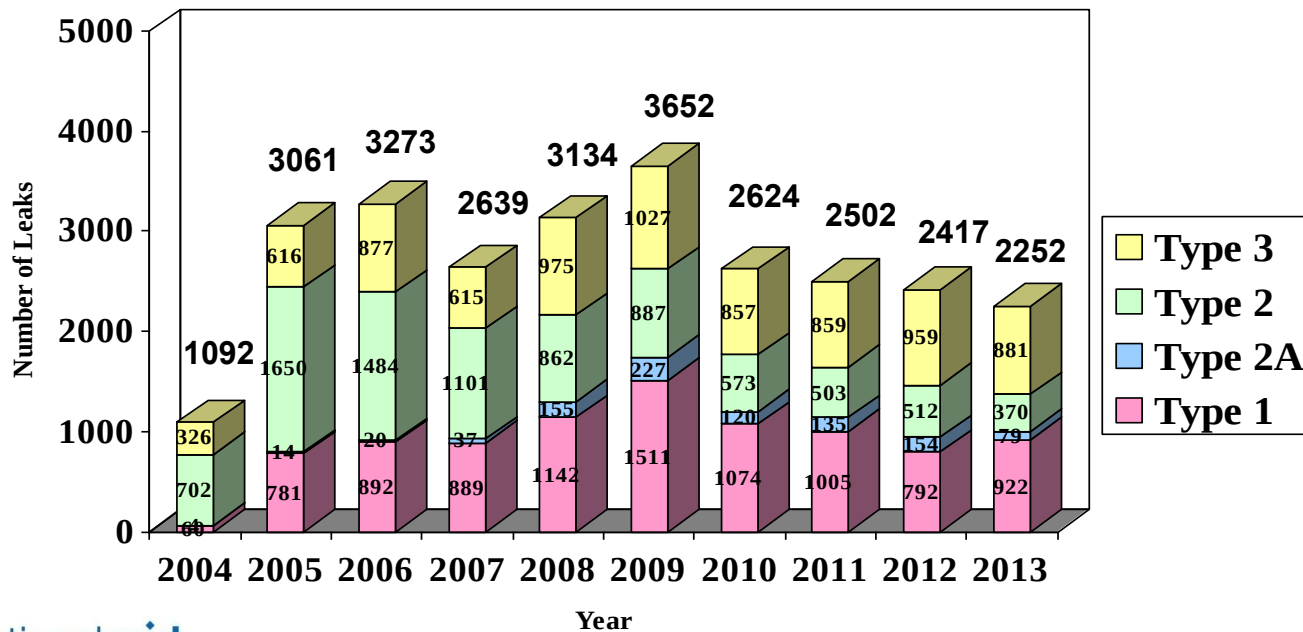
IMPORTANT: There have been known issues with interpreting consolidated leak source categories. This data was investigated and reformatted to show leaks found by company vs public in 2012. This issue should be addressed in the enterprise-wide LMS rollout. Further investigation will continue in 2014.

2013 SYSTEM INTEGRITY REPORT

RI

LEAK RECEIPTS By ORIGINAL Type

(Excluding damages)

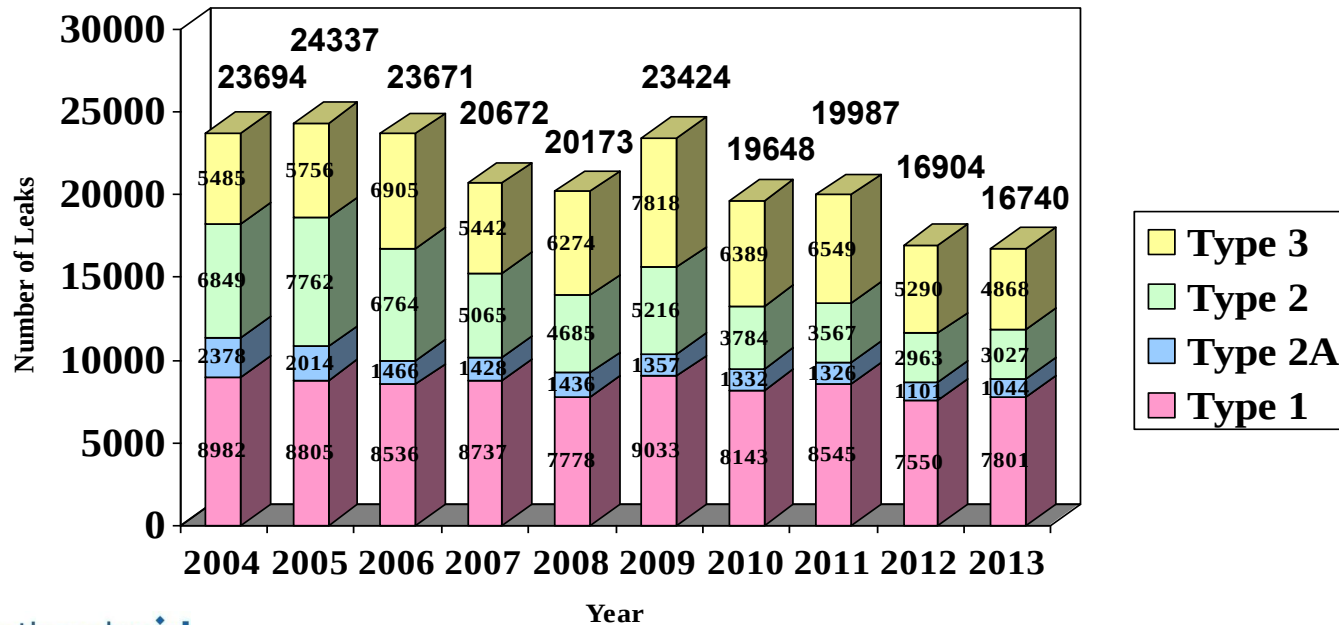


2013 SYSTEM INTEGRITY REPORT

US NGrid

LEAK RECEIPTS By ORIGINAL Type

(Excluding damages)



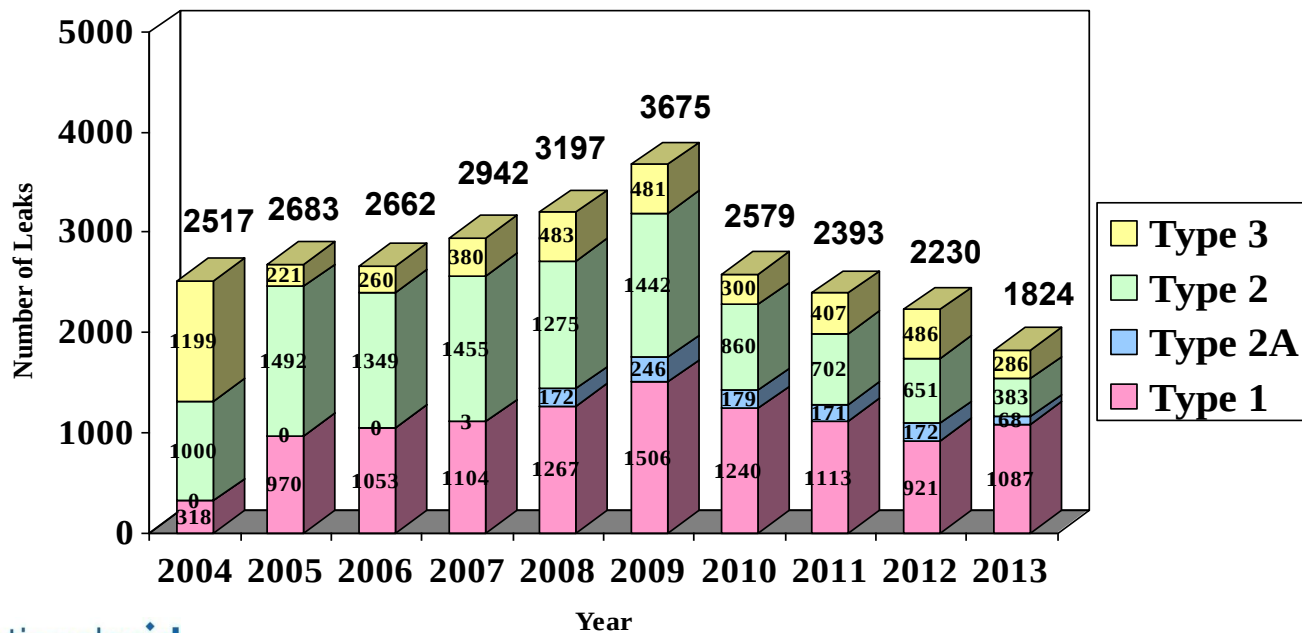
2013 SYSTEM INTEGRITY REPORT

LEAKS REPAIRED

By REPAIRED Type

RI

(Including damages)

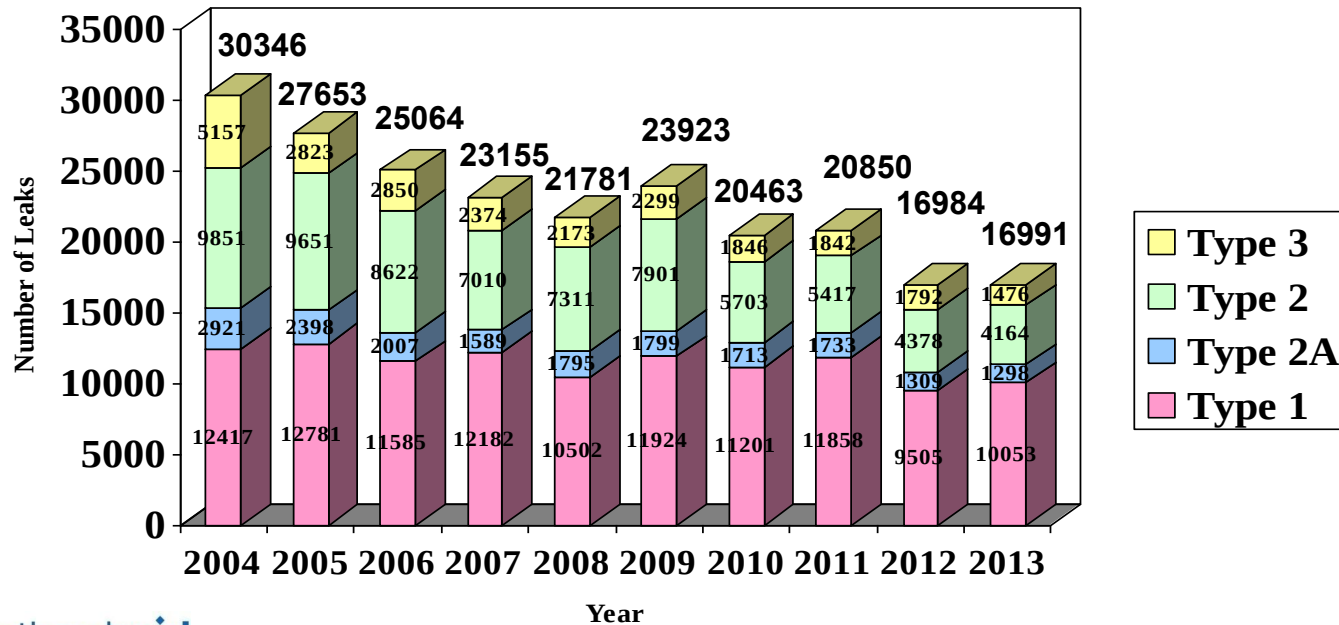


2013 SYSTEM INTEGRITY REPORT

US NGrid

LEAKS REPAIRED By REPAIRED Type

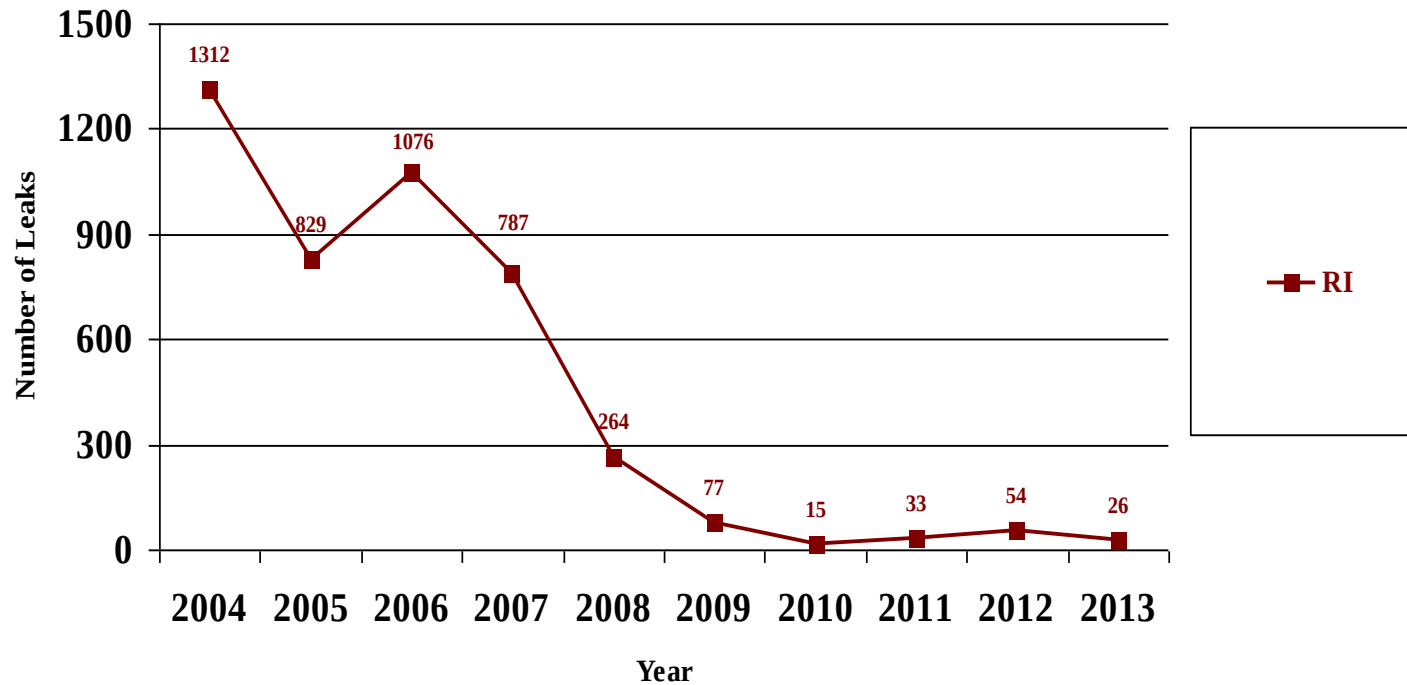
(Including damages)



2013 SYSTEM INTEGRITY REPORT

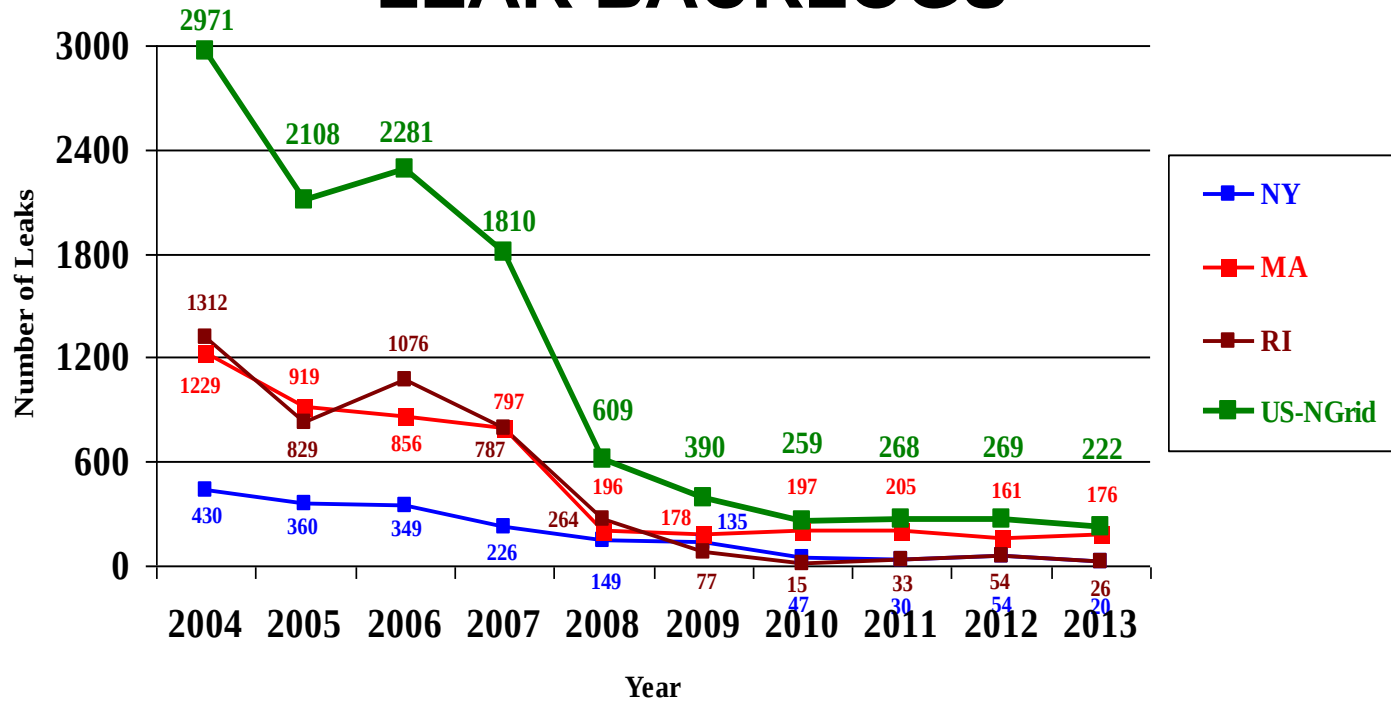
RI

YEAR-END WORKABLE LEAK BACKLOGS



2013 SYSTEM INTEGRITY REPORT

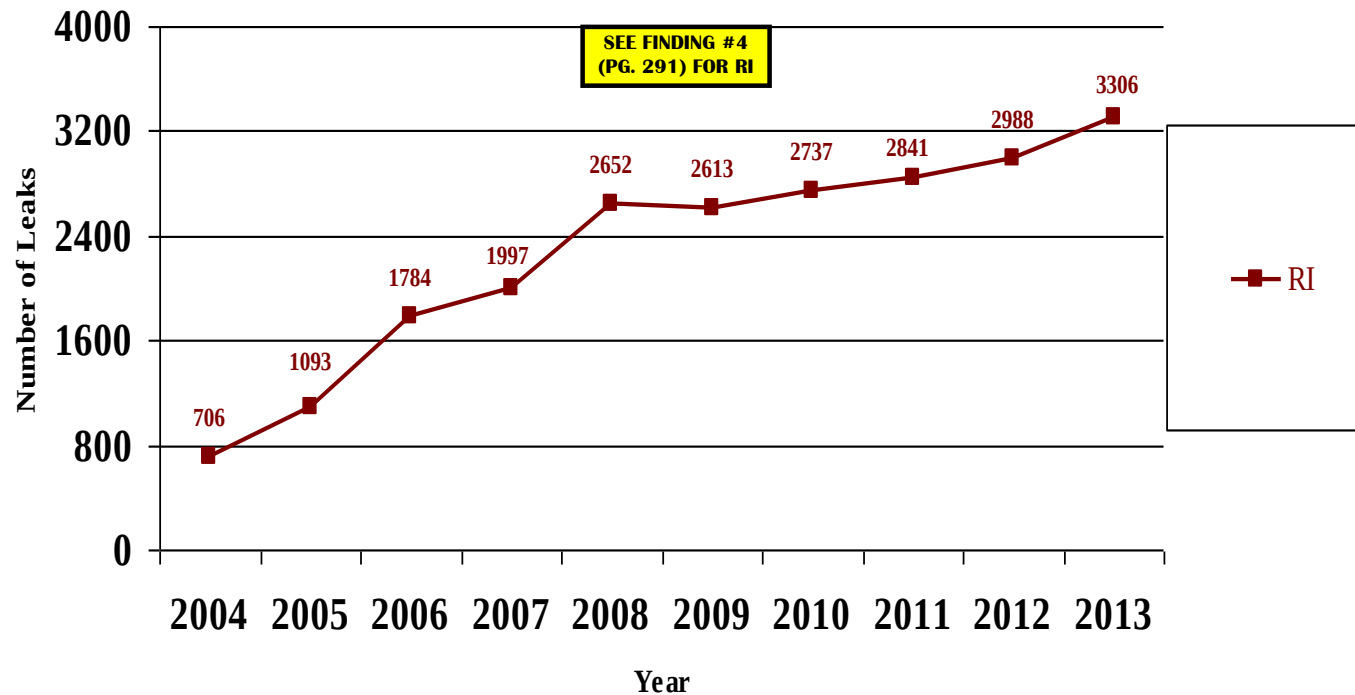
NGrid YEAR-END WORKABLE LEAK BACKLOGS



2013 SYSTEM INTEGRITY REPORT

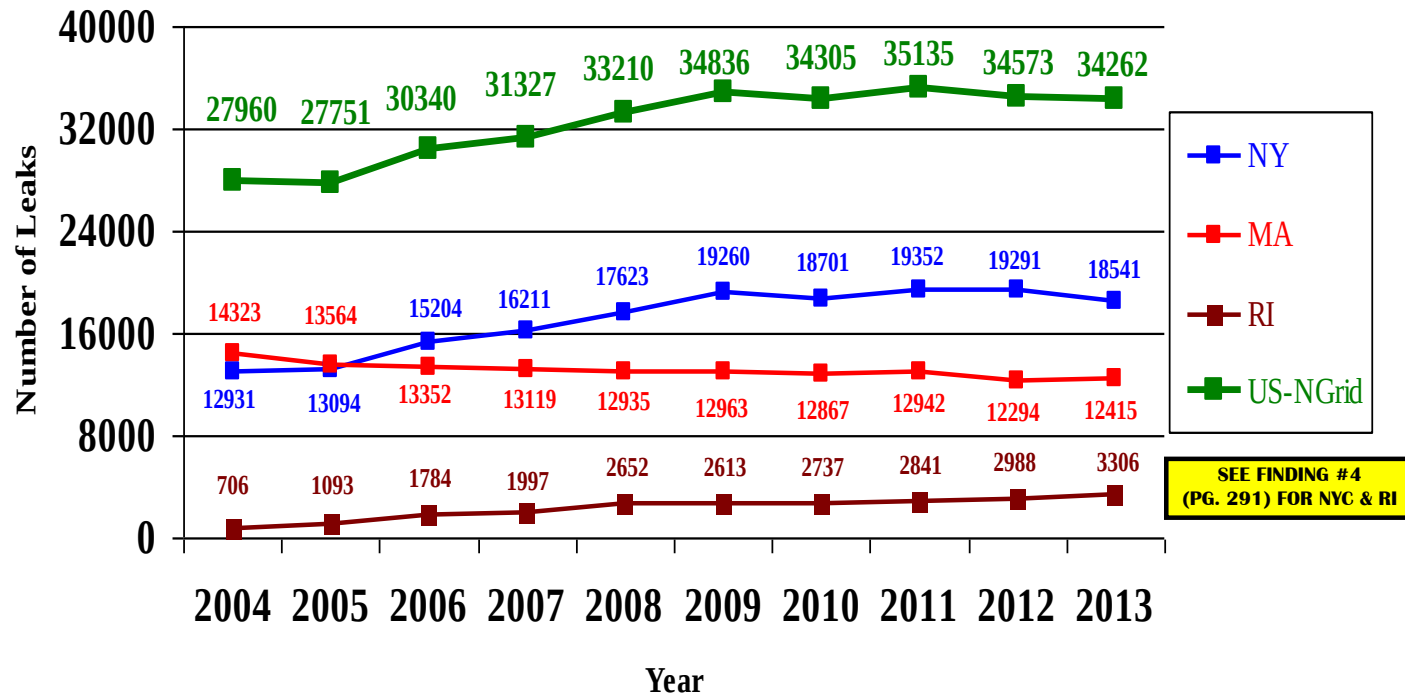
RI

YEAR-END OPEN TYPE 3



2013 SYSTEM INTEGRITY REPORT

NGrid YEAR-END OPEN TYPE 3



2013 SYSTEM INTEGRITY REPORT

MAIN INVENTORY ANALYSIS

2013 SYSTEM INTEGRITY REPORT

RI

MAIN INVENTORY (MILES)

Average Age
Of All RI
Distribution Main:
46.4 Years

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Plastic	861	891	918	941	968	1,002	1,044	1,103	1,168	1227
Cast Iron	926	922	908	900	896	885	878	875	859	831
PROTECTED STEEL	616	621	540	564	578	551	601	588	597	596
UNPROT'D STEEL	649	640	711	679	664	674	592	580	534	508
Other	1	1	1	1	1	-	-	0.007	0.007	0.007
Ductile Iron	17	17	17	17	17	17	17	17	16	16
TOTAL MAIN	3,070	3,092	3,095	3,102	3,124	3,129	3,132	3,163	3,174	3,179

DOT-Reported Distribution Pipe Inventories

2013 SYSTEM INTEGRITY REPORT

US-NGrid

MAIN INVENTORY (MILES)

Average Age
Of All US-NGrid
Distribution Main:
44.12 Years

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Plastic	11,061	11,604	11,658	11,892	12,373	12,855	13,205	13,558	14,030	14,477
Cast Iron	6,521	6,428	6,359	6,302	6,223	6,097	5,944	5,835	5,692	5,526
PROTECTED STEEL	9,124	9,329	8,755	8,939	8,962	8,971	9,073	9,113	9,116	9,108
UNPROT'D STEEL	6,851	6,569	7,052	6,856	6,691	6,493	6,263	6,069	5,843	5,695
Other	17	1	1	1	1	0.043	0.065	0.072	0.072	0.046
Ductile Iron	17	17	17	17	17	17	17	17	16	16
TOTAL MAIN	33,591	33,949	33,843	34,007	34,266	34,433	34,503	34,591	34,697	34,821

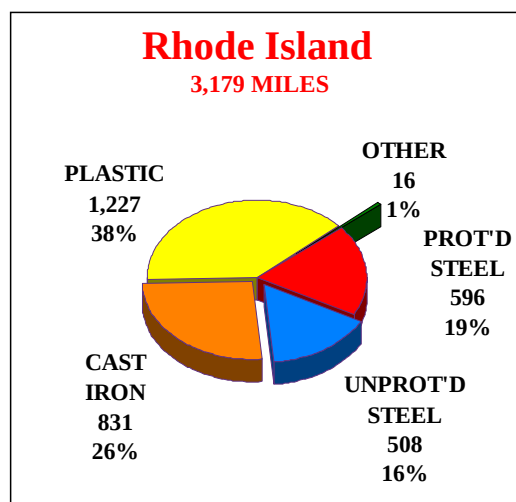
DOT-Reported Distribution Pipe Inventories

**SEE FINDING #5
(PG. 292) FOR MA**

2013 SYSTEM INTEGRITY REPORT

MAIN INVENTORY

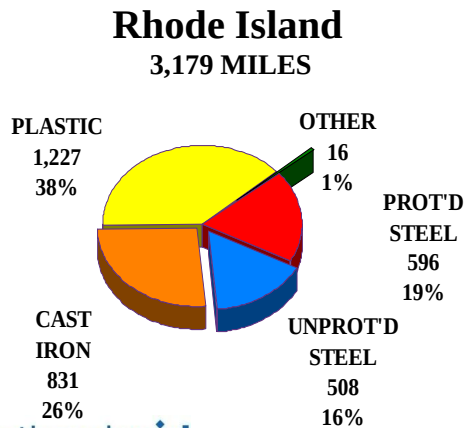
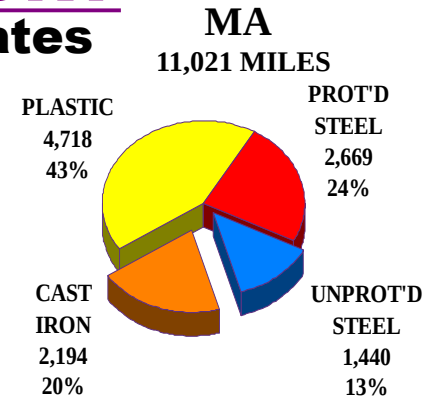
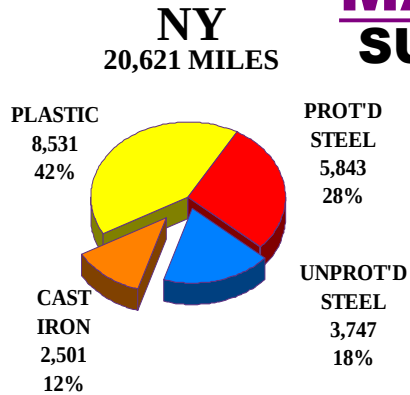
RI



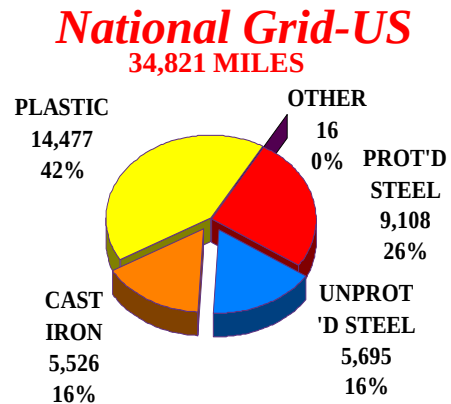
2013 SYSTEM INTEGRITY REPORT

MAIN INVENTORY

SUMMARY – All States



nationalgrid



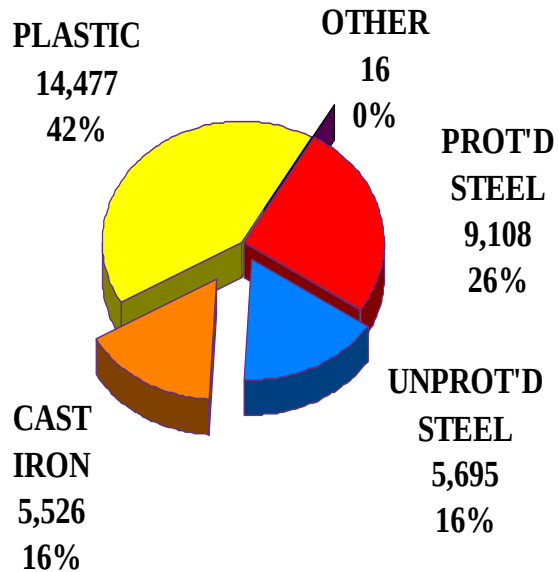
2013 SYSTEM INTEGRITY REPORT

2013 MAIN INVENTORY

U.S. COMPARATIVE SUMMARY

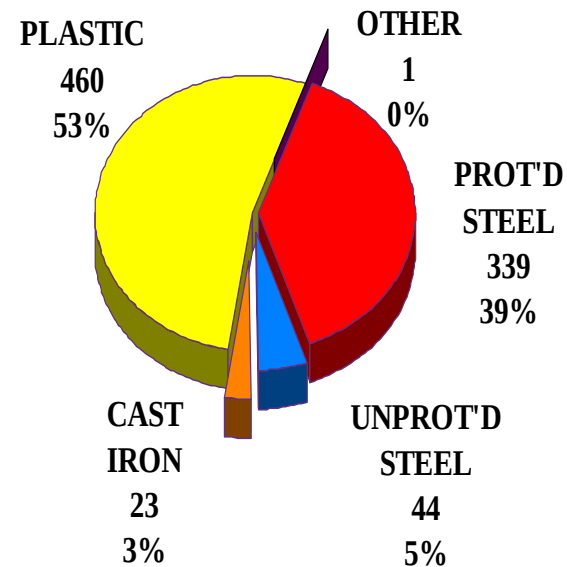
National Grid - US

34,821 MILES



2012 PHMSA Average

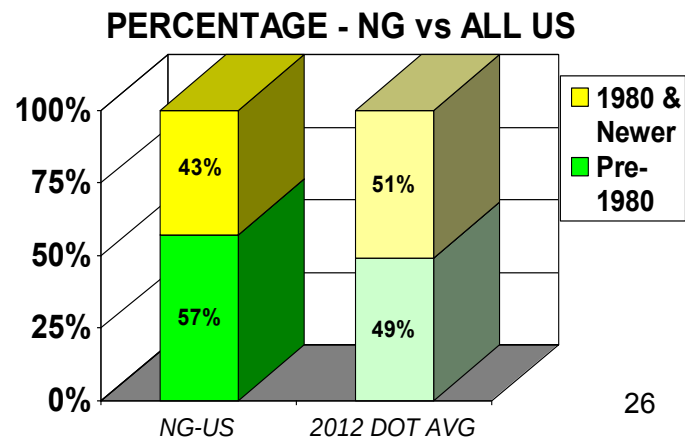
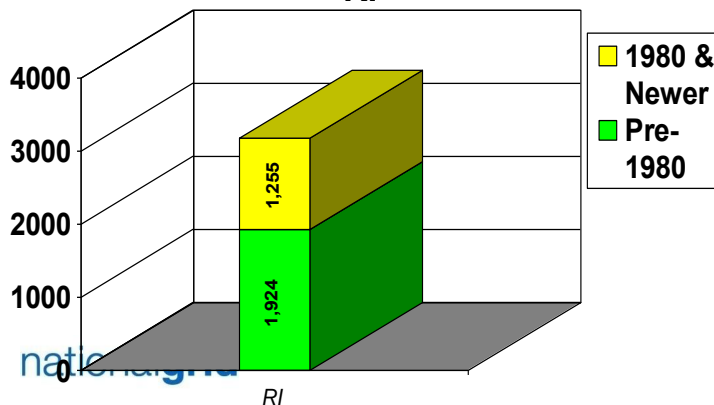
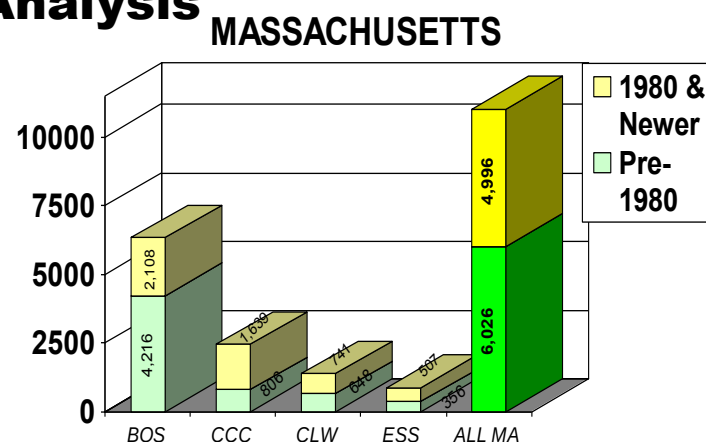
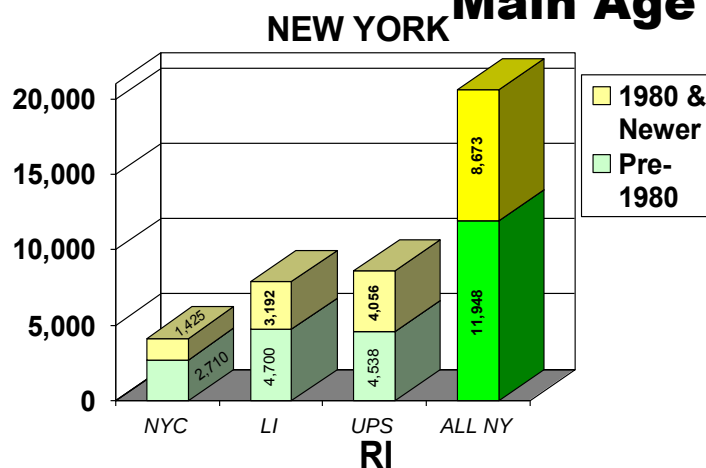
867 MILES



2013 SYSTEM INTEGRITY REPORT

2013 MAIN INVENTORY

Main Age Analysis



2013 SYSTEM INTEGRITY REPORT

AVERAGE DISTRIBUTION MAIN SYSTEM AGE

ASSUMPTIONS

- 1 Quantities of main shown are in miles
- 2 Estimated average ages are in years
- 3 Estimated average main ages were calculated using the following assumptions:
 - a) all pre-1910 pipe was assumed to be installed in 1900
 - b) all the pipe in each decade was assumed to be installed in the middle of the decade
- 4 Pre-1940 data for Upstate NY became available from 2009, and had the effect of aging that system slightly

IMPORTANT: 2012 Age Estimates Include Significant Data Correction For RI.

