

792 **Q. Has Nicor conducted any type of cost benefit analysis to show that it would be cost-**  
793 **effective to replace cast iron mains and copper services more rapidly than it has**  
794 **been replacing them since 2003?**

795 A. No, Nicor has not performed an analysis showing that it would be cost-effective to  
796 replace mains and services more rapidly than its current optimization program would  
797 indicate is reasonable. Indeed, in response to DLH 10.04 (attached as AG/CUB Exhibit  
798 2.10), Nicor acknowledged that it has not prepared any analysis showing the costs or  
799 benefits of its proposal.

800 In fact, Nicor has provided information in discovery that would show just the  
801 opposite. In response to data request DLH 4.02 (a copy of which is provided as AG/CUB  
802 Exhibit 2.11), Nicor provided an analysis showing that it costs approximately \$356,000  
803 to replace one mile of cast iron main. Under Nicor's filing, the Company would recover  
804 a pre-tax rate of return of 13.68% and depreciation expense of 4.1%.<sup>7</sup> Thus, for each  
805 \$1,000 in investment, the Company would recover approximately \$178 in revenue  
806 requirement from customers. The Company confirmed this in response to DLH 10.05  
807 (attached as AG/CUB Exhibit 2.12).

808 The estimated \$356,000 cost to replace one mile of cast iron main would result in  
809 a revenue requirement of approximately \$63,300 in the first year<sup>8</sup>, declining by  
810 approximately \$2,000 per year due to accrued depreciation.<sup>9</sup> According to the same

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<sup>7</sup> The pre-tax return is discussed above. Depreciation expense of 4.1% is from Nicor's response to data request AG 3.13.

<sup>8</sup>  $\$356,000 \times 17.78\% = \$63,297$

<sup>9</sup> Applying a depreciation rate of 4.1% to an investment of \$356,000 would yield annual depreciation expense of \$14,596. Rate base would be reduced by this amount each year. Using a pre-tax return of 13.68% on rate base would mean the return would decline by \$1,997 each year.

811 Company document, however, Nicor's estimated annual savings from replacing a mile of  
812 main is only \$3,242 per year.

813 That is, the annual revenue requirement in the first year would be approximately  
814 20 times greater than the annual savings that would be expected. Even after the new mile  
815 of main were depreciated for 20 years, the annual revenue requirement still would be at  
816 least 7 times higher than the expected savings in operating and maintenance expenses.  
817 Indeed just the annual depreciation expense of more than \$14,000 – that is, no return on  
818 the investment at all – exceeds the expected annual operating savings by more than  
819 400%.

820 **Q. Has the Company conducted any type of analysis to show a public safety need for an**  
821 **accelerated main replacement program?**

822 A. No, the Company has not conducted any analysis to show that there is a real public safety  
823 need for its proposed program. On the contrary, Nicor has stated unequivocally that it  
824 will continue to provide safe and reliable service if its proposed rider is not approved.  
825 See Nicor's responses to AG 3.33 and MEM 4.01, attached as AG/CUB Exhibit 2.13.

826 **Q. What do you conclude?**

827 A. I conclude that there is neither an economic nor a safety reason for Nicor to accelerate its  
828 main and service line replacement program at this time. Nicor should continue to use its  
829 current optimization program that appropriately evaluates the costs and benefits of  
830 replacing (as opposed to maintaining and repairing) its distribution infrastructure.  
831 Nicor's program has achieved significant results in a cost-effective manner since 2003.

832 My analyses of Nicor and industry data do not show a compelling need for Nicor to  
833 dramatically change its program.

834 **Q. Are you suggesting that Nicor should never replace any mains or services?**

835 A. No, I am not suggesting that at all. Certainly, there will be areas of pipe that need to be  
836 repaired or replaced, just as they have in the past. But that is very different from saying  
837 that all cast iron and copper pipe must be replaced during the next 10 years – requiring an  
838 annual level of replacement significantly greater than Nicor has been doing historically.  
839 Such a radical and expensive program should be undertaken only if it can be  
840 demonstrated that it is cost-effective and needed to ensure the provision of safe and  
841 reliable service to the public. Nicor has not made any such demonstration in this case.

842 **Q. What do you recommend?**

843 A. I recommend that the Commission should reject Nicor's attempt to implement an  
844 accelerated main replacement program and Rider QIP. Such a program is neither cost  
845 effective nor needed to protect public safety.

846

847 ***Bad Check Charge***

848 **Q. Has Nicor proposed a change in its bad check, or Not Sufficient Funds (NSF)**  
849 **charge?**

850 A. Yes. Nicor currently charges a customer \$16.00 when a customer payment is returned for  
851 insufficient funds. Nicor is proposing to increase this charge to \$25.00. Nicor Ex. 14.2,  
852 p. 56 (proposed revision to Tariff Sheet 39).

853 **Q. Does Nicor incur costs of \$25.00 when a customer payment is returned from the**  
854 **bank?**

855 A. No, it does not. In response to data request AG 4.07(b) (a copy of which is attached as  
856 AG/CUB Exhibit 2.14), Nicor provided a workpaper purporting to show that its cost to  
857 process a returned payment is \$17.59. Nicor then states that it is recommending a charge  
858 of \$25.00 to match rates established in the Peoples Gas and North Shore Gas rate case.  
859 In response to CB 2.02 (also part of AG/CUB Exhibit 2.14), Nicor provides another  
860 attempted justification. It states that the amount it would charge above costs "acts as an  
861 incentive for customers to make proper remittances to the Company."

862 **Q. Do you agree that Nicor's bad check charge should be set at a rate higher than its**  
863 **cost in order to penalize customers or to match the rate established for other**  
864 **utilities?**

865 A. No, I do not agree with Nicor's premise. The charge for a returned payment should be  
866 set to recover the costs incurred by the utility. Further, if one were going to use Nicor's  
867 premise, one could just as easily choose Illinois-American Water Company, which has a  
868 bad check charge of \$15.00. I am not, however, recommending such an approach. In my  
869 opinion, a bad check charge should be set to recover the utility's cost of processing a  
870 returned payment. If other utilities have higher costs, I would respectfully suggest that  
871 the Commission should investigate the reasons for those higher costs.

872 I also do not believe it is appropriate for the Commission to penalize customers in  
873 the manner Nicor suggests. When a customer sends an NSF payment, the customer is  
874 charged a fee by its bank and by Nicor. That should provide more than enough incentive  
875 for the customer to avoid bad payments. There is no evidence that any further penalty

876 would affect customer behavior – it simply would provide Nicor with a windfall in excess  
877 of its costs.

878 **Q. Do you accept Nicor's calculation showing that it costs \$17.59 to process a returned**  
879 **payment?**

880 A. No, I do not. If I understand Nicor's workpaper, it shows a Company labor cost of  
881 \$12.52 to process a returned payment, a bank charge of \$1.75, and a carrying cost of  
882 \$3.33. I can accept the labor cost of \$12.52 and the bank charge of \$1.75, but I disagree  
883 that a carrying cost of \$3.33 should be included as an additional cost to Nicor. Nicor's  
884 rates will be established in this case to recover all of its reasonable cash working capital  
885 needs, including a calculation of the average revenue lag (see Nicor Sch. B-8).  
886 Attempting to recover costs associated with a portion of the revenue lag again through the  
887 bad check charge is inappropriate and would result in double recovery of a portion of the  
888 Company's working capital needs.

889 **Q. If the Commission disagrees with you and allows a working capital allowance for a**  
890 **rejected payment, do you agree with Nicor's calculation of \$3.33?**

891 A. No, I do not agree with Nicor's calculation. Nicor's calculation is based on a pre-tax cost  
892 of capital of approximately 16.35%, as I show on AG/CUB Exhibit 2.15. There are two  
893 problems with this. First, according to Nicor's filing, its pre-tax cost of capital is  
894 13.68%, not 16.35%.<sup>10</sup> Using Nicor's requested cost of capital would reduce this cost  
895 from \$3.33 to \$2.82, as I show in the middle column of AG/CUB Exhibit 2.15.

