

DIRECT TESTIMONY
OF
MARK MAPLE
ENGINEERING DEPARTMENT
ENERGY DIVISION
ILLINOIS COMMERCE COMMISSION

NORTHERN ILLINOIS GAS COMPANY
d/b/a
NICOR GAS COMPANY

DOCKET NO. 04-0779

MARCH 1, 2005

1 Q. Please state your name and business address.

2 A. My name is Mark Maple and my business address is 527 East Capitol Avenue,
3 Springfield, Illinois 62701.

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

5 A. I am employed by the Illinois Commerce Commission (the "Commission") as a
6 Gas Engineer in the Engineering Department of the Energy Division.

7 Q. Please state your educational background.

8 A. I hold a Bachelor of Science degree in Mechanical Engineering and a minor in
9 Mathematics from Southern Illinois University at Carbondale, Illinois. I am
10 currently enrolled in the MBA program at the University of Illinois at Springfield,
11 where I have taken 40 of the required 48 hours towards my degree. Finally, I am
12 a registered Professional Engineer Intern in the State of Illinois.

13 Q. What are your duties and responsibilities as a Gas Engineer in the Engineering
14 Department?

15 A. My primary responsibilities and duties are in the performance of studies and
16 analyses dealing with the day-to-day, and long-term, operations and planning of
17 the gas utilities providing service in Illinois. For example, I review purchased gas
18 adjustment clause reconciliations, rate base additions, levels of natural gas used

19 for working capital, and applications for Certificates of Public Convenience and
20 Necessity. I also perform utility gas meter test shop audits.

21 Q. Please describe the general purpose of this proceeding?

22 A. On November 4, 2004, Nicor Gas Company (“Nicor” or the “Company”) filed
23 tariffs that requested Commission approval to increase its base rates for bundled
24 service and gas transportation customers. The purpose of this proceeding is to
25 investigate Nicor’s request for a general increase in its rates pursuant to its filed
26 tariffs.

27 Q. What was your assignment within this proceeding?

28 A. I was assigned to review the reasonableness of the Company’s requested level
29 of working capital associated with its gas in storage.

30 Q. Are you sponsoring any schedules or exhibits with your direct testimony?

31 A. Yes, I prepared the following two schedules and one exhibit that are being filed
32 as confidential attachments to my direct testimony:

33 Schedule 6.1 Adjustment to Storage Volumes Due to Working Gas
34 Reclassification

35 Schedule 6.2 Valuation of Working Capital Allowance Adjustment

36 Exhibit 6.01 Nicor’s response to an oral Staff data request
37 regarding storage activity from 2000-2005.

38

38 Q. Please summarize the recommendations you are making in this proceeding?

39 A. Based on my analysis showing that the Company's test year amount of gas in
40 storage is not reasonable, I recommend that the Commission reduce Nicor's
41 working capital allowance for gas in storage by \$44,712,418.

42 **Gas in Storage**

43 Q. Please describe how a gas utility utilizes gas in storage to provide
44 service?

45 A. Gas utilities use storage reservoirs to store gas obtained via pipeline from
46 gas suppliers for later delivery. In the winter months, a gas utility uses
47 storage field supply to meet winter peak demand, while also avoiding the
48 costs associated with contracting for other winter firm supply resources. A
49 storage field's working gas is normally comprised of summer injections
50 that are, under most circumstances, less expensive than winter resources.

51 Q. What is working gas?

52 A. Working gas, also called top gas, is the volume of gas in a storage
53 reservoir that is cycled (withdrawn during winter months, injected during
54 the non-winter months) from storage. Stated differently, working gas is
55 the gas available in a storage reservoir to meet utility customers' winter
56 demands. The utility replaces the working gas used by its customers

57 during the winter season by injecting gas back into the storage reservoir
58 during the non-winter season.

59 Q. What is base gas?

60 A. Base gas is the volume of gas required in a storage reservoir to provide
61 adequate operating pressures in the storage field to cycle the working gas.
62 Base gas is usually broken down into two components, recoverable base
63 gas and non-recoverable base gas. Recoverable base gas is the volume
64 of base gas that could be withdrawn if a utility were to retire the storage
65 field. Non-recoverable base gas is the volume of bas gas that the utility
66 will be unable to either physically or economically withdraw if it were to
67 retire the storage field.

68 Q. Please describe your review of the Company's storage gas levels?

69 A. I requested an electronic copy of Schedule F-9, which is a summary of the
70 Company's underground storage activity from 2000-2005. I then asked
71 several follow-up oral data requests to have Nicor remove all references to
72 third-party storage, provide actual numbers rather than estimates for 2004,
73 include leased storage volumes, and to reflect the results of a storage

74 reclassification. As a result, Nicor produced a document that I have
75 attached to my testimony as Exhibit 6.01*.

76 In particular, I reviewed the amount of working gas that the Company was
77 proposing in the test year, which forms the basis for its requested gas in
78 storage working capital allowance, to see if that amount was reasonable.
79 As part of my review, I compared the Company's test year working gas
80 levels to historical storage levels for the most recent five years.

81 Q. Did you arrive at any adjustments as a result of your review of the working
82 gas levels?

83 A. Yes. I am proposing a working capital allowance decrease of \$44,712,418
84 as a result of my 7,041,326 MCF adjustment to the test year volume of
85 working gas in storage.

86 Q. How did you arrive at your volumetric adjustment?

87 A. Using Exhibit 6.01, I computed a 13 month average of working gas
88 volumes for the 2005 test year. I then adjusted the volumes from 2000-
89 2004 to account for a storage reclassification, which is explained later in
90 my testimony. Finally, I calculated the 13-month average volume of
91 working gas for each of the previous five years. When I compared the test

* Filed as a confidential exhibit.