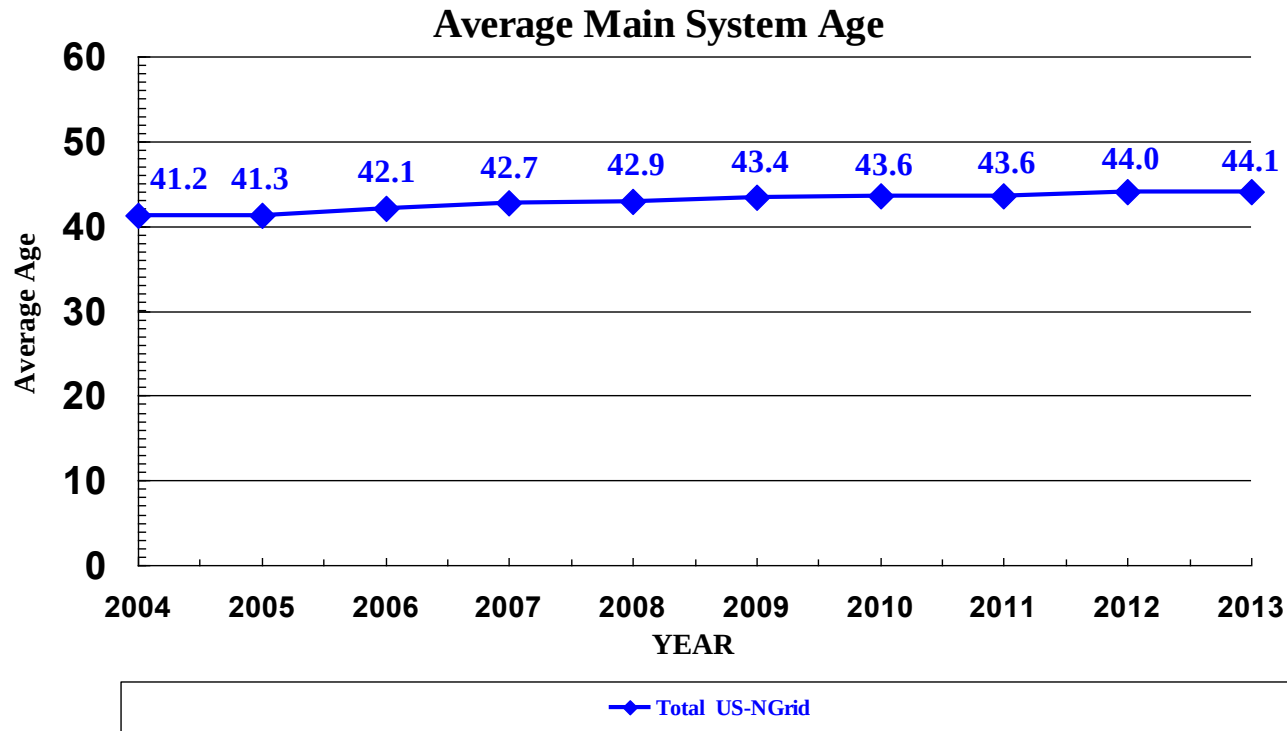
Availability of pre-1940 pipe ages had the data effect of aging the RI system by several years. While it was not possible to recalculate ages going back to 2004, an estimate of 2011 RI age with corrected data would be 47.08, meaning the RI system actually got younger. For NG-TOTAL, the 2011 would have been 43.95, meaning that the entire system aged less than a month in 2012.

SUMMARY

AVERAGE DISTRIBUTION MAIN SYSTEM AGE	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
NYC	56.9	56.9	56.6	56.4	56.8	56.8	56.6	55.8	55.1	54.8
LI	42.4	42.2	41.8	41.5	41.4	41.7	42.2	41.4	40.7	40.9
UPSTATE	37.8	37.4	36.9	36.3	35.7	33.9	33.5	32.8	32.3	31.8
TOTAL NY	43.4	43.1	42.7	42.3	42.1	41.5	41.4	40.7	40.1	39.9
BOSTON	54.4	54.8	55.3	55.5	55.7	55.8	55.5	55.3	53.2	54.4
ESSEX	35.1	34.5	33.9	33.2	32.4	31.6	30.9	30.0	29.8	29.5
Boston +Essex	52.1	52.4	52.76	52.84	52.93	52.89	52.51	52.23	50.49	51.42
COLONIAL-Cape	28.2	28.1	28.7	28.9	28.3	27.5	27.0	26.2	25.4	24.8
COLONIAL-Lowell	36.3	36.2	36.1	35.9	35.3	34.9	34.2	33.6	33.2	32.4
COLONIAL(Cape+Lowell)	31.1	31.0	31.41	31.45	30.87	30.19	29.61	28.92	28.19	27.54
TOTAL MA	44.8	44.9	45.3	45.4	45.3	45.0	44.5	44.1	42.9	43.1
N.E. GAS (RI)	46.4	46.7	43.4	45.7	45.5	45.0	44.4	43.8	43.3	42.7
TOTAL NATIONAL GRID	44.12	44.04	43.61	43.60	43.43	42.91	42.67	42.06	41.27	41.20

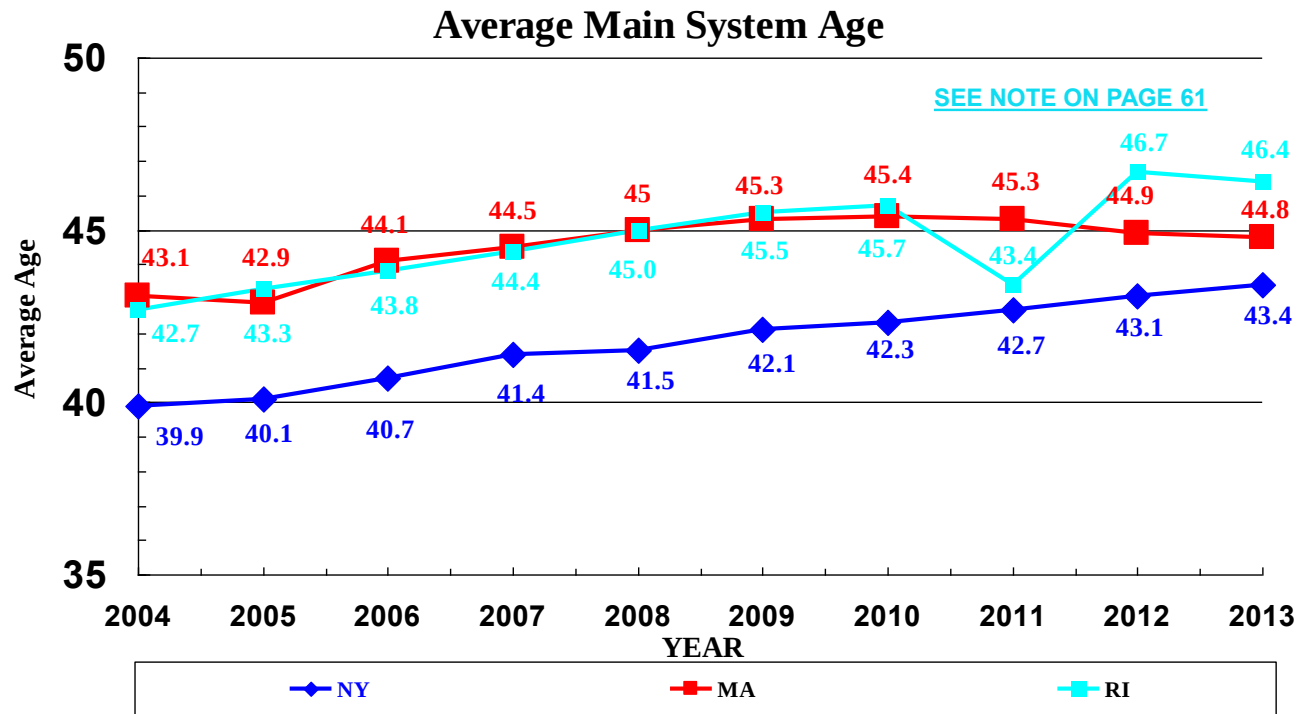
2013 SYSTEM INTEGRITY REPORT

National Grid Gas Distribution System is Aging at a rate
of 4.3 months every year.



2013 SYSTEM INTEGRITY REPORT

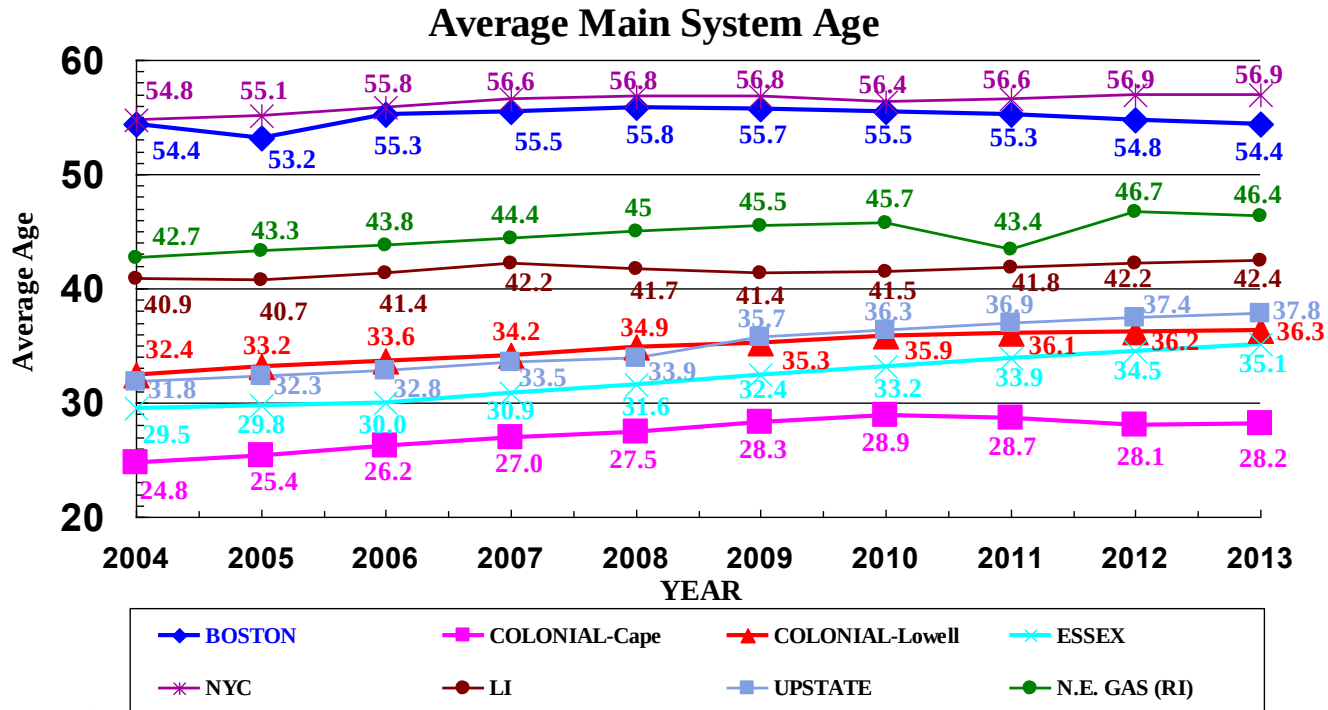
National Grid Gas Distribution System Average Age of Main by State



2013 SYSTEM INTEGRITY REPORT

National Grid Gas Distribution System

Average Age of Main by Legacy NG Company Reflects Expected Northeast Pattern(i.e., old civilization areas and cast iron)



2013 SYSTEM INTEGRITY REPORT

Cast Iron Pipeline

- The average age of National Grid's pipeline system is strongly influenced by the amount of cast iron pipe.
- Cast iron main, which was primarily installed from the mid-1800's to the 1950's, is a large contributor to the average age in NYC, Boston & RI – the three regions with the oldest pipe.
- Cast iron main failures are not as age dependent as failures in pipe made from other materials, like Steel. Cast iron failures are more influenced by external factors (temperature, external load, undermining, construction methods, etc.)' while Steel failures are primarily due to corrosion which is time progressive.
- Most US distribution companies are much "newer" than National Grid-US and , therefore have little or no cast iron (the avg. US system contains only 3% CI main, as opposed to NG-US, which is 16% CI)

2013 SYSTEM INTEGRITY REPORT

Average age of main excluding cast iron.

- In general, CI was installed from the mid-1800's until the 1950's, so it would not be unreasonable to assume (for system aging purposes) that if we excluded pre-1940 pipe, we would get rough estimates of the system ages without CI.

Region	Average System Age (Years)
Boston	30.26
Cape	24.92
Lowell	29.81
Essex	28.52
Total MA	28.53
RI	35.55
NYC	30.44
LI	33.78
Upstate NY	34.14
Total NY	33.47
Total US-NGRID	32.19

2013 SYSTEM INTEGRITY REPORT

PERCENT OF LEAK-PRONE PIPE

	2013			2012			2011			2010			2009			2008			2007			2006			2005			2004		
Region	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe	Miles leak Prone main	Miles of main	% leak- prone pipe
NYC	1,940	4,135	47%	1,977	4,128	48%	2,016	4,109	49%	2,067	4,095	50%	2,110	4,069	52%	2,139	4,040	53%	2,169	4,033	54%	2,180	4,033	54%	2,203	4,034	55%	2,251	4,054	56%
LI	3,524	7,892	45%	3,582	7,843	46%	3,641	7,822	47%	3,696	7,807	47%	3,767	7,814	48%	3,881	7,729	50%	3,927	7,521	52%	3,946	7,510	53%	3,995	7,496	53%	4,030	7,419	54%
UPState	783	8,594	9%	823	8,552	10%	883	8,528	10%	915	8,523	11%	953	8,507	11%	999	8,489	12%	1,075	8,508	13%	1,126	8,436	13%	1,181	8,351	14%	1,258	8,275	15%
NY	6,247	20,621	30%	6,382	20,523	31%	6,540	20,459	32%	6,678	20,425	33%	6,830	20,390	33%	7,019	20,258	35%	7,171	20,062	36%	7,252	19,979	36%	7,379	19,881	37%	7,539	19,748	38%
BGC	3,230	6,324	51%	3,318	6,309	53%	3,426	6,292	54%	3,527	6,282	56%	3,637	6,264	58%	3,735	6,247	60%	3,791	6,219	61%	3,862	6,175	63%	3,453	6,373	54%	3,645	6,183	59%
EGC	103	863	12%	107	860	12%	110	859	13%	114	860	13%	118	858	14%	125	855	15%	126	852	15%	150	847	18%	154	848	18%	157	839	19%
CAPE	121	2,445	5%	143	2,440	6%	188	2,427	8%	222	2,419	9%	241	2,409	10%	257	2,402	11%	269	2,396	11%	295	2,382	12%	239	2,401	10%	247	2,379	10%
LOWELL	181	1,389	13%	192	1,391	14%	185	1,390	13%	195	1,386	14%	205	1,383	15%	217	1,380	16%	221	1,376	16%	234	1,366	17%	211	1,354	16%	225	1,372	16%
MA	3,634	11,021	33%	3,759	11,000	34%	3,909	10,968	36%	4,059	10,946	37%	4,201	10,915	38%	4,335	10,884	40%	4,407	10,843	41%	4,541	10,769	42%	4,057	10,976	37%	4,274	10,773	40%
RI	1,339	3,179	42%	1,393	3,174	44%	1,455	3,163	46%	1,470	3,132	47%	1,559	3,129	50%	1,561	3,124	50%	1,580	3,102	51%	1,620	3,095	52%	1,563	3,092	51%	1,576	3,070	51%
US-NGrid	11,220	34,821	32%	11,535	34,697	33%	11,903	34,591	34%	12,208	34,503	35%	12,589	34,433	37%	12,915	34,266	38%	13,158	34,007	39%	13,413	33,843	40%	12,998	33,949	38%	13,389	33,591	40%

2013 SYSTEM INTEGRITY REPORT

NATIONAL GRID MAIN REPLACEMENT

Rate Case Supported "Leak-Prone" Main Replacement Levels										
Region	2013 Total Main (Miles)	2013 Leak Prone Main (Miles)	Leaks/Miles of Total Main (Repair rate)	Leaks/Miles of Leak Prone Main (Repair rate)	⁽⁵⁾ 2013 Annual "Planned" Replacement (Miles)	Planned Replacement % of Leak prone system	⁽⁵⁾ 2013 Annual "Actual" Replacement (Miles)	Actual Replacement % of Leak prone system	⁽⁵⁾ 2014 Annual "Planned" Replacement (Miles)	Years to LPP Main Elimination based on "Current" annual plan
NYC	4,135	1,940	0.48	1.02	41.0	2.1%	41.9	2.2%	43.0	45
LI	7,892	3,524	0.11	0.23	57.5	1.6%	53.9	1.5%	62.0	57
Upstate NY	8,594	783	0.06	0.65	39.6	5.1%	40.4	5.2%	42.6	18
RI	3,179	1,339	0.34	0.79	55.5	4.1%	44.0	3.3%	70.4	19
BGC & EGC	7,187	3,333	0.59	1.25	111.5	3.3%	95.8	2.9%	122.0	27
CCC & CLW	3,835	301	0.06	0.77	57.8	19.2%	42.6	14.1%	46.3	7

- Note:**
1. Leaks per mile of total main excludes Excavation leaks.
 2. Leaks per mile of Leak-Prone main (LPP) excludes Excavation leaks and Plastic leaks.
(Also, all non-Excavation Steel leaks are assumed to have occurred on Unprotected Steel)
 3. Leak-Prone Pipe = Unprotected steel (Bare & Coated) + CI/WI + Other.
 4. Miles of Leak-Prone main replaced includes all Proactive programs (Main Replacement program & System Reinforcement) and all Reactive programs (Public Works, Water Intrusion & Leak/reactive).
 5. Annual planned and actual replacement miles are CY.
 6. Data source is "2013 & 2014 US Gas Leak Prone Pipe Replacement Programs" report from 03.31.2014

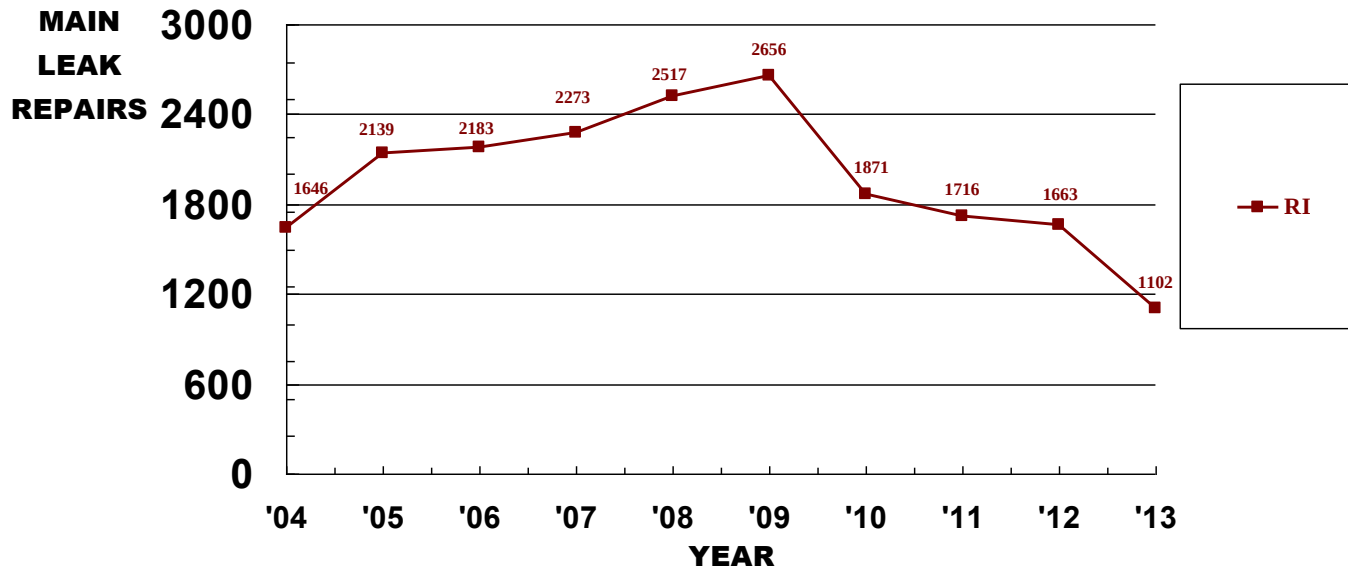
2013 SYSTEM INTEGRITY REPORT

MAIN LEAK REPAIR ANALYSIS

2013 SYSTEM INTEGRITY REPORT

TOTAL MAIN LEAK REPAIRS

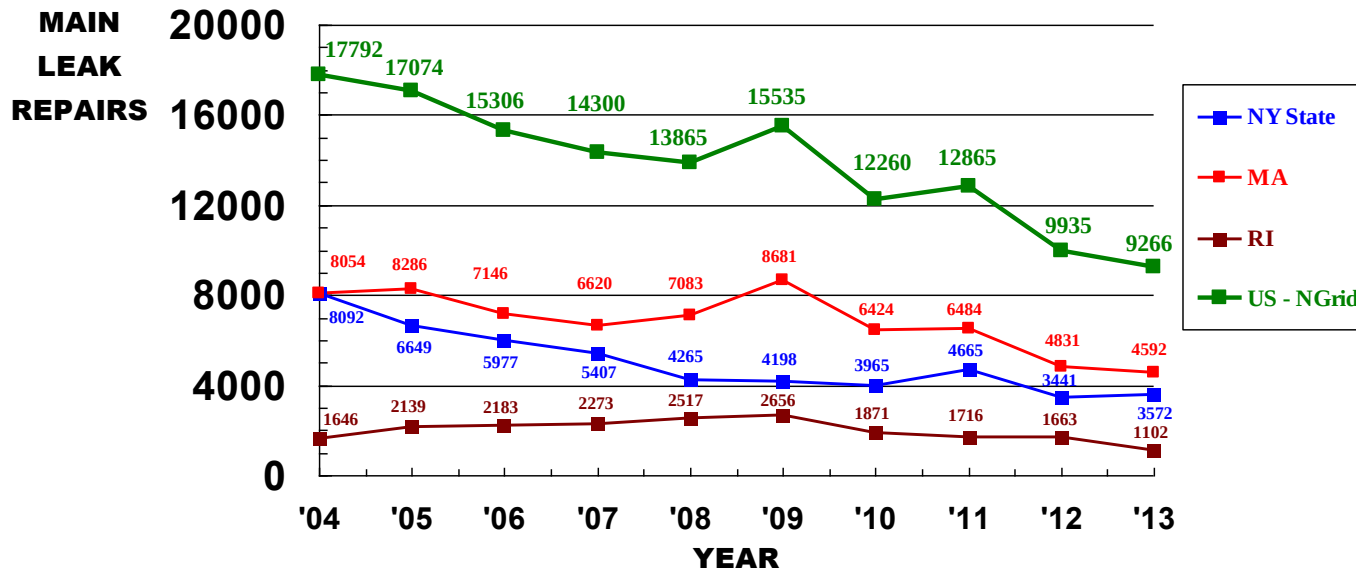
INCLUDING Damages



2013 SYSTEM INTEGRITY REPORT

TOTAL MAIN LEAK REPAIRS

INCLUDING Damages



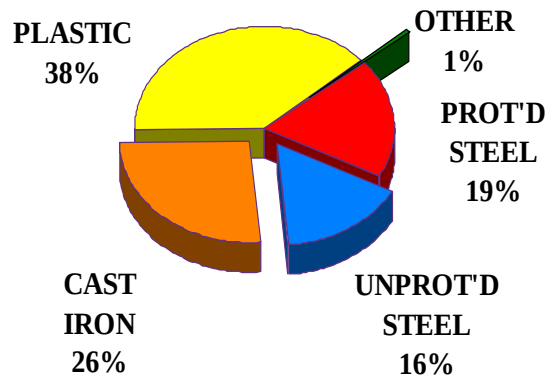
2013 SYSTEM INTEGRITY REPORT

RI

2013 TOTAL MAIN LEAKS REPAIRS

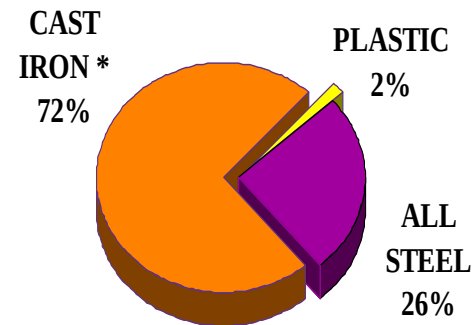
TOTAL MAIN INVENTORY BY MATERIAL

3,179 MILES



TOTAL MAIN LEAK REPAIRS BY MATERIAL

1,102 LEAKS (including damages)



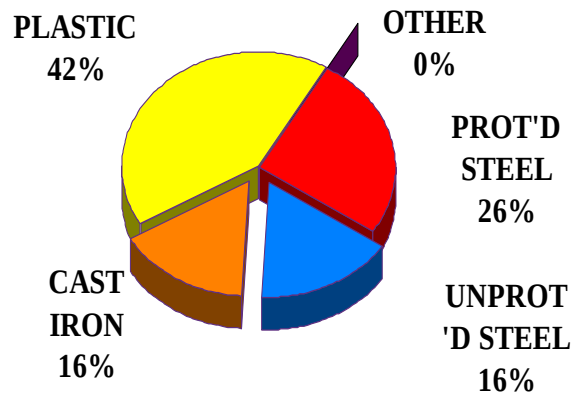
NOTE: (*) CI Leaks include Other material Leaks.
Leak Count Totals Individual Repairs.

2013 SYSTEM INTEGRITY REPORT

US-NGrid 2013 TOTAL MAIN LEAKS REPAIRS

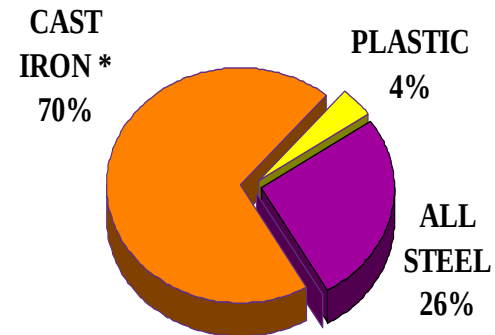
TOTAL MAIN INVENTORY BY MATERIAL

34,821 MILES



TOTAL MAIN LEAK REPAIRS BY MATERIAL

9,266 LEAKS (including damages)



NOTE: (*) CI Leaks include Other material Leaks.
Leak Count Totals Individual Repairs

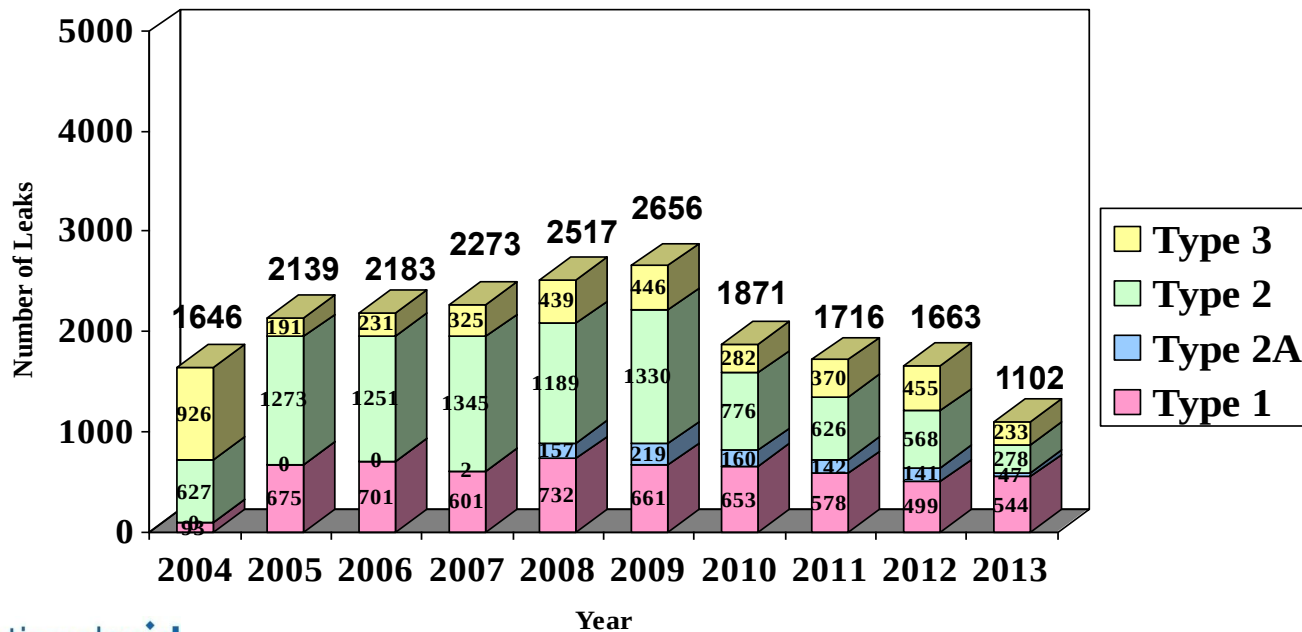
2013 SYSTEM INTEGRITY REPORT

RI

LEAKS REPAIRED By REPAIRED Type

MAIN

(Including damages)

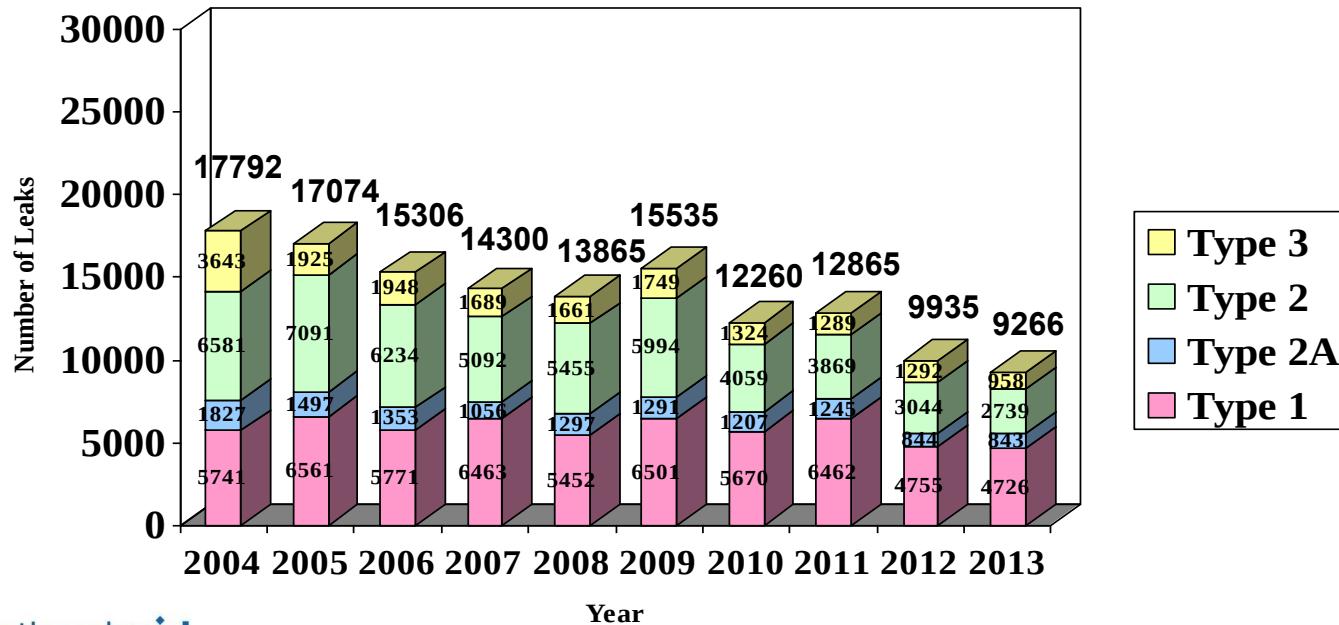


2013 SYSTEM INTEGRITY REPORT

US NGrid

LEAKS REPAIRED By REPAIRED Type MAIN

(Including damages)

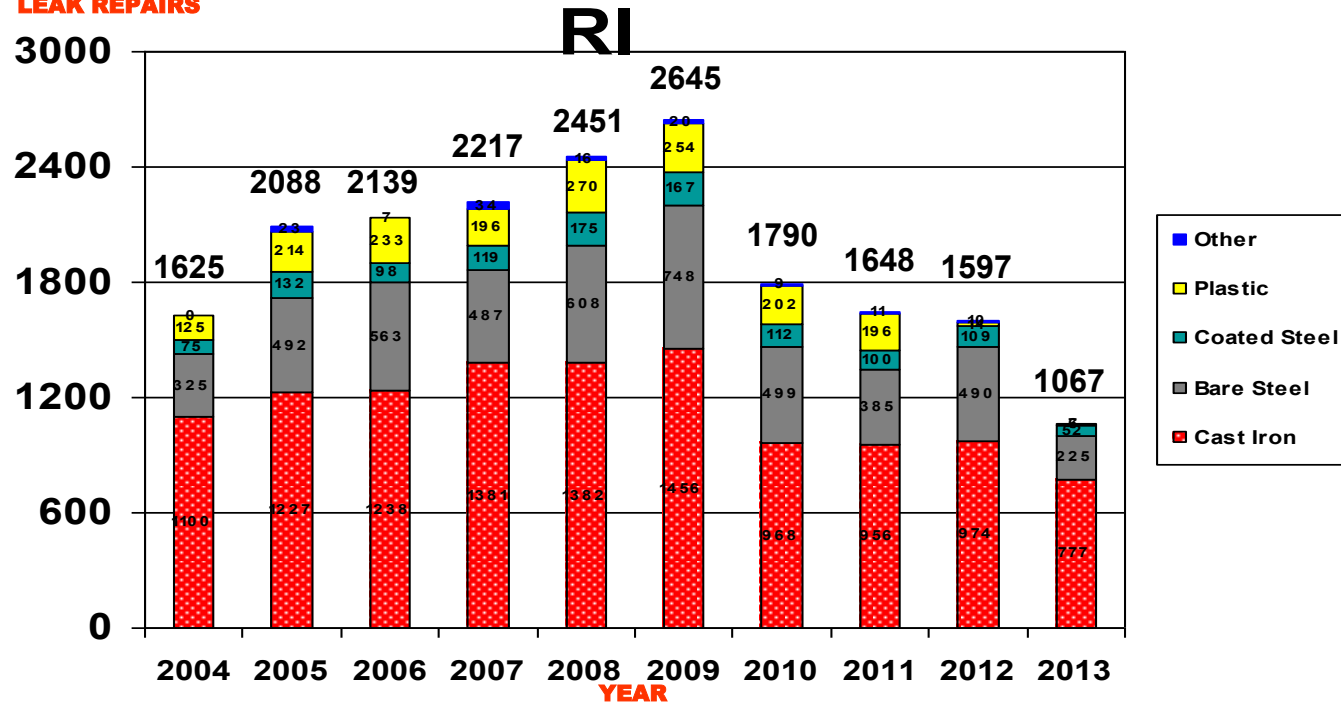


2013 SYSTEM INTEGRITY REPORT

2004 -2013 MAIN LEAK REPAIRS

**All Main Leak Repairs by Material
(Excluding damages)**

**NUMBER OF MAIN
LEAK REPAIRS**



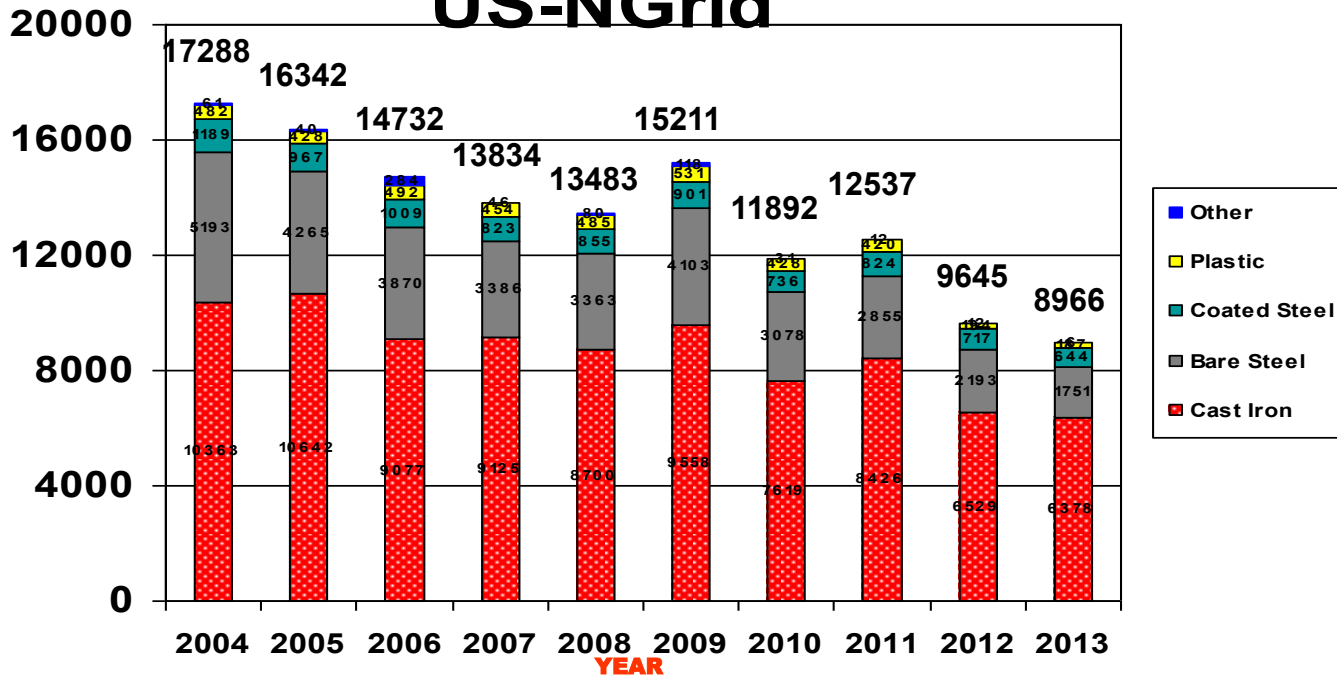
2013 SYSTEM INTEGRITY REPORT

2004 -2013 MAIN LEAK REPAIRS

All Main Leak Repairs by Material
(Excluding damages)