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<sup>10</sup> Nicor's filing shows a weighted cost of debt of 2.93% and a weighted cost of equity (common and preferred) of 6.28%. Nicor Sch. D-1. The cost of equity is grossed up for taxes using the conversion factor of 1.711825. Nicor Sch. A-2.1. Thus the pre-tax cost of capital is  $2.93\% + (6.28\% \times 1.711825)$ , which equals 13.68%. See also AG Exhibit 2.14, where Nicor performs this same calculation in response to a data request.

896 In my opinion, however, this is still not the appropriate method to determine the  
897 working capital associated with a returned payment. If the Commission finds that there  
898 should be an allowance for additional working capital created by the rejected payment,  
899 then the additional working capital should be based only on the Company's incremental  
900 cost of borrowing. This is reasonable because Nicor is already recovering a general  
901 working capital allowance, so any additional lag created by a rejected payment – which  
902 Nicor shows to be 17 days – would be financed with short-term debt. See AG/CUB  
903 Exhibit 2.14. On Schedule D-2 of its filing, Nicor shows that its cost of short-term debt  
904 is 3.559%. Applying this cost rate for the 17 days of delayed payment used in Nicor's  
905 calculation would result in a working capital allowance in the NSF charge of \$0.77, as I  
906 show in the last column on AG/CUB Exhibit 2.15.

907 **Q. What do you conclude?**

908 A. I conclude that Nicor has documented labor costs of \$12.52 and a bank charge of \$1.75  
909 for processing a returned payment. These costs total \$14.27. Even if a working capital  
910 allowance is added, that additional cost should be no more than \$0.78, for a total of  
911 \$15.04. I conclude, therefore, that Nicor has not shown a reason to increase its NSF  
912 charge above the current level of \$16.00.

913 **Q. What do you recommend?**

914 A. I recommend that Nicor's request to increase its bad check charge should be denied and  
915 that the charge should remain at \$16.00.

916 **Q. Does your recommendation result in a change to Nicor's revenue requirement for**  
917 **the test year?**

918 A. Yes, it does. Keeping the bad check charge at its current level would require the reversal  
919 of the expense credit of \$96,000, offset by tax expenses of \$38,000, made by Nicor on  
920 Schedule C-2.4. I have provided this recommendation to AG witness Effron who reflects  
921 that change in his calculation of Nicor's revenue requirement.

922 **Conclusion**

923 **Q. Does this conclude your direct testimony?**

924 A. No. I will be filing additional direct testimony on September 4, 2008, to address  
925 residential rate design.

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Attorney General**  
**Ill.C.C. Docket No. 08-0363**  
**AG Fourth Set of Data Requests**

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- AG 4.10 Q. Please identify and describe in detail each program the Company uses to assist its low-income and/or payment-troubled customers with:
- a. Reducing the amount of the bill
  - b. Being able to pay all or a portion of the bill in a timely manner
  - c. Obtaining assistance from outside the Company to pay the gas bill
  - d. Obtaining assistance from outside the Company to pay bills for other necessities
- AG 4.10 A.
- a. Please see Nicor Gas' responses to Staff data requests DLH 18.02 and 18.11.
  - b. Please see Nicor Gas' responses to Staff data requests DLH 18.02 and 18.11.
  - c. Please see Nicor Gas' responses to Staff data requests DLH 18.02 and 18.11.
  - d. Nicor does not have a program to assist customers outside of the Company to pay bills for other necessities.

*Witness:* Kevin W. Kirby

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-0363**  
**DLH Eighteenth Set of Data Requests**

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DLH 18.02 Q. Referring to Nicor Gas Ex. 3.0, page 28, lines 597-598, provide a full description of the Company's "focused and aggressive collection efforts." Include copies of any Company policies, any analysis conducted of the Company's collection efforts, or other similar evidence concerning the Company's collection efforts. Also fully describe any changes in collection efforts or policies since the Company's last rate case.

DLH 18.02 A. Please refer to Nicor Gas Exhibit 6.0, pages 18-19, lines 383-404 for a description of activities.

Further, Nicor Gas utilizes many proactive actions to prompt customers to pay past due balances. These include:

- Multiple automatic phone contact campaigns including:
  - Customer falls into arrears
  - Pre-disconnection
  - Right after a customer defaults on a payment plan
  - Informing customers of energy assistance availability
- Multiple live agent phone contact campaigns including:
  - Customer is severely past due
  - Commercial and Industrial customers past due
- Aggressive disconnection of service as allowed by part 280
- Requirement for full arrears and deposit before restoration of service as allowed per part 280
- Full File Credit reporting to TransUnion
- Filing suit in state court and placing a lien on the past due customers property where significant balances remain unpaid
- Skip Tracing former customers, who have relocated, and who have charged off balances
- Positive ID verification at time of new service establishment
- Utilizing third party collection agents to recover charge off amounts
- Attempting to collect past due arrears whenever a customer calls into the Nicor Gas call center

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-0363**  
**DLH Eighteenth Set of Data Requests**

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DLH 18.11 Q. Referring to Nicor Gas Ex. 6.0, page 7, lines 153-154, provide a complete description of the numerous steps the Customer Care function takes to assist customers who are behind on their bill. Also provide a description of any other procedures or steps performed by the Company outside of the Customer Care function to assist customers who are behind on their bill.

DLH 18.11 A. Customers who are behind on their bill will receive assistance from Nicor Gas in a number of ways. A customer that calls the Company can receive a deferred payment plan (DPA). Customers may also enroll over the internet. Depending on the circumstances, a customer may prefer a budget plan combined with a DPA to spread current payments over a longer period of time.

In addition to incoming calls, Nicor Gas had increased the use of outbound notification programs to make customers aware of delinquent amounts before the debt becomes unmanageable. Outbound programs include notifying customers that have missed a payment on their DPA, missed a payment on their Budget Plan, become 45 days late, or that are currently delinquent but had previously been a LIHEAP participant. In addition, a person attempts to contact a customer that becomes 120 days late. Each of these programs is an attempt to establish contact, make arrangements, and limit further delinquencies.

Nicor Gas has a sharing program that matches customer payments up to \$300. We also have considerable interaction with 15 intake agencies, working daily with them on extenuating circumstances.

*Witness:* Kevin W. Kirby

Northern Illinois Gas Company d/b/a Nicor Gas Company  
ICC Docket No. 08-0363

**Nicor Company Use Gas 2005-2007 and Projected for 2009**

**Table 1: Consumption (Therms)**

	Actual 2005	Actual 2006	Actual 2007	Projected 2009
a/c 819 - Compressor station	12,189,360	11,199,860	11,641,650	11,372,000
a/c 823 - Gas losses	17,503,950	18,435,720	17,392,110	17,500,000
a/c 932 - Gas for company facilities	1,841,930	1,683,410	1,718,050	1,931,000
Total	31,535,240	31,318,990	30,751,810	30,803,000

Sources:

Actual from AG 4.12

Projected from AG 4.11

**Table 2: Expense (\$)**

	Actual 2005	Actual 2006	Actual 2007	Projected 2009
a/c 819 - Compressor station	7,937,455	13,996,544	9,795,973	9,897,000
a/c 823 - Gas losses	17,543,969	21,425,411	14,819,805	15,230,000
a/c 932 - Gas for company facilities	1,231,355	2,150,464	1,433,251	1,681,000
Total	26,712,779	37,572,419	26,049,029	26,808,000

Sources:

Actual from AG 4.14

Projected from AG 4.13

**Table 3: Cost per Therm (\$)**

	Actual 2005	Actual 2006	Actual 2007	Projected 2009
a/c 819 - Compressor station	0.65	1.25	0.84	0.87
a/c 823 - Gas losses	1.00	1.16	0.85	0.87
a/c 932 - Gas for company facilities	0.67	1.28	0.83	0.87
Total	0.85	1.20	0.85	0.87