92 year average to the average of the previous five years, the test year value
93 was 7,041,326 MCF (thousand cubic feet) greater.

94 Q. Did you determine a value for the Company's overestimate of the volume
95 of working gas in storage?

96 A. Yes. In order to determine a value for this difference, I utilized an average
97 price of \$0.635 per therm for 2005 storage gas, as reported by the
98 Company in response to Staff data request TEE 1.04. This resulted in a
99 value of \$44,712,418. These calculations can be found on Schedule 6.2*
100 attached to my testimony.

101 Q. You stated earlier that you adjusted the prior year volumes of working gas
102 in storage to reflect subsequent Company reclassifications before
103 computing the 13-month average working gas in storage for the previous 5
104 years. Can you explain the basis and need for this adjustment?

105 A. Yes. The Company noted at the bottom of its response to my oral data
106 request that it had reclassified 8.3 BCF (billion cubic feet) of gas from
107 working gas to cushion (or base) gas in the middle of 2004. The
108 Company also notes that 1.3 BCF of base gas was reclassified back to
109 working gas at the completion of the storage study. I subtracted the net
110 7.1 BCF volume from all of the pre-reclassification data to develop

111 consistent and comparable data. Similarly, I added the 1.3 BCF volume to
112 working gas for all months between the original reclassification and
113 subsequent reclassification back to working gas. These adjustments can
114 be found on Schedule 6.01^{*} attached to my testimony.

115 Q. What does it mean to reclassify working gas to base gas?

116 A. In the normal course of operating a storage field, the deliverability of the
117 field can change. Gas migration, pressure changes, and water level
118 variations in the storage field can reduce the amount of working gas that is
119 actually available for withdrawal. From time to time, utilities will study the
120 characteristics of the fields and try to estimate these changes and loses.
121 In 2004, Nicor hired a company to perform such a study. The final report
122 from this study was attached to Nicor witness Mr. Gary Bartlett's testimony
123 as Nicor Exhibit 8.3. As a result of the study, Nicor determined that 7.1
124 BCF of working gas was no longer available for normal usage, and
125 reclassified that gas as base gas. According to Nicor's response to Staff
126 data request ENG 4.02, Exhibit 1, 6.7 BCF of the working gas was
127 reclassified as non-recoverable base gas, while the remaining 0.4 BCF of
128 working gas was reclassified as recoverable base gas.

129 Q. Are you disputing Nicor's reclassification of working gas to base gas?

* Filed as a confidential schedule.

130 A. No.

131 Q. Why did you subtract that volume from the 2000-2003 working gas
132 inventories if the reclassification was not made until 2004?

133 A. The previous study of Nicor's storage fields was conducted in 1995,
134 almost a decade prior to the most recent study. The 7.1 BCF of working
135 gas did not all become unavailable at one discernable point in time. One
136 can reasonably assume that significant changes had taken place by 2000,
137 even though they weren't officially documented until 2004. In fact, at no
138 time from 2000 – 2004 did Nicor's working gas balance dip below 7.1
139 BCF, which is further proof that these volumes were not actually available
140 for use by the Company. By making this adjustment, we get a more
141 accurate picture of the actual average working gas volumes that Nicor has
142 operated with for the past five years.

143 Q. What would the impact be on Nicor's working capital allowance if the
144 historical averages were not adjusted for the reclassification?

145 A. In effect, the Company would be double counting these volumes going
146 forward. The total volume of gas in storage has not changed – only the
147 classification category has changed. As a result of the reclassification,
148 Nicor's allowable return on recoverable and non-recoverable base is now
149 larger due to the added volumes in those categories. Adjusting the

150 historical averages for the reclassification ensures that my adjustment to
151 the projected volume of working gas in storage for the 2005 test year is
152 reasonable and appropriately reflects the effect of the reclassification. My
153 review reveals that if Nicor were now allowed to continue to earn a return
154 on its unadjusted working gas volumes, it would essentially be double
155 counting the amount of gas that was reclassified since its 2005 working
156 gas in storage projections are considerably higher than its reclassification-
157 adjusted historical averages.

158 Q. What is the basis for using the most recent five year average of working
159 gas levels to adjust the test year numbers?

160 A. The test year working capital allowance is supposed to be representative
161 of the working capital needed by the Company in future years. However,
162 the test year volumes of working gas reflected in the Company's working
163 capital allowance were the second highest in recent years, and were
164 considerably higher than the five year average. The five year average is
165 a better representation of just and reasonable future working gas volumes
166 than is the Company's estimates for the test year.

167 Q. Why is a five year average a better representation of future working gas
168 volumes than the Company's test year estimate?

169 A. The Company's estimate is just that – an estimate, which seems to be
170 based somewhat on the Company's pattern of usage from 2004. Storage
171 usage, and therefore the yearly average storage volume, is influenced by
172 many factors including weather and the market price of gas. These
173 factors are constantly changing and are never the same from year to year.
174 Therefore, the yearly average storage volumes can fluctuate from one
175 year to the next. By taking a five year average, we can smooth out some
176 of these variations and arrive at a more normal value. Furthermore, the
177 use of five years of historical data to establish a working capital allowance
178 has been accepted and ordered by the Commission, most recently in the
179 AmerenCIPS and AmerenUE rate cases (Dockets 02-0798, 03-0008, and
180 03-0009).

181 Q. Does this conclude your direct testimony?

182 A. Yes, it does.