NUMBER OF MAIN
LEAK REPAIRS

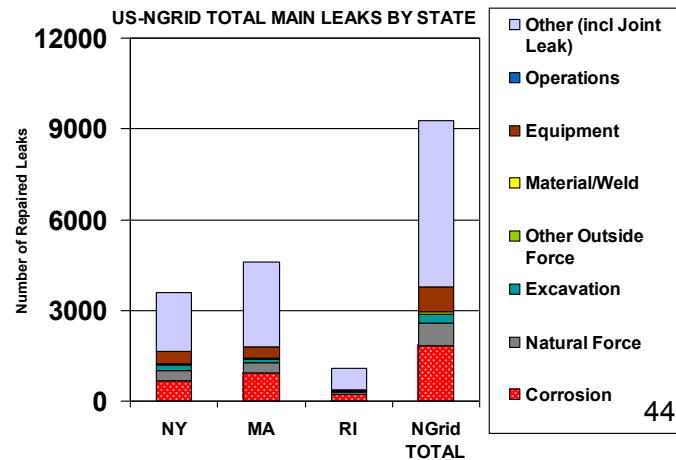
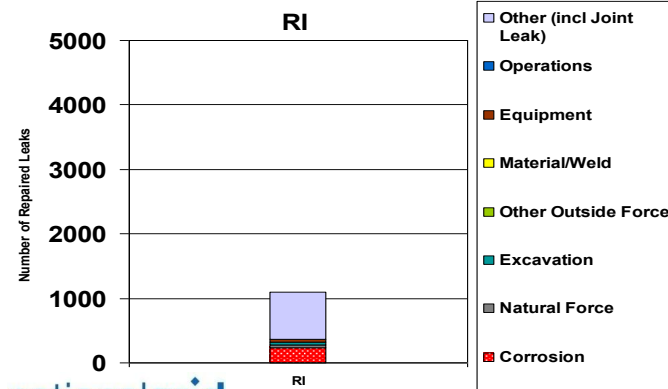
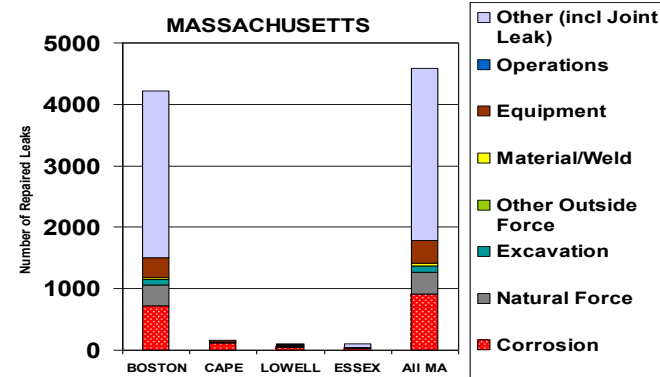
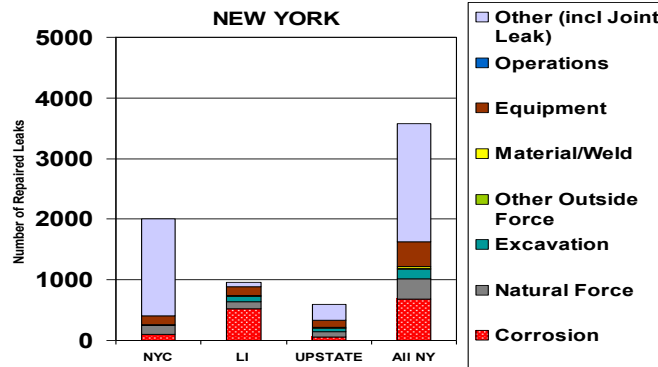
US-NGrid



2013 SYSTEM INTEGRITY REPORT

2013 MAIN LEAK REPAIRS

All Main Leak Repairs (including damages)

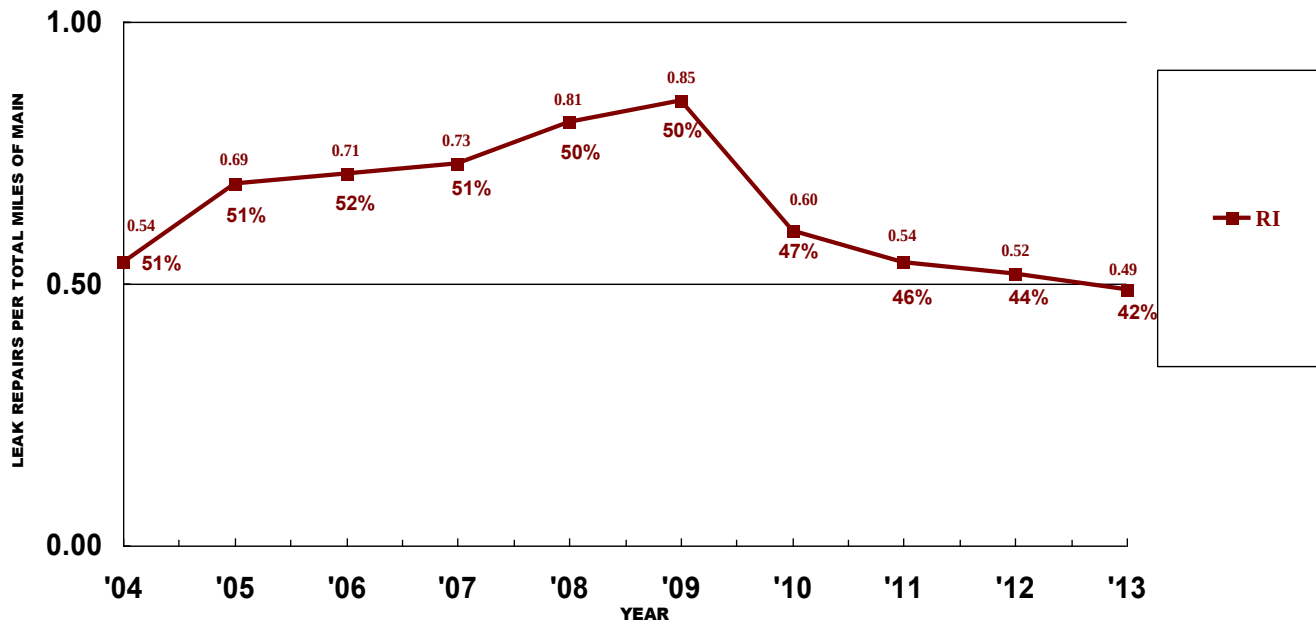


2013 SYSTEM INTEGRITY REPORT

TOTAL MAIN LEAK “RATES”

INCLUDING Damages

PERCENTAGES SHOWN ARE PERCENT OF LEAK-PRONE PIPE

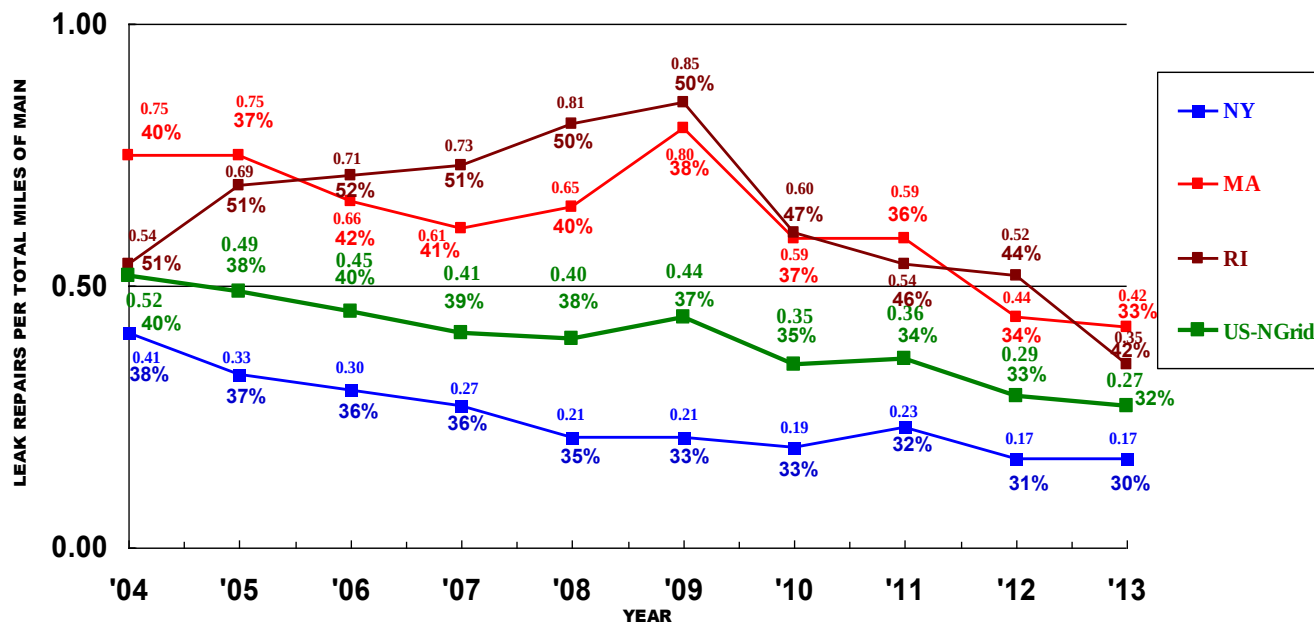


2013 SYSTEM INTEGRITY REPORT

TOTAL MAIN LEAK “RATES”

INCLUDING Damages

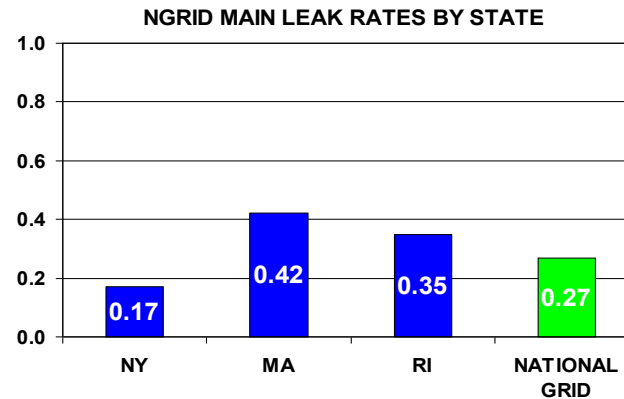
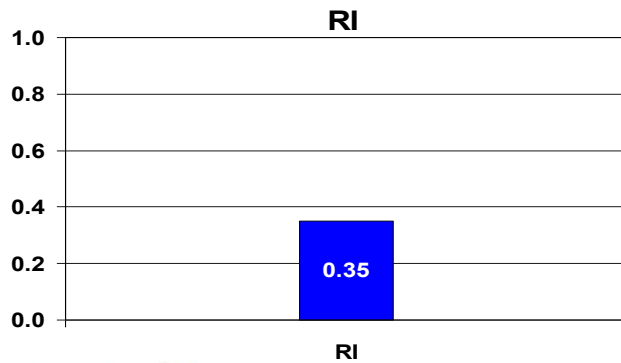
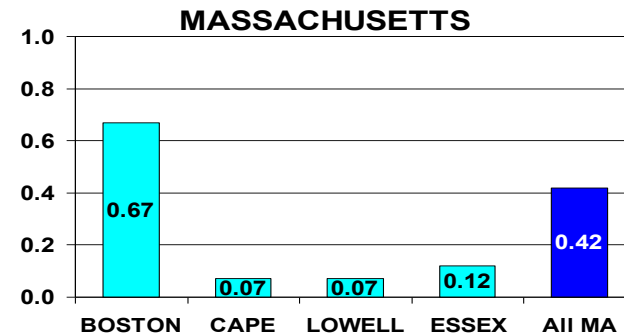
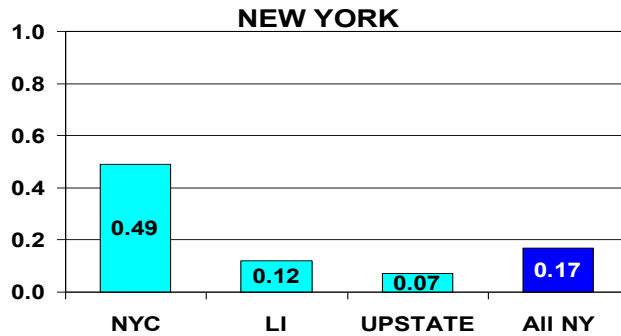
PERCENTAGES SHOWN ARE PERCENT OF LEAK-PRONE PIPE



2013 SYSTEM INTEGRITY REPORT

2013 MAIN LEAK “RATES”

Total Main Leak Repairs (incl. damages) / Mile of Total Main



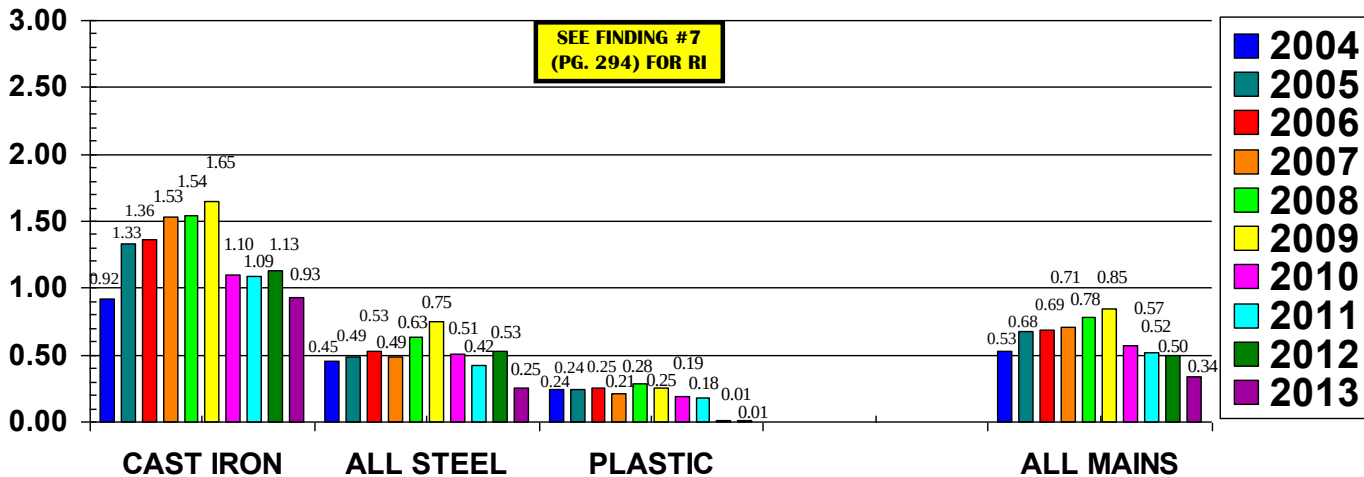
2013 SYSTEM INTEGRITY REPORT

RI

MAIN LEAK “RATES” COMPARISON BY MATERIAL

EXCLUDING Damages

**LEAK REPAIRS
PER MILE OF MAIN**



MATERIAL

COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

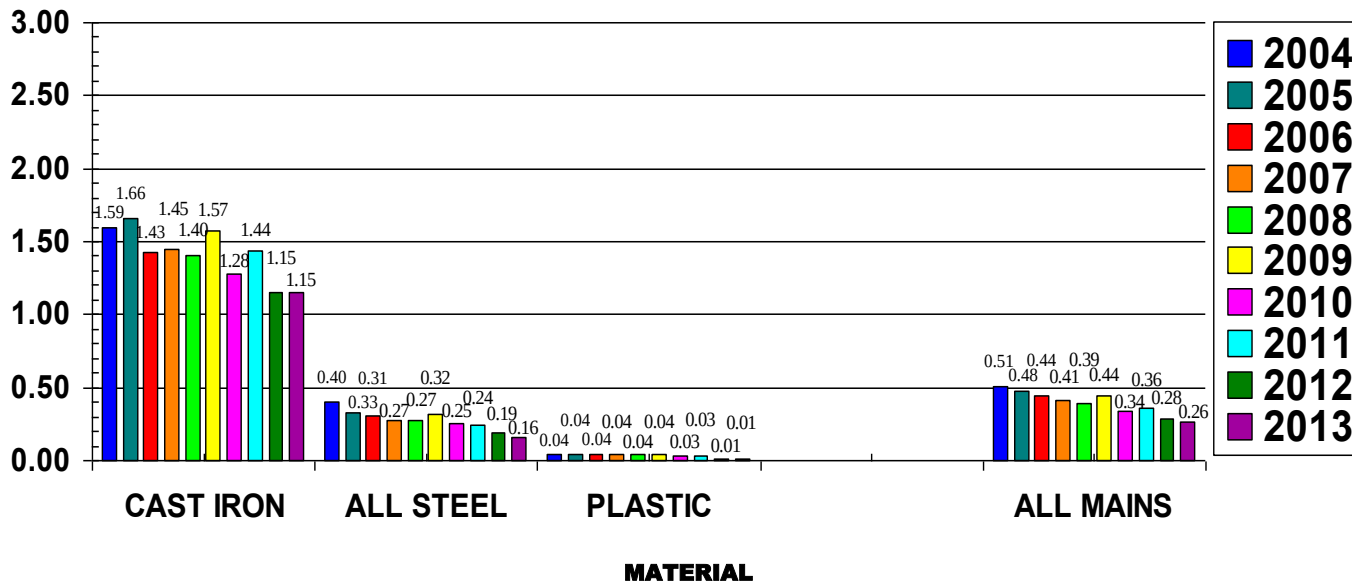
2013 SYSTEM INTEGRITY REPORT

US-NGrid

MAIN LEAK “RATES” COMPARISON BY MATERIAL

EXCLUDING Damages

**LEAK REPAIRS
PER MILE OF MAIN**

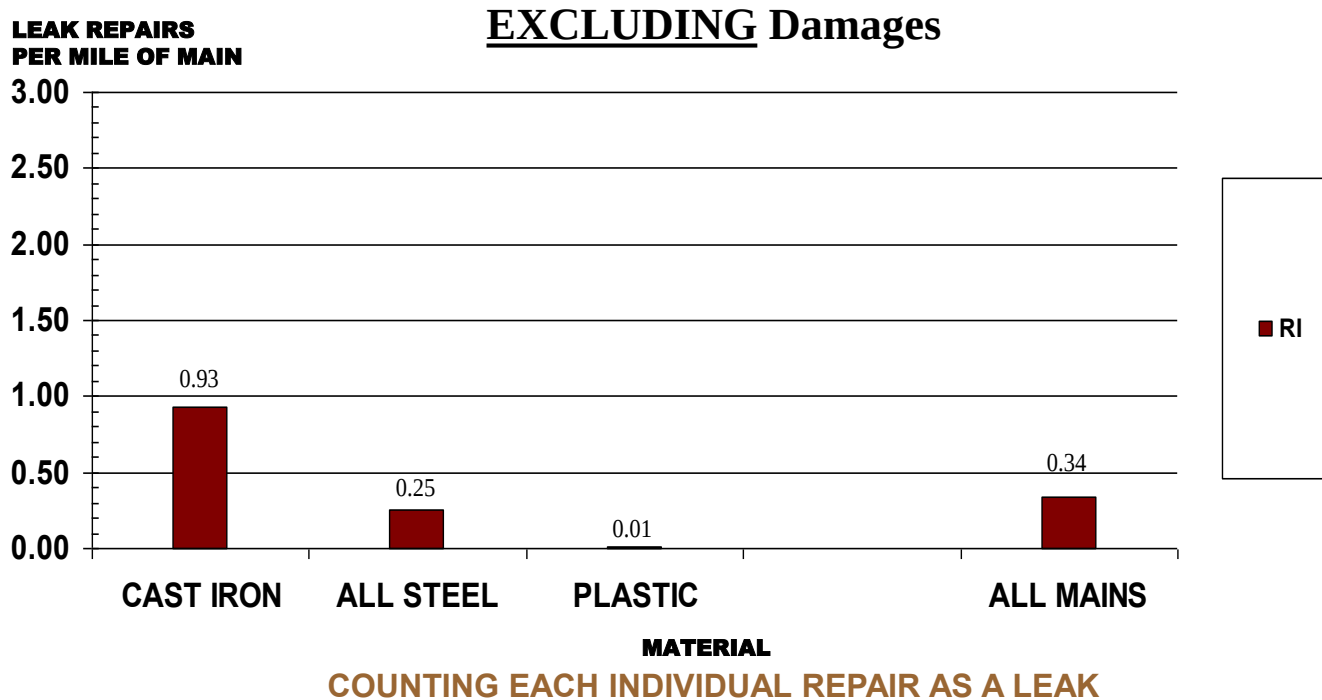


COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

2013 SYSTEM INTEGRITY REPORT

2013 MAIN LEAK “RATES”

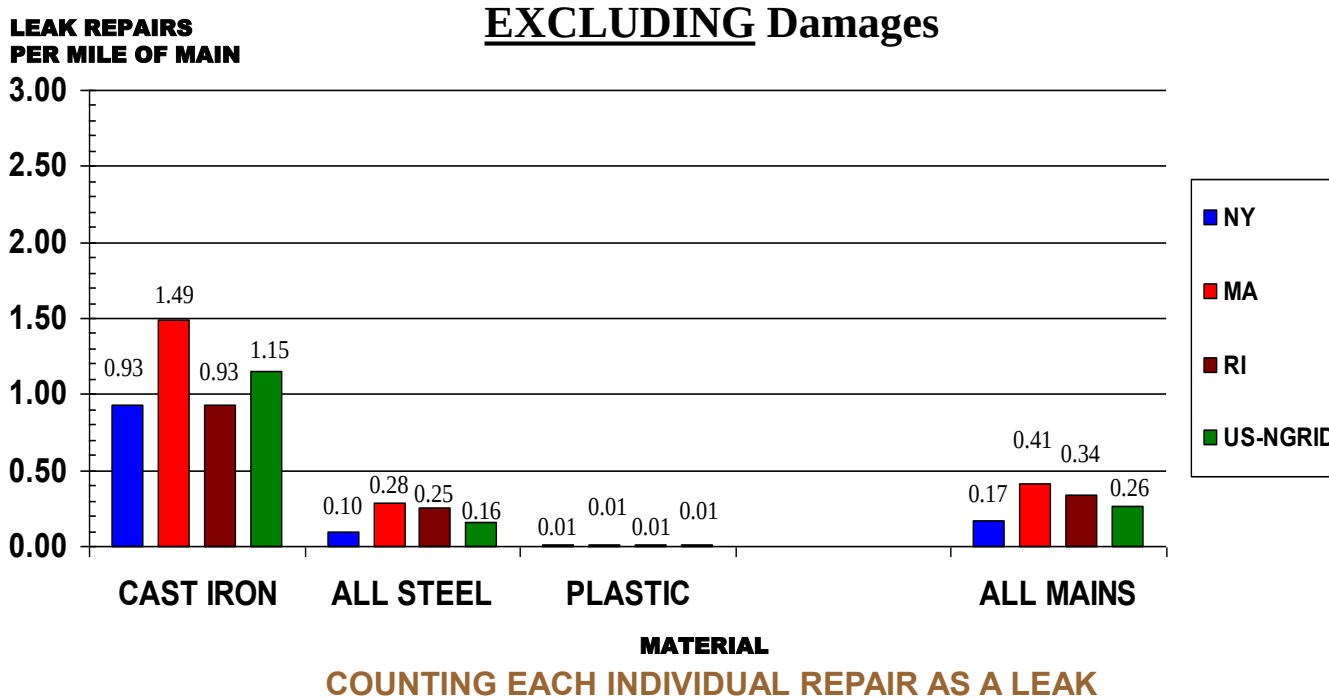
“RI” COMPARISON BY MATERIAL



2013 SYSTEM INTEGRITY REPORT

2013 MAIN LEAK “RATES”

“ALL REGION” COMPARISON BY MATERIAL



2013 SYSTEM INTEGRITY REPORT

2013 DETAILS OF MAIN LEAK REPAIRS



2013 SYSTEM INTEGRITY REPORT

RI

2013 MAIN LEAK REPAIRS

MATERIAL-CAUSE MATRIX

	<u>CORROSION</u>	<u>MATL/WELD</u>	<u>NAT FORCE</u>	<u>OTH OS FRC</u>	<u>EQUIPMENT</u>	<u>OPERATIONS</u>	<u>CI JT/OTHER</u>	<u>DAMAGES</u>	<u>ALL CAUSES</u>
CAST IRON	90	1	50	0	20	0	616	19	796
STEEL	137	0	4	1	25	0	110	5	282
BARE	123	0	4	1	13	0	84	4	229
COATED	14	0	0	0	12	0	26	1	53
PLASTIC	0	2	0	0	4	0	1	11	18
OTHER	1	0	0	0	0	0	5	0	6
ALL MAINS	228	3	54	1	49	0	732	35	1,102

COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

2013 SYSTEM INTEGRITY REPORT

US-NGrid 2013 MAIN LEAK REPAIRS MATERIAL-CAUSE MATRIX

	<u>CORROSION</u>	<u>MATL/WELD</u>	<u>NAT FORCE</u>	<u>OTH OS FRC</u>	<u>EQUIPMENT</u>	<u>OPERATIONS</u>	<u>CI JT/OTHER</u>	<u>DAMAGES</u>	<u>ALL CAUSES</u>
CAST IRON	159	5	707	4	221	0	5,282	57	6,435
STEEL	1,671	19	31	9	491	1	173	60	2,455
BARE	1,309	8	22	4	287	0	121	41	1,792
COATED	362	11	9	5	204	1	52	19	663
PLASTIC	0	45	5	5	117	1	14	183	370
OTHER	1	0	0	0	0	0	5	0	6
ALL MAINS	1,831	69	743	18	829	2	5,474	300	9,266

COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

2013 SYSTEM INTEGRITY REPORT

A CLOSER LOOK AT CAST IRON MAINS

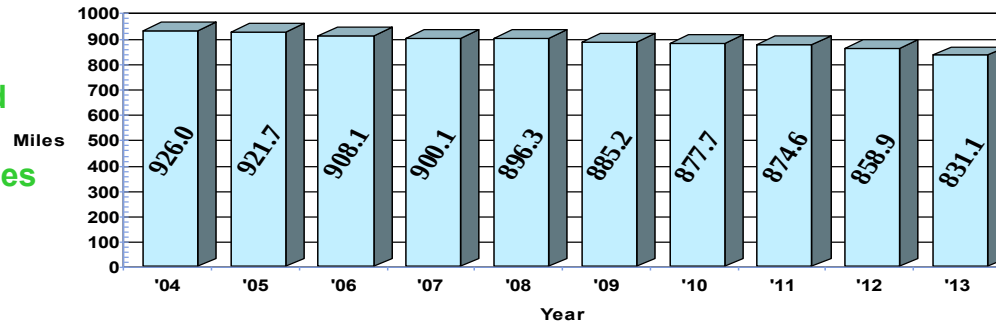


2013 SYSTEM INTEGRITY REPORT

RI

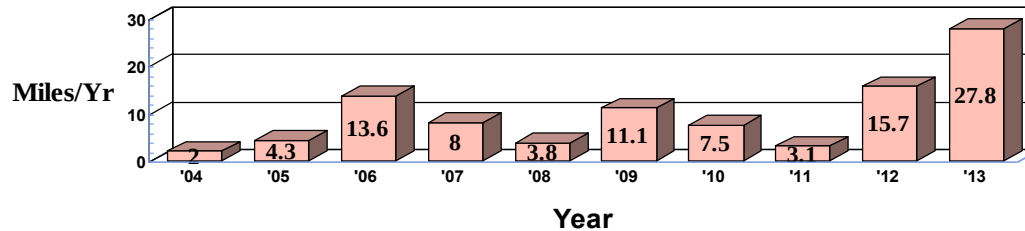
DOT-
Reported
Pipe
Inventories

CAST IRON MAIN INVENTORY



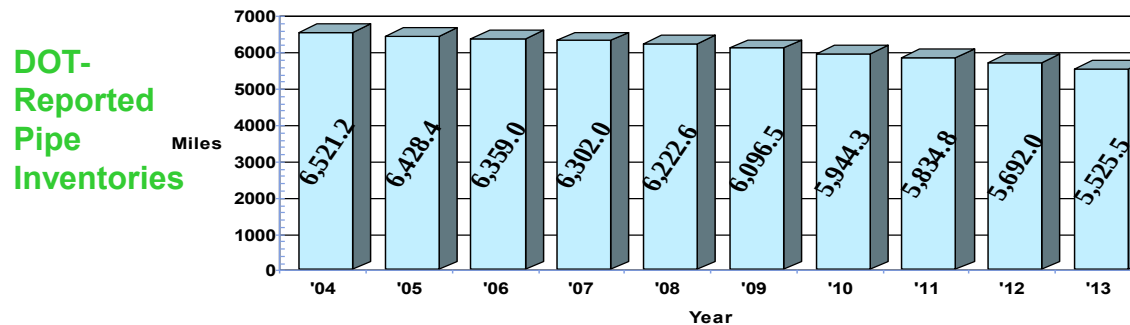
CAST IRON ATTRITION RATE

Avg 10-Yr Attrition Rate: 9.69 Miles/Year (1.11%)



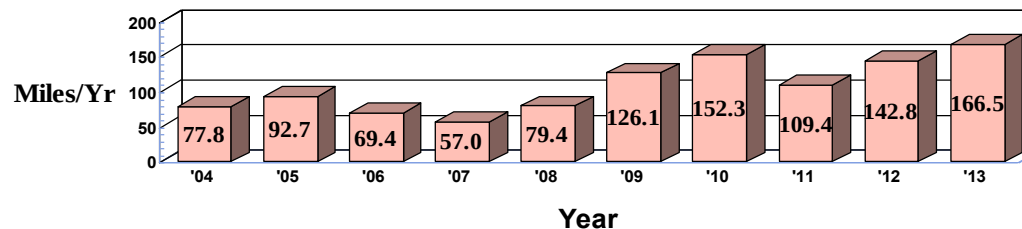
2013 SYSTEM INTEGRITY REPORT

US-NGrid CAST IRON MAIN INVENTORY



CAST IRON ATTRITION RATE

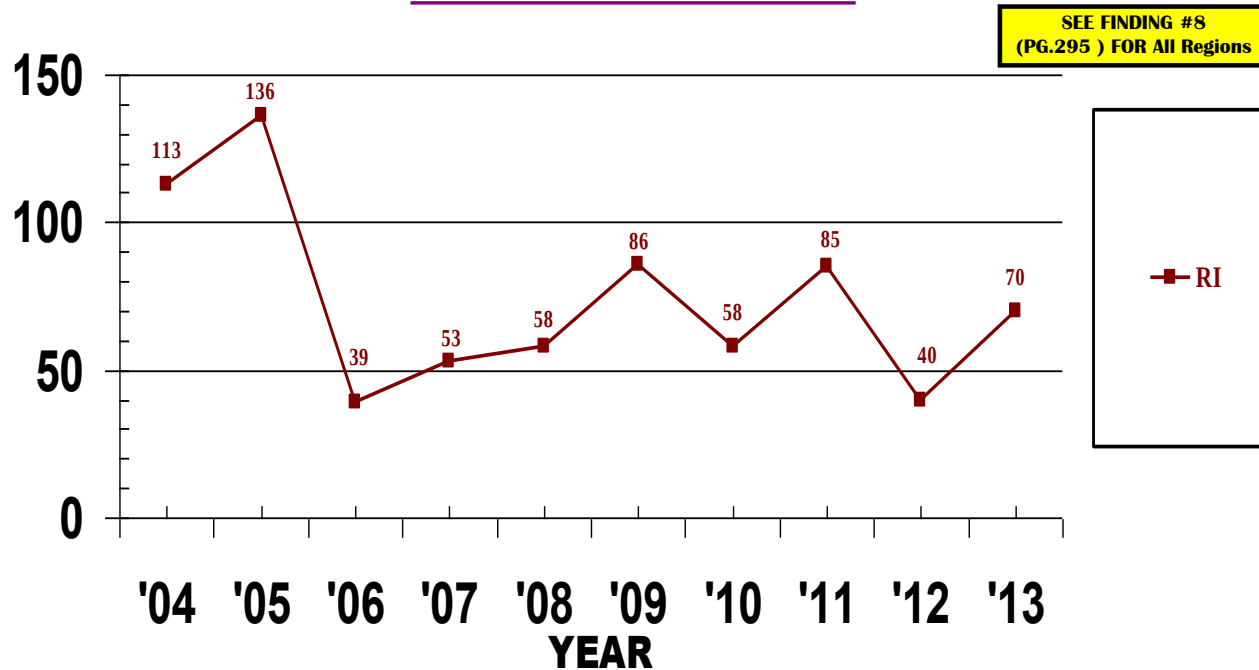
Avg 10-Yr Attrition Rate: 107.35 Miles/Year (1.79%)



2013 SYSTEM INTEGRITY REPORT

TOTAL CAST IRON MAIN BREAKS

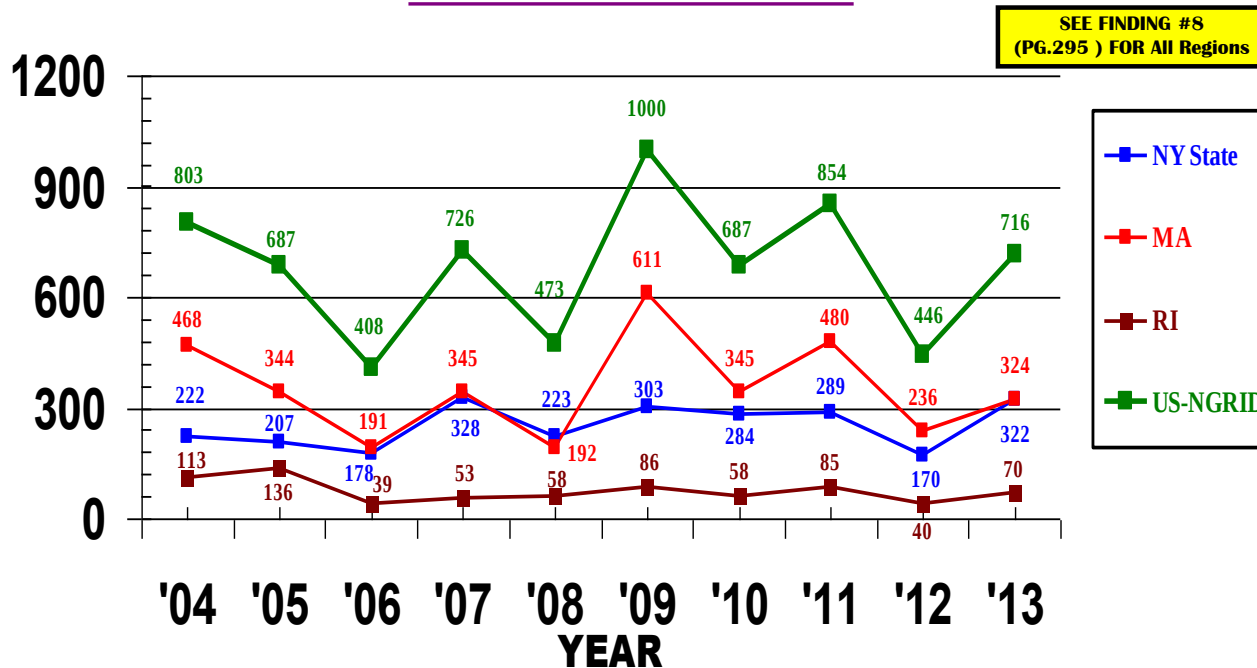
BREAKS



2013 SYSTEM INTEGRITY REPORT

TOTAL CAST IRON MAIN BREAKS

BREAKS

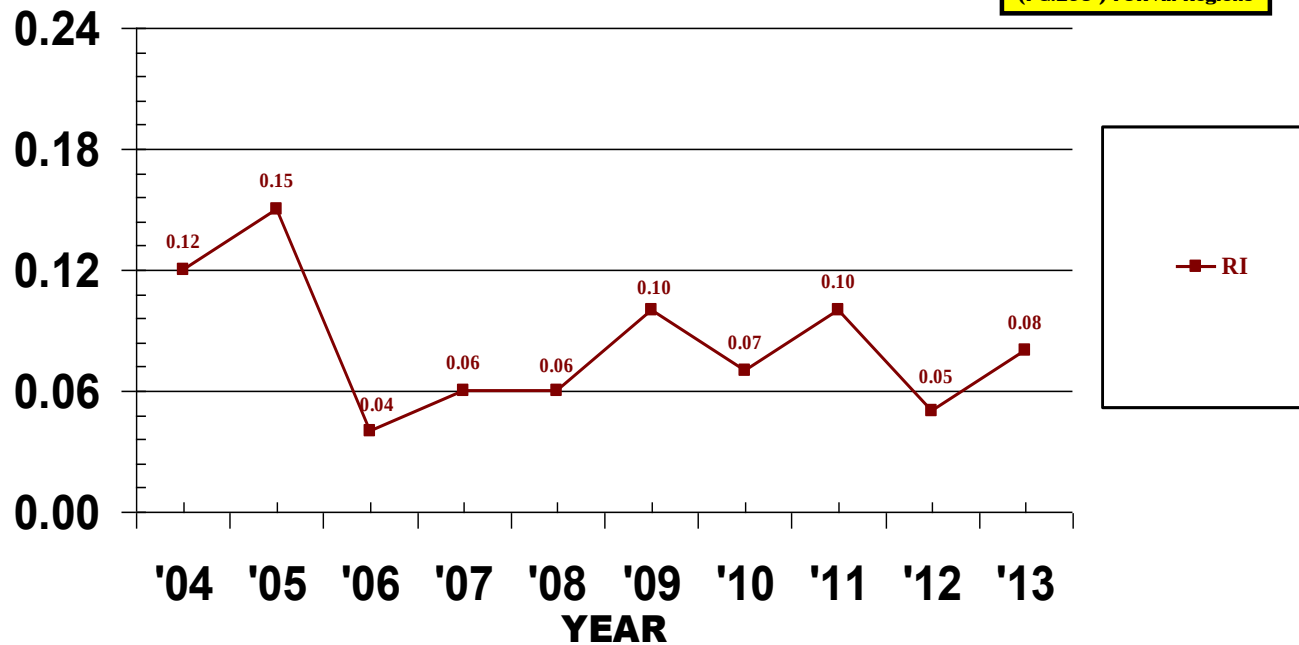


2013 SYSTEM INTEGRITY REPORT

CAST IRON MAIN BREAK "RATES"