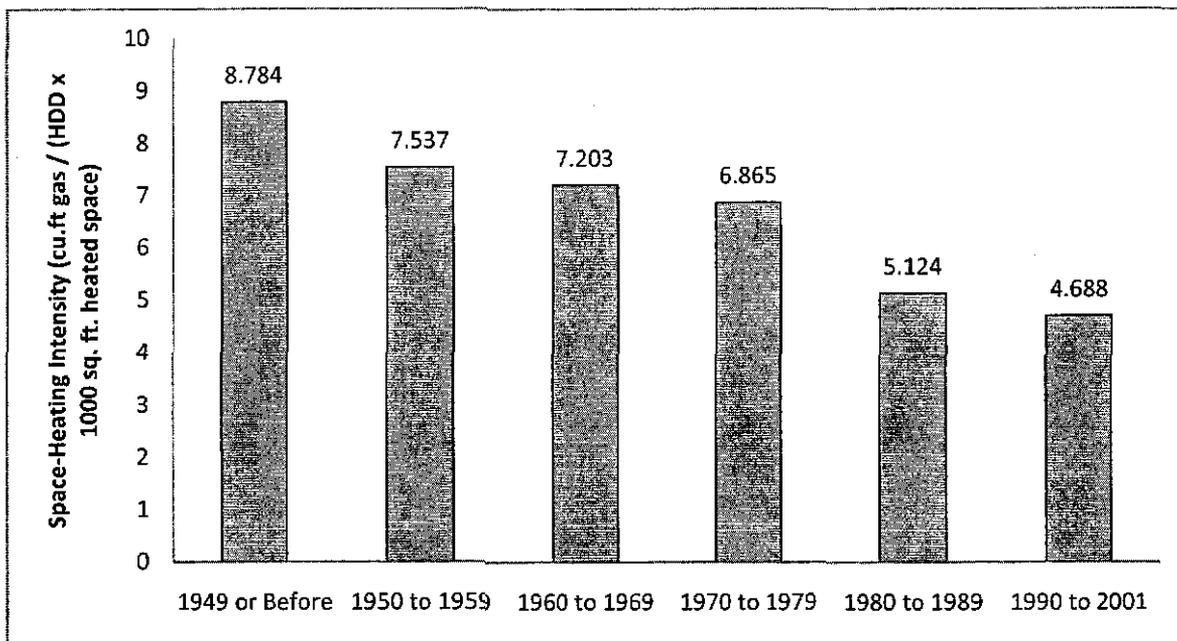
Source:

Corresponding figures in Table 2 divided by Table 1

Northern Illinois Gas Company d/b/a Nicor Gas Company  
ICC Docket No. 08-0363

**Space-Heating Intensity in 2001 for Housing Units Where  
Natural Gas is the Main Space-Heating Fuel, by Year of Construction**

(Space heating intensity measured by cubic feet of natural gas per  
heating degree day per 1000 square feet of heated space)



Source: US Department of Energy, Energy Information Administration,  
2001 Residential Energy Consumption Survey, Table CD2-2c  
< <http://www.eia.doe.gov/emeu/recs/contents.html>

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Attorney General**  
**Ill.C.C. Docket No. 08-0363**  
**AG Third Set of Data Requests**

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AG 3.04 Q. Please provide actual average gas usage per customer statistics for each of the rate classes 1, 4 and 74 for each of the past 10 years (provide all available months of calendar 2008). Please provide this data in electronic excel format.

AG 3.04 A. Please see attached Exhibit 1.

*Witness:* None

Rate 1  
Actual Average Use Per Customer

	Therms (In Thousands)	Avg Cust	Use Per Avg Cust
1999	2,098,794	1,750,925	1,199
2000	2,234,552	1,782,191	1,254
2001	2,076,492	1,810,499	1,147
2002	2,239,053	1,839,582	1,217
2003	2,314,893	1,871,819	1,237
2004	2,213,495	1,905,380	1,162
2005	2,190,728	1,936,826	1,131
2006	2,028,773	1,958,838	1,036
2007	2,215,475	1,969,805	1,125
2008			
January	450,518	1,983,002	227
February	416,478	1,985,543	210
March	292,812	1,986,393	147
April	151,310	1,985,925	76
May	87,494	1,984,620	44
June	52,048	1,980,776	26
2008 Average	1,450,660	1,984,377	731

Rate 4  
Actual Average Use Per Customer

	Therms (In Thousands)	Avg Cust	Use Per Avg Cust
1999	735,616	165,139	4,455
2000	802,159	167,798	4,781
2001	763,436	169,697	4,499
2002	826,582	172,306	4,797
2003	864,757	175,070	4,939
2004	820,938	177,906	4,614
2005	828,767	180,464	4,592
2006	752,624	182,852	4,116
2007	838,868	183,149	4,580
2008			
January	163,958	185,845	882
February	160,816	186,424	863
March	113,889	186,437	611
April	62,897	185,851	338
May	33,365	185,264	180
June	18,706	184,205	102
2008 Average	553,631	185,671	2,982

Rate 74  
Actual Average Use Per Customer

	Therms (In Thousands)	Avg Cust	Use Per Avg Cust
1999	698,743	12,606	55,429
2000	714,479	11,848	60,304
2001	646,644	11,087	58,325
2002	660,336	10,583	62,396
2003	643,686	9,350	68,843
2004	603,096	8,962	67,295
2005	598,482	9,100	65,767
2006	576,118	9,114	63,212
2007	591,978	9,000	65,775
2008			
January	94,204	9,127	10,321
February	90,380	9,143	9,885
March	74,555	9,179	8,122
April	45,570	9,187	4,960
May	31,298	9,167	3,414
June	20,895	9,185	2,275
2008 Average	356,902	9,165	38,943

Northern Illinois Gas Company d/b/a Nicor Gas Company  
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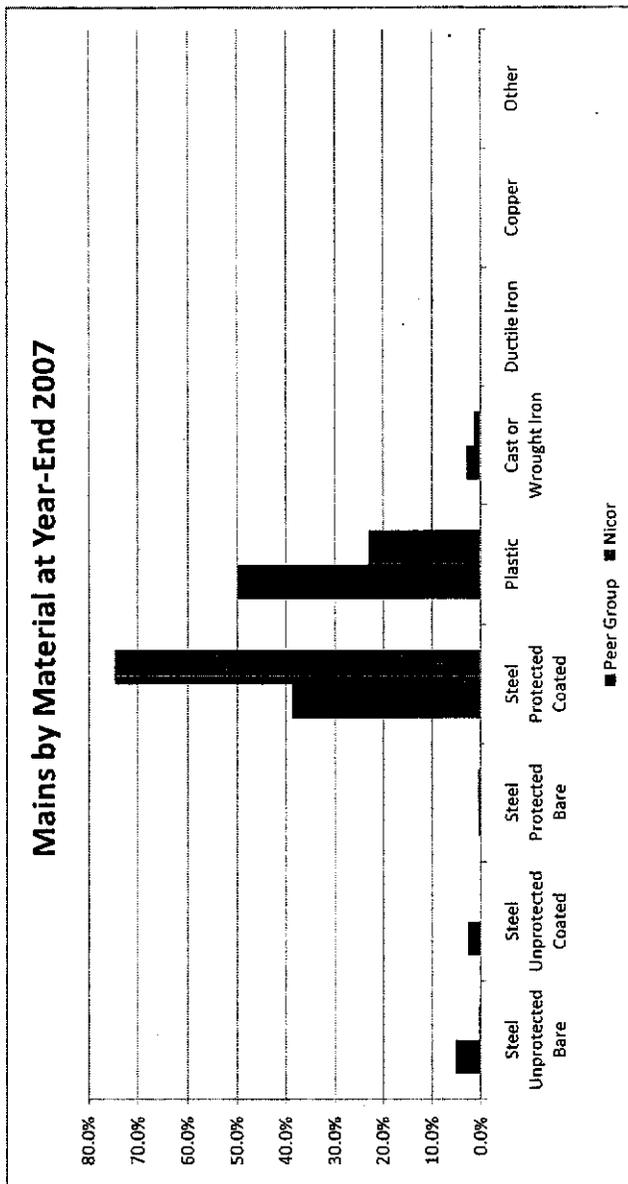
**Selection of Nicor Peer Group**

