A Reexamination of Market-Based Pricing of Storage Services at NE Hub Partners' Tioga Facility

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May 25, 2000

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INTRODUCTION

NE Hub Partners, L.P. ("NE Hub") is constructing and plans to own and operates a natural gas storage facility ("Tioga") in Tioga County, Pennsylvania, near the New York and Pennsylvania border. NE Hub has been authorized by the Federal Energy Regulatory Commission ("Commission" or "FERC"), in an Order issued April 20, 1998 ("Order"), to charge market-based rates for Tioga's storage services.[1] The fundamental predicate for the Commission's grant of market-based rate authority to NE Hub was the Commission's determination that NE Hub would not be able to exercise market power.

NiSource Inc. ("NiSource") is a partner in NE Hub Partners, L.P. NiSource proposes to merge with Columbia Energy Group ("Columbia"). PHB Hagler Bailly Inc. ("PHB") has been requested to examine whether this merger would likely change the conditions that lead the Commission to conclude that NE Hub would not be able to exercise market power over natural gas storage services in the relevant market. This report sets forth PHB's analysis and conclusions.

Summary

I have undertaken an analysis of storage services in the relevant geographic market following the Commission's guidelines for analysis of market power in connection with applications for market-based rates.[2] Also, the Commission has issued subsequent orders regarding market-based rates for storage services, which further clarify the Commission requirements for market-based rates.

My study analyzed market share and concentration statistics for storage services in New York and Pennsylvania based peak day deliverability and working gas capacity measures. Consistent with prior analyses and Commission orders regarding this geographic market, my analysis shows that

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1 NE HUB Partners, L.P., 83 FERC ¶ 61,043 (1998).

2 Federal Energy Regulatory Commission, "Statement of Policy and Request for Comments – Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines," 74 FERC ¶ 61,076 (1996). Hereinafter referred to as "Policy Statement."

the market is very concentrated (HHIs above 1,800). The high level of concentration in the market is attributable to the high market shares of CNG Transmission Company ("CNG")—above 50 percent by either measure. The combination of Tioga and Columbia ("merged company") storage facilities would result in market shares of 12 percent based on peak day deliverability and 5 percent based on working gas capacity.

Tioga is a salt dome facility, which is characterized by high deliverability. High deliverability facilities provide needle peak storage. PHB also conducted an analysis of the market shares and concentration of high deliverability storage based on a geographic market which encompasses New York, Pennsylvania, New Jersey and New England. This market is not concentrated (HHI less than 1,000). The merged company market share is 10.4 percent.

As discussed in more detail later, another factor contributes to the my conclusion that there has not been a change in the market power concerning Tioga. None of the Columbia storage facilities have market-based rate authority. These facilities represent only 6.9 percent of peak day deliverability, 4.3 percent of working gas capacity and less than one percent of the high deliverability storage services market. Consequently, Tioga's ability to raise prices above competitive levels has not changed because Columbia provides storage services based on just and reasonable rates. The proposed merger of NiSource and Columbia will not have any adverse effects on competition based on my analysis and other competitive market circumstances. Therefore, Tioga's circumstances will not change by virtue of the merger and the Commission's conclusions regarding Tioga's market power remain valid.

DESCRIPTION OF THE MERGED COMPANIES

NE Hub Partners

Tioga is owned by MHP which is a sole limited partnership owned by Tioga Gas Storage Company; TCP Gas Storage Services, L.P.; TCP Storage Holding Corp; and NI Energy Services, Inc; all of which are subsidiaries of NiSource, Inc. Tioga is a salt cavern storage facility located in Tioga County, Pennsylvania. Because it is a salt cavern, Tioga has high deliverability (500 MMcfd) with relatively low working gas capacity at 5.0 Bcf. Phase I will be operational in late 2002 and Phase II will add an additional 5.0 Bcf of working gas capacity by late 2004. As such, Tioga provides excellent peaking service to meet needle peaks, daily pipeline balancing, as well as conventional storage services. It will be connected to CNG Transmission, North Penn, Transco, National Fuels and Tennessee Gas Pipeline. Tioga is located near the Ellisburg Hub.

Columbia

Columbia has approximately 12 depleted reservoir storage facilities located in New York and Pennsylvania with total peak day deliverability of 670 Mcf/day and total working gas capacity of 23.3 Bcf. Columbia operates its storage a single pool with 5.8 Bcf reserved for system operations. These facilities have large working gas capacity and are ideally suitable for meeting seasonal loads. Columbia's Heard storage facility in Pennsylvania has been temporarily deactivated.[3]

REQUIREMENTS FOR MARKET-BASED RATE AUTHORITY

In 1996 the Commission issued its Policy Statement providing guidelines about the standards for approving market-based rates. Also, the Commission has issued several orders regarding market-based rates for storage services. These cases, provide further guidance on the Commission's requirements for market-based rate authority and include: Ouchita Gas Storage Company, L.L.C. 76 FERC ¶ 61,139 (1996), Equitable Storage Company, 75 FERC ¶ 61,081 (1996) and Egan Hub Partners, L.P., 77 FERC ¶. 61,061 (1996). Together with orders in Avoca Natural Gas Storage Company, 68 FERC ¶ 61,045 (1995) ("Avoca") and Steuben Gas Storage Company, 72 FERC ¶ 61,102 (1995), which both involved market-based rates for market area storage,[4] the Commission has established clear guidelines regarding the factors that an applicant must demonstrate to receive approval of market-based rates.

In order to assess the potential exercise of market power, the Policy Statement requires that the analysis must properly identify the relevant product and geographic market for the proposed service. In addition, the number and type of alternatives available to potential customers of the proposed service must be identified. The size of the market must be measured and market shares of participants in the market must be calculated to assess the likely presence of