BREAKS
PER MILE

SEE FINDING #8
(PG.295) FOR All Regions

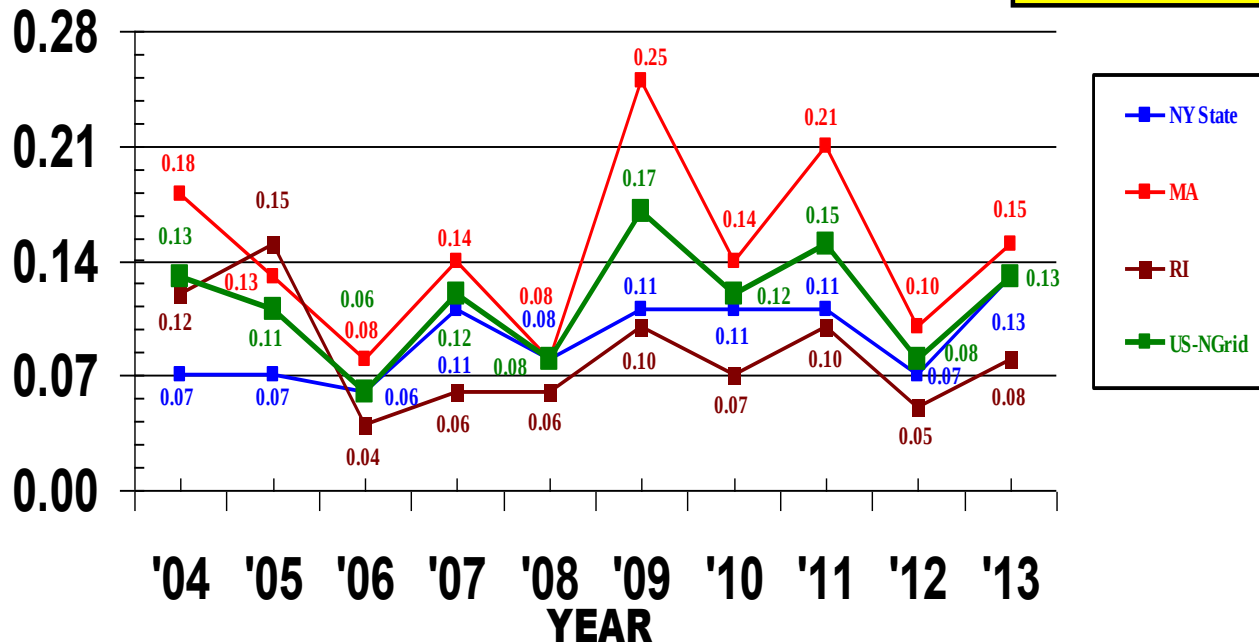


2013 SYSTEM INTEGRITY REPORT

CAST IRON MAIN BREAK "RATES"

BREAKS
PER MILE

SEE FINDING #8
(PG.295) FOR All Regions

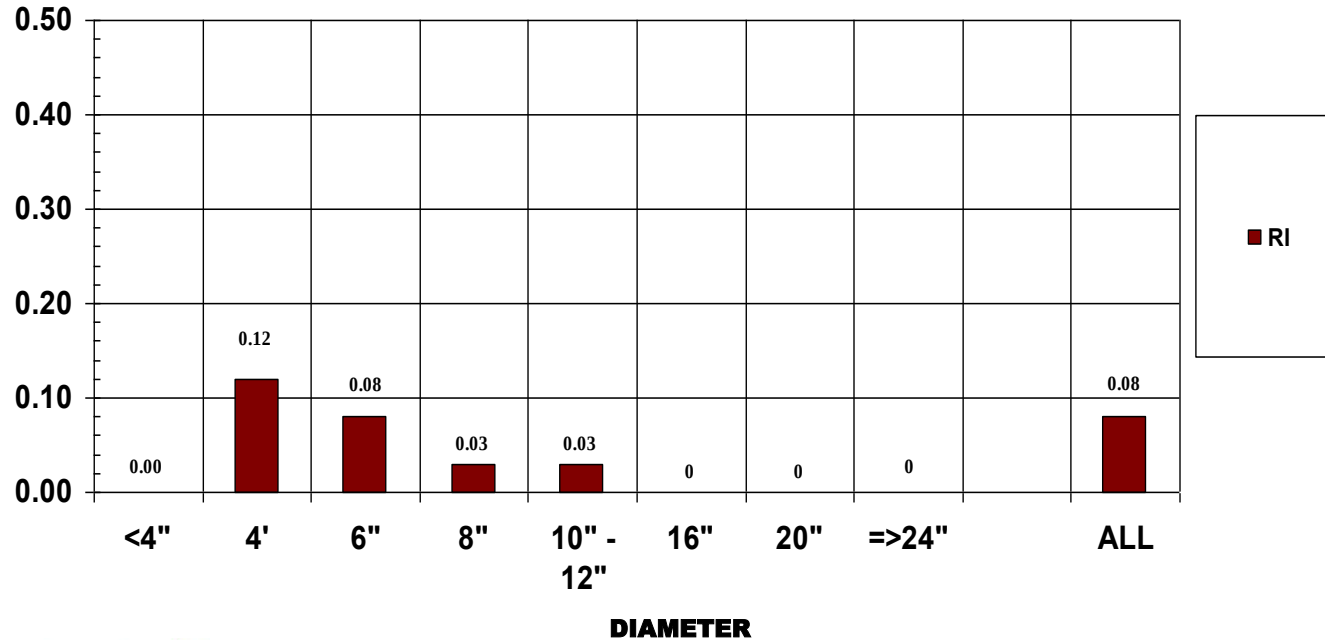


2013 SYSTEM INTEGRITY REPORT

2013 CAST IRON MAIN BREAK “RATES”

“RI REGION” *COMPARISON BY DIAMETER*

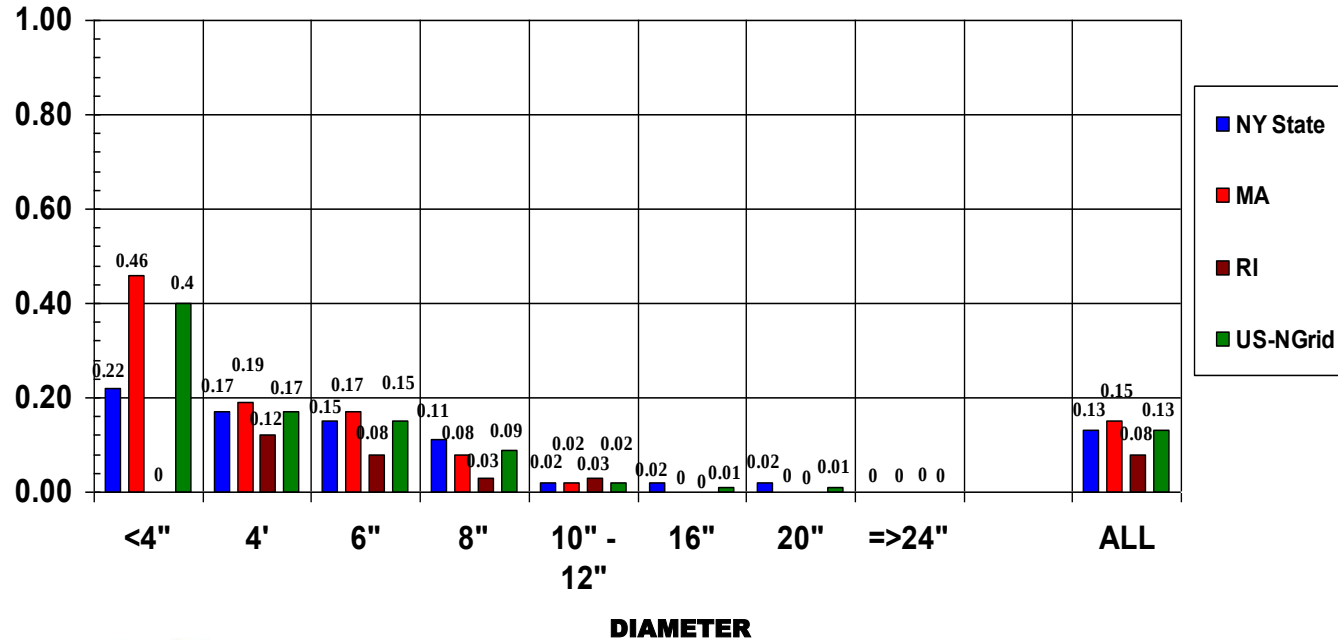
**CAST IRON BREAKS
PER MILE OF CI MAIN**



2013 SYSTEM INTEGRITY REPORT

2013 CAST IRON MAIN BREAK “RATES” “ALL REGION” COMPARISON BY DIAMETER

**CAST IRON BREAKS
PER MILE OF CI MAIN**



2013 SYSTEM INTEGRITY REPORT

A CLOSER LOOK AT STEEL MAINS

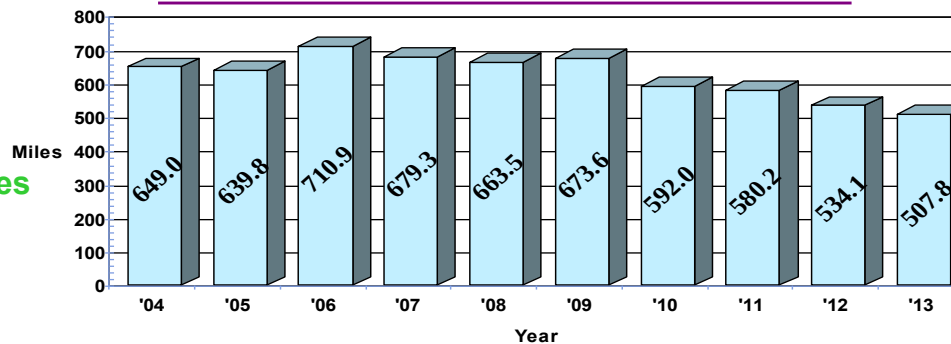


2013 SYSTEM INTEGRITY REPORT

RI

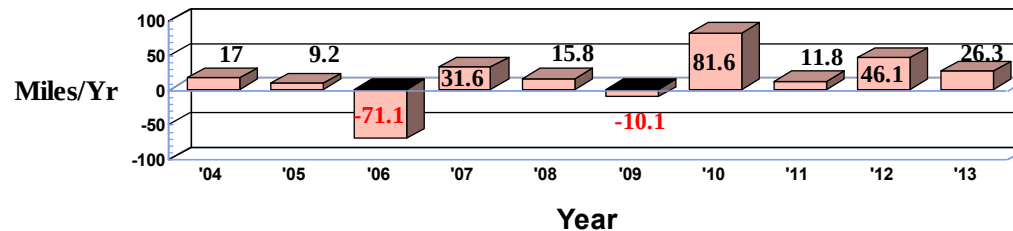
DOT-
Reported
Pipe
Inventories

UNPROTECTED STEEL MAIN INVENTORY



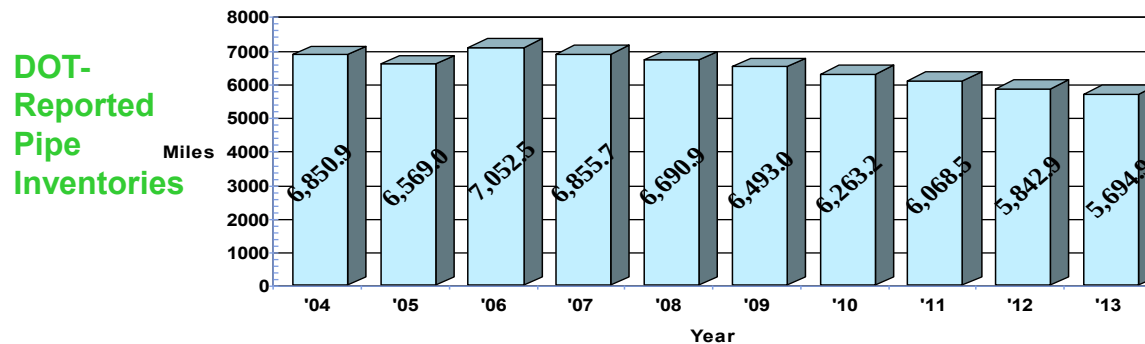
UNPROTECTED STEEL ATTRITION RATE

Avg 10 -Yr Attrition Rate: 15.82 Miles/Year (2.92%)



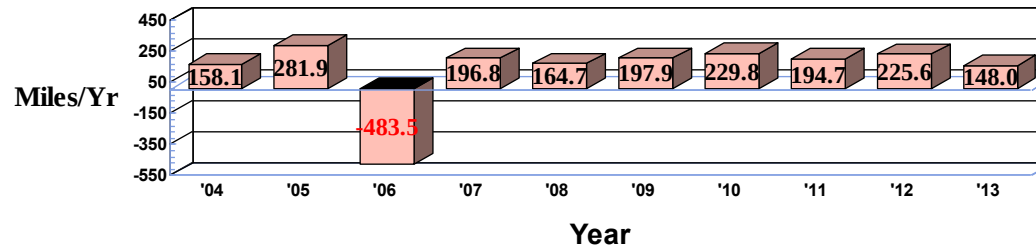
2013 SYSTEM INTEGRITY REPORT

US-NGrid UNPROTECTED STEEL MAIN INVENTORY



UNPROTECTED STEEL ATTRITION RATE

Avg 10 -Yr Attrition Rate: 131.41 Miles/Year (2.15%)

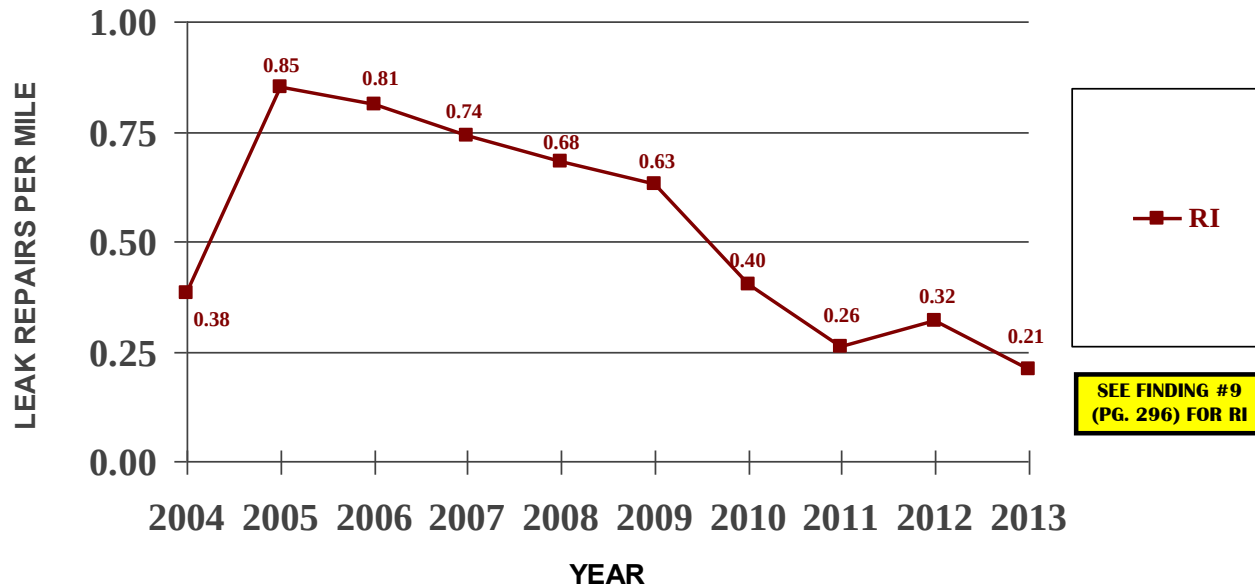


2013 SYSTEM INTEGRITY REPORT

MAIN CORROSION LEAK “RATES”

CORROSION Leak Repairs Per Mile of “TOTAL” Steel

INCLUDES ALL CORROSION LEAKS, REGARDLESS OF MAIN MATERIAL

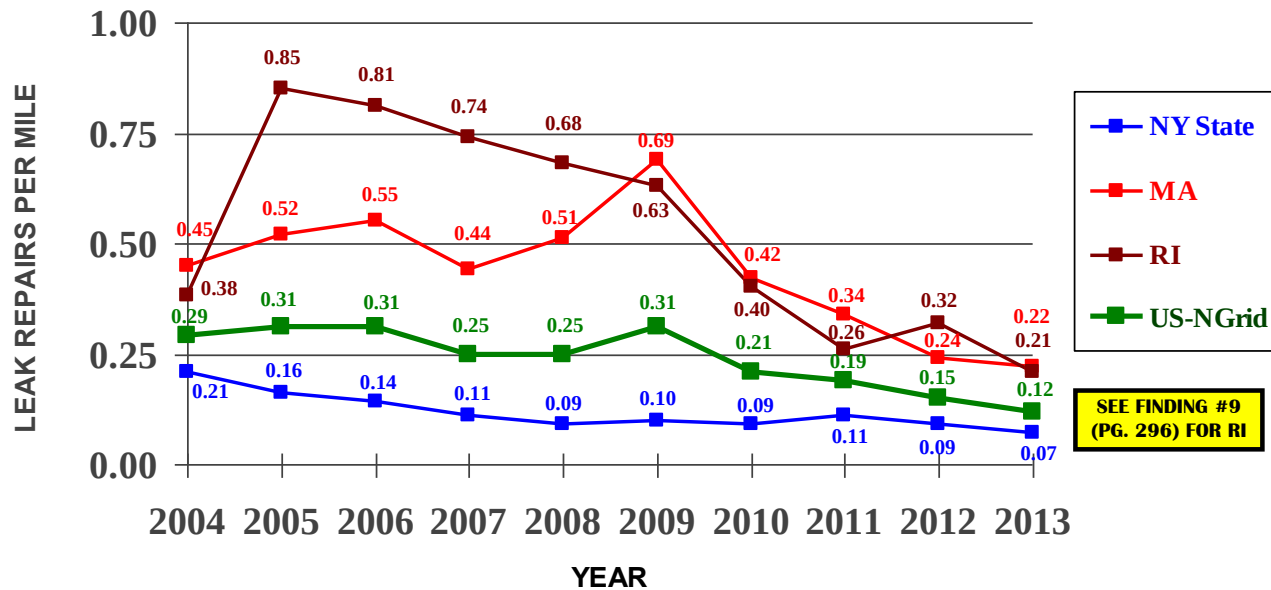


2013 SYSTEM INTEGRITY REPORT

MAIN CORROSION LEAK “RATES”

CORROSION Leak Repairs Per Mile of “TOTAL” Steel

INCLUDES ALL CORROSION LEAKS, REGARDLESS OF MAIN MATERIAL



2013 SYSTEM INTEGRITY REPORT

SERVICE INVENTORY ANALYSIS

2013 SYSTEM INTEGRITY REPORT

RI

SERVICE INVENTORY (NUMBER OF SERVICES)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Plastic	99,630	102,026	104,640	106,500	109,144	112,313	115,718	121,770	126,474	130,002
Copper	181	181	181	180	178	177	171	209	208	207
Cast Iron	207	208	190	183	175	168	162	194	189	185
Protected Steel	16,332	16,223	11,206	11,408	12,066	11,260	11,206	10,422	10,285	10,150
Unprotected Steel	65,364	64,285	68,045	66,473	63,919	62,462	59,800	56,049	53,449	51,387
Other	1,830	1,747	1,656	1,547	1,470	1,405	1,348	1,322	1,085	1,000
TOTAL SERVICES	183,544	184,670	185,918	186,291	186,952	187,785	188,405	189,966	191,690	192,931

Note: 16 Ductile iron services in R.I. are counted as "Other" services

2013 SYSTEM INTEGRITY REPORT

US-NGrid

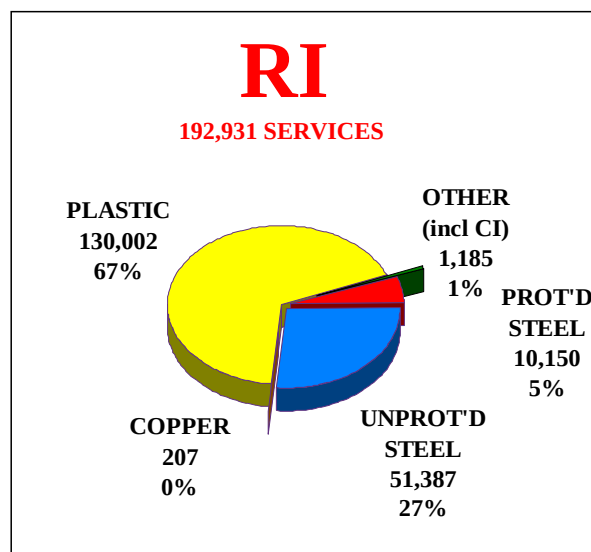
SERVICE INVENTORY

(NUMBER OF SERVICES)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Plastic	1,287,058	1,331,198	1,380,296	1,404,270	1,431,603	1,481,743	1,528,456	1,564,475	1,609,251	1,657,859
Copper	182,381	180,216	178,571	177,271	175,971	172,904	170,545	169,607	167,923	165,339
Cast Iron	5,825	5,812	5,608	5,540	5,507	5,421	5,192	5,098	4,688	3,355
Protected Steel	202,096	212,317	212,546	212,883	210,081	204,954	202,429	199,810	197,509	193,752
Unprotected Steel	555,267	549,961	563,059	554,670	546,990	519,984	496,858	480,738	462,191	446,505
Other	246,597	174,068	126,054	119,922	118,252	114,077	106,884	105,028	101,426	96,358
TOTAL SERVICES	2,479,224	2,453,572	2,466,134	2,474,556	2,488,404	2,499,083	2,510,364	2,524,756	2,542,988	2,563,168

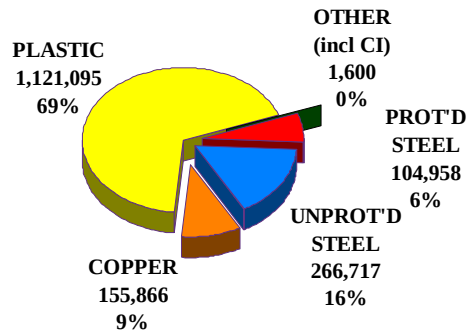
2013 SYSTEM INTEGRITY REPORT

SERVICE INVENTORY

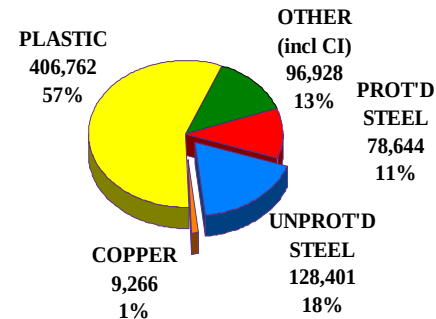


2013 SYSTEM INTEGRITY REPORT SERVICE INVENTORY

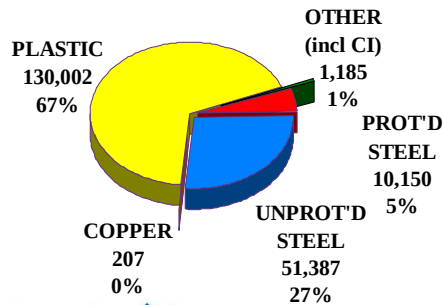
NY State 1,650,236 SERVICES



MA 720,001 SERVICES



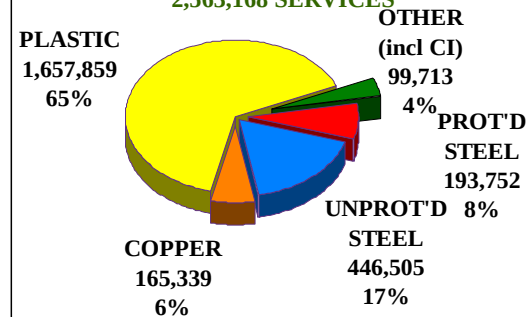
RI 192,931 SERVICES



nationalgrid

US-NGrid

2,563,168 SERVICES



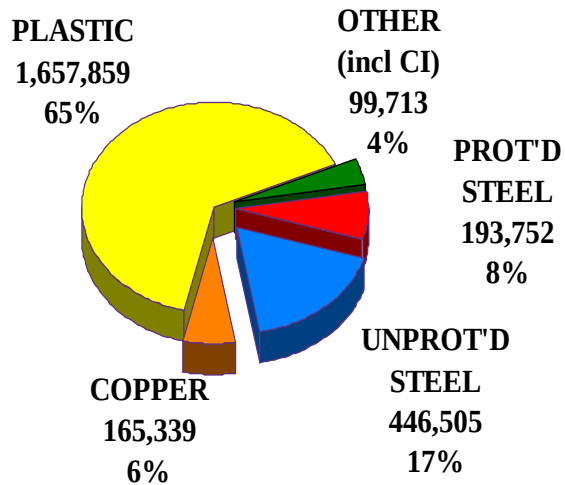
2013 SYSTEM INTEGRITY REPORT

2013 SERVICE INVENTORY

U.S. COMPARATIVE SUMMARY

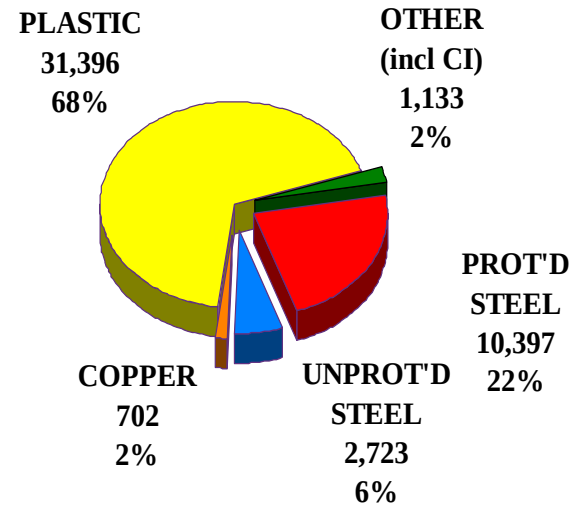
National Grid - US

2,563,168 SERVICES



2012 PHMSA Average

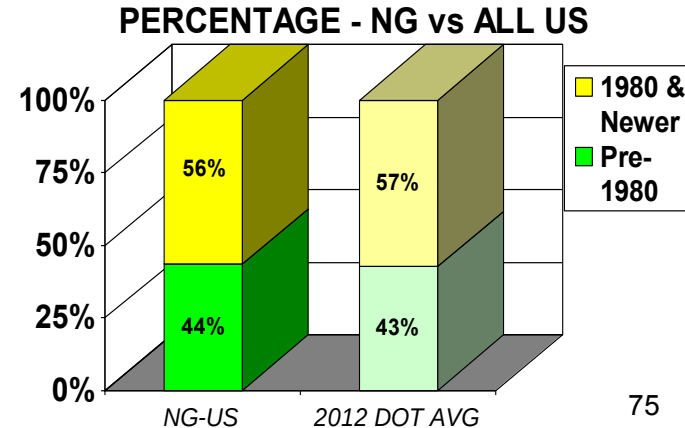
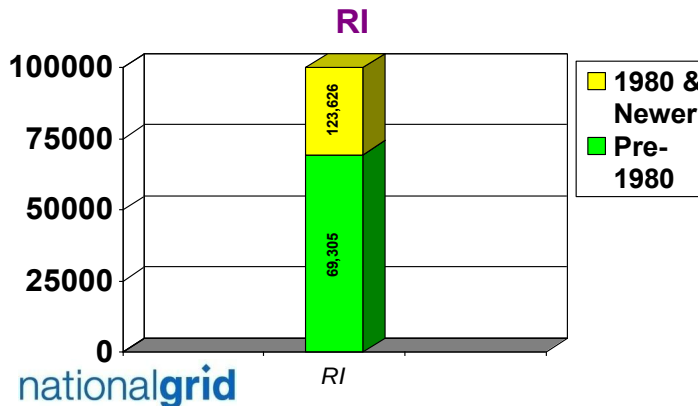
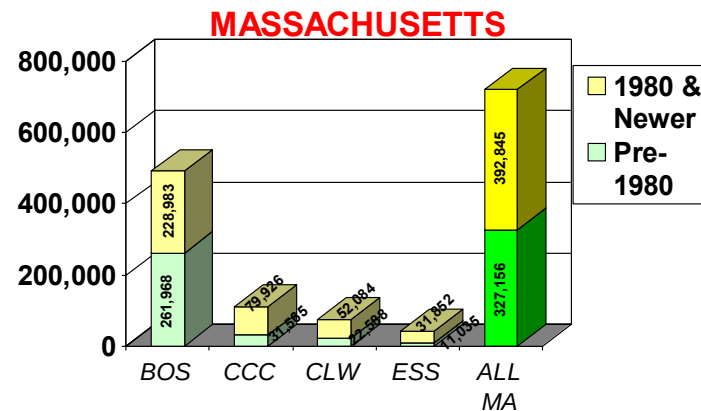
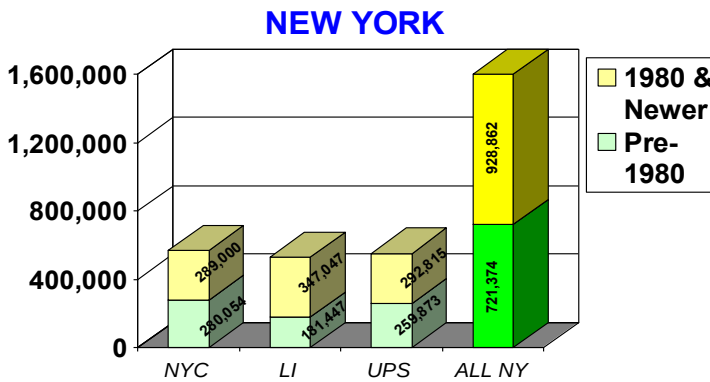
46,351 SERVICES



2013 SYSTEM INTEGRITY REPORT

2013 SERVICE INVENTORY

Service Age Analysis



2013 SYSTEM INTEGRITY REPORT

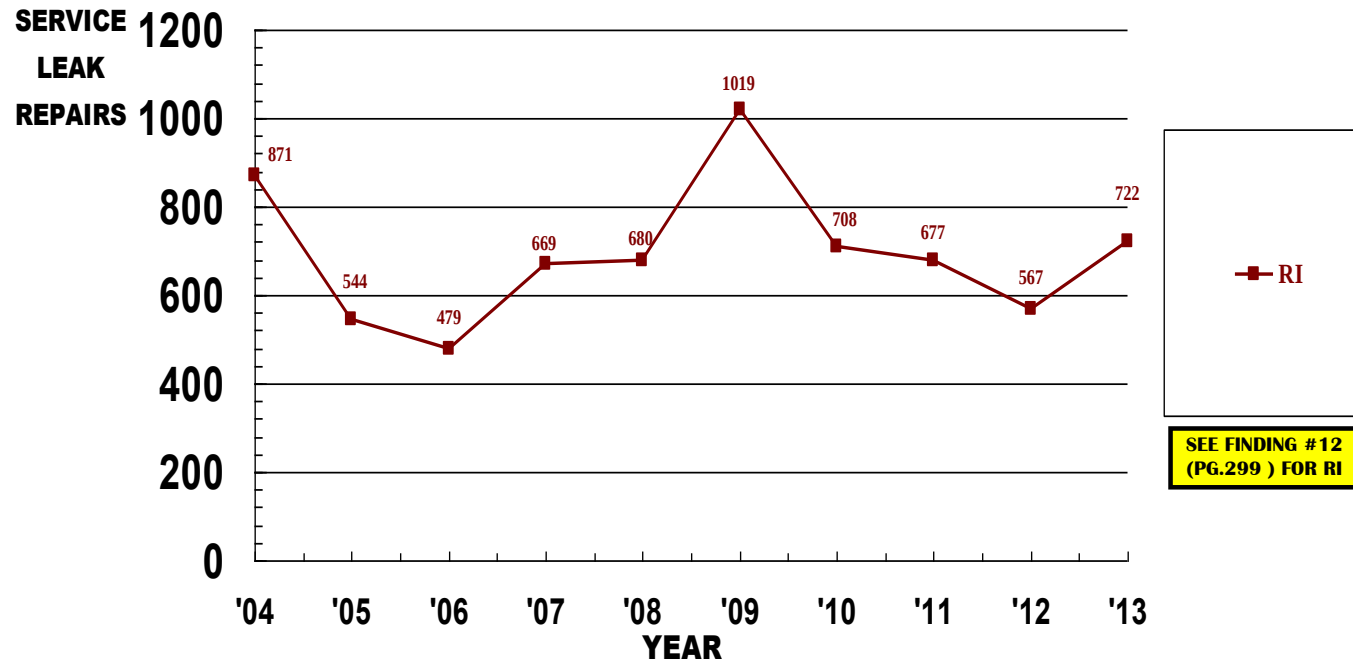
SERVICE LEAK REPAIR ANALYSIS

NOTE: Above Ground Leaks, which are included in the DOT Reports (beginning in 2012), are excluded from this report in order to maintain the integrity of our trend analyses for distribution (not CMS) piping.