	<u>Miles of Main</u>	<u>Number of Services</u>
Atlanta Gas Light Co.	30,281	1,562,377
Atmos Energy Corp.	28,357	1,496,710
Columbia Gas of Ohio	19,706	1,344,837
Consumers Energy Co.	25,924	1,537,407
Dominion East Ohio	19,584	1,294,905
Entex	29,134	1,684,824
Michigan Consolidated Gas Co.	18,693	1,193,333
Oklahoma Natural Gas Co.	16,161	986,047
Pacific Gas & Electric Co.	41,804	3,302,016
Public Service Co. of Colorado	20,914	1,002,639
Public Service Electric & Gas Co.	17,618	1,242,398
Southern California Gas Co.	47,566	4,332,024
Southwest Gas Co.	18,382	978,311

Northern Illinois Gas Company d/b/a Nicor Gas Company  
 ICC Docket No. 08-0363

Miles of Mains in Service at Year-End 2007, by Material - Nicor and Peer Group

	Peer Group	Percent	Nicor	Percent
Steel Unprotected Bare	17,172	5.1%	125	0.4%
Steel Unprotected Coated	9,102	2.7%	-	0.0%
Steel Protected Bare	1,552	0.5%	159	0.5%
Steel Protected Coated	129,685	38.8%	24,543	74.8%
Plastic	166,600	49.9%	7,543	23.0%
Cast or Wrought Iron	9,521	2.8%	438	1.3%
Ductile Iron	-	0.0%	-	0.0%
Copper	4	0.0%	-	0.0%
Other	488	0.1%	-	0.0%
<b>Total</b>	<b>334,124</b>	<b>100.0%</b>	<b>32,808</b>	<b>100.0%</b>

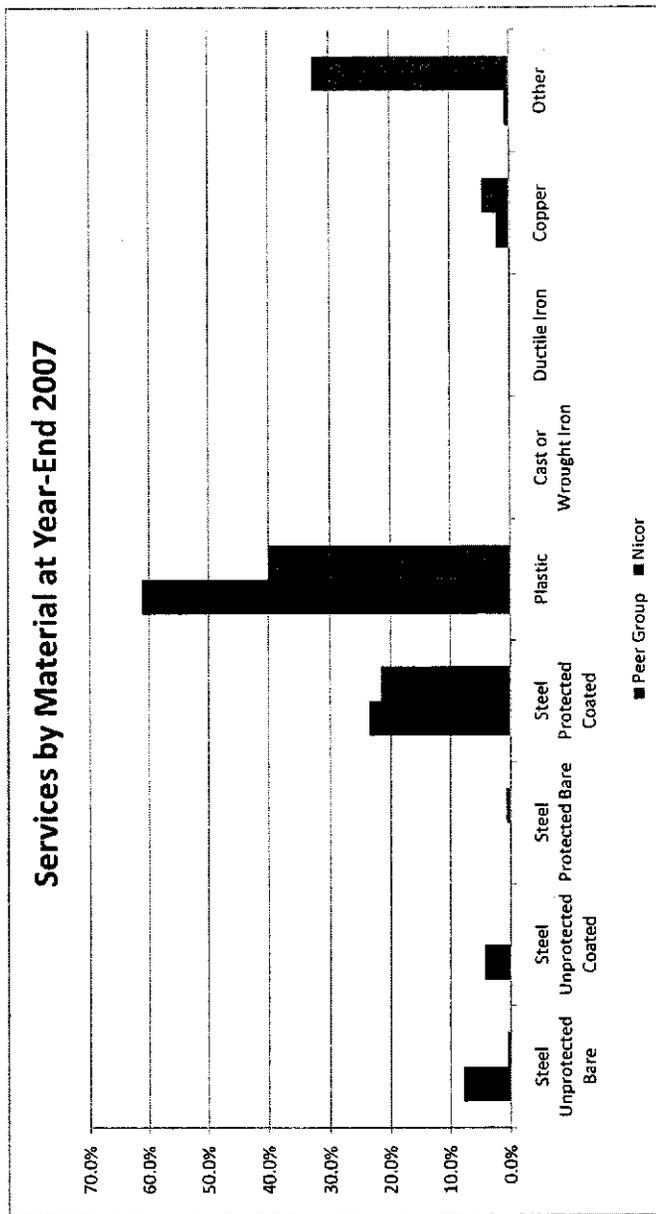


Source: US Office of Pipeline Safety, Annual Reports for Gas Distribution Utilities, <http://ops.dot.gov/stats/DT98.htm>

Northern Illinois Gas Company d/b/a Nicor Gas Company  
 ICC Docket No. 08-0363

**Number of Service Lines in Service at Year-End 2007, by Material - Nicor and Peer Group**

	Peer Group	Percent	Nicor	Percent
Steel Unprotected Bare	1,725,825	7.9%	10,026	0.5%
Steel Unprotected Coated	963,966	4.4%	-	0.0%
Steel Protected Bare	37,863	0.2%	12,720	0.6%
Steel Protected Coated	5,167,141	23.5%	427,710	21.6%
Plastic	13,423,832	61.1%	793,692	40.0%
Cast or Wrought Iron	106	0.0%	-	0.0%
Ductile Iron	-	0.0%	-	0.0%
Copper	459,083	2.1%	90,881	4.6%
Other	180,012	0.8%	648,012	32.7%
<b>Total</b>	<b>21,957,828</b>	<b>100.0%</b>	<b>1,983,041</b>	<b>100.0%</b>



Source: US Office of Pipeline Safety, Annual Reports for Gas Distribution Utilities, <http://ops.dot.gov/stats/DT98.htm>

Northern Illinois Gas Company d/b/a Nicor Gas Company  
ICC Docket No. 08-0363

**Number of Leaks Eliminated or Repaired, by Type, During 2007 - Nicor and Peer Group**

	<u>Peer Group</u>	<u>% of Total</u>	<u>Nicor</u>	<u>% of Total</u>
Corrosion - Mains	11,372	34.7%	251	14.3%
Natural Forces - Mains	3,643	11.1%	161	9.2%
Excavation - Mains	6,969	21.3%	304	17.3%
Other Outside Force- Mains	815	2.5%	-	0.0%
Material or Welds - Mains	2,166	6.6%	651	37.1%
Equipment - Mains	872	2.7%	-	0.0%
Operations - Mains	1,329	4.1%	-	0.0%
Other - Mains	5,625	17.2%	386	22.0%
Total Leaks in Mains	32,791	100.0%	1,753	100.0%
Total Miles	334,124		32,808	
Leaks per 100 Miles	9.8		5.3	

	<u>Peer Group</u>	<u>% of Total</u>	<u>Nicor</u>	<u>% of Total</u>
Corrosion - Services	18,917	23.3%	2,597	18.6%
Natural Forces - Services	2,903	3.6%	1,078	7.7%
Excavation - Services	24,289	29.9%	2,474	17.7%
Other Outside Force - Services	2,967	3.6%	-	0.0%
Material or Welds - Services	6,354	7.8%	3,936	28.2%
Equipment - Services	4,621	5.7%	-	0.0%
Operations - Services	4,084	5.0%	-	0.0%
Other - Services	17,163	21.1%	3,873	27.7%
Total Leaks in Services	81,298	100.0%	13,958	100.0%
Total Services	21,957,828		1,983,041	
Leaks per 1000 Services	3.7		7.0	

Leaks Awaiting Repair at Year End	25,293		2,964	
Total Miles	334,124		32,808	
Known Leaks per 100 Miles	7.6		9.0	

Total Leaks	139,382		18,675	
Total Leaks per 100 Miles	41.7		56.9	
Total Leaks per 1000 Services	6.3		9.4	

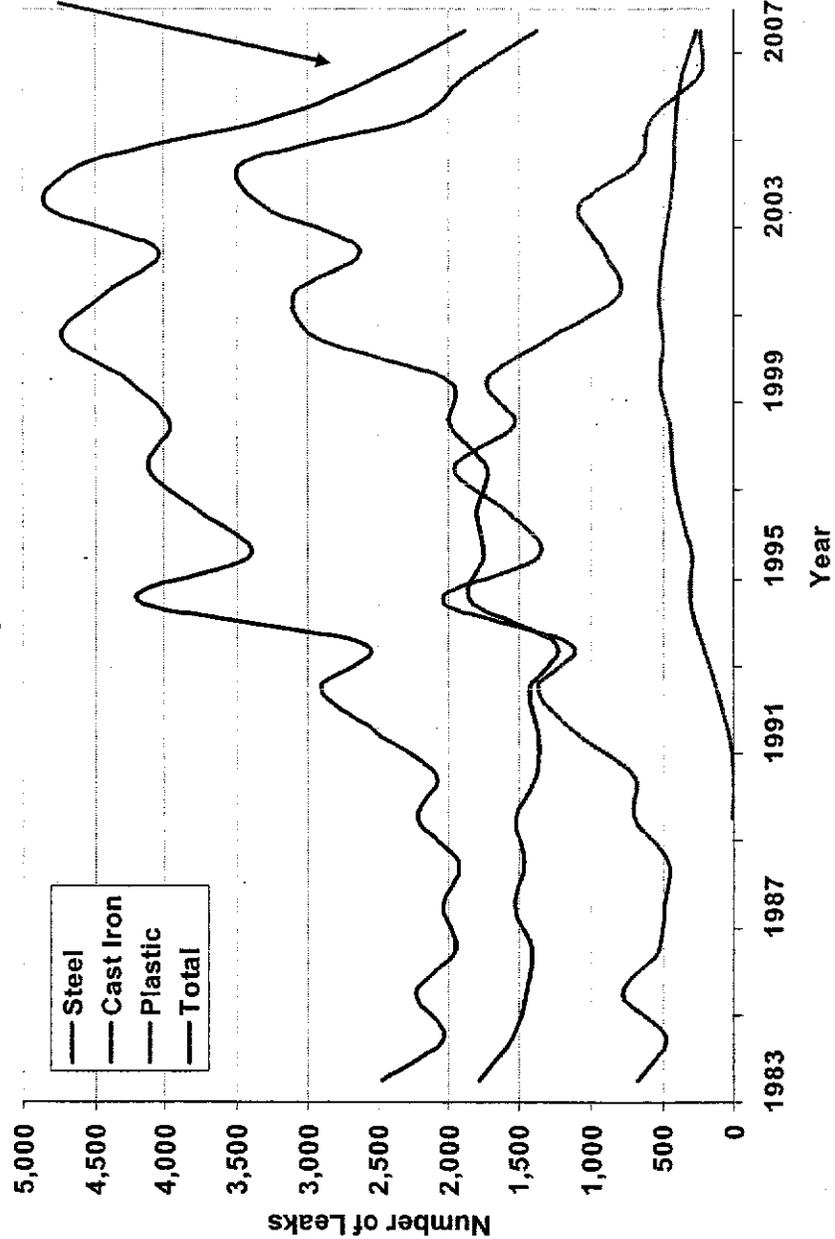
# Annual Distribution System Review: 2007



# Main Leaks Reported 1983-2007, All Causes

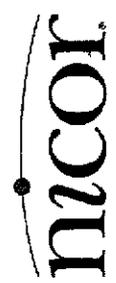
Reported Main Leaks have decreased **60%** since 2003; Cast Iron Main Leaks down **75%** since 2003

Main Leaks Reported, 1983-2007

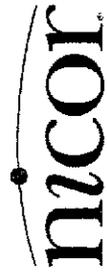
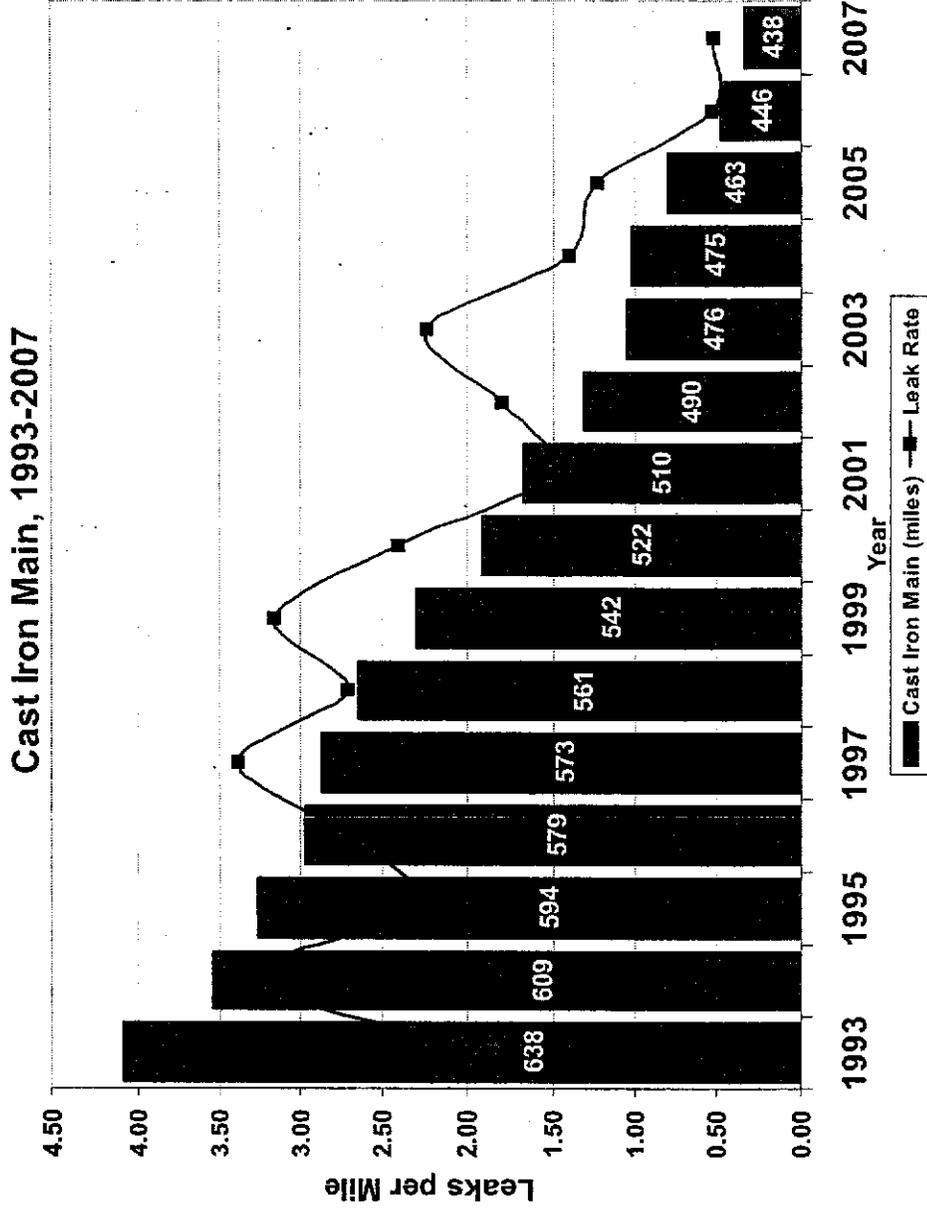


2007 Main Leaks Reported

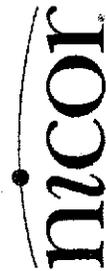
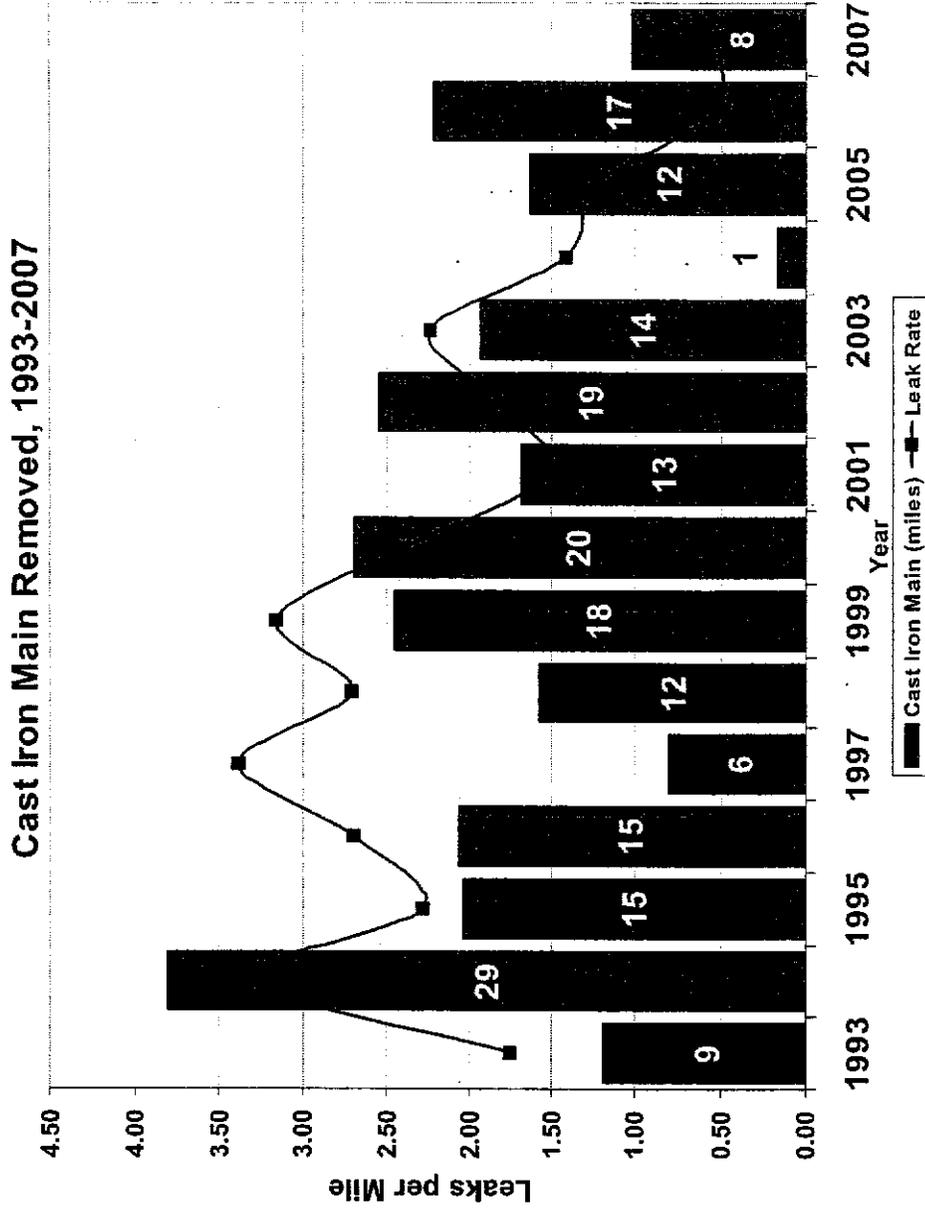
Material	Leaks
Steel	1,377
Cast Iron	233
Plastic	268
<b>Total</b>	<b>1,878</b>



# Cast Iron Main 1993-2007



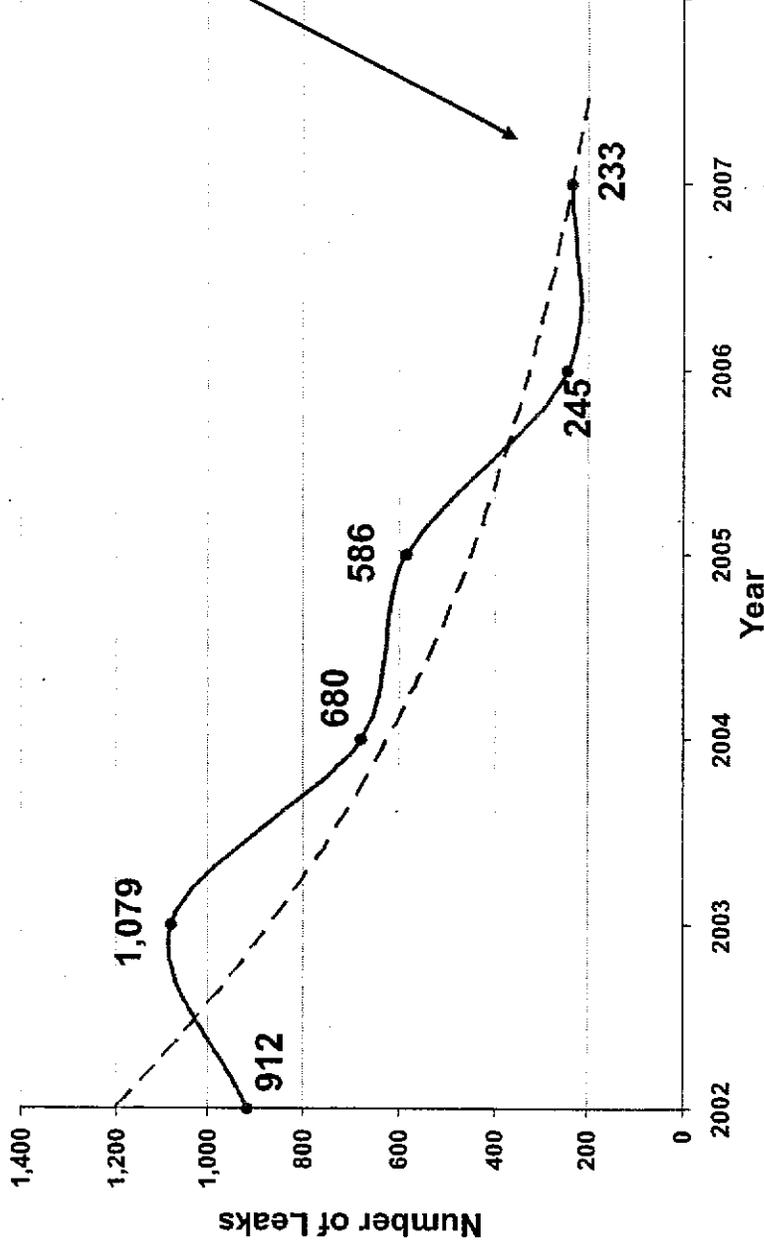
# Cast Iron Main Removed, 1993-2007



# Cast Iron Main Leaks Reported, 2002-2007

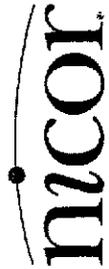
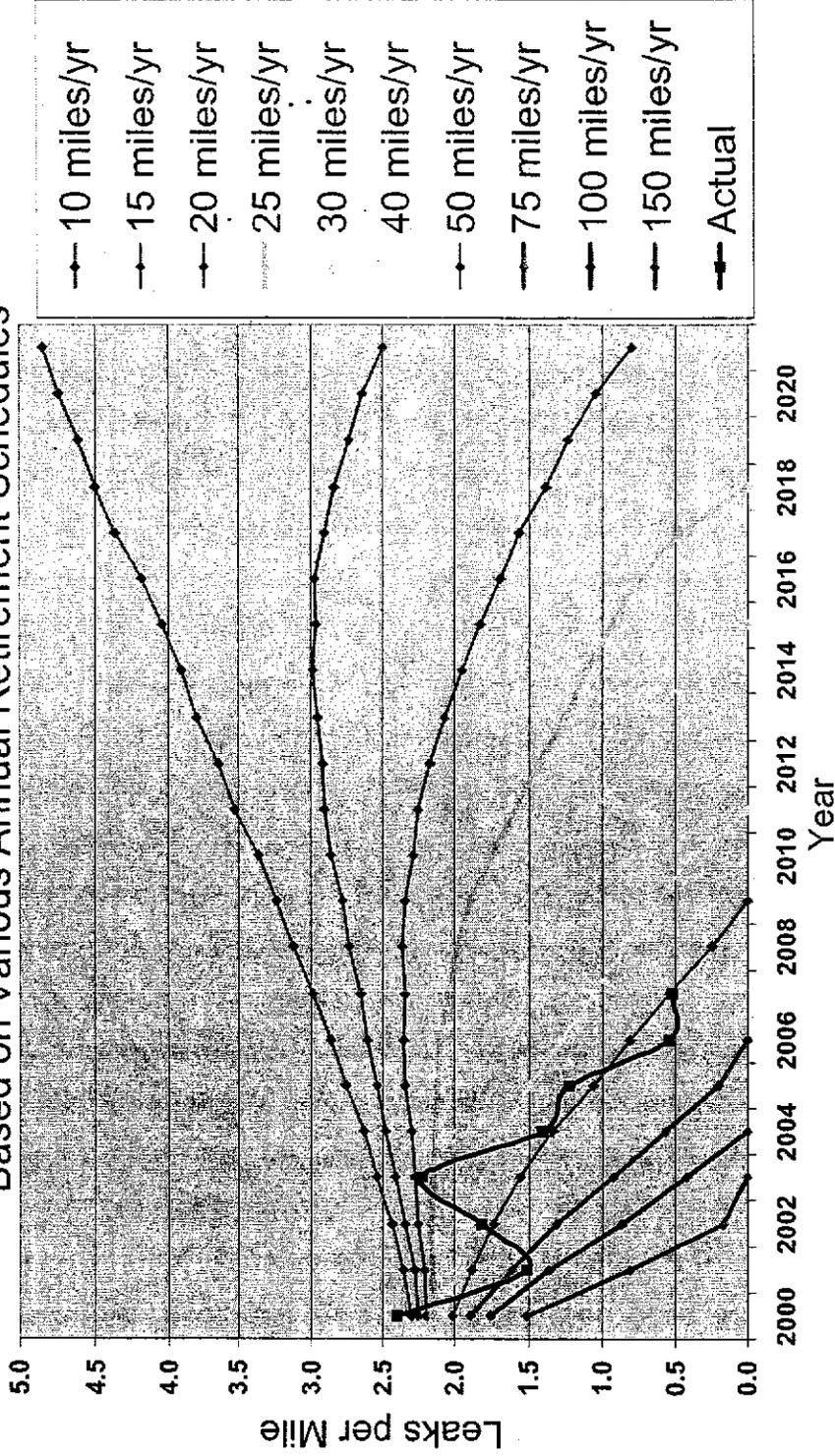
Cast Iron Main Leaks down 75% since 2003

Cast Iron Main Leaks Reported, 2002-2007



# Projected Cast Iron Leak Rates

Projected Cast Iron Leak Rates  
Based on Various Annual Retirement Schedules



**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-0363**  
**DLH Tenth Set of Data Requests**

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DLH 10.04 Q. Referring to Nicor Gas Ex. 12.0, p. 34, provide all studies prepared by or on behalf of the Company regarding the recommended replacement rate of its cast iron main and copper services.

DLH 10.04 A. The cast iron main and copper service replacement rates were determined on the basis of eliminating these material types from the system over the next 10 years. No formal study was conducted to determine the replacement rate; however the rate was determined by dividing the remaining units equally over the ten year period.

*Witness:* Anthony R. McCain

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-XXXX**  
**DLH Fourth Set of Data Requests**

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DLH 4.02 Q. Referring to Nicor Gas Ex. 12.0, page 33, provide all supporting workpapers and calculations related to the Company's statement at lines 640-642 that it proposes to credit customers with \$6,000 per mile of operations and maintenance ("O&M") savings for each incremental mile of cast iron main replaced under Rider Qualifying Infrastructure Plant ("Rider QIP").

DLH 4.02 A. Please see the attached Exhibit 1 showing the determination of annual operation and maintenance cost savings per mile of cast iron main of \$3,200. As stated in the direct testimony of Anthony McCain, it is difficult to determine the intangible savings related to the replacement of facilities that are fully integrated into the Company's system. (Nicor Gas Ex 5.0, page 11 lines 220 and 221) However, in an effort to account for the benefits associated with intangibles of an upgraded system including the elimination of more problematic copper services, Nicor Gas has included an additional \$2,800 in its cost savings credit.

*Witness:* Anthony R. McCain

**Main Replacement Economics**

**OE Savings**

	Annual Benefit / Unit	Unit Per Mile	Benefit / Mile / Yr
CI Main Leak Repair	\$ 850.00		0.73 \$
Reduced Leak Investigation	\$ 22.00		2.48 \$
Reduced Meter Read Cost	\$ 0.48		220 \$
Reduced Inside Leak Survey	\$ 4.30		220 \$
Reduced 3/5 System Survey	\$ 0.19		176 \$
Eliminated System Regulator Maintenance	\$ 2,400.00		0.46 \$
Eliminated System Chart Changes	\$ 201.50		0.46 \$
Eliminated LP Drip Maintenance	\$ 20,960.00	\$	47.85 \$
Eliminated Winter Survey	\$ 40.00		1 \$
Main Leak Re-Checks	\$ 24.00		0.76 \$
Service Leak Re-Checks	\$ 24.00		2.13 \$
Eliminated Service Leak Repairs	\$ 264.00		0.53 \$
Total OE Benefit Per Mile			\$ 3,242.41

**Proposed Replacement Rate (Miles)**

**OE Benefits**

25.00  
**\$ 81,060.17**

**Capital Investment**

	Cost / Unit	Unit Per Mile	Cost Per Mile
Pipe Replacement	\$ 32		5280 \$
Service Replacement	\$ 627		176 \$
Cross Ties	\$ 350		220 \$
			\$ 356,312

\*Retirement cost averages 30% of pipe replacement cost = 0.3 x \$168,960 = \$50,688

**Approximate Cost Category Distribution**

Labor	Material	Contractor
75%	10%	15%
100%	0%	0%
100%	0%	0%
100%	0%	0%
0%	0%	100%
100%	0%	0%
100%	0%	0%
80%	10%	10%
90%	0%	10%
100%	0%	0%
100%	0%	0%
100%	0%	0%

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-0363**  
**DLH Tenth Set of Data Requests**

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- DLH 10.05 Q. Referring to Nicor Gas Ex. 14.2, page 145, Section D-Qualifying Infrastructure Plant ("QIP"), the proposed tariff at c) states that "the maximum investment in replacements for such calendar year that may be classified as QIP shall be \$20 million." Provide the calculation of the revenue requirement impact of the \$20 million maximum amount. The calculation should be provided in an Excel file with all formulas intact.
- DLH 10.05 A. Please see the attached Exhibit 1 illustrating the Rider QIP revenue requirement and percentage charge assuming a \$20 million investment in one year.

*Witness:* Robert R. Mudra

**Rider QIP Revenue Requirement for \$20 MM Investment**

**I. Determination of Pre-tax Return**

$$PTR = ((WCCE + WCPE) \times GRCF) + WCD$$

Where:

GRCF = Gross Revenue Conversion Factor  
1.711825 see Schedule A-2, page 1 of 1

WCCE = Weighted cost of common equity from the Company's last rate case.  
6.27 see Nicor Gas Exhibit 10.2

WCPE = Weighted cost of preferred equity from the Company's last rate case.  
0.01 see Nicor Gas Exhibit 10.2

WCD = Weighted cost of debt from the Company's last rate case.  
2.93 see Nicor Gas Exhibit 10.2

PTR = 13.68 percent

**II. Determination of Depreciation Expense.**

Assumes the new plant is depreciated at Nicor Gas' composite rate of 4.1 percent.

**III. Determination of Revenue Requirement and QIP Percentage Charge (S%)**

$$S\% = \frac{(((CQIP \times PTR) + Dep) - Csavings) + ARA}{PAR} \times 100$$

Where:

CQIP = Qualified investment  
\$ 20,000,000

PTR = Pre-tax return  
13.68% see above

Dep = Depreciation expense related to CQIP for the calendar year.  
\$ 820,000 \$20 million times 4.1 percent depreciation.

Csavings = \$6,000 times the number of miles of plant installed.  
\$ 150,000 assumes 25 miles of main replacement

ARA = Annual reconciliation amount.  
\$ - assumes no reconciliation amount.

Revenue Requirement = (CQIP X PTR) + Dep - Csavings + ARA = \$ 3,406,000

PAR = Company's forecasted QIP base revenues for the effective period,  
\$ 685,584,000 see Nicor Gas Exhibit 14.3 page 1 of 1

QIP Charge Percentage (S%) = 0.50 percent

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Attorney General**  
**Ill.C.C. Docket No. 08-0363**  
**AG Third Set of Data Requests**

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AG 3.33 Q. Is it the Company's testimony that the risk-based approach to cast iron main replacement referenced in Mr. McCain's and Mr. O'Connor's testimony does not permit the Company to provide reliable gas delivery service? If so, please identify with specificity where the Company is presently not providing reasonably reliable delivery service and provide all statistical or other performance measures indicating where improvements in reliability and the planned replacement acceleration (Nicor Ex. 5.0 at line 147-148) is needed.

AG 3.33 A. No. Nicor Gas has and will continue to provide reliable and safe service. The application of a risk based approach to prioritizing cast iron replacement projects has been an effective tool for maintaining safety and system reliability. Risk based prioritization will continue to guide main replacement decisions by helping direct resources to those projects providing the greatest improvements in system performance. The Company plans to continue using the same risk based approach under an accelerated program.

*Witness:* Anthony R. McCain

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-0363**  
**MEM Fourth Set of Data Requests**

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MEM 4.01 Q. Will Nicor be unable to provide safe and reliable service to customers if the cast iron and copper service replacement schedule is not accelerated as requested in the QIP rider? Explain.

MEM 4.01 A. No. Nicor Gas is committed to providing safe and reliable service. If the QIP rider is not approved, replacement projects will continue to be analytically prioritized in a manner that maintains safety and reliability.

*Witness:* Anthony McCain

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Attorney General**  
**Ill.C.C. Docket No. 08-0363**  
**AG Fourth Set of Data Requests**

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- AG 4.07 Q. Re: Nicor Ex. 14.0 (Mudra), lines 1143-1155. Please provide workpapers and all other records, data and documents supporting each of the following:
- a. Charge for customer damaging non-steel service pipe of \$410
  - b. Non-sufficient funds charge of \$25.00
  - c. Charge for reconnection after disconnection for non-payment of \$42.00.

- AG 4.07 A. a. Please see the attached Exhibit 1.
- b. Please see the attached Exhibit 2.
  - c. Please see the attached Exhibit 3.

*Witness:* Robert R. Mudra

**Determination of Charge for Non-Sufficient Funds**

**Labor Rate**

Remittance	\$6.87	(Preparing advices to Account preparing balancing tape, customer request look ups and supervisory/manager oversight)
Call Center	\$3.20	(Call handling issues)
Data Entry		(Entry of account correction and balancing to work)
Billing Services		(Preparing J.E.)
Accounting	<u>\$10.80</u>	(Reconciliation to the bank, misc look ups, supervisory/manager oversight)
Average Labor Cost per unit	\$6.96	
Overhead	0.80	
	<u>\$5.56</u>	
Labor Rate	\$12.52	

**Bank Charges**

Return Items, Redeposit Returns      \$1.75

Carrying Cost      \$3.33

\$17.59

Recommended NSF Charge set at \$25.00 to match rate established in Peoples Gas and North Share Gas rate case. Docket No. 07-0241 and 07-0242.

Avg Check x Cost of Capital X Days Delayed	
Avg Check	\$472
Cost of Captial	0.000415
Days Delayed	17
	\$ 3.33

**Northern Illinois Gas Company d/b/a Nicor Gas Company**  
**Response to: Illinois Commerce Commission**  
**Ill.C.C. Docket No. 08-0363**  
**CB Second Set of Data Requests**

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- CB 2.02 Q. Referring to Company witness Mudra's direct testimony (Co. Ex. 14.0 pg. 52), please provide an explanation of the reasons underlying the Company's proposal to increase the returned checks for non-sufficient funds fee from \$16 to \$25. Also provide documentation of the Company's analysis, and all work papers.
- CB 2.02 A. Please see Nicor Gas' response to data request AG 4.07 for support of the \$25.00 non-sufficient funds charge. The cost increase shown on the exhibit to AG 4.07 is mainly due to increased labor costs. The proposed amount above the costs acts as an incentive for customers to make proper remittance to the Company. Additionally, the \$25.00 matches the recently approved charge for Peoples Gas and North Shore Gas.

*Witness:* Robert R. Mudra

Northern Illinois Gas Company d/b/a Nicor Gas Company  
 ICC Docket No. 08-0363

**Working Capital Allowance for NSF Charge**

	<u>Nicor Calculation</u>	<u>Nicor Filing</u>	<u>AG Calculation</u>
1 Average check	\$472	\$472	\$472
2 Annual cost of capital	16.351%	13.680%	3.559%
3 Daily cost of capital	0.000415	0.000351	0.000096
4 Days delayed	17	17	17
5 Working capital	\$3.33	\$2.82	\$0.77

Sources:

- Line 1: AG Exhibit 2.01  
 Line 2: Nicor Calculation:  $(1 + \text{line 3})^{365}$   
 Nicor Filing: Nicor Schs. D-1 and A-2.1  
 AG Calculation: Nicor Sch. D-2, p. 2  
 Line 3: Nicor Calculation: AG Exhibit 2.01  
 Nicor Filing and AG Calculation:  $(1 + \text{line 2})^{(1/365)}$   
 Line 4: AG Exhibit 2.01  
 Line 5: Line 1 x line 3 x line 4

**STATE OF ILLINOIS  
ILLINOIS COMMERCE COMMISSION**

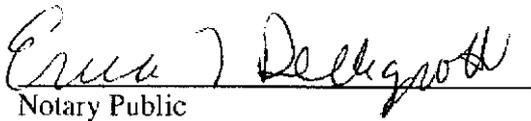
Northern Illinois Gas Company )	Docket No. 08-0363
d/b/a Nicor Gas Company )	
Proposed general increase in rates, and )	
revisions to other terms and conditions )	

**AFFIDAVIT OF SCOTT J. RUBIN**

I, Scott J. Rubin, being duly sworn and on oath, state that I am the same Scott J. Rubin identified in the attached Additional Direct Testimony of Scott J. Rubin on behalf of the People of the State of Illinois, and that I prepared that testimony and am familiar with the contents of them. My pre-filed Direct Testimony, with accompanying exhibits, is true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
Scott J. Rubin

Signed and sworn to  
before me this 28 day of Aug, 2008.

  
\_\_\_\_\_  
Notary Public

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal  
Erica L. Dellgrotto, Notary Public  
Town of Bloomsburg, Columbia County  
My Commission Expires Nov. 3, 2008

Member, Pennsylvania Association of Notaries