2013 SYSTEM INTEGRITY REPORT

TOTAL SERVICE LEAK REPAIRS

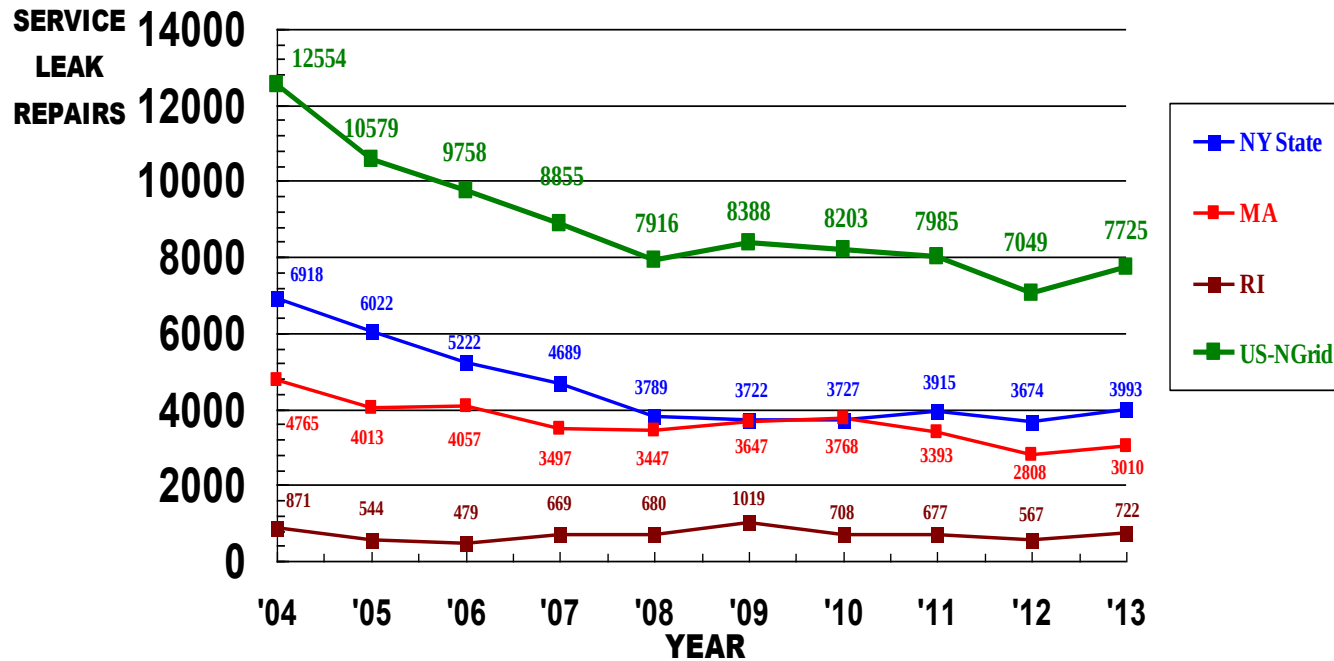
INCLUDING Damages



2013 SYSTEM INTEGRITY REPORT

TOTAL SERVICE LEAK REPAIRS

INCLUDING Damages



2013 SYSTEM INTEGRITY REPORT

2013 TOTAL SERVICE LEAK REPAIRS

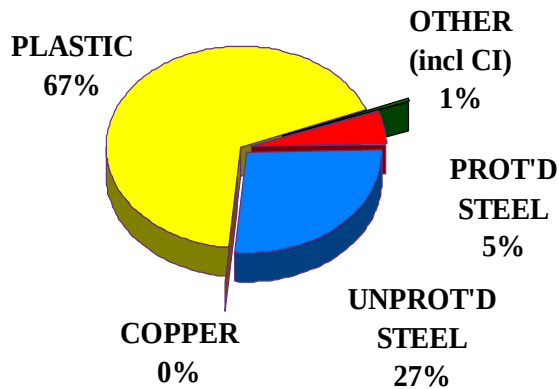
RI

INCLUDING Damages

TOTAL SERVICE INVENTORY

BY MATERIAL

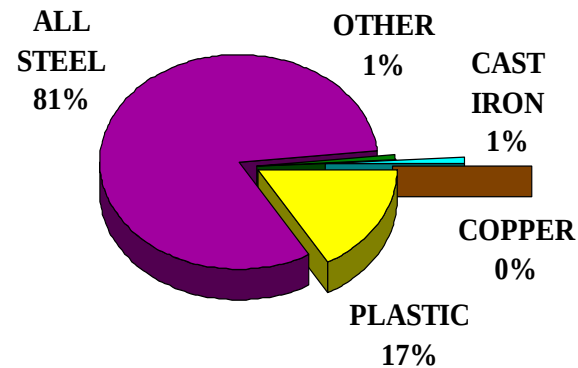
192,931 SERVICES



TOTAL SERVICE LEAK REPAIRS

BY MATERIAL

722 LEAKS



2013 SYSTEM INTEGRITY REPORT

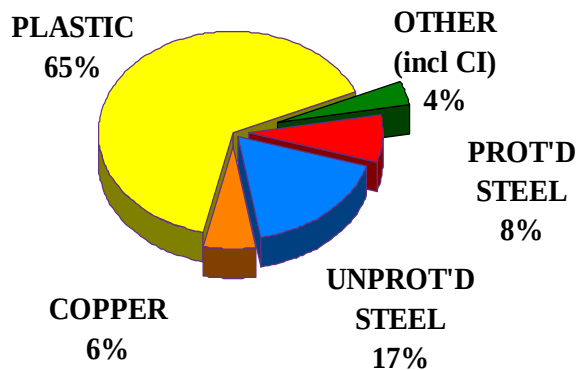
2013 TOTAL SERVICE LEAK REPAIRS

US-NGrid INCLUDING Damages

TOTAL SERVICE INVENTORY

BY MATERIAL

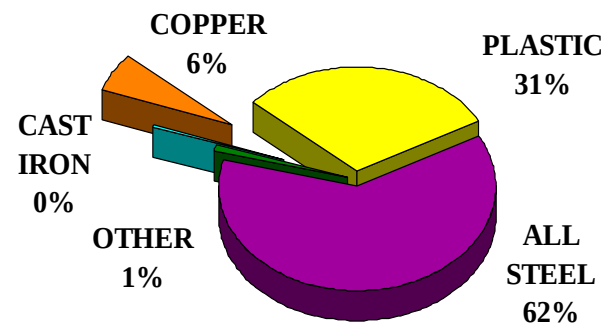
2,563,168 SERVICES



TOTAL SERVICE LEAK REPAIRS

BY MATERIAL

7,725 LEAKS



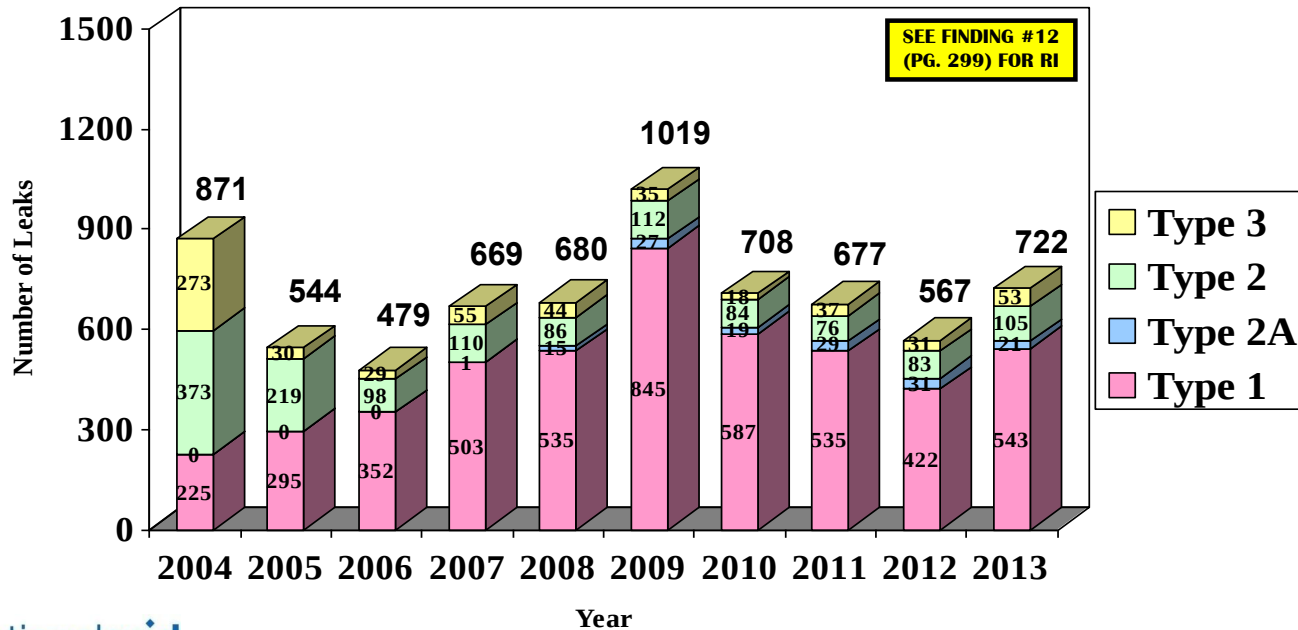
2013 SYSTEM INTEGRITY REPORT

LEAKS REPAIRED

By REPAIRED Type SERVICE

RI

(Including damages)

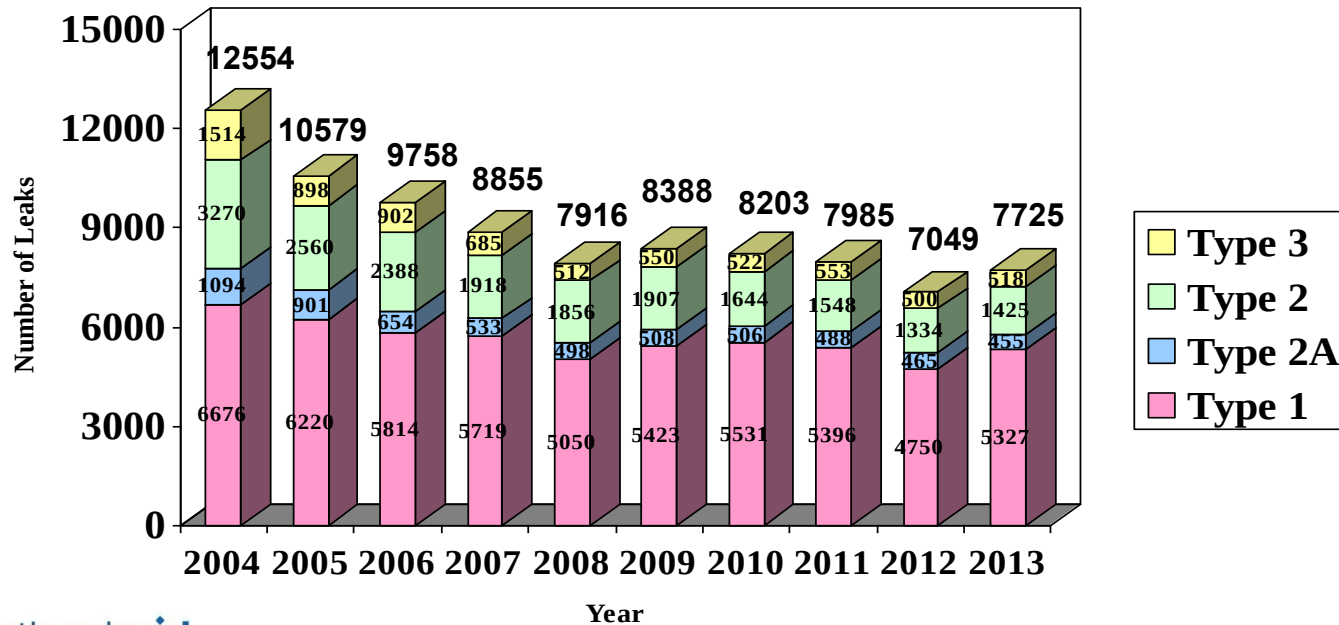


2013 SYSTEM INTEGRITY REPORT

US NGrid

LEAKS REPAIRED By REPAIRED Type SERVICE

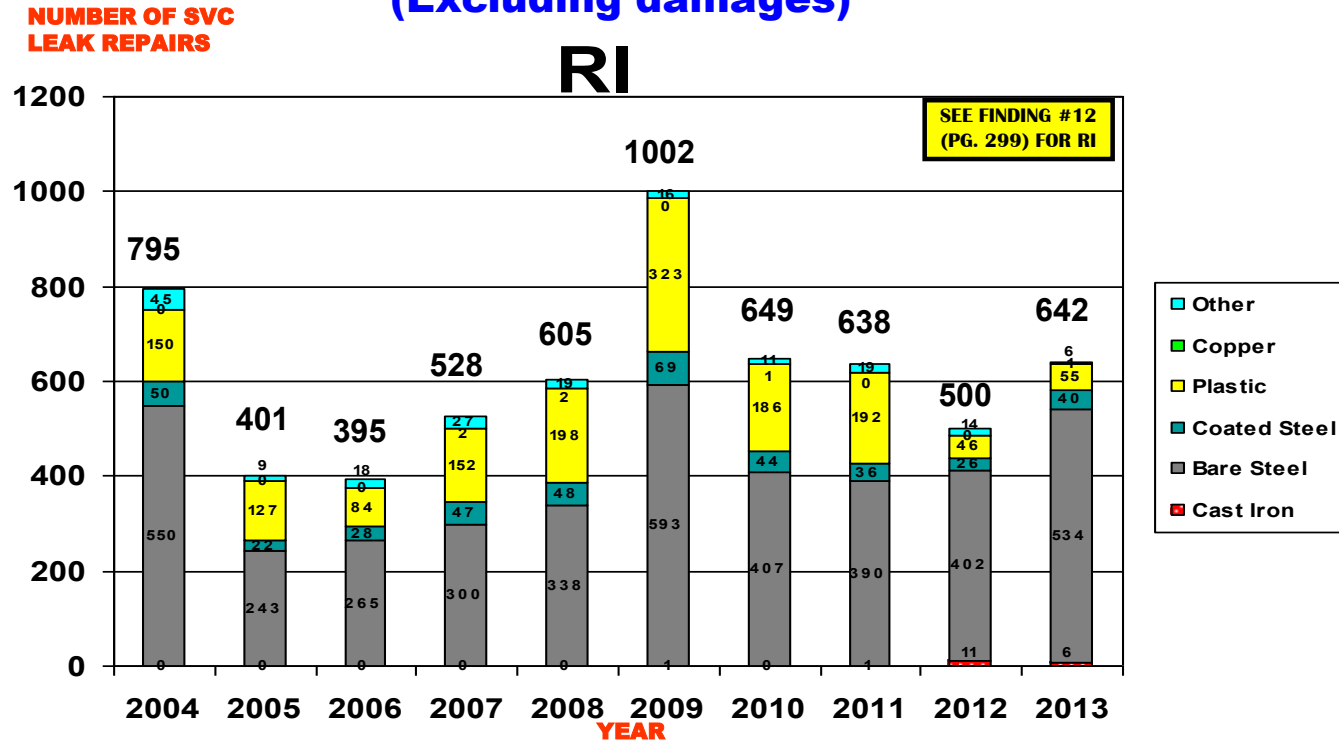
(Including damages)



2013 SYSTEM INTEGRITY REPORT

2004 -2013 SERVICE LEAK REPAIRS

All Service Leak Repairs by Material (Excluding damages)



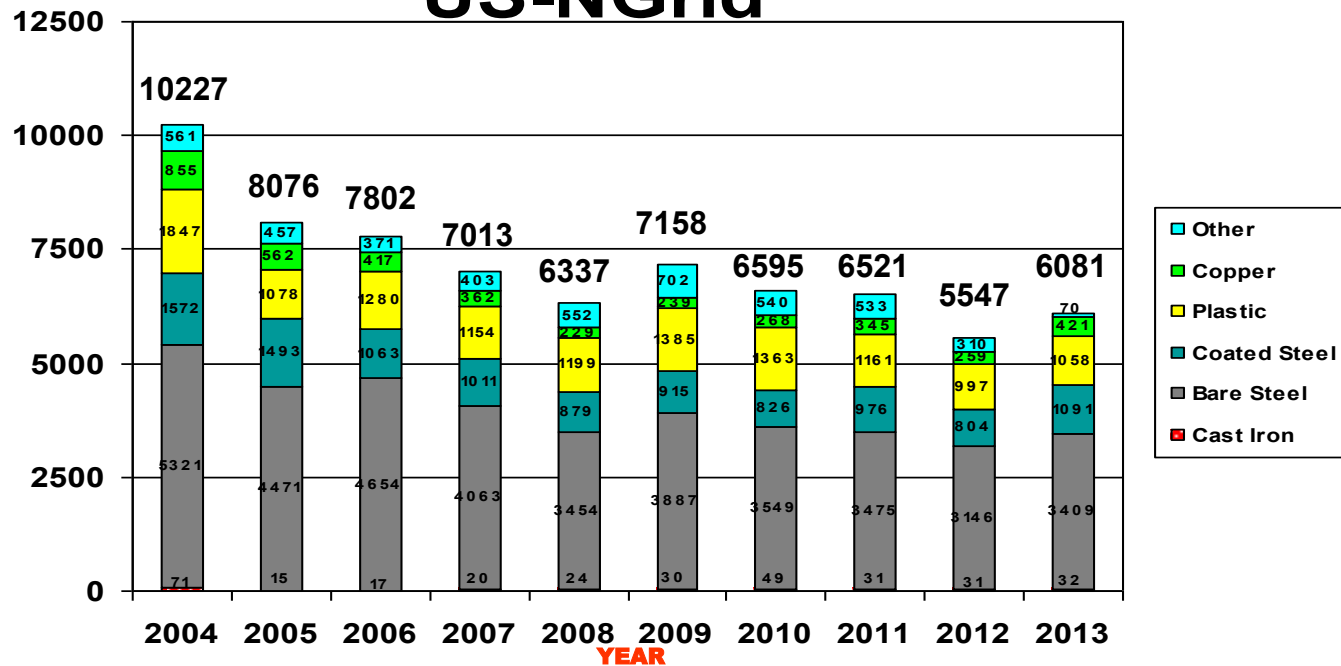
2013 SYSTEM INTEGRITY REPORT

2004 -2013 SERVICE LEAK REPAIRS

All Service Leak Repairs by Material
(Excluding damages)

**NUMBER OF SVC
LEAK REPAIRS**

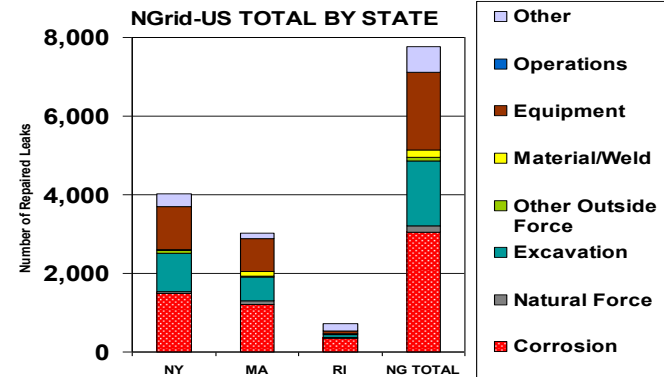
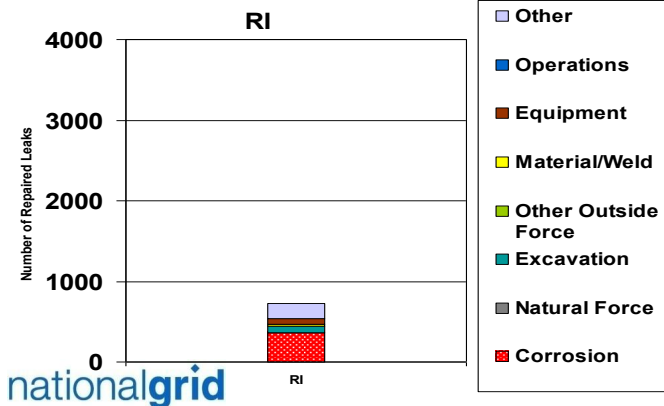
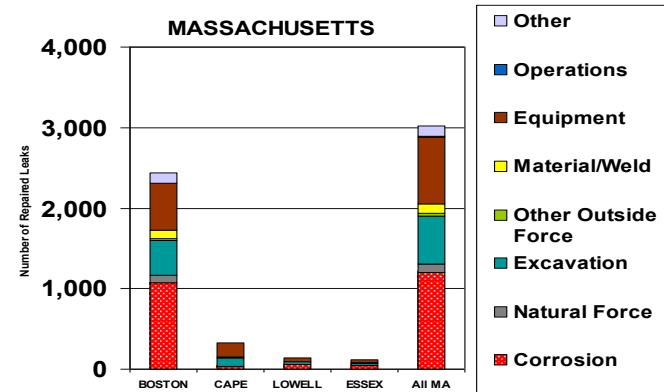
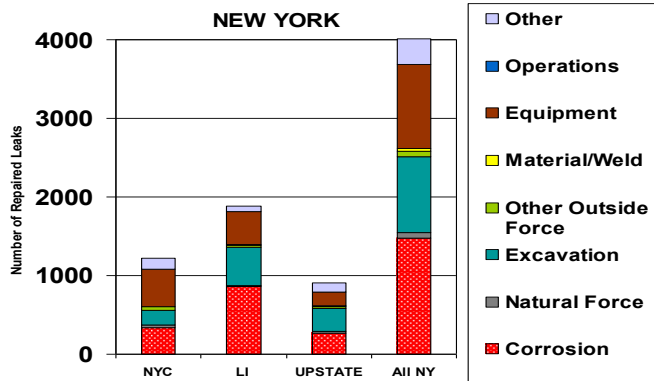
US-NGrid



2013 SYSTEM INTEGRITY REPORT

2013 SERVICE LEAK REPAIRS

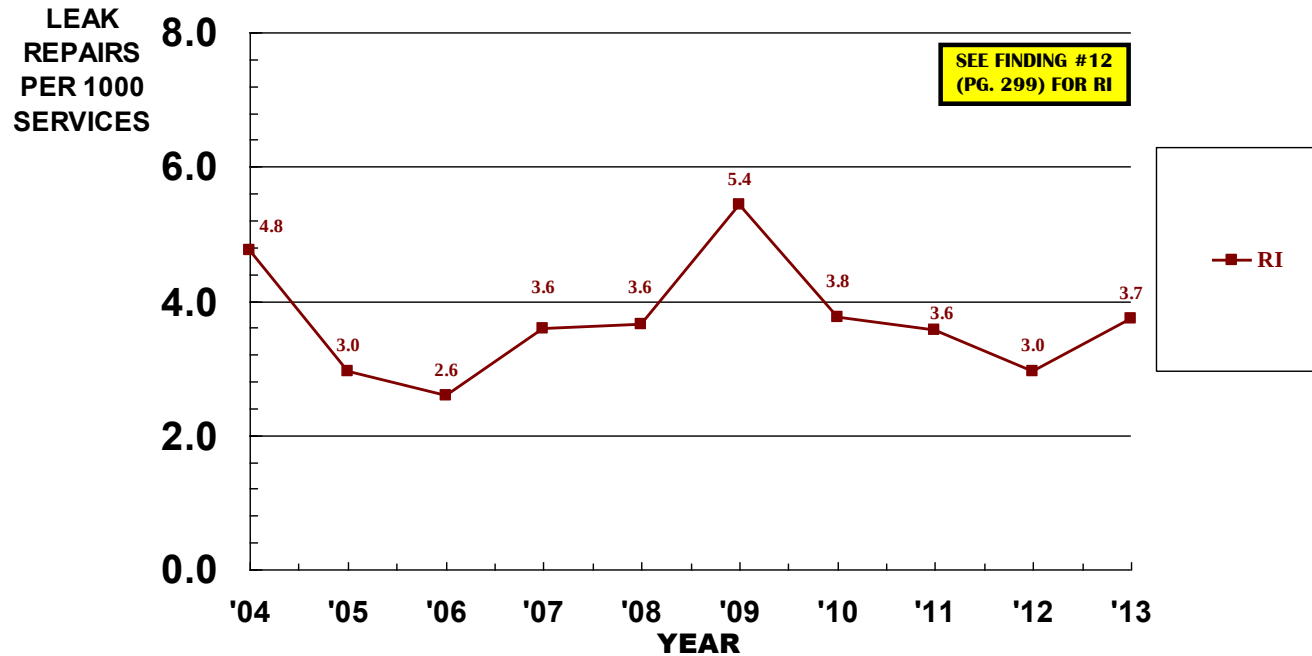
All Service Leak Repairs (including damages & Above Ground Leaks)



2013 SYSTEM INTEGRITY REPORT

TOTAL SERVICE LEAK “RATES”

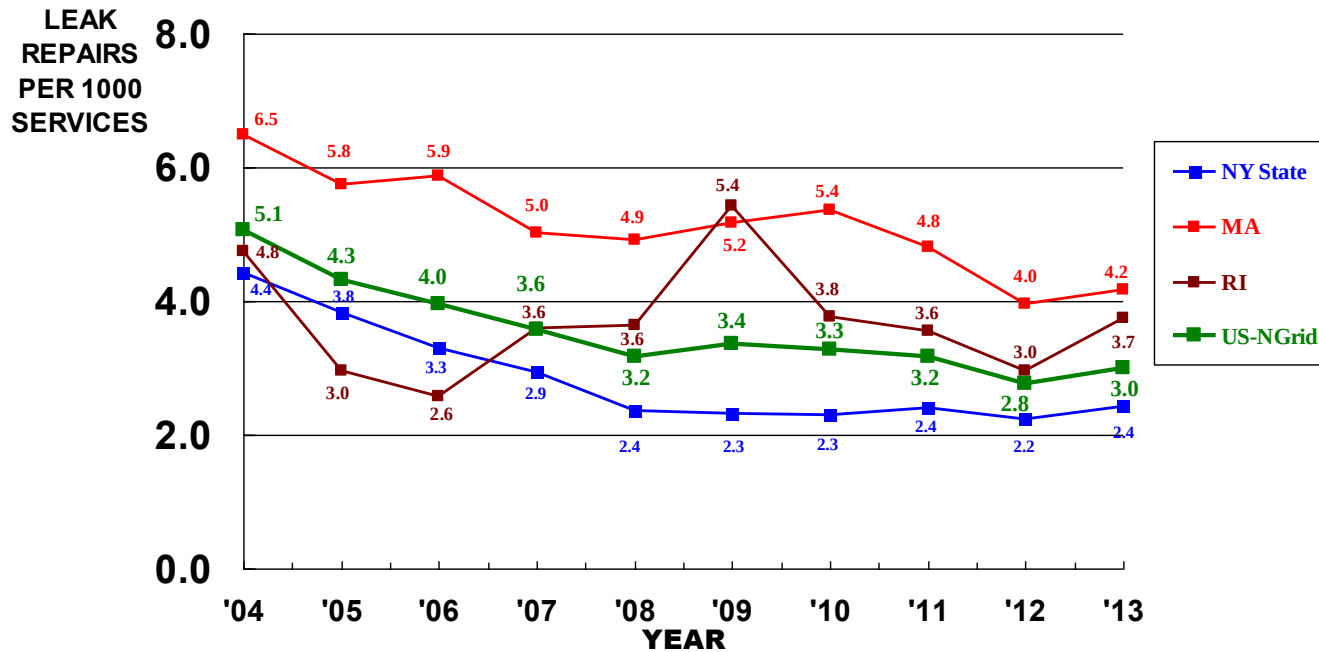
INCLUDING Damages



2013 SYSTEM INTEGRITY REPORT

TOTAL SERVICE LEAK “RATES”

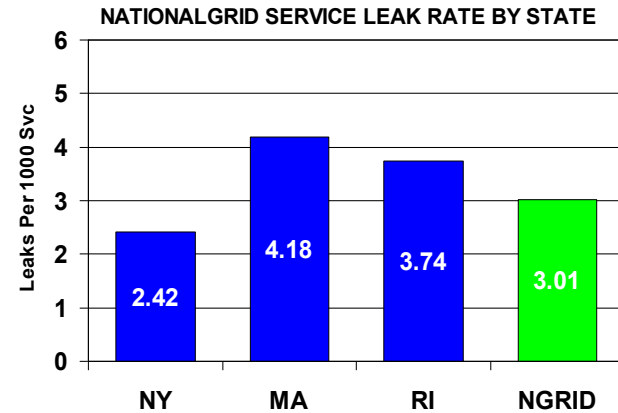
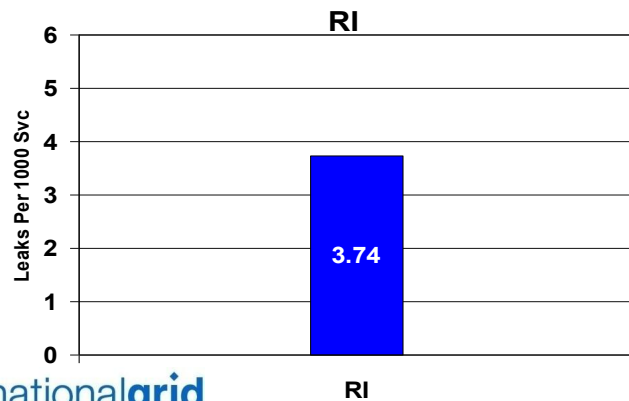
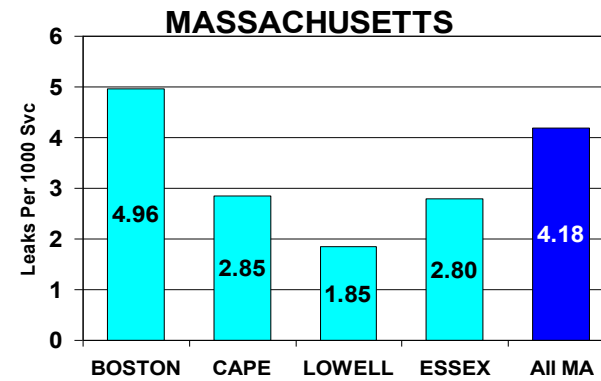
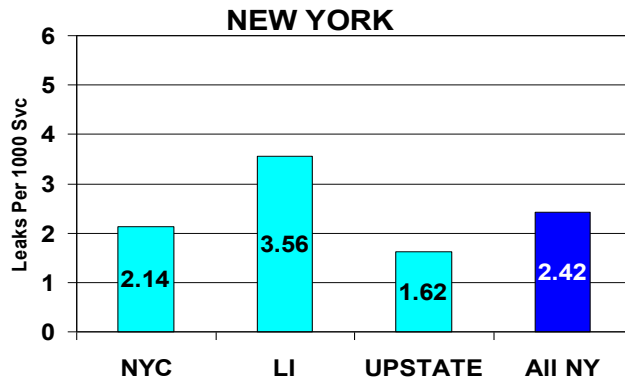
INCLUDING Damages



2013 SYSTEM INTEGRITY REPORT

2013 SERVICE LEAK “RATES”

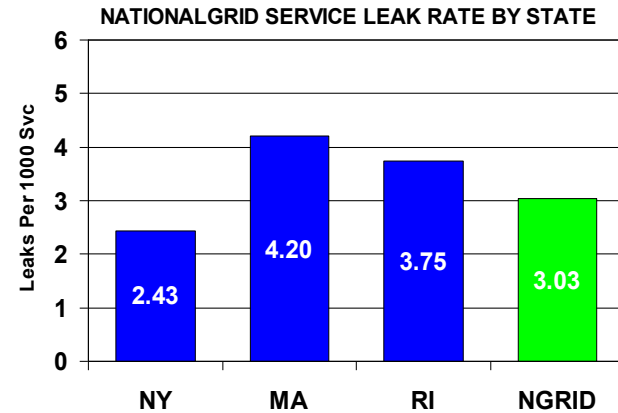
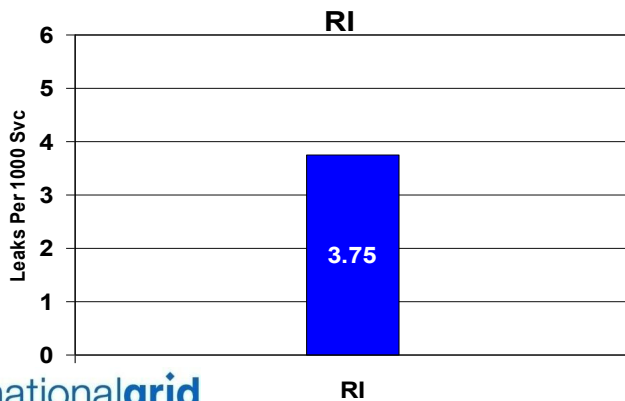
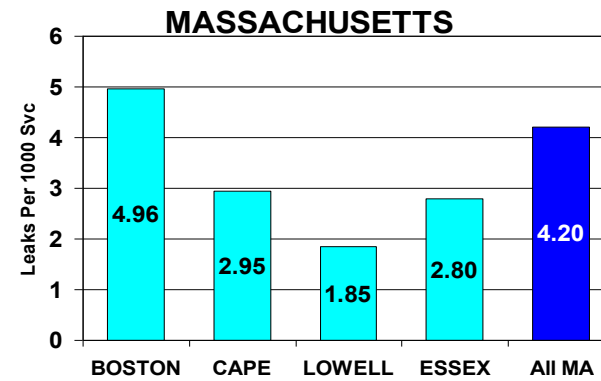
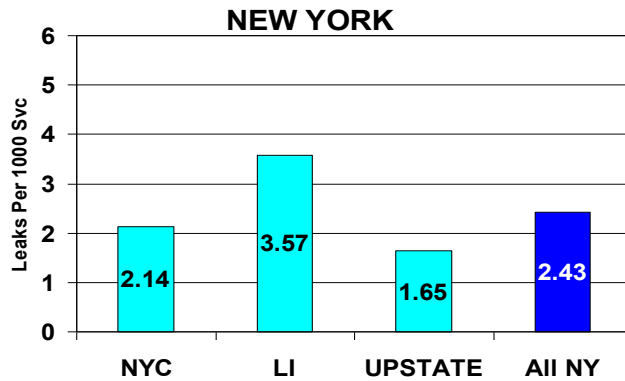
Total Service Leak Repairs (incl. damages) / 1,000 Total Services



2013 SYSTEM INTEGRITY REPORT

2013 SERVICE LEAK “RATES”

Total Service Leak Repairs (incl. damage & above ground leak) / 1,000 Total Services



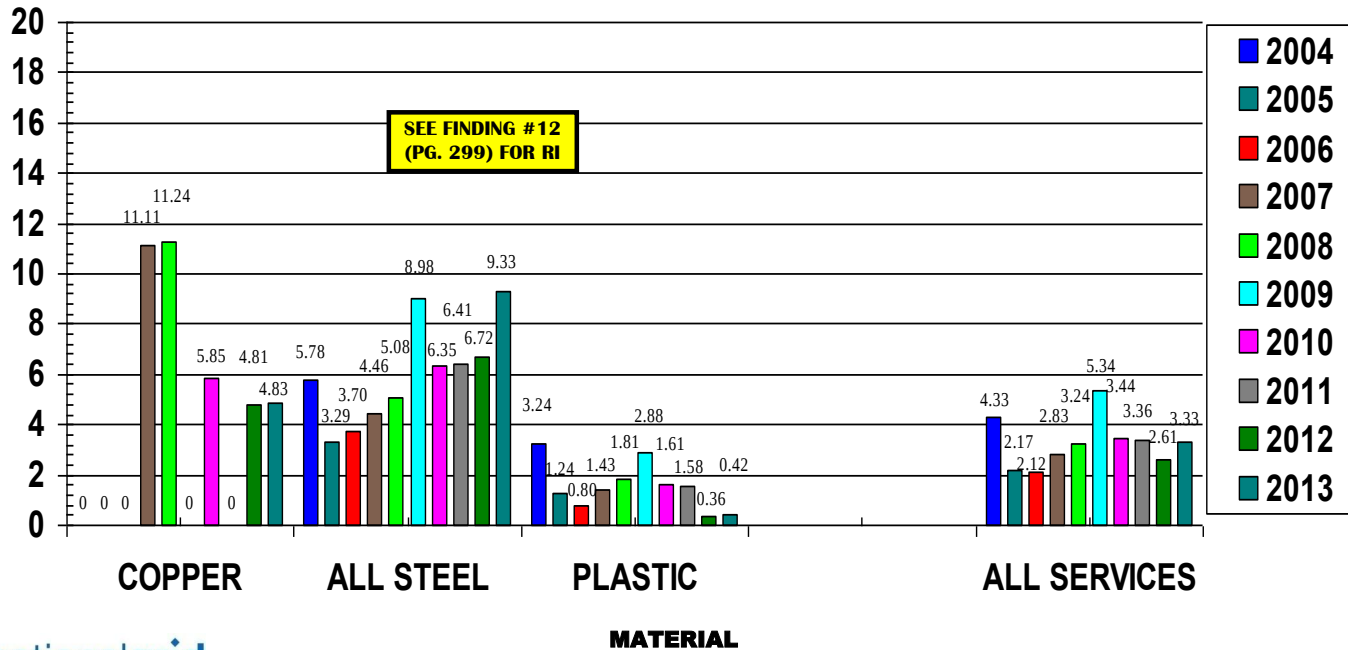
2013 SYSTEM INTEGRITY REPORT

RI

TOTAL SERVICE LEAK “RATES” COMPARISON BY MATERIAL

EXCLUDING Damages

**LEAK REPAIRS
PER 1000 SERVICES**

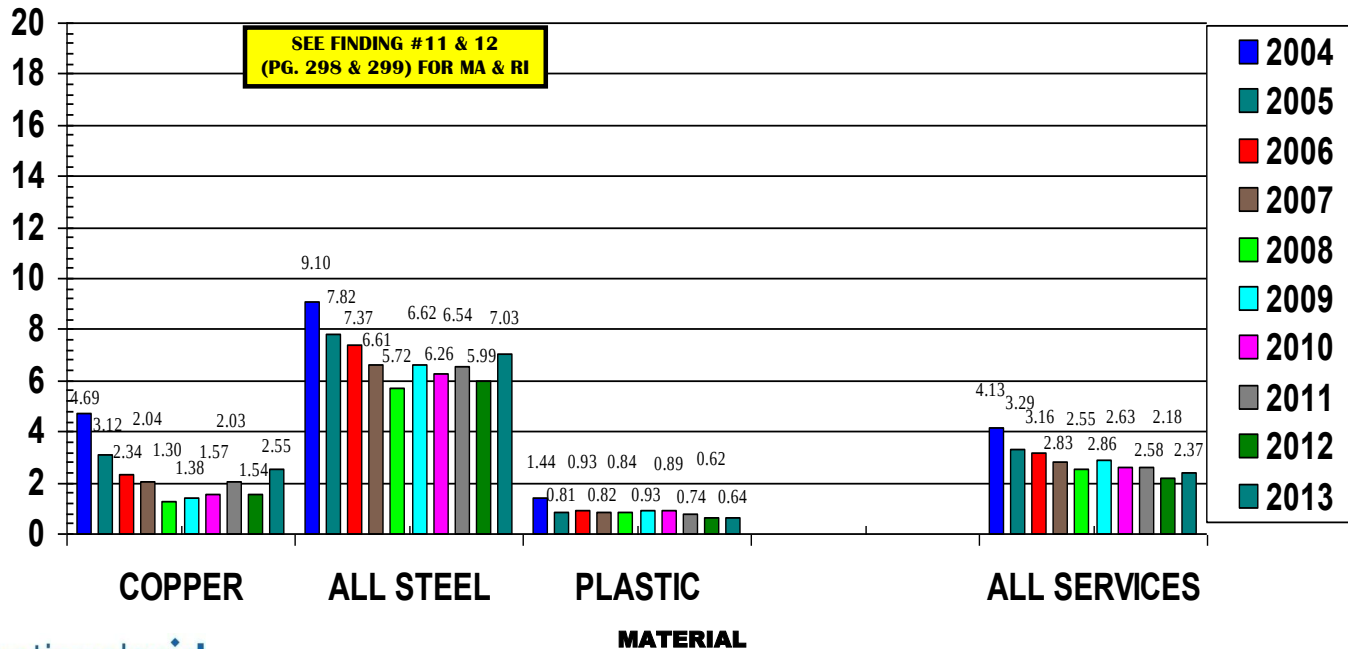


2013 SYSTEM INTEGRITY REPORT

US-NGrid TOTAL SERVICE LEAK “RATES” COMPARISON BY MATERIAL

**LEAK REPAIRS
PER 1000 SERVICES**

EXCLUDING Damages



2013 SYSTEM INTEGRITY REPORT

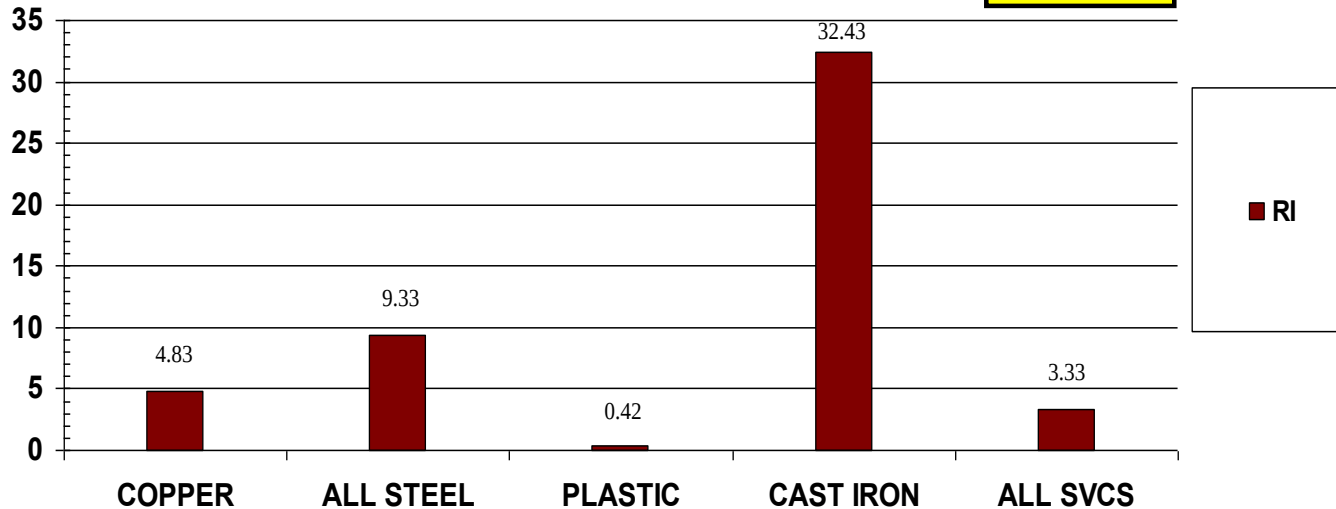
2013 SERVICE LEAK “RATES”

“RI” COMPARISON BY MATERIAL

EXCLUDING Damages

LEAK REPAIRS
PER 1000 SERVICES

SEE FINDING #13
(PG. 300) FOR RI



MATERIAL

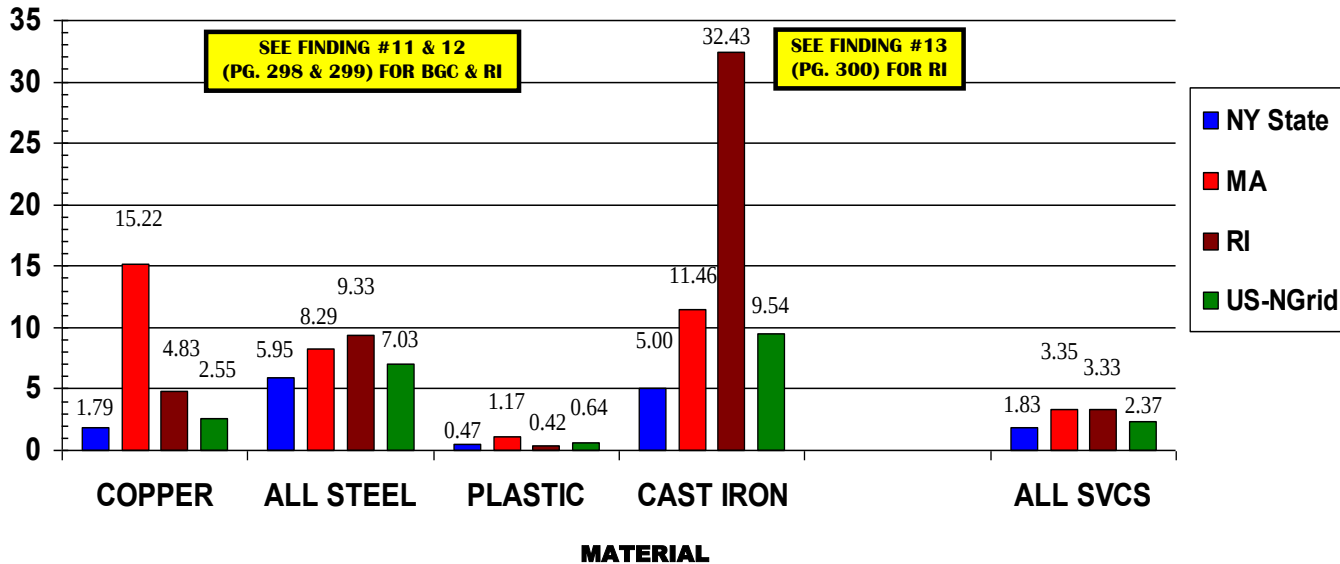
2013 SYSTEM INTEGRITY REPORT

2013 SERVICE LEAK “RATES”

“ALL REGION” COMPARISON BY MATERIAL

EXCLUDING Damages

LEAK REPAIRS
PER 1000 SERVICES



2013 SYSTEM INTEGRITY REPORT

2013 DETAILS OF SERVICE LEAK REPAIRS



2013 SYSTEM INTEGRITY REPORT

RI

2013 SERVICE LEAKS MATERIAL-CAUSE MATRIX

	<u>CORROSION</u>	<u>MATL/WELD</u>	<u>NAT FORCE</u>	<u>OTH OS FRC</u>	<u>EQUIPMENT</u>	<u>OPERATIONS</u>	<u>OTHER</u>	<u>DAMAGES</u>	<u>ALL CAUSES</u>
CAST IRON	1	0	0	0	0	0	5	1	7
COPPER	1	0	0	0	0	0	0	0	1
STEEL	354	3	5	0	40	0	172	14	588
BARE	333	2	5	0	27	0	167	13	547
COATED	21	1	0	0	13	0	5	1	41
PLASTIC	1	12	0	1	37	0	4	65	120
OTHER	3	0	0	0	2	0	1	0	6
ALL SVCS	360	15	5	1	79	0	182	80	722

COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

2013 SYSTEM INTEGRITY REPORT

US-NGrid

2013 SERVICE LEAKS MATERIAL-CAUSE MATRIX

	<u>CORROSION</u>	<u>MATL/WELD</u>	<u>NAT FORCE</u>	<u>OTH OS FRC</u>	<u>EQUIPMENT</u>	<u>OPERATIONS</u>	<u>OTHER</u>	<u>DAMAGES</u>	<u>ALL CAUSES</u>
CAST IRON	12	1	3	0	4	0	12	6	38
COPPER	66	6	14	12	290	0	33	38	459
STEEL	2,945	83	121	31	793	1	526	295	4,795
BARE	2,411	76	109	20	400	1	392	227	3,636
COATED	534	7	12	11	393	0	134	68	1,159
PLASTIC	6	73	35	49	831	0	64	1,304	2,362
OTHER	8	2	2	0	56	0	2	1	71
ALL SVCS	3,037	165	175	92	1,974	1	637	1,644	7,725

COUNTING EACH INDIVIDUAL REPAIR AS A LEAK

2013 SYSTEM INTEGRITY REPORT

2012/2013 DISTRIBUTION DOT REPORT DATA COMPARISONS



2013 SYSTEM INTEGRITY REPORT

2012/2013 DOT ANNUAL DISTRIBUTION REPORT COMPARISONS (RI & US-NGRID)

		RI				US - NGRID (ALL REGIONS COMBINED)			
		2013	2012	Delta(13-12)	%	2013	2012	Delta(13-12)	%
Main Inventory	Cast Iron	831 miles	859 miles	-27.791	-3.2%	5,525.512 miles	5,692 miles	-166.484	-3%
	Plastic	1227 miles	1,168 miles	+59.317	5%	14,476.637 miles	14,030 miles	+446.784	3%
	UP Bare Steel	320 miles	346 miles	-26.115	-8%	4,016.400 miles	4,154 miles	-137.412	-3%
	UP Coated Steel	188 miles	188 miles	-0.178	0%	1,678.470 miles	1,689 miles	-10.622	-1%
	CP Bare Steel	0 miles	0 miles	+0	0%	393.788 miles	392 miles	+1.979	1%
	CP Coated Steel	596 miles	597 miles	-0.69	0%	8,714.091 miles	8,724 miles	-9.847	0%
	Other	0 miles	0 miles	+0	0%	0.046 miles	0 miles	-0.026	-36%
	Ductile Iron	16,242 miles	16 miles	-0.084	-0.5%	16,242 miles	16 miles	-0.084	-1%
	TOTAL MAIN	3,179 miles	3,174 miles	+4.459	0.1%	34,821 miles	34,697 miles	+124.288	0.4%
Main Leaks	Corrosion	228 repairs	357 repairs	-129	-36%	1,831 repairs	2,207 repairs	-376	-17%
	Natural Forces	54 repairs	22 repairs	+32	145%	743 repairs	447 repairs	+296	66%
	Excavation	35 repairs	66 repairs	-31	-47%	300 repairs	290 repairs	+10	3%
	Other Outside Force	1 repairs	1 repairs	+0	100%	18 repairs	23 repairs	-5	-22%
	Material or Welds	3 repairs	1 repairs	+2	100%	69 repairs	67 repairs	+2	3%
	Equipment	49 repairs	86 repairs	-37	-43%	829 repairs	682 repairs	+147	22%
	Operations	0 repairs	0 repairs	+0	0%	2 repairs	0 repairs	+2	200%
	Other	732 repairs	1,130 repairs	-398	-35%	5,474 repairs	6,219 repairs	-745	-12%
	TOTAL MAIN LEAKS	1,102 repairs	1,663 repairs	-561	-34%	9,266 repairs	9,935 repairs	-669	-7%
Service Inventory	Copper	207 svcs	208 svcs	-1	0%	165,339 svcs	167,323 svcs	-2,584	-2%
	Plastic	130,002 svcs	126,474 svcs	+3,528	3%	1,657,859 svcs	1,609,251 svcs	+48,608	3%
	UP Bare Steel	41,821 svcs	43,858 svcs	-2,037	-5%	287,305 svcs	298,770 svcs	-11,465	-4%
	UP Coated Steel	9,566 svcs	9,591 svcs	-25	0%	159,200 svcs	163,421 svcs	-4,221	-3%
	CP Bare Steel	0 svcs	0 svcs	+0	0%	12,948 svcs	12,948 svcs	+0	0%
	CP Coated Steel	10,150 svcs	10,285 svcs	-135	-1%	180,804 svcs	184,561 svcs	-3,757	-2%
	Other	1,000 svcs	1,085 svcs	-85	-8%	96,358 svcs	101,426 svcs	-5,068	-5%
	Cast Iron	185 svcs	189 svcs	-4	-2%	3,355 svcs	4,688 svcs	-1,333	-28%
	TOTAL SERVICES	192,931 svcs	191,690 svcs	+1,241	0.6%	2,563,168 svcs	2,542,988 svcs	+20,180	0.8%
Service Leaks Excluding Above Ground Leak	Corrosion	360 repairs	296 repairs	+64	22%	3,037 repairs	3,076 repairs	-39	-1%
	Natural Forces	5 repairs	4 repairs	+1	25%	175 repairs	177 repairs	-2	-1%
	Excavation	80 repairs	67 repairs	+13	19%	1,644 repairs	1,502 repairs	+142	9%
	Other Outside Force	1 repairs	0 repairs	+1	100%	92 repairs	95 repairs	-3	-3%
	Material or Welds	15 repairs	1 repairs	+14	100%	165 repairs	74 repairs	+91	123%
	Equipment	79 repairs	68 repairs	+11	16%	1,974 repairs	1,668 repairs	+306	18%
	Operations	0 repairs	0 repairs	+0	0%	1 repairs	2 repairs	-1	200%
	Other	182 repairs	131 repairs	+51	39%	637 repairs	455 repairs	+182	40%
	TOTAL SVC LEAKS	722 repairs	567 repairs	+155	27%	7,725 repairs	7,049 repairs	+676	10%
Service Leaks Including Above Ground Leak	Corrosion	360 repairs	300 repairs	+60	20%	3,040 repairs	3,085 repairs	-45	-1%
	Natural Forces	5 repairs	8 repairs	-3	-38%	177 repairs	186 repairs	-9	-5%
	Excavation	80 repairs	67 repairs	+13	19%	1,644 repairs	1,502 repairs	+142	9%
	Other Outside Force	2 repairs	1 repairs	+1	100%	103 repairs	111 repairs	-8	-7%
	Material or Welds	15 repairs	3 repairs	+12	100%	166 repairs	81 repairs	+85	105%
	Equipment	79 repairs	70 repairs	+9	13%	1,985 repairs	1,677 repairs	+308	18%
	Operations	0 repairs	0 repairs	+0	0%	3 repairs	5 repairs	-2	200%
	Other	182 repairs	148 repairs	+34	23%	643 repairs	473 repairs	+170	36%
	TOTAL SVC LEAKS	723 repairs	597 repairs	+126	21%	7,761 repairs	7,120 repairs	+641	9%
	TOTAL LEAK REPAIRS (Main & Svc)	1,824 repairs	2,230 repairs	-406	-18%	16,991 repairs	16,984 repairs	+7	0%
Excluding Above Ground Leak									
TOTAL LEAK REPAIRS (Main & Svc)		1,825 repairs	2,260 repairs	-435	-19%	17,027 repairs	17,055 repairs	-28	0%
Including Above Ground Leak									
Workable Backlog As of 12/31		26 leaks	54 leaks	-28	-52%	219 leaks	269 leaks	-50	-19%
UFG (Net)		3.4%	2.4%	1.0%		2.5%	2.3%	0.2%	
Average Service Length (Ft)		66.09 ft	66.00 ft	+0.09		59 ft	59 ft	+0.13	

2013 SYSTEM INTEGRITY REPORT

NATIONAL GRID-US 2013 GAS DISTRIBUTION SYSTEM STATISTICS



2013 SYSTEM INTEGRITY REPORT

2013 GAS DISTRIBUTION SYSTEM STATISTICS

STATE	LEGACY	2013 PIPELINE / CUSTOMER / SENDOUT STATISTICS								
		Miles of Main	# of Services	Avg Service Length (ft/svc)	Miles of Services	TOTAL Distribution Pipeline	Residential Customers	Commercial and Industrial Customers	TOTAL Customers	Sendout (MDT)
	NYC	4,135	569,054	45	4,850	8,985	1,148,293	69,281	1,217,574	159,274
	LI	7,892	528,494	65	6,506	14,398	507,762	59,581	567,343	92,739
	UPSTATE	8,594	552,688	71	7,432	16,026	552,392	45,810	598,202	124,216
ALL NEW YORK STATE		20,621	1,650,236	60	18,788	39,409	2,208,447	174,672	2,383,119	376,229
	BOSTON	6,324	490,951	46	4,285	10,609	571,205	51,865	623,070	111,211
	ESSEX	863	42,887	78	636	1,499	47,181	4,947	52,128	6,540
	CAPE	2,445	111,491	75	1,585	4,030	100,580	9,382	109,962	11,060
	LOWELL	1,389	74,672	72	1,017	2,406	81,807	9,190	90,997	14,552
ALL MASSACHUSETTS		11,021	720,001	55	7,522	18,544	800,773	75,384	876,157	143,362
RHODE ISLAND		3,179	192,931	66	2,415	5,593	234,561	24,499	259,060	39,493
TOTAL NGRID-US		34,821	2,563,168	59	28,725	63,546	3,243,781	274,555	3,518,336	559,085

CAUTION:

This chart is for comparative-illustrative purposes only. The data is not audited & many assumption have been made.

Inventory data is from the CY 2013 Annual DOT/PHMSA Distribution Reports.

Customer data is from the Gas Customer Data base, Active Gas Accounts as of End of January 2014.

Sendout data is from the sendouts for the 12-month period ending 6/30/13, used to calculate UFG for the DOT Reports.

2013 SYSTEM INTEGRITY REPORT

2013 GAS DISTRIBUTION SYSTEM STATISTICS

STATE	LEGACY	PERCENTAGES OF NGRID-US SYSTEM					ASSET RATIOS			GAS CONSUMPTION RATIOS			
		% of Main	% of Services	% of Distribution Pipeline	% of Customers	% of Sendout	Service Density (Svcs / Mile Main)	Meter Density (Customers / Service)	Customer Density (Customers / Mile Total Pipeline)	Main Capacities Used (Sendout MDT / Mile Main)	Service Capacities Used (Sendout MDT / Service)	Pipeline Capacities Used (Sendout MDT / Mile Total Pipe)	Customer Usage (Sendout MDT / Customer)
	NYC	11.9%	22.2%	14.1%	34.6%	28.5%	138	2.1	135.5	38.52	0.28	17.73	0.131
	LI	22.7%	20.6%	22.7%	16.1%	16.6%	67	1.1	39.4	11.75	0.18	6.44	0.163
	UPSTATE	24.7%	21.6%	25.2%	17.0%	22.2%	64	1.1	37.3	14.45	0.22	7.75	0.208
ALL NEW YORK STATE		59.2%	64.4%	62.0%	67.7%	67.3%	80	1.4	60.5	18.24	0.23	9.55	0.158
	BOSTON	18.2%	19.2%	16.7%	17.7%	19.9%	78	1.3	58.7	17.59	0.23	10.48	0.178
	ESSEX	2.5%	1.7%	2.4%	1.5%	1.2%	50	1.2	34.8	7.58	0.15	4.36	0.125
	CAPE	7.0%	4.3%	6.3%	3.1%	2.0%	46	1.0	27.3	4.52	0.10	2.74	0.101
	LOWELL	4.0%	2.9%	3.8%	2.6%	2.6%	54	1.2	37.8	10.47	0.19	6.05	0.160
ALL MASSACHUSETTS		31.7%	28.1%	29.2%	24.9%	25.6%	65	1.2	47.2	13.01	0.20	7.73	0.164
RHODE ISLAND		9.1%	7.5%	8.8%	7.4%	7.1%	61	1.3	46.3	12.42	0.20	7.06	0.152
TOTAL NGRID-US		100%	100%	100%	100%	100%	74	1.4	55.4	16.06	0.22	8.80	0.159

2013 SYSTEM INTEGRITY REPORT

SEPARATE LEAK-PRONE PIPE ANALYSIS

STATE	LEGACY	2013 LEAK-PRONE PIPE INVENTORY						LEAK-PRONE PIPE %'s		
		Leak - Prone Main (miles)	% of TOTAL Main	Leak - Prone Services (#)	% of TOTAL Services	Miles of Leak - Prone Services	TOTAL Leak - Prone Pipe (in miles)	% of NG-US Leak - Prone Main (miles)	% of NG-US Leak - Prone Services (#)	% of NG-US TOTAL Leak - Prone Pipe
	NYC	1,940	46.9%	25,371	4.5%	216	2,156	17.3%	5.6%	13.1%
	LI	3,524	44.7%	107,215	20.3%	1,320	4,844	31.4%	23.8%	29.5%
	UPSTATE	783	9.1%	135,731	24.6%	1,825	2,608	7.0%	30.2%	15.9%
ALL NEW YORK STATE		6,247	30.3%	268,317	16.3%	3,361	9,608	55.7%	59.6%	58.4%
	BOSTON	3,230	51.1%	114,663	23.4%	1,001	4,231	28.8%	25.5%	25.7%
	ESSEX	103	12.0%	4,965	11.6%	74	177	0.9%	1.1%	1.1%
	CAPE	121	4.9%	4,584	4.1%	65	186	1.1%	1.0%	1.1%
	LOWELL	181	13.0%	5,759	7.7%	78	259	1.6%	1.3%	1.6%
ALL MASSACHUSETTS		3,634	33.0%	129,971	18.1%	1,218	4,852	32.4%	28.9%	29.5%
RHODE ISLAND		1,339	42.1%	51,572	26.7%	646	1,984	11.9%	11.5%	12.1%
TOTAL NGRID-US		11,220	32.2%	449,860	17.6%	5,225	16,445	100%	100%	100%

NOTES:

Leak-Prone Main includes Cast Iron/Wrought Iron, Unprotected Steel and Other Material.
Leak-Prone Service includes Cast Iron/Wrought Iron and Unprotected Steel.

2013 SYSTEM INTEGRITY REPORT

LEAK AND REPAIR ANALYSIS

STATE	LEGACY	2013 LEAK DATA				LEAK RATE RATIOS					
		TOTAL Leak Receipts (Main & Service)	TOTAL Leak Repairs (Main & Service)	Year-End Workable Leak Backlog	TOTAL Repairs + Workable Leaks	TOTAL Leak Receipts / Mile TOTAL Pipe	TOTAL Leak Repairs / Mile TOTAL Mile Leak- Prone Pipe	TOTAL Leak Repairs / Mile TOTAL Mile Leak- Prone Pipe	TOTAL Leak Repairs / Mile TOTAL Mile Leak- Prone Pipe	Repairs + Workables / Mile TOTAL Pipe	Repairs + Workable / Mile Leak- Prone Pipe
	NYC	3,332	3,223	7	3,230	0.4	1.5	0.4	1.5	0.4	1.5
	LI	3,527	2,844	10	2,854	0.2	0.7	0.2	0.6	0.2	0.6
	UPSTATE	1,205	1,498	0	1,498	0.1	0.5	0.1	0.6	0.1	0.6
ALL NEW YORK STATE		8,064	7,565	17	7,582	0.2	0.8	0.2	0.8	0.2	0.8
	BOSTON	5,606	6,658	170	6,828	0.5	1.3	0.6	1.6	0.6	1.6
	ESSEX	190	225	2	227	0.1	1.1	0.2	1.3	0.2	1.3
	CAPE	375	480	1	481	0.1	2.0	0.1	2.6	0.1	2.6
	LOWELL	253	239	3	242	0.1	1.0	0.1	0.9	0.1	0.9
ALL MASSACHUSETTS		6,424	7,602	176	7,778	0.3	1.3	0.4	1.6	0.4	1.6
RHODE ISLAND		2,252	1,824	26	1,850	0.4	1.1	0.3	0.9	0.3	0.9
TOTAL NGRID-US		16,740	16,991	219	17,210	0.3	1.0	0.3	1.0	0.3	1.0

NOTES:

TOTAL Leak Repairs (Main & Service) include Excavation Leaks.

TOTAL Leak Repairs (Main & Service) exclude Above Ground Leaks.

2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS (FINDINGS AND EXPLANATIONS)



2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS

FINDINGS AND EXPLANATIONS

FINDING 4:

NYC and RI has been experiencing a sustained increase in Type 3 leak backlogs.

This issue was actively investigated in 2013 and found that Type-3 Leak Receipts went up and Repairs went down significantly both in NYC and RI since 2004. Also elimination of Type-3 leaks without repair is going down consistently in RI. Distribution Engineering is in process of following up with the departments involved to capture and close out these Type-3 leaks properly and will actively monitor it in 2014.

2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS

FINDINGS AND EXPLANATIONS

FINDING 7:

RI has an unusually high plastic main leak rate, compared to other regions.

An investigation has found that the leaking material is not captured on the repair work order and therefore determined by using the closest facility in SmallWorld. The rate decreased in 2012 due to data validation by Distribution Engineering. To further resolve this issue, “Leaking Material” and “Leak Cause” fields were added to the work order form in 2013 and found significant improvement in data quality during quarterly data validation.

2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS

FINDINGS AND EXPLANATIONS

FINDING 8:

NGRID has experienced an increase in Cast Iron Main Breaks in all regions in 2013.

In 2013, CI main breaks and rates increased in every region and this is believed to be weather dependent. Gas Distribution Engineering did a deep dive into the details of the Cast Iron main break data and found 40% increase in 4" CI main breaks and 85% increase in 6" CI main breaks in 2013. A geographical analysis was also performed to see whether any specific location is experiencing extreme CI main breaks or not and was communicated this result with Main and Service Replacement group to evaluate those broken segments and address any systemic issue.

2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS

FINDINGS AND EXPLANATIONS

FINDING 9:

RI experienced an increase in Main Corrosion leaks in 2012.

The 2012 increase shown is not an actual increase in main corrosion leaks, but data correction that resulted from Distribution Engineering's scrubbing of RI leak reporting data. It was found that a significant number of leaks that were reported on plastic mains were actually corrosion leaks on steel. [Distribution Engineering has monitored this in 2013 and found corrosion leak repairs and rates decreased over 2012 due to continuous data scrubbing/validation process and also the implementation of new work order form and leak editor screen.](#)

2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS

FINDINGS AND EXPLANATIONS

FINDING 12:

RI has experienced increased and erratic service leak rates over the last few years.

An investigation has determined that service leak repair counts are incorrectly reported for the past few years. Some Type 3 leaks are being closed out (either for no follow up gas reads or in conjunction with main replacement) and reported as “Repaired-Other”. We are still in the process of correcting this data anomaly.

In addition to that, RI has received more Type-1 Leaks in 2013 than in 2012 and repaired most of them. Most of the leaks were on bare steel due to “Corrosion” and “Other” leak cause. Due to more accurate reporting and more extensive data scrubbing, corrosion leak repair rates on Bare steel appears to be rising and Plastic leak repair rate is falling down. In the past, actual corrosion repair counts were obscured by paperwork that was not filled correctly or information not being transferred to Small World correctly. Higher corrosion leak counts now merely reflect reporting of actual work completed and recorded more clearly on a revised work order form. Remaining bare steel services continue to leak at a much higher rate and should continue to remain a priority for replacement.

2013 SYSTEM INTEGRITY REPORT

2013 SYSTEM INTEGRITY REPORT ANALYSIS

FINDINGS AND EXPLANATIONS

FINDING 13:

RI 2013 Cast Iron Service leak repair data verification results:

For 2013

RI leak repair data shows 7 CI service leak repairs, causing a very high CI leak rate. Distribution Engineering scrubbed all of these records and found those seven(7) "CI service" leak repairs were actually:

- One (1) equipment repair (svc tap) on PE svc off a CI main
- Two (2) repairs that were actually CI main repairs
- Four (4) repairs that were actually BS svc repairs.

These services were tied to CI mains and Smallworld had these repairs tied to services or service connections at CI mains. The new work order form and leak editor screen implemented in Q3 of 2013 should help to reduce this type of error in the future.

END of SLIDES.

PUC 2-7

Request:

Please explain in detail how the Gas ISR program has decreased risks or improved the gas distribution system in Rhode Island.

Response:

Since implementation of the first annual Gas Infrastructure, Safety, and Reliability (ISR) plan in 2011, the Company's work pursuant to the programs included in its ISR plans has significantly improved the Rhode Island gas distribution system. The most pronounced benefits are primarily attributable to the accelerated replacement of leak prone gas mains and services. Please see National Grid's "Trend Based System Integrity Analysis" (System Integrity Trend Analysis) provided as Attachment PUC 2-6 to the Company's response to PUC 2-6. This trend-based report reflects changes over a ten-year period and provides for insight into long-term trends.

One key factor of risk associated with the gas distribution system is measured through total leak receipts as trended on page eight of the System Integrity Trend Analysis. The trend of leak receipts reflects an upward trend between 2004 through 2009, followed by a downward trend between 2009 through 2013, the time period covered by the Company's Accelerated Replacement Program (ARP) and Gas ISR plans. Specifically, leak receipts in 2013 have been reduced by 38% from their peak in 2009.

A second measure of risk is identified through the trending of the year-end workable leak backlog reflected on page 16 of the System Integrity Trend Analysis. A lower workable leak backlog reflects the lower risk associated with the population of leaks that pose potential hazards. The reduction of this backlog and the continued ability to maintain reduced levels entering the winter period have been enabled through the replacement of mains and services and reduction of system leaks.

Another trend that reflects the reduced risk is main leak repairs performed on an annual basis as found on page 36 of the System Integrity Analysis. Similar to receipts, main leak repairs reflects an increasing trend between 2004 and 2009, followed by a significant reduction from 2009 through 2013. As shown in the System Integrity Analysis, main leak repairs have decreased by 59% from their peak in 2009.

In total, the downward trend in leak receipts, leak backlog, and leak repairs clearly demonstrates an improvement in the integrity of the gas distribution system in Rhode Island and a significant reduction in risk to the public.

PUC 2-7, page 2

Finally, investment in capital upgrades through the ARP and Gas ISR plans of the Company's liquefied natural gas plants, take stations, and regulator stations have provided for improved continuous service to the broad customer base in Rhode Island. In addition, system and station modifications have provided for the safe and reliable operation of critical infrastructure at the stations through incorporation of modern safety and reliability components and systems. All of these investments have improved the gas distribution system, reduced leak risk, and in turn, increased public safety in Rhode Island.

PUC 2-8

Request:

Please provide a list of soft off closures for gas that are greater than one year and the total amount of dollars associated with these accounts.

Response:

For clarity in this response, the Company wishes to explain that the Company tracks soft-off closures by premises and meter, not by account. Once a meter becomes "inactive" through a soft-off closure, there is no longer a customer account associated with that meter. Without a customer account (and applicable rate), the Company's billing system does not calculate an associated dollar amount.

Please see Attachment PUC 2-8-1, which provides a listing of inactive soft-off gas meters with metered usage that have been in a soft-off status for over 12 months (based on a reading-from date prior to 3/1/2014) that remained open at the time of preparing this response. In order to approximate the value of the associated gas, the Company applied the current residential heating gas cost recovery (GCR) rate per therm of \$0.6871 and the current BTU conversion factor of 1.029. Use of this GCR rate and BTU conversion factor is consistent with filings made in the 2012-2013 soft-off pilot study.

Please see Attachment PUC 2-8-2, which provides a listing of inactive soft-off gas meters without metered usage (readings could not be obtained) that have been in a soft-off status for over 12 months (based on a last reading date before 3/1/2014) that remained open at the time of preparing this response. The Company's billing system does not create estimated usage values for inactive meters, and thus this response has not applied a value to that associated gas.

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	1/3/2013	7/30/2014	815	17	1.029	839	\$0.6871	\$576
		Gas	7/22/2006	1/30/2012	28	1	1.029	29	\$0.6871	\$20
		Gas	2/27/2013	12/29/2014	6	6	1.029	6	\$0.6871	\$4
		Gas	5/1/2013	1/30/2015	691	20	1.029	711	\$0.6871	\$489
		Gas	4/25/2013	1/30/2015	167	16	1.029	172	\$0.6871	\$118
		Gas	2/27/2014	1/30/2015	186	11	1.029	191	\$0.6871	\$132
		Gas	10/9/2013	1/30/2015	54	15	1.029	56	\$0.6871	\$38
		Gas	5/1/2012	3/27/2013	61	11	1.029	63	\$0.6871	\$43
		Gas	1/15/2014	4/28/2014	227	4	1.029	234	\$0.6871	\$160
		Gas	10/29/2012	12/31/2014	16	15	1.029	16	\$0.6871	\$11
		Gas	7/25/2007	2/2/2015	350	35	1.029	360	\$0.6871	\$247
		Gas	7/31/2013	12/1/2014	32	15	1.029	33	\$0.6871	\$23
		Gas	8/31/2012	2/2/2015	17	14	1.029	17	\$0.6871	\$12
		Gas	7/1/2013	2/2/2015	30	17	1.029	31	\$0.6871	\$21
		Gas	9/3/2013	12/2/2014	4	4	1.029	4	\$0.6871	\$3
		Gas	8/8/2013	2/3/2015	1,106	17	1.029	1,138	\$0.6871	\$782
		Gas	12/4/2012	2/4/2015	356	12	1.029	366	\$0.6871	\$252
		Gas	1/4/2014	3/4/2014	13	2	1.029	13	\$0.6871	\$9
		Gas	8/6/2013	2/6/2015	23	6	1.029	24	\$0.6871	\$16
		Gas	7/3/2013	3/5/2014	8	1	1.029	8	\$0.6871	\$6
		Gas	12/1/2012	2/5/2015	2,287	15	1.029	2,353	\$0.6871	\$1,617
		Gas	2/25/2014	2/5/2015	180	11	1.029	185	\$0.6871	\$127
		Gas	7/19/2013	2/5/2015	436	18	1.029	449	\$0.6871	\$308
		Gas	1/2/2014	2/5/2015	393	13	1.029	404	\$0.6871	\$278
		Gas	4/9/2013	8/6/2013	100	4	1.029	103	\$0.6871	\$71
		Gas	12/4/2013	2/5/2015	6	6	1.029	6	\$0.6871	\$4
		Gas	1/15/2013	2/5/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	7/8/2013	12/5/2013	44	5	1.029	45	\$0.6871	\$31
		Gas	7/17/2013	2/7/2015	592	19	1.029	609	\$0.6871	\$419
		Gas	5/22/2012	1/8/2015	6	3	1.029	6	\$0.6871	\$4
		Gas	9/27/2012	2/7/2015	347	28	1.029	357	\$0.6871	\$245
		Gas	1/18/2012	1/18/2012	274	37	1.029	282	\$0.6871	\$194
		Gas	8/1/2012	12/10/2012	172	5	1.029	177	\$0.6871	\$122
		Gas	12/11/2013	2/11/2015	1,751	14	1.029	1,802	\$0.6871	\$1,238
		Gas	4/8/2013	2/10/2015	2,132	16	1.029	2,194	\$0.6871	\$1,507
		Gas	10/8/2013	2/10/2015	1,152	16	1.029	1,185	\$0.6871	\$814
		Gas	4/22/2013	2/11/2015	83	4	1.029	85	\$0.6871	\$59
		Gas	6/10/2013	12/9/2014	14	14	1.029	14	\$0.6871	\$10
		Gas	3/10/2013	2/11/2015	17	17	1.029	17	\$0.6871	\$12
		Gas	1/11/2013	2/11/2015	48	21	1.029	49	\$0.6871	\$34
		Gas	2/8/2012	8/8/2014	13	12	1.029	13	\$0.6871	\$9
		Gas	1/6/2014	2/12/2015	76	14	1.029	78	\$0.6871	\$54
		Gas	12/18/2012	1/13/2015	588	20	1.029	605	\$0.6871	\$416
		Gas	1/11/2012	2/12/2015	168	36	1.029	173	\$0.6871	\$119
		Gas	2/21/2014	2/12/2015	31	11	1.029	32	\$0.6871	\$22
		Gas	4/15/2013	2/12/2015	170	22	1.029	175	\$0.6871	\$120
		Gas	10/8/2012	10/11/2012	7	1	1.029	7	\$0.6871	\$5
		Gas	1/11/2012	2/12/2015	478	37	1.029	492	\$0.6871	\$338
		Gas	12/23/2013	2/12/2015	187	14	1.029	192	\$0.6871	\$132
		Gas	8/24/2001	2/11/2015	30	22	1.029	31	\$0.6871	\$21
		Gas	5/10/2013	2/10/2014	72	8	1.029	74	\$0.6871	\$51
		Gas	1/14/2014	2/13/2015	574	13	1.029	591	\$0.6871	\$406
		Gas	8/5/2013	2/13/2015	1,667	19	1.029	1,715	\$0.6871	\$1,179
		Gas	11/8/2013	2/13/2015	615	15	1.029	633	\$0.6871	\$435
		Gas	10/21/2013	2/12/2015	1,284	12	1.029	1,321	\$0.6871	\$908
		Gas	10/14/2013	5/14/2014	4	4	1.029	4	\$0.6871	\$3
		Gas	10/13/2013	11/12/2014	532	10	1.029	547	\$0.6871	\$376
		Gas	1/3/2014	2/12/2014	32	1	1.029	33	\$0.6871	\$23
		Gas	6/4/2013	2/13/2015	962	19	1.029	990	\$0.6871	\$680
		Gas	4/12/2012	2/13/2015	288	34	1.029	296	\$0.6871	\$204
		Gas	1/31/2014	2/13/2015	759	13	1.029	781	\$0.6871	\$537
		Gas	11/12/2013	2/12/2015	405	9	1.029	417	\$0.6871	\$286
		Gas	6/13/2013	6/10/2014	47	14	1.029	48	\$0.6871	\$33
		Gas	6/13/2012	2/12/2015	29	23	1.029	30	\$0.6871	\$21
		Gas	11/4/2013	2/13/2015	617	11	1.029	635	\$0.6871	\$436
		Gas	2/13/2014	2/14/2015	23	12	1.029	24	\$0.6871	\$16
		Gas	10/15/2013	2/14/2015	453	16	1.029	466	\$0.6871	\$320
		Gas	5/16/2013	5/20/2014	11	5	1.029	11	\$0.6871	\$8
		Gas	3/30/2012	2/17/2015	352	14	1.029	362	\$0.6871	\$249
		Gas	12/15/2013	4/17/2014	9	4	1.029	9	\$0.6871	\$6
		Gas	1/18/2012	2/15/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	8/2/2013	10/18/2013	10	3	1.029	10	\$0.6871	\$7
		Gas	12/17/2012	2/20/2015	1,800	25	1.029	1,852	\$0.6871	\$1,273

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	3/30/2013	2/18/2015	317	22	1.029	326	\$0.6871	\$224
		Gas	9/19/2013	2/18/2015	2,105	16	1.029	2,166	\$0.6871	\$1,488
		Gas	12/16/2013	2/18/2015	11	6	1.029	11	\$0.6871	\$8
		Gas	3/12/2013	2/18/2015	837	22	1.029	861	\$0.6871	\$592
		Gas	8/20/2013	9/17/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	9/1/2013	2/17/2015	1,037	17	1.029	1,067	\$0.6871	\$733
		Gas	11/14/2012	12/17/2014	4	4	1.029	4	\$0.6871	\$3
		Gas	1/18/2012	2/18/2015	603	35	1.029	620	\$0.6871	\$426
		Gas	7/23/2013	11/14/2013	19	4	1.029	20	\$0.6871	\$13
		Gas	4/16/2013	2/20/2015	100	21	1.029	103	\$0.6871	\$71
		Gas	1/31/2014	1/20/2015	118	11	1.029	121	\$0.6871	\$83
		Gas	11/29/2013	12/19/2014	27	5	1.029	28	\$0.6871	\$19
		Gas	10/19/2013	2/19/2014	38	4	1.029	39	\$0.6871	\$27
		Gas	6/13/2013	8/23/2013	15	3	1.029	15	\$0.6871	\$11
		Gas	11/20/2013	12/21/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	4/22/2013	1/24/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	12/21/2013	1/24/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	1/14/2013	1/23/2014	292	12	1.029	300	\$0.6871	\$206
		Gas	11/27/2013	4/23/2014	36	5	1.029	37	\$0.6871	\$25
		Gas	2/26/2014	1/22/2015	93	10	1.029	96	\$0.6871	\$66
		Gas	3/22/2011	5/22/2013	7	4	1.029	7	\$0.6871	\$5
		Gas	12/22/2011	1/22/2015	61	6	1.029	63	\$0.6871	\$43
		Gas	2/7/2012	12/22/2014	2,170	32	1.029	2,233	\$0.6871	\$1,534
		Gas	2/21/2014	1/22/2015	16	9	1.029	16	\$0.6871	\$11
		Gas	11/20/2013	12/20/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	8/2/2013	1/22/2015	462	17	1.029	475	\$0.6871	\$327
		Gas	3/27/2012	1/23/2014	19	4	1.029	20	\$0.6871	\$13
		Gas	1/23/2012	7/24/2013	11	11	1.029	11	\$0.6871	\$8
		Gas	6/18/2013	3/25/2014	101	10	1.029	104	\$0.6871	\$71
		Gas	5/13/2013	6/24/2013	13	1	1.029	13	\$0.6871	\$9
		Gas	2/1/2014	4/25/2014	8	3	1.029	8	\$0.6871	\$6
		Gas	10/11/2012	10/24/2012	3	1	1.029	3	\$0.6871	\$2
		Gas	8/26/2013	1/29/2015	66	17	1.029	68	\$0.6871	\$47
		Gas	1/24/2013	2/25/2013	7	2	1.029	7	\$0.6871	\$5
		Gas	4/25/2013	5/29/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	1/6/2014	6/27/2014	109	6	1.029	112	\$0.6871	\$77
		Gas	5/30/2013	1/30/2015	2,856	19	1.029	2,939	\$0.6871	\$2,019
		Gas	12/16/2013	1/30/2015	67	14	1.029	69	\$0.6871	\$47
		Gas	3/21/2013	12/30/2014	97	5	1.029	100	\$0.6871	\$69
		Gas	1/26/2012	2/27/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	4/28/2013	1/29/2015	10	8	1.029	10	\$0.6871	\$7
		Gas	9/3/2013	1/30/2015	327	16	1.029	336	\$0.6871	\$231
		Gas	1/4/2013	1/30/2015	10	8	1.029	10	\$0.6871	\$7
		Gas	12/28/2011	1/30/2015	340	8	1.029	350	\$0.6871	\$240
		Gas	7/8/2013	1/30/2015	84	18	1.029	86	\$0.6871	\$59
		Gas	5/30/2012	11/28/2012	94	6	1.029	97	\$0.6871	\$66
		Gas	5/15/2013	5/30/2014	108	12	1.029	111	\$0.6871	\$76
		Gas	9/28/2012	2/1/2015	12	12	1.029	12	\$0.6871	\$8
		Gas	1/12/2012	2/1/2015	31	26	1.029	32	\$0.6871	\$22
		Gas	5/31/2013	10/31/2013	21	5	1.029	22	\$0.6871	\$15
		Gas	8/30/2013	12/1/2014	9	8	1.029	9	\$0.6871	\$6
		Gas	8/31/2012	10/1/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	12/31/2011	5/31/2012	34	5	1.029	35	\$0.6871	\$24
		Gas	5/1/2012	6/2/2014	768	13	1.029	790	\$0.6871	\$543
		Gas	3/29/2013	5/1/2013	11	1	1.029	11	\$0.6871	\$8
		Gas	10/1/2012	2/28/2013	426	4	1.029	438	\$0.6871	\$301
		Gas	8/14/2013	9/3/2013	6	1	1.029	6	\$0.6871	\$4
		Gas	12/3/2013	1/6/2014	13	1	1.029	13	\$0.6871	\$9
		Gas	12/26/2013	2/3/2014	48	2	1.029	49	\$0.6871	\$34
		Gas	7/29/2013	2/5/2015	314	7	1.029	323	\$0.6871	\$222
		Gas	6/5/2013	2/4/2014	57	7	1.029	59	\$0.6871	\$40
		Gas	1/30/2007	2/2/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	3/25/2013	8/5/2013	128	4	1.029	132	\$0.6871	\$90
		Gas	10/2/2013	2/5/2015	233	15	1.029	240	\$0.6871	\$165
		Gas	12/23/2013	2/5/2015	628	6	1.029	646	\$0.6871	\$444
		Gas	9/20/2012	12/4/2012	25	3	1.029	26	\$0.6871	\$18
		Gas	5/6/2013	12/4/2014	1,751	18	1.029	1,802	\$0.6871	\$1,238
		Gas	2/2/2012	3/4/2014	5	5	1.029	5	\$0.6871	\$4
		Gas	12/16/2002	8/6/2012	21	5	1.029	22	\$0.6871	\$15
		Gas	1/10/2014	4/4/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	5/3/2012	1/6/2015	24	23	1.029	25	\$0.6871	\$17
		Gas	10/4/2013	2/6/2015	231	12	1.029	238	\$0.6871	\$163
		Gas	7/9/2013	2/7/2015	680	19	1.029	700	\$0.6871	\$481

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	8/31/2013	2/7/2015	182	17	1.029	187	\$0.6871	\$129
		Gas	5/13/2013	2/7/2015	816	21	1.029	840	\$0.6871	\$577
		Gas	1/8/2013	8/7/2014	72	19	1.029	74	\$0.6871	\$51
		Gas	10/24/2013	2/7/2015	109	16	1.029	112	\$0.6871	\$77
		Gas	1/23/2014	2/7/2015	236	11	1.029	243	\$0.6871	\$167
		Gas	2/5/2014	2/7/2015	2,181	12	1.029	2,244	\$0.6871	\$1,542
		Gas	1/30/2012	2/7/2015	25	13	1.029	26	\$0.6871	\$18
		Gas	1/6/2012	1/8/2013	40	12	1.029	41	\$0.6871	\$28
		Gas	10/22/2013	2/7/2015	453	16	1.029	466	\$0.6871	\$320
		Gas	8/8/2013	10/7/2013	33	2	1.029	34	\$0.6871	\$23
		Gas	2/2/2007	2/6/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	1/10/2012	4/10/2012	16	3	1.029	16	\$0.6871	\$11
		Gas	6/3/2013	2/10/2015	3,322	21	1.029	3,418	\$0.6871	\$2,349
		Gas	6/3/2013	7/10/2013	4	1	1.029	4	\$0.6871	\$3
		Gas	1/3/2014	2/10/2015	80	14	1.029	82	\$0.6871	\$57
		Gas	7/19/2013	7/13/2014	38	4	1.029	39	\$0.6871	\$27
		Gas	1/24/2014	2/11/2015	71	12	1.029	73	\$0.6871	\$50
		Gas	7/22/2013	2/12/2015	1,250	19	1.029	1,286	\$0.6871	\$884
		Gas	4/25/2013	2/11/2015	56	22	1.029	58	\$0.6871	\$40
		Gas	7/8/2013	2/12/2015	81	19	1.029	83	\$0.6871	\$57
		Gas	12/11/2011	2/12/2015	1,625	26	1.029	1,672	\$0.6871	\$1,149
		Gas	12/2/2013	1/14/2014	5	2	1.029	5	\$0.6871	\$4
		Gas	12/11/2013	2/11/2014	57	2	1.029	59	\$0.6871	\$40
		Gas	7/11/2013	2/12/2015	1,201	19	1.029	1,236	\$0.6871	\$849
		Gas	11/9/2012	1/13/2015	17	15	1.029	17	\$0.6871	\$12
		Gas	1/11/2012	3/13/2013	3	2	1.029	3	\$0.6871	\$2
		Gas	12/27/2012	1/14/2013	6	1	1.029	6	\$0.6871	\$4
		Gas	8/14/2012	3/12/2013	8	7	1.029	8	\$0.6871	\$6
		Gas	2/14/2013	11/12/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	4/9/2013	2/13/2015	630	22	1.029	648	\$0.6871	\$445
		Gas	11/27/2013	2/13/2015	1,707	14	1.029	1,757	\$0.6871	\$1,207
		Gas	9/20/2013	11/12/2013	18	2	1.029	19	\$0.6871	\$13
		Gas	6/12/2012	3/12/2013	25	9	1.029	26	\$0.6871	\$18
		Gas	11/9/2012	6/12/2013	57	7	1.029	59	\$0.6871	\$40
		Gas	2/6/2013	12/14/2014	44	4	1.029	45	\$0.6871	\$31
		Gas	1/12/2012	2/12/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	10/27/2012	2/14/2015	428	4	1.029	440	\$0.6871	\$303
		Gas	11/12/2001	2/14/2015	619	14	1.029	637	\$0.6871	\$438
		Gas	6/18/2013	5/16/2014	91	10	1.029	94	\$0.6871	\$64
		Gas	4/30/2007	2/14/2015	62	23	1.029	64	\$0.6871	\$44
		Gas	11/25/2013	2/14/2015	149	15	1.029	153	\$0.6871	\$105
		Gas	12/16/2013	2/18/2015	92	13	1.029	95	\$0.6871	\$65
		Gas	9/1/2012	2/19/2013	55	6	1.029	57	\$0.6871	\$39
		Gas	12/6/2011	12/18/2014	318	1	1.029	327	\$0.6871	\$225
		Gas	9/17/2012	8/18/2014	203	22	1.029	209	\$0.6871	\$144
		Gas	4/12/2012	5/18/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	7/30/2013	4/17/2014	241	9	1.029	248	\$0.6871	\$170
		Gas	8/5/2013	2/20/2015	459	18	1.029	472	\$0.6871	\$325
		Gas	11/27/2013	2/19/2015	340	13	1.029	350	\$0.6871	\$240
		Gas	6/1/2013	2/18/2015	44	12	1.029	45	\$0.6871	\$31
		Gas	9/23/2013	1/19/2015	307	15	1.029	316	\$0.6871	\$217
		Gas	11/14/2013	1/19/2015	9	9	1.029	9	\$0.6871	\$6
		Gas	7/17/2012	5/20/2014	115	22	1.029	118	\$0.6871	\$81
		Gas	3/20/2013	3/21/2014	42	11	1.029	43	\$0.6871	\$30
		Gas	2/3/2014	1/21/2015	74	11	1.029	76	\$0.6871	\$52
		Gas	9/29/2011	4/23/2013	3	1	1.029	3	\$0.6871	\$2
		Gas	11/15/2013	1/22/2015	5	4	1.029	5	\$0.6871	\$4
		Gas	9/25/2013	12/21/2013	36	3	1.029	37	\$0.6871	\$25
		Gas	12/20/2011	1/20/2012	8	1	1.029	8	\$0.6871	\$6
		Gas	1/22/2014	1/22/2015	1,301	8	1.029	1,339	\$0.6871	\$920
		Gas	7/24/2012	1/22/2015	22	19	1.029	23	\$0.6871	\$16
		Gas	12/21/2011	1/22/2015	137	11	1.029	141	\$0.6871	\$97
		Gas	2/21/2013	1/22/2015	5	5	1.029	5	\$0.6871	\$4
		Gas	3/27/2013	7/23/2013	13	4	1.029	13	\$0.6871	\$9
		Gas	11/21/2012	12/19/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	6/20/2012	7/24/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	2/23/2013	7/25/2013	21	5	1.029	22	\$0.6871	\$15
		Gas	2/28/2013	3/22/2013	16	1	1.029	16	\$0.6871	\$11
		Gas	11/20/2012	4/23/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	3/20/2001	1/25/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	12/22/2011	1/25/2012	6	1	1.029	6	\$0.6871	\$4
		Gas	10/15/2012	12/26/2012	35	3	1.029	36	\$0.6871	\$25
		Gas	8/27/2012	8/26/2013	182	1	1.029	187	\$0.6871	\$129

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	6/24/2012	4/24/2014	3	3	1.029	3	\$0.6871	\$2
		Gas	12/22/2011	5/25/2012	4	4	1.029	4	\$0.6871	\$3
		Gas	12/27/2011	10/27/2014	5	5	1.029	5	\$0.6871	\$4
		Gas	9/26/2013	9/25/2014	42	12	1.029	43	\$0.6871	\$30
		Gas	9/26/2013	1/28/2015	34	7	1.029	35	\$0.6871	\$24
		Gas	1/2/2014	4/28/2014	125	4	1.029	129	\$0.6871	\$88
		Gas	9/2/2013	2/3/2015	1,164	16	1.029	1,198	\$0.6871	\$823
		Gas	12/29/2011	2/27/2012	37	2	1.029	38	\$0.6871	\$26
		Gas	7/2/2013	3/28/2014	66	5	1.029	68	\$0.6871	\$47
		Gas	10/7/2013	10/26/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	3/12/2012	1/29/2015	309	8	1.029	318	\$0.6871	\$218
		Gas	6/26/2013	1/29/2015	126	18	1.029	130	\$0.6871	\$89
		Gas	7/1/2012	11/28/2012	24	4	1.029	25	\$0.6871	\$17
		Gas	11/26/2013	1/30/2015	3,043	14	1.029	3,131	\$0.6871	\$2,151
		Gas	1/27/2014	2/26/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	7/31/2013	2/1/2015	22	16	1.029	23	\$0.6871	\$16
		Gas	12/28/2011	2/28/2012	68	2	1.029	70	\$0.6871	\$48
		Gas	12/30/2011	2/2/2015	15	15	1.029	15	\$0.6871	\$11
		Gas	2/29/2012	9/3/2013	2	2	1.029	2	\$0.6871	\$1
		Gas	12/14/1998	2/1/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	1/4/2012	2/5/2015	1,321	25	1.029	1,359	\$0.6871	\$934
		Gas	12/4/2013	5/6/2014	88	5	1.029	91	\$0.6871	\$62
		Gas	1/3/2012	2/4/2015	18	18	1.029	19	\$0.6871	\$13
		Gas	7/10/2013	8/5/2013	13	1	1.029	13	\$0.6871	\$9
		Gas	9/1/2013	11/3/2014	336	12	1.029	346	\$0.6871	\$238
		Gas	9/18/2013	2/5/2015	204	16	1.029	210	\$0.6871	\$144
		Gas	10/4/2012	2/2/2013	45	4	1.029	46	\$0.6871	\$32
		Gas	12/4/2013	1/4/2014	3	1	1.029	3	\$0.6871	\$2
		Gas	9/5/2012	2/5/2015	701	12	1.029	721	\$0.6871	\$496
		Gas	7/8/2013	2/8/2015	2,258	18	1.029	2,323	\$0.6871	\$1,596
		Gas	7/18/1994	2/3/2012	148	1	1.029	152	\$0.6871	\$105
		Gas	11/4/2013	2/4/2014	47	1	1.029	48	\$0.6871	\$33
		Gas	11/22/2013	2/7/2015	1,593	14	1.029	1,639	\$0.6871	\$1,126
		Gas	10/15/2013	1/8/2014	741	3	1.029	762	\$0.6871	\$524
		Gas	12/27/2013	3/10/2014	221	3	1.029	227	\$0.6871	\$156
		Gas	2/22/2013	2/10/2015	933	23	1.029	960	\$0.6871	\$660
		Gas	1/10/2012	4/10/2012	25	3	1.029	26	\$0.6871	\$18
		Gas	1/9/2012	3/9/2012	12	2	1.029	12	\$0.6871	\$8
		Gas	3/8/2012	12/10/2014	9	9	1.029	9	\$0.6871	\$6
		Gas	6/22/2012	1/10/2014	23	3	1.029	24	\$0.6871	\$16
		Gas	6/22/2012	3/8/2013	449	9	1.029	462	\$0.6871	\$317
		Gas	4/1/2013	2/11/2015	1,067	23	1.029	1,098	\$0.6871	\$754
		Gas	1/10/2013	2/11/2015	38	23	1.029	39	\$0.6871	\$27
		Gas	2/19/2014	3/12/2014	2	1	1.029	2	\$0.6871	\$1
		Gas	9/1/2013	12/11/2013	4	2	1.029	4	\$0.6871	\$3
		Gas	12/14/2013	1/13/2015	46	5	1.029	47	\$0.6871	\$33
		Gas	9/28/2013	11/8/2014	15	10	1.029	15	\$0.6871	\$11
		Gas	10/10/2013	2/12/2015	190	10	1.029	196	\$0.6871	\$134
		Gas	10/3/2013	2/12/2015	224	16	1.029	230	\$0.6871	\$158
		Gas	5/31/2013	2/12/2015	1,595	21	1.029	1,641	\$0.6871	\$1,128
		Gas	12/12/2013	2/12/2015	917	14	1.029	944	\$0.6871	\$648
		Gas	2/10/2012	4/10/2014	3	3	1.029	3	\$0.6871	\$2
		Gas	5/11/2012	2/12/2015	224	9	1.029	230	\$0.6871	\$158
		Gas	2/11/2014	2/11/2015	301	7	1.029	310	\$0.6871	\$213
		Gas	10/23/2012	2/12/2015	31	22	1.029	32	\$0.6871	\$22
		Gas	7/28/2012	8/15/2012	6	1	1.029	6	\$0.6871	\$4
		Gas	10/12/2012	2/12/2015	642	11	1.029	661	\$0.6871	\$454
		Gas	3/6/2013	3/13/2013	8	1	1.029	8	\$0.6871	\$6
		Gas	12/17/2013	2/12/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	8/15/2013	2/13/2015	19	13	1.029	20	\$0.6871	\$13
		Gas	12/26/2013	2/13/2015	181	13	1.029	186	\$0.6871	\$128
		Gas	4/12/2013	2/12/2015	145	21	1.029	149	\$0.6871	\$103
		Gas	12/6/2012	2/12/2014	78	14	1.029	80	\$0.6871	\$55
		Gas	11/30/2013	2/13/2015	800	15	1.029	823	\$0.6871	\$566
		Gas	1/13/2014	2/14/2015	4	3	1.029	4	\$0.6871	\$3
		Gas	3/1/2012	3/13/2012	22	1	1.029	23	\$0.6871	\$16
		Gas	1/13/2012	2/14/2015	72	16	1.029	74	\$0.6871	\$51
		Gas	12/2/2013	2/14/2015	129	15	1.029	133	\$0.6871	\$91
		Gas	10/14/2013	2/14/2015	519	13	1.029	534	\$0.6871	\$367
		Gas	5/21/2013	2/19/2015	729	14	1.029	750	\$0.6871	\$515
		Gas	9/28/2012	10/18/2012	5	1	1.029	5	\$0.6871	\$4
		Gas	8/6/2012	2/19/2015	65	30	1.029	67	\$0.6871	\$46
		Gas	5/8/2012	10/20/2014	137	20	1.029	141	\$0.6871	\$97

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	1/19/2012	2/20/2015	65	36	1.029	67	\$0.6871	\$46
		Gas	6/1/2013	2/18/2014	4	2	1.029	4	\$0.6871	\$3
		Gas	11/14/2012	2/17/2015	3,945	15	1.029	4,059	\$0.6871	\$2,789
		Gas	10/1/2012	2/18/2015	1,997	28	1.029	2,055	\$0.6871	\$1,412
		Gas	6/18/2013	4/16/2014	146	10	1.029	150	\$0.6871	\$103
		Gas	8/19/2011	4/17/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	2/15/2013	3/18/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	12/26/2012	1/20/2015	58	23	1.029	60	\$0.6871	\$41
		Gas	5/22/2012	1/20/2015	70	12	1.029	72	\$0.6871	\$49
		Gas	6/20/2013	2/19/2014	29	4	1.029	30	\$0.6871	\$21
		Gas	2/21/2014	1/22/2015	31	10	1.029	32	\$0.6871	\$22
		Gas	12/17/2012	4/22/2013	9	2	1.029	9	\$0.6871	\$6
		Gas	5/31/2013	1/22/2015	413	19	1.029	425	\$0.6871	\$292
		Gas	1/20/2011	4/23/2014	560	6	1.029	576	\$0.6871	\$396
		Gas	12/20/2011	1/22/2015	54	31	1.029	56	\$0.6871	\$38
		Gas	1/8/2014	2/25/2014	2	1	1.029	2	\$0.6871	\$1
		Gas	10/4/2000	1/24/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	6/27/2013	8/26/2013	15	2	1.029	15	\$0.6871	\$11
		Gas	10/24/2013	1/29/2015	29	8	1.029	30	\$0.6871	\$21
		Gas	8/13/2012	8/27/2012	3	1	1.029	3	\$0.6871	\$2
		Gas	2/1/2013	1/29/2015	74	4	1.029	76	\$0.6871	\$52
		Gas	9/12/2012	11/26/2012	9	3	1.029	9	\$0.6871	\$6
		Gas	11/26/2013	12/30/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	10/1/2013	1/30/2015	157	15	1.029	162	\$0.6871	\$111
		Gas	11/26/2013	12/30/2013	17	1	1.029	17	\$0.6871	\$12
		Gas	11/26/2013	2/27/2014	476	3	1.029	490	\$0.6871	\$337
		Gas	7/1/2012	10/26/2012	13	3	1.029	13	\$0.6871	\$9
		Gas	10/29/2012	2/2/2015	16	15	1.029	16	\$0.6871	\$11
		Gas	6/1/2013	8/29/2014	7	6	1.029	7	\$0.6871	\$5
		Gas	5/31/2013	10/29/2014	60	16	1.029	62	\$0.6871	\$42
		Gas	3/1/2013	2/3/2015	49	19	1.029	50	\$0.6871	\$35
		Gas	12/3/2013	4/1/2014	324	4	1.029	333	\$0.6871	\$229
		Gas	7/10/2012	10/30/2013	121	15	1.029	125	\$0.6871	\$86
		Gas	9/1/2013	9/3/2014	5	3	1.029	5	\$0.6871	\$4
		Gas	12/3/2013	2/3/2015	38	14	1.029	39	\$0.6871	\$27
		Gas	10/7/2013	11/5/2014	229	7	1.029	236	\$0.6871	\$162
		Gas	1/27/2010	2/2/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	12/4/2013	2/5/2015	60	14	1.029	62	\$0.6871	\$42
		Gas	2/5/2013	2/5/2015	64	16	1.029	66	\$0.6871	\$45
		Gas	4/29/2013	2/5/2015	127	21	1.029	131	\$0.6871	\$90
		Gas	2/19/2014	6/4/2014	15	2	1.029	15	\$0.6871	\$11
		Gas	5/3/2012	2/5/2015	1,701	31	1.029	1,750	\$0.6871	\$1,203
		Gas	8/16/2013	2/5/2015	3,714	17	1.029	3,822	\$0.6871	\$2,626
		Gas	6/20/2013	11/2/2013	31	5	1.029	32	\$0.6871	\$22
		Gas	12/3/2013	2/5/2015	36	13	1.029	37	\$0.6871	\$25
		Gas	2/22/2012	4/3/2012	4	2	1.029	4	\$0.6871	\$3
		Gas	9/16/2013	2/5/2015	2,442	16	1.029	2,513	\$0.6871	\$1,727
		Gas	10/3/2013	2/5/2015	23	15	1.029	24	\$0.6871	\$16
		Gas	9/5/2012	8/5/2014	26	18	1.029	27	\$0.6871	\$18
		Gas	4/20/2012	10/3/2014	441	28	1.029	454	\$0.6871	\$312
		Gas	12/4/2013	2/5/2015	86	8	1.029	88	\$0.6871	\$61
		Gas	2/28/2014	12/5/2014	73	10	1.029	75	\$0.6871	\$52
		Gas	2/2/2012	1/6/2015	18	17	1.029	19	\$0.6871	\$13
		Gas	5/15/2013	7/8/2013	4	2	1.029	4	\$0.6871	\$3
		Gas	4/5/2012	11/4/2012	23	7	1.029	24	\$0.6871	\$16
		Gas	7/26/2013	8/8/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/28/2014	3/10/2014	32	1	1.029	33	\$0.6871	\$23
		Gas	1/3/1995	2/6/2012	12	1	1.029	12	\$0.6871	\$8
		Gas	9/21/2012	11/6/2013	314	14	1.029	323	\$0.6871	\$222
		Gas	11/25/2013	12/6/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	5/3/2008	11/8/2012	305	1	1.029	314	\$0.6871	\$216
		Gas	11/19/2013	12/9/2013	18	1	1.029	19	\$0.6871	\$13
		Gas	12/9/2013	2/10/2015	18	2	1.029	19	\$0.6871	\$13
		Gas	5/24/2013	2/10/2015	232	21	1.029	239	\$0.6871	\$164
		Gas	1/2/2014	2/11/2015	820	13	1.029	844	\$0.6871	\$580
		Gas	3/20/2012	8/8/2012	26	4	1.029	27	\$0.6871	\$18
		Gas	11/6/2013	1/9/2015	8	8	1.029	8	\$0.6871	\$6
		Gas	9/28/2012	2/10/2015	1,104	28	1.029	1,136	\$0.6871	\$781
		Gas	8/10/2012	2/10/2015	6	6	1.029	6	\$0.6871	\$4
		Gas	3/5/2013	4/9/2013	78	1	1.029	80	\$0.6871	\$55
		Gas	12/12/2013	1/13/2014	15	1	1.029	15	\$0.6871	\$11
		Gas	10/10/2013	1/13/2014	17	3	1.029	17	\$0.6871	\$12
		Gas	6/1/2012	6/10/2012	2	1	1.029	2	\$0.6871	\$1

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	6/20/2012	7/11/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	9/12/2013	11/8/2013	5	2	1.029	5	\$0.6871	\$4
		Gas	8/26/2013	2/12/2015	152	18	1.029	156	\$0.6871	\$107
		Gas	10/18/2013	3/20/2014	335	5	1.029	345	\$0.6871	\$237
		Gas	1/27/2014	2/12/2015	254	13	1.029	261	\$0.6871	\$180
		Gas	10/10/2013	2/12/2015	70	9	1.029	72	\$0.6871	\$49
		Gas	10/14/2013	2/12/2015	1,487	16	1.029	1,530	\$0.6871	\$1,051
		Gas	4/3/2013	10/10/2013	19	7	1.029	20	\$0.6871	\$13
		Gas	7/23/2013	8/15/2013	8	1	1.029	8	\$0.6871	\$6
		Gas	11/13/2013	2/13/2015	472	15	1.029	486	\$0.6871	\$334
		Gas	8/2/2013	2/12/2015	67	19	1.029	69	\$0.6871	\$47
		Gas	11/25/2013	2/13/2015	113	15	1.029	116	\$0.6871	\$80
		Gas	7/17/2012	2/13/2013	34	7	1.029	35	\$0.6871	\$24
		Gas	12/9/2013	2/13/2015	246	15	1.029	253	\$0.6871	\$174
		Gas	5/25/2013	2/12/2015	359	21	1.029	369	\$0.6871	\$254
		Gas	1/9/2013	2/14/2013	4	2	1.029	4	\$0.6871	\$3
		Gas	2/12/2014	2/12/2015	762	12	1.029	784	\$0.6871	\$539
		Gas	5/27/2013	2/13/2015	339	20	1.029	349	\$0.6871	\$240
		Gas	6/29/2011	2/12/2015	112	20	1.029	115	\$0.6871	\$79
		Gas	1/18/2013	11/12/2013	29	10	1.029	30	\$0.6871	\$21
		Gas	3/14/2013	2/14/2015	110	12	1.029	113	\$0.6871	\$78
		Gas	12/13/2012	5/14/2013	9	5	1.029	9	\$0.6871	\$6
		Gas	3/13/2013	4/15/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	11/13/2012	12/13/2012	19	1	1.029	20	\$0.6871	\$13
		Gas	10/11/2013	2/14/2015	35	5	1.029	36	\$0.6871	\$25
		Gas	12/12/2013	2/14/2015	1,445	14	1.029	1,487	\$0.6871	\$1,022
		Gas	1/12/2012	2/10/2012	7	1	1.029	7	\$0.6871	\$5
		Gas	6/15/2012	4/16/2013	50	10	1.029	51	\$0.6871	\$35
		Gas	11/26/2012	3/14/2013	139	1	1.029	143	\$0.6871	\$98
		Gas	10/1/2013	2/20/2015	580	16	1.029	597	\$0.6871	\$410
		Gas	10/22/2012	12/17/2012	5	1	1.029	5	\$0.6871	\$4
		Gas	8/21/2012	12/17/2012	14	4	1.029	14	\$0.6871	\$10
		Gas	1/21/2014	12/17/2014	3	3	1.029	3	\$0.6871	\$2
		Gas	12/16/2013	3/19/2014	400	3	1.029	412	\$0.6871	\$283
		Gas	7/1/2013	2/19/2015	607	19	1.029	625	\$0.6871	\$429
		Gas	1/18/2013	10/20/2014	136	19	1.029	140	\$0.6871	\$96
		Gas	12/27/2012	5/20/2014	85	17	1.029	87	\$0.6871	\$60
		Gas	8/29/2012	12/17/2014	13	4	1.029	13	\$0.6871	\$9
		Gas	2/4/2014	2/18/2015	159	12	1.029	164	\$0.6871	\$112
		Gas	6/16/2013	3/19/2014	293	9	1.029	301	\$0.6871	\$207
		Gas	2/14/2014	12/16/2014	32	9	1.029	33	\$0.6871	\$23
		Gas	11/14/2013	12/16/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/28/2014	2/17/2015	80	10	1.029	82	\$0.6871	\$57
		Gas	1/21/2014	1/20/2015	37	7	1.029	38	\$0.6871	\$26
		Gas	2/5/2014	3/20/2014	29	2	1.029	30	\$0.6871	\$21
		Gas	9/19/2012	10/20/2014	4	4	1.029	4	\$0.6871	\$3
		Gas	6/20/2013	10/19/2013	25	4	1.029	26	\$0.6871	\$18
		Gas	10/19/2012	1/20/2015	375	7	1.029	386	\$0.6871	\$265
		Gas	6/30/2012	7/23/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	1/11/2012	1/20/2015	24	24	1.029	25	\$0.6871	\$17
		Gas	1/21/2014	2/20/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	4/23/2012	5/23/2012	23	1	1.029	24	\$0.6871	\$16
		Gas	1/24/2014	11/20/2014	47	8	1.029	48	\$0.6871	\$33
		Gas	8/31/2012	12/22/2014	119	22	1.029	122	\$0.6871	\$84
		Gas	1/20/2014	1/23/2015	30	12	1.029	31	\$0.6871	\$21
		Gas	11/13/2013	1/23/2014	6	3	1.029	6	\$0.6871	\$4
		Gas	6/25/2012	12/23/2014	164	29	1.029	169	\$0.6871	\$116
		Gas	8/24/2012	1/26/2015	11	11	1.029	11	\$0.6871	\$8
		Gas	12/22/2011	1/29/2015	55	37	1.029	57	\$0.6871	\$39
		Gas	1/28/2014	1/29/2015	167	12	1.029	172	\$0.6871	\$118
		Gas	11/15/2013	1/29/2015	347	14	1.029	357	\$0.6871	\$245
		Gas	7/1/2013	8/28/2013	23	2	1.029	24	\$0.6871	\$16
		Gas	4/1/2013	1/30/2015	123	21	1.029	127	\$0.6871	\$87
		Gas	9/12/2013	1/30/2015	385	10	1.029	396	\$0.6871	\$272
		Gas	1/2/2014	1/29/2014	74	1	1.029	76	\$0.6871	\$52
		Gas	2/27/2014	12/29/2014	10	8	1.029	10	\$0.6871	\$7
		Gas	9/17/2013	1/30/2015	898	16	1.029	924	\$0.6871	\$635
		Gas	7/29/2013	1/30/2015	10	10	1.029	10	\$0.6871	\$7
		Gas	1/13/2014	1/29/2015	160	12	1.029	165	\$0.6871	\$113
		Gas	8/24/2012	12/27/2012	278	5	1.029	286	\$0.6871	\$197
		Gas	9/1/2013	2/2/2015	679	16	1.029	699	\$0.6871	\$480
		Gas	8/30/2013	2/1/2015	9	7	1.029	9	\$0.6871	\$6
		Gas	6/1/2013	2/1/2015	37	19	1.029	38	\$0.6871	\$26

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	6/28/2013	8/29/2014	5	5	1.029	5	\$0.6871	\$4
		Gas	8/30/2012	2/1/2015	11	11	1.029	11	\$0.6871	\$8
		Gas	9/30/2013	6/2/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	12/5/2012	12/31/2012	34	1	1.029	35	\$0.6871	\$24
		Gas	10/1/2012	2/2/2015	7	7	1.029	7	\$0.6871	\$5
		Gas	8/27/2013	2/3/2015	10	10	1.029	10	\$0.6871	\$7
		Gas	8/1/2013	9/3/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	1/28/2014	2/2/2015	352	6	1.029	362	\$0.6871	\$249
		Gas	1/17/2014	2/5/2015	86	13	1.029	88	\$0.6871	\$61
		Gas	10/3/2013	2/5/2015	141	15	1.029	145	\$0.6871	\$100
		Gas	12/2/2013	2/5/2015	726	14	1.029	747	\$0.6871	\$513
		Gas	5/21/2013	7/2/2014	3	2	1.029	3	\$0.6871	\$2
		Gas	10/28/2013	10/3/2014	39	11	1.029	40	\$0.6871	\$28
		Gas	2/1/2012	2/5/2015	9	9	1.029	9	\$0.6871	\$6
		Gas	8/28/2012	6/5/2014	57	9	1.029	59	\$0.6871	\$40
		Gas	10/3/2013	2/5/2015	250	15	1.029	257	\$0.6871	\$177
		Gas	9/12/2013	2/5/2015	981	16	1.029	1,009	\$0.6871	\$694
		Gas	1/3/2012	4/4/2012	7	3	1.029	7	\$0.6871	\$5
		Gas	1/16/2014	3/10/2014	6	2	1.029	6	\$0.6871	\$4
		Gas	12/31/2012	1/8/2013	5	1	1.029	5	\$0.6871	\$4
		Gas	1/23/2013	6/9/2014	42	16	1.029	43	\$0.6871	\$30
		Gas	1/22/2014	2/7/2015	210	13	1.029	216	\$0.6871	\$148
		Gas	2/6/2012	1/8/2015	27	22	1.029	28	\$0.6871	\$19
		Gas	9/1/2013	2/7/2015	357	18	1.029	367	\$0.6871	\$252
		Gas	5/21/2012	2/7/2015	33	2	1.029	34	\$0.6871	\$23
		Gas	5/10/2012	11/5/2012	5	4	1.029	5	\$0.6871	\$4
		Gas	10/2/2013	3/11/2014	410	6	1.029	422	\$0.6871	\$290
		Gas	11/28/2013	3/11/2014	3	1	1.029	3	\$0.6871	\$2
		Gas	2/10/2014	2/11/2015	372	12	1.029	383	\$0.6871	\$263
		Gas	5/1/2013	9/11/2013	29	5	1.029	30	\$0.6871	\$21
		Gas	7/3/2013	9/9/2014	727	14	1.029	748	\$0.6871	\$514
		Gas	8/20/2013	3/11/2014	581	7	1.029	598	\$0.6871	\$411
		Gas	1/10/2012	4/10/2012	2	2	1.029	2	\$0.6871	\$1
		Gas	4/10/2013	6/11/2013	24	2	1.029	25	\$0.6871	\$17
		Gas	5/9/2013	9/10/2013	49	4	1.029	50	\$0.6871	\$35
		Gas	4/10/2013	2/11/2015	70	22	1.029	72	\$0.6871	\$49
		Gas	10/15/2013	4/21/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	2/15/2014	1/13/2015	31	2	1.029	32	\$0.6871	\$22
		Gas	2/21/2014	2/12/2015	375	12	1.029	386	\$0.6871	\$265
		Gas	11/1/2012	2/13/2013	99	4	1.029	102	\$0.6871	\$70
		Gas	10/11/2012	2/12/2015	1,396	28	1.029	1,436	\$0.6871	\$987
		Gas	3/27/2013	10/11/2013	20	7	1.029	21	\$0.6871	\$14
		Gas	8/20/2013	9/13/2013	5	1	1.029	5	\$0.6871	\$4
		Gas	6/13/2013	2/13/2015	728	20	1.029	749	\$0.6871	\$515
		Gas	6/14/2012	3/13/2013	169	9	1.029	174	\$0.6871	\$119
		Gas	10/2/2012	2/14/2013	34	5	1.029	35	\$0.6871	\$24
		Gas	8/23/2013	9/13/2013	7	1	1.029	7	\$0.6871	\$5
		Gas	5/1/2013	2/13/2015	384	22	1.029	395	\$0.6871	\$271
		Gas	2/27/2012	8/13/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	6/20/2013	1/15/2015	12	8	1.029	12	\$0.6871	\$8
		Gas	8/17/2012	12/13/2012	37	4	1.029	38	\$0.6871	\$26
		Gas	2/27/2014	2/13/2015	154	12	1.029	158	\$0.6871	\$109
		Gas	11/14/2012	2/14/2015	240	27	1.029	247	\$0.6871	\$170
		Gas	10/15/2013	2/14/2015	55	16	1.029	57	\$0.6871	\$39
		Gas	12/13/2013	3/17/2014	73	3	1.029	75	\$0.6871	\$52
		Gas	1/14/2014	2/17/2015	535	10	1.029	551	\$0.6871	\$378
		Gas	1/16/2012	2/18/2015	424	14	1.029	436	\$0.6871	\$300
		Gas	5/16/2013	11/15/2013	2	2	1.029	2	\$0.6871	\$1
		Gas	7/12/2013	7/21/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/6/2014	2/20/2015	213	12	1.029	219	\$0.6871	\$151
		Gas	8/9/2013	2/19/2015	562	18	1.029	578	\$0.6871	\$397
		Gas	10/1/2013	8/19/2014	285	10	1.029	293	\$0.6871	\$202
		Gas	10/17/2013	2/20/2015	1,071	8	1.029	1,102	\$0.6871	\$757
		Gas	2/28/2014	2/19/2015	733	10	1.029	754	\$0.6871	\$518
		Gas	1/18/2012	10/17/2014	397	6	1.029	409	\$0.6871	\$281
		Gas	3/8/2013	2/19/2015	27	22	1.029	28	\$0.6871	\$19
		Gas	6/18/2013	2/19/2015	22	16	1.029	23	\$0.6871	\$16
		Gas	10/31/2013	11/18/2014	196	10	1.029	202	\$0.6871	\$139
		Gas	7/23/2013	2/19/2015	198	18	1.029	204	\$0.6871	\$140
		Gas	5/20/2013	2/19/2015	286	12	1.029	294	\$0.6871	\$202
		Gas	4/18/2012	5/18/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	12/9/2013	12/17/2013	27	1	1.029	28	\$0.6871	\$19
		Gas	10/3/2013	11/18/2013	6	1	1.029	6	\$0.6871	\$4

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	1/17/2013	2/16/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	11/4/2013	2/18/2015	1,479	15	1.029	1,522	\$0.6871	\$1,046
		Gas	11/14/2013	2/18/2015	54	14	1.029	56	\$0.6871	\$38
		Gas	6/26/2013	2/18/2015	475	18	1.029	489	\$0.6871	\$336
		Gas	10/17/2013	2/18/2015	667	9	1.029	686	\$0.6871	\$472
		Gas	12/10/2013	3/19/2014	24	3	1.029	25	\$0.6871	\$17
		Gas	12/23/2011	12/14/2012	1,933	9	1.029	1,989	\$0.6871	\$1,367
		Gas	7/2/2013	1/20/2015	16	12	1.029	16	\$0.6871	\$11
		Gas	1/29/2013	9/21/2014	51	13	1.029	52	\$0.6871	\$36
		Gas	8/2/2013	10/22/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/24/2000	1/23/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	12/21/2011	1/22/2015	1,426	36	1.029	1,467	\$0.6871	\$1,008
		Gas	5/9/2013	1/22/2015	1,256	18	1.029	1,292	\$0.6871	\$888
		Gas	2/4/2013	1/22/2015	209	23	1.029	215	\$0.6871	\$148
		Gas	1/9/2014	2/20/2014	57	1	1.029	59	\$0.6871	\$40
		Gas	6/26/2012	1/22/2015	164	30	1.029	169	\$0.6871	\$116
		Gas	9/20/2013	1/23/2014	87	4	1.029	90	\$0.6871	\$62
		Gas	10/28/2013	1/23/2014	4	3	1.029	4	\$0.6871	\$3
		Gas	5/31/2013	6/21/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	8/22/2013	8/27/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	12/22/2011	1/29/2015	78	37	1.029	80	\$0.6871	\$55
		Gas	1/28/2014	1/29/2015	8	8	1.029	8	\$0.6871	\$6
		Gas	1/13/2014	1/30/2015	203	13	1.029	209	\$0.6871	\$144
		Gas	3/28/2012	9/26/2014	5	5	1.029	5	\$0.6871	\$4
		Gas	5/2/2013	3/28/2014	94	7	1.029	97	\$0.6871	\$66
		Gas	4/12/2013	1/29/2015	98	21	1.029	101	\$0.6871	\$69
		Gas	2/19/2005	7/29/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	2/28/2014	7/29/2014	22	5	1.029	23	\$0.6871	\$16
		Gas	9/14/2012	9/27/2013	204	10	1.029	210	\$0.6871	\$144
		Gas	6/30/2013	1/30/2015	442	18	1.029	455	\$0.6871	\$313
		Gas	8/30/2012	1/2/2014	11	9	1.029	11	\$0.6871	\$8
		Gas	12/28/2011	2/1/2015	24	8	1.029	25	\$0.6871	\$17
		Gas	1/5/2014	1/2/2015	24	11	1.029	25	\$0.6871	\$17
		Gas	1/31/2014	12/2/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	9/2/2013	12/2/2014	1,058	12	1.029	1,089	\$0.6871	\$748
		Gas	2/12/2003	2/1/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	1/30/2014	3/2/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	12/2/2013	2/3/2015	13	13	1.029	13	\$0.6871	\$9
		Gas	12/6/2012	2/3/2015	53	9	1.029	55	\$0.6871	\$37
		Gas	2/9/2001	2/3/2015	155	29	1.029	159	\$0.6871	\$110
		Gas	12/2/2013	1/31/2014	347	2	1.029	357	\$0.6871	\$245
		Gas	1/3/2013	12/2/2014	23	14	1.029	24	\$0.6871	\$16
		Gas	6/13/2013	2/13/2015	51	17	1.029	52	\$0.6871	\$36
		Gas	9/13/2013	10/31/2013	18	2	1.029	19	\$0.6871	\$13
		Gas	3/4/2013	4/2/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	10/3/2013	2/5/2015	287	12	1.029	295	\$0.6871	\$203
		Gas	6/29/2013	9/4/2013	82	3	1.029	84	\$0.6871	\$58
		Gas	4/1/2013	2/5/2015	567	19	1.029	583	\$0.6871	\$401
		Gas	11/16/2012	8/4/2014	12	5	1.029	12	\$0.6871	\$8
		Gas	10/8/2012	8/5/2013	3,002	10	1.029	3,089	\$0.6871	\$2,122
		Gas	5/6/2013	2/5/2015	82	20	1.029	84	\$0.6871	\$58
		Gas	3/5/2012	12/4/2014	3	3	1.029	3	\$0.6871	\$2
		Gas	12/28/2013	2/5/2015	13	11	1.029	13	\$0.6871	\$9
		Gas	9/12/2012	11/1/2013	6	2	1.029	6	\$0.6871	\$4
		Gas	8/3/2012	2/5/2015	6	6	1.029	6	\$0.6871	\$4
		Gas	12/4/2013	2/5/2015	272	14	1.029	280	\$0.6871	\$192
		Gas	5/8/2013	2/5/2015	823	19	1.029	847	\$0.6871	\$582
		Gas	12/4/2013	2/5/2015	493	14	1.029	507	\$0.6871	\$349
		Gas	3/8/2013	2/5/2015	501	21	1.029	516	\$0.6871	\$354
		Gas	1/5/2012	5/6/2013	43	10	1.029	44	\$0.6871	\$30
		Gas	10/21/2013	2/6/2015	719	15	1.029	740	\$0.6871	\$508
		Gas	11/22/2013	12/5/2014	43	12	1.029	44	\$0.6871	\$30
		Gas	7/1/2012	2/6/2015	33	10	1.029	34	\$0.6871	\$23
		Gas	12/13/2013	2/9/2015	65	14	1.029	67	\$0.6871	\$46
		Gas	7/8/2012	2/9/2015	4	4	1.029	4	\$0.6871	\$3
		Gas	11/4/2013	12/5/2013	4	1	1.029	4	\$0.6871	\$3
		Gas	7/22/2013	8/7/2014	256	13	1.029	263	\$0.6871	\$181
		Gas	8/2/2013	2/7/2015	582	15	1.029	599	\$0.6871	\$411
		Gas	6/7/2013	11/5/2013	3	3	1.029	3	\$0.6871	\$2
		Gas	9/16/2013	2/7/2015	60	9	1.029	62	\$0.6871	\$42
		Gas	9/17/2013	2/7/2015	403	17	1.029	415	\$0.6871	\$285
		Gas	10/7/2013	2/7/2015	1,882	16	1.029	1,937	\$0.6871	\$1,331
		Gas	9/10/2013	2/7/2015	216	17	1.029	222	\$0.6871	\$153

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	3/29/2012	1/8/2015	17	17	1.029	17	\$0.6871	\$12
		Gas	7/29/2013	10/6/2014	545	13	1.029	561	\$0.6871	\$385
		Gas	6/19/2013	2/7/2015	724	15	1.029	745	\$0.6871	\$512
		Gas	1/6/2012	3/6/2012	22	2	1.029	23	\$0.6871	\$16
		Gas	12/13/2013	2/11/2015	55	14	1.029	57	\$0.6871	\$39
		Gas	5/9/2012	6/11/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	12/3/2013	2/10/2015	92	13	1.029	95	\$0.6871	\$65
		Gas	7/10/2013	2/11/2015	950	19	1.029	978	\$0.6871	\$672
		Gas	3/8/2012	7/10/2013	2	2	1.029	2	\$0.6871	\$1
		Gas	5/31/2013	6/10/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	8/8/2012	2/10/2015	53	16	1.029	55	\$0.6871	\$37
		Gas	9/27/2012	1/12/2015	8	5	1.029	8	\$0.6871	\$6
		Gas	7/10/2013	1/9/2014	6	5	1.029	6	\$0.6871	\$4
		Gas	5/8/2013	2/10/2015	498	21	1.029	512	\$0.6871	\$352
		Gas	12/11/2013	10/9/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	12/2/2013	1/30/2015	346	14	1.029	356	\$0.6871	\$245
		Gas	10/11/2013	2/11/2015	1,237	14	1.029	1,273	\$0.6871	\$875
		Gas	1/8/2014	2/12/2015	1,655	8	1.029	1,703	\$0.6871	\$1,170
		Gas	8/14/2012	5/13/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	10/9/2012	10/11/2012	12	1	1.029	12	\$0.6871	\$8
		Gas	4/11/2013	2/12/2015	672	10	1.029	691	\$0.6871	\$475
		Gas	1/11/2012	2/12/2015	2,503	29	1.029	2,576	\$0.6871	\$1,770
		Gas	2/10/2012	6/12/2014	23	12	1.029	24	\$0.6871	\$16
		Gas	2/5/2013	8/13/2013	66	6	1.029	68	\$0.6871	\$47
		Gas	12/2/2013	2/13/2015	2,768	15	1.029	2,848	\$0.6871	\$1,957
		Gas	7/15/2013	2/12/2014	122	7	1.029	126	\$0.6871	\$86
		Gas	12/9/2013	2/13/2015	181	14	1.029	186	\$0.6871	\$128
		Gas	9/28/2013	11/12/2013	74	2	1.029	76	\$0.6871	\$52
		Gas	11/22/2013	2/13/2015	164	15	1.029	169	\$0.6871	\$116
		Gas	8/15/2013	9/13/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	12/12/2012	1/14/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	8/16/2013	2/13/2015	540	18	1.029	556	\$0.6871	\$382
		Gas	1/11/2012	2/10/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	12/11/2012	8/13/2014	4	4	1.029	4	\$0.6871	\$3
		Gas	8/8/2013	8/16/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	1/12/2012	2/13/2015	275	37	1.029	283	\$0.6871	\$194
		Gas	9/14/2012	9/16/2013	52	12	1.029	54	\$0.6871	\$37
		Gas	12/13/2012	2/14/2015	5	5	1.029	5	\$0.6871	\$4
		Gas	9/5/2013	12/12/2013	51	4	1.029	52	\$0.6871	\$36
		Gas	1/15/2014	2/12/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	11/9/2012	11/12/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	6/14/2012	7/16/2014	17	17	1.029	17	\$0.6871	\$12
		Gas	3/15/2013	2/17/2015	24	16	1.029	25	\$0.6871	\$17
		Gas	8/30/2012	2/15/2013	53	6	1.029	55	\$0.6871	\$37
		Gas	7/17/2013	11/13/2014	390	14	1.029	401	\$0.6871	\$276
		Gas	10/16/2013	12/15/2014	744	9	1.029	766	\$0.6871	\$526
		Gas	7/21/2013	2/19/2015	478	14	1.029	492	\$0.6871	\$338
		Gas	2/16/2013	1/19/2015	2	2	1.029	2	\$0.6871	\$1
		Gas	8/20/2013	2/19/2015	189	7	1.029	194	\$0.6871	\$134
		Gas	7/5/2013	2/20/2015	778	18	1.029	801	\$0.6871	\$550
		Gas	11/18/2013	4/21/2014	59	3	1.029	61	\$0.6871	\$42
		Gas	2/28/2014	2/19/2015	289	10	1.029	297	\$0.6871	\$204
		Gas	1/22/2014	10/20/2014	207	8	1.029	213	\$0.6871	\$146
		Gas	10/1/2013	2/19/2015	1,115	16	1.029	1,147	\$0.6871	\$788
		Gas	8/2/2012	2/18/2015	203	29	1.029	209	\$0.6871	\$144
		Gas	1/17/2012	12/17/2014	10	8	1.029	10	\$0.6871	\$7
		Gas	10/17/2013	11/15/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	12/30/2013	2/18/2015	70	11	1.029	72	\$0.6871	\$49
		Gas	12/16/2013	2/17/2015	132	6	1.029	136	\$0.6871	\$93
		Gas	11/15/2013	2/18/2015	769	14	1.029	791	\$0.6871	\$544
		Gas	7/17/2013	8/20/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/14/2012	3/19/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	2/7/2014	2/14/2014	1	1	1.029	1	\$0.6871	\$1
		Gas	7/19/2013	1/20/2015	12	12	1.029	12	\$0.6871	\$8
		Gas	12/19/2013	3/21/2014	7	3	1.029	7	\$0.6871	\$5
		Gas	7/21/2013	10/22/2014	231	15	1.029	238	\$0.6871	\$163
		Gas	7/21/2000	1/20/2012	0	1	1.029	0	\$0.6871	\$0
		Gas	5/22/2013	11/19/2014	17	5	1.029	17	\$0.6871	\$12
		Gas	9/11/2013	10/22/2013	8	2	1.029	8	\$0.6871	\$6
		Gas	2/20/2012	11/19/2014	28	18	1.029	29	\$0.6871	\$20
		Gas	8/22/2012	12/19/2012	11	4	1.029	11	\$0.6871	\$8
		Gas	12/26/2012	1/23/2014	489	13	1.029	503	\$0.6871	\$346
		Gas	1/25/2013	9/24/2014	2	2	1.029	2	\$0.6871	\$1

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	10/23/2013	1/29/2015	1,042	15	1.029	1,072	\$0.6871	\$737
		Gas	10/23/2013	12/26/2014	244	9	1.029	251	\$0.6871	\$173
		Gas	6/30/2013	1/29/2015	1,212	19	1.029	1,247	\$0.6871	\$857
		Gas	12/4/2013	1/28/2015	26	13	1.029	27	\$0.6871	\$18
		Gas	1/11/2012	7/30/2014	2,257	2	1.029	2,322	\$0.6871	\$1,596
		Gas	6/27/2013	2/27/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	2/26/2014	1/29/2015	13	11	1.029	13	\$0.6871	\$9
		Gas	6/26/2013	11/30/2014	5	5	1.029	5	\$0.6871	\$4
		Gas	1/28/2013	3/27/2013	4	2	1.029	4	\$0.6871	\$3
		Gas	9/26/2012	1/29/2015	107	27	1.029	110	\$0.6871	\$76
		Gas	9/28/2012	10/29/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	8/30/2013	2/2/2015	283	16	1.029	291	\$0.6871	\$200
		Gas	4/2/2013	2/5/2015	42	21	1.029	43	\$0.6871	\$30
		Gas	1/8/2013	3/5/2013	53	2	1.029	55	\$0.6871	\$37
		Gas	3/8/2013	2/5/2015	1,446	21	1.029	1,488	\$0.6871	\$1,022
		Gas	10/3/2013	2/5/2015	15	2	1.029	15	\$0.6871	\$11
		Gas	3/29/2013	5/5/2013	7	1	1.029	7	\$0.6871	\$5
		Gas	1/22/2014	1/6/2015	61	11	1.029	63	\$0.6871	\$43
		Gas	12/11/2012	2/1/2013	8	2	1.029	8	\$0.6871	\$6
		Gas	8/6/2013	2/4/2014	17	5	1.029	17	\$0.6871	\$12
		Gas	12/4/2013	2/5/2015	17	11	1.029	17	\$0.6871	\$12
		Gas	12/4/2012	2/5/2015	195	10	1.029	201	\$0.6871	\$138
		Gas	4/3/2013	7/7/2014	485	13	1.029	499	\$0.6871	\$343
		Gas	3/20/2013	3/6/2014	39	10	1.029	40	\$0.6871	\$28
		Gas	1/3/2012	2/5/2015	148	4	1.029	152	\$0.6871	\$105
		Gas	5/2/2012	5/6/2013	96	12	1.029	99	\$0.6871	\$68
		Gas	8/6/2013	10/3/2013	13	2	1.029	13	\$0.6871	\$9
		Gas	1/2/2014	2/5/2015	58	13	1.029	60	\$0.6871	\$41
		Gas	2/19/2014	8/7/2014	22	5	1.029	23	\$0.6871	\$16
		Gas	6/1/2013	3/10/2014	145	10	1.029	149	\$0.6871	\$103
		Gas	12/6/2012	6/9/2014	21	9	1.029	22	\$0.6871	\$15
		Gas	8/2/2013	8/7/2013	7	1	1.029	7	\$0.6871	\$5
		Gas	7/1/2013	9/9/2013	14	3	1.029	14	\$0.6871	\$10
		Gas	5/7/2012	11/6/2013	46	16	1.029	47	\$0.6871	\$33
		Gas	12/2/2013	2/11/2015	3,446	15	1.029	3,546	\$0.6871	\$2,436
		Gas	11/20/2012	10/9/2013	36	11	1.029	37	\$0.6871	\$25
		Gas	8/8/2012	10/10/2012	4	2	1.029	4	\$0.6871	\$3
		Gas	3/15/2007	2/9/2012	317	1	1.029	326	\$0.6871	\$224
		Gas	11/30/2013	7/9/2014	127	8	1.029	131	\$0.6871	\$90
		Gas	8/8/2012	9/10/2012	2	1	1.029	2	\$0.6871	\$1
		Gas	5/31/2013	2/10/2015	430	21	1.029	442	\$0.6871	\$304
		Gas	6/21/2013	2/11/2015	586	20	1.029	603	\$0.6871	\$414
		Gas	10/23/2012	1/10/2013	202	3	1.029	208	\$0.6871	\$143
		Gas	11/6/2013	2/10/2015	90	15	1.029	93	\$0.6871	\$64
		Gas	2/19/2014	2/12/2015	104	10	1.029	107	\$0.6871	\$74
		Gas	2/13/2013	3/12/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	11/8/2013	2/12/2015	3	3	1.029	3	\$0.6871	\$2
		Gas	8/5/2013	2/12/2015	2,282	19	1.029	2,348	\$0.6871	\$1,613
		Gas	10/4/2013	7/14/2014	149	10	1.029	153	\$0.6871	\$105
		Gas	4/15/2013	7/14/2014	11	10	1.029	11	\$0.6871	\$8
		Gas	9/12/2013	4/11/2014	533	7	1.029	548	\$0.6871	\$377
		Gas	5/1/2013	7/15/2014	386	11	1.029	397	\$0.6871	\$273
		Gas	1/16/2014	2/12/2015	366	10	1.029	377	\$0.6871	\$259
		Gas	1/12/2012	2/12/2015	46	26	1.029	47	\$0.6871	\$33
		Gas	6/28/2013	2/13/2015	364	20	1.029	375	\$0.6871	\$257
		Gas	4/29/2012	6/13/2012	7	1	1.029	7	\$0.6871	\$5
		Gas	5/15/2012	6/14/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	12/13/2013	2/14/2015	189	5	1.029	194	\$0.6871	\$134
		Gas	2/13/2012	11/13/2013	45	21	1.029	46	\$0.6871	\$32
		Gas	3/14/2012	11/13/2013	69	20	1.029	71	\$0.6871	\$49
		Gas	2/27/2014	2/14/2015	23	9	1.029	24	\$0.6871	\$16
		Gas	9/30/2013	2/14/2015	746	13	1.029	768	\$0.6871	\$527
		Gas	2/25/2014	2/14/2015	504	12	1.029	519	\$0.6871	\$356
		Gas	12/10/2012	5/16/2013	3	2	1.029	3	\$0.6871	\$2
		Gas	9/27/2013	2/17/2015	203	16	1.029	209	\$0.6871	\$144
		Gas	6/16/2013	2/17/2015	160	16	1.029	165	\$0.6871	\$113
		Gas	2/15/2012	2/17/2015	96	35	1.029	99	\$0.6871	\$68
		Gas	8/1/2013	2/17/2015	113	18	1.029	116	\$0.6871	\$80
		Gas	1/18/2012	2/15/2012	9	1	1.029	9	\$0.6871	\$6
		Gas	2/14/2012	6/19/2012	17	4	1.029	17	\$0.6871	\$12
		Gas	4/8/2013	5/20/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/6/2014	11/17/2014	145	8	1.029	149	\$0.6871	\$103
		Gas	2/18/2014	2/17/2015	743	11	1.029	765	\$0.6871	\$525

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	8/25/2012	2/18/2015	211	29	1.029	217	\$0.6871	\$149
		Gas	11/21/2013	2/17/2015	64	14	1.029	66	\$0.6871	\$45
		Gas	12/20/2011	5/22/2012	385	5	1.029	396	\$0.6871	\$272
		Gas	12/26/2012	1/22/2015	68	23	1.029	70	\$0.6871	\$48
		Gas	2/26/2014	4/22/2014	13	2	1.029	13	\$0.6871	\$9
		Gas	8/1/2013	1/22/2015	775	17	1.029	797	\$0.6871	\$548
		Gas	9/21/2012	1/22/2013	3	3	1.029	3	\$0.6871	\$2
		Gas	1/2/2014	1/22/2015	111	12	1.029	114	\$0.6871	\$78
		Gas	11/19/2013	12/20/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	10/22/2013	1/22/2015	2,496	13	1.029	2,568	\$0.6871	\$1,765
		Gas	10/22/2012	1/22/2015	69	13	1.029	71	\$0.6871	\$49
		Gas	11/7/2012	1/22/2015	2,138	26	1.029	2,200	\$0.6871	\$1,512
		Gas	5/7/2013	1/22/2015	24	13	1.029	25	\$0.6871	\$17
		Gas	12/20/2011	1/22/2015	164	36	1.029	169	\$0.6871	\$116
		Gas	6/7/2013	1/22/2015	77	19	1.029	79	\$0.6871	\$54
		Gas	4/1/2012	6/21/2013	72	4	1.029	74	\$0.6871	\$51
		Gas	11/13/2013	12/20/2013	59	1	1.029	61	\$0.6871	\$42
		Gas	2/2/2012	12/23/2014	166	7	1.029	171	\$0.6871	\$117
		Gas	5/11/2013	5/27/2013	5	1	1.029	5	\$0.6871	\$4
		Gas	5/31/2013	1/29/2015	454	20	1.029	467	\$0.6871	\$321
		Gas	5/2/2013	5/28/2013	4	1	1.029	4	\$0.6871	\$3
		Gas	12/22/2011	1/29/2015	27	11	1.029	28	\$0.6871	\$19
		Gas	8/27/2013	9/25/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	12/9/2013	1/29/2015	452	9	1.029	465	\$0.6871	\$320
		Gas	8/29/2013	6/27/2014	118	9	1.029	121	\$0.6871	\$83
		Gas	7/10/2012	9/28/2012	5	2	1.029	5	\$0.6871	\$4
		Gas	12/15/2008	1/30/2015	820	16	1.029	844	\$0.6871	\$580
		Gas	7/29/2013	8/28/2013	1,197	17	1.029	1,232	\$0.6871	\$846
		Gas	1/30/2014	1/30/2015	47	11	1.029	48	\$0.6871	\$33
		Gas	7/1/2013	1/30/2015	243	18	1.029	250	\$0.6871	\$172
		Gas	11/26/2013	1/29/2014	15	1	1.029	15	\$0.6871	\$11
		Gas	8/1/2013	10/28/2013	7	3	1.029	7	\$0.6871	\$5
		Gas	12/17/2012	3/27/2013	18	4	1.029	19	\$0.6871	\$13
		Gas	2/28/2013	5/31/2013	9	3	1.029	9	\$0.6871	\$6
		Gas	11/30/2012	1/2/2014	5	5	1.029	5	\$0.6871	\$4
		Gas	6/28/2013	7/31/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	4/10/1999	2/1/2012	2	1	1.029	2	\$0.6871	\$1
		Gas	3/1/2013	2/2/2015	47	21	1.029	48	\$0.6871	\$33
		Gas	7/1/2013	2/2/2015	38	18	1.029	39	\$0.6871	\$27
		Gas	8/30/2012	10/1/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	12/30/2011	1/31/2012	1	1	1.029	1	\$0.6871	\$1
		Gas	8/31/2012	8/4/2014	6	6	1.029	6	\$0.6871	\$4
		Gas	5/21/2013	3/5/2014	83	9	1.029	85	\$0.6871	\$59
		Gas	7/3/2013	3/5/2014	3	1	1.029	3	\$0.6871	\$2
		Gas	10/23/2012	12/3/2012	6	2	1.029	6	\$0.6871	\$4
		Gas	6/5/2013	1/6/2014	42	6	1.029	43	\$0.6871	\$30
		Gas	6/5/2013	2/5/2015	764	19	1.029	786	\$0.6871	\$540
		Gas	4/4/2013	2/5/2015	1,284	21	1.029	1,321	\$0.6871	\$908
		Gas	7/3/2013	2/5/2015	2,529	18	1.029	2,602	\$0.6871	\$1,788
		Gas	11/4/2012	2/5/2015	32	23	1.029	33	\$0.6871	\$23
		Gas	10/4/2013	3/6/2014	378	4	1.029	389	\$0.6871	\$267
		Gas	10/2/2012	2/5/2015	130	24	1.029	134	\$0.6871	\$92
		Gas	6/6/2012	5/6/2013	43	7	1.029	44	\$0.6871	\$30
		Gas	9/5/2013	2/5/2015	4	4	1.029	4	\$0.6871	\$3
		Gas	1/3/2014	4/3/2014	3	2	1.029	3	\$0.6871	\$2
		Gas	9/27/2013	5/6/2014	2,663	6	1.029	2,740	\$0.6871	\$1,883
		Gas	11/4/2013	12/5/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	10/3/2013	8/5/2014	44	9	1.029	45	\$0.6871	\$31
		Gas	12/5/2013	4/4/2014	43	3	1.029	44	\$0.6871	\$30
		Gas	6/6/2012	9/5/2014	3	3	1.029	3	\$0.6871	\$2
		Gas	10/21/2013	11/4/2013	3	1	1.029	3	\$0.6871	\$2
		Gas	1/6/2012	3/6/2012	31	2	1.029	32	\$0.6871	\$22
		Gas	10/7/2013	2/7/2015	236	16	1.029	243	\$0.6871	\$167
		Gas	1/23/2014	2/7/2015	351	13	1.029	361	\$0.6871	\$248
		Gas	3/11/2002	2/5/2013	2,098	11	1.029	2,159	\$0.6871	\$1,483
		Gas	5/31/2013	3/10/2014	446	10	1.029	459	\$0.6871	\$315
		Gas	4/8/2013	1/8/2015	3	3	1.029	3	\$0.6871	\$2
		Gas	9/1/2013	2/10/2015	132	18	1.029	136	\$0.6871	\$93
		Gas	5/17/2013	2/11/2015	1,473	21	1.029	1,516	\$0.6871	\$1,041
		Gas	10/25/2013	12/10/2014	1,588	12	1.029	1,634	\$0.6871	\$1,123
		Gas	10/10/2012	2/6/2013	35	4	1.029	36	\$0.6871	\$25
		Gas	1/9/2012	2/10/2015	2,786	28	1.029	2,867	\$0.6871	\$1,970
		Gas	9/15/2005	2/10/2015	14	12	1.029	14	\$0.6871	\$10

PREMISE	METER	SERVICE	READING FROM	READING TO	CONSUMPTION	RDG ROWS	THERM FACTOR	THERMS	RATE	VALUE
		Gas	11/27/2013	2/11/2015	357	15	1.029	367	\$0.6871	\$252
		Gas	1/12/2014	2/11/2015	2	2	1.029	2	\$0.6871	\$1
		Gas	1/10/2012	2/11/2015	357	36	1.029	367	\$0.6871	\$252
		Gas	1/10/2012	12/10/2012	16	10	1.029	16	\$0.6871	\$11
		Gas	10/30/2013	2/10/2015	101	14	1.029	104	\$0.6871	\$71
		Gas	2/14/2014	2/12/2015	236	12	1.029	243	\$0.6871	\$167
		Gas	8/14/2012	1/13/2015	13	13	1.029	13	\$0.6871	\$9
		Gas	10/15/2013	1/13/2014	280	3	1.029	288	\$0.6871	\$198
		Gas	4/25/2013	10/10/2013	38	6	1.029	39	\$0.6871	\$27
		Gas	10/10/2013	2/12/2015	3	3	1.029	3	\$0.6871	\$2
		Gas	8/13/2013	11/8/2014	2	2	1.029	2	\$0.6871	\$1
		Gas	6/25/2009	2/12/2015	7,697	16	1.029	7,920	\$0.6871	\$5,442
		Gas	1/14/2014	2/13/2015	239	13	1.029	246	\$0.6871	\$169
		Gas	1/12/2012	1/14/2015	622	11	1.029	640	\$0.6871	\$440
		Gas	11/1/2012	7/16/2013	9	1	1.029	9	\$0.6871	\$6
		Gas	11/11/2013	4/13/2014	164	5	1.029	169	\$0.6871	\$116
		Gas	8/23/2013	12/13/2013	34	4	1.029	35	\$0.6871	\$24
		Gas	6/27/2009	2/14/2015	19	3	1.029	20	\$0.6871	\$13
		Gas	4/25/2013	12/12/2014	124	20	1.029	128	\$0.6871	\$88
		Gas	10/2/2012	2/14/2015	55	2	1.029	57	\$0.6871	\$39
		Gas	2/25/2014	2/14/2015	90	12	1.029	93	\$0.6871	\$64
		Gas	12/5/2013	2/12/2014	40	3	1.029	41	\$0.6871	\$28
		Gas	11/12/2013	2/14/2015	60	13	1.029	62	\$0.6871	\$42
		Gas	7/16/2013	8/15/2014	9	4	1.029	9	\$0.6871	\$6
		Gas	2/14/2013	2/16/2015	25	24	1.029	26	\$0.6871	\$18
		Gas	10/24/2013	2/20/2015	1,618	15	1.029	1,665	\$0.6871	\$1,144
		Gas	5/31/2012	12/17/2014	846	20	1.029	871	\$0.6871	\$598
		Gas	10/17/2013	2/19/2015	195	12	1.029	201	\$0.6871	\$138
		Gas	8/9/2013	2/19/2015	148	18	1.029	152	\$0.6871	\$105
		Gas	3/26/2013	2/17/2015	11	9	1.029	11	\$0.6871	\$8
		Gas	2/14/2012	11/15/2012	40	9	1.029	41	\$0.6871	\$28
		Gas	9/4/2013	2/18/2015	115	17	1.029	118	\$0.6871	\$81
		Gas	4/11/2013	2/18/2015	824	21	1.029	848	\$0.6871	\$583
		Gas	10/1/2012	2/18/2015	153	28	1.029	157	\$0.6871	\$108
		Gas	2/22/2013	2/18/2015	69	23	1.029	71	\$0.6871	\$49
		Gas	10/17/2013	10/16/2014	82	11	1.029	84	\$0.6871	\$58
		Gas	4/17/2012	1/20/2015	13	13	1.029	13	\$0.6871	\$9
		Gas	10/16/2013	12/17/2014	6	6	1.029	6	\$0.6871	\$4
		Gas	11/6/2013	9/7/2014	10	8	1.029	10	\$0.6871	\$7
		Gas	9/15/2013	9/19/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	2/16/2012	11/19/2014	14	14	1.029	14	\$0.6871	\$10
		Gas	12/20/2011	1/23/2015	138	12	1.029	142	\$0.6871	\$98
		Gas	12/21/2012	3/20/2013	50	1	1.029	51	\$0.6871	\$35
		Gas	12/11/2013	12/21/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	8/21/2013	10/22/2013	1	1	1.029	1	\$0.6871	\$1
		Gas	2/14/2014	1/22/2015	389	10	1.029	400	\$0.6871	\$275
		Gas	9/30/2012	12/22/2014	331	16	1.029	341	\$0.6871	\$234
		Gas	1/23/2013	1/22/2015	89	23	1.029	92	\$0.6871	\$63
		Gas	3/12/2013	1/22/2015	811	22	1.029	835	\$0.6871	\$573
		Gas	11/5/2012	1/22/2015	64	24	1.029	66	\$0.6871	\$45
		Gas	4/30/2013	1/22/2015	694	20	1.029	714	\$0.6871	\$491
		Gas	2/21/2014	1/22/2015	808	10	1.029	831	\$0.6871	\$571
		Gas	2/18/2014	1/25/2015	36	11	1.029	37	\$0.6871	\$25
		Gas	6/27/2013	7/26/2013	2	1	1.029	2	\$0.6871	\$1
		Gas	10/31/2013	1/29/2015	232	6	1.029	239	\$0.6871	\$164
		Gas	2/28/2014	1/29/2015	121	6	1.029	125	\$0.6871	\$86
		Gas	12/27/2012	1/29/2015	25	18	1.029	26	\$0.6871	\$18

Company #	Premise #	Last Reading
49		12/7/2011
49		1/18/2012
49		2/1/2012
49		2/13/2012
49		2/13/2012
49		2/24/2012
49		3/7/2012
49		3/13/2012
49		3/15/2012
49		3/19/2012
49		3/26/2012
49		4/17/2012
49		5/3/2012
49		5/11/2012
49		5/23/2012
49		5/31/2012
49		6/8/2012
49		6/14/2012
49		6/29/2012
49		7/9/2012
49		7/11/2012
49		7/23/2012
49		8/1/2012
49		8/1/2012
49		8/6/2012
49		8/21/2012
49		8/22/2012
49		8/29/2012
49		8/29/2012
49		9/9/2012
49		9/24/2012
49		10/3/2012
49		10/17/2012
49		10/26/2012
49		10/29/2012
49		11/4/2012
49		11/7/2012
49		11/8/2012
49		11/28/2012
49		12/5/2012
49		12/10/2012
49		12/11/2012
49		12/12/2012
49		12/19/2012
49		12/24/2012
49		1/7/2013
49		1/16/2013
49		1/22/2013

Company #	Premise #	Last Reading
49		1/29/2013
49		2/11/2013
49		2/14/2013
49		2/21/2013
49		3/8/2013
49		3/26/2013
49		4/3/2013
49		4/4/2013
49		4/19/2013
49		4/25/2013
49		5/6/2013
49		5/6/2013
49		5/13/2013
49		5/14/2013
49		5/14/2013
49		5/22/2013
49		5/22/2013
49		6/18/2013
49		7/3/2013
49		7/8/2013
49		7/10/2013
49		7/10/2013
49		7/10/2013
49		7/11/2013
49		7/12/2013
49		7/15/2013
49		7/16/2013
49		7/17/2013
49		8/1/2013
49		8/6/2013
49		8/13/2013
49		8/20/2013
49		8/20/2013
49		8/22/2013
49		8/23/2013
49		8/27/2013
49		9/3/2013
49		9/4/2013
49		9/4/2013
49		9/6/2013
49		9/11/2013
49		9/13/2013
49		9/13/2013
49		9/19/2013
49		9/26/2013
49		10/3/2013
49		10/19/2013
49		10/22/2013

Company #	Premise #	Last Reading
49		10/24/2013
49		10/24/2013
49		10/24/2013
49		10/31/2013
49		10/31/2013
49		11/6/2013
49		11/6/2013
49		11/7/2013
49		11/12/2013
49		11/18/2013
49		12/2/2013
49		12/10/2013
49		12/12/2013
49		12/16/2013
49		12/21/2013
49		12/21/2013
49		12/26/2013
49		12/27/2013
49		12/31/2013
49		1/7/2014
49		1/8/2014
49		1/8/2014
49		1/9/2014
49		1/9/2014
49		1/16/2014
49		1/16/2014
49		1/23/2014
49		1/23/2014
49		1/30/2014
49		2/4/2014
49		2/6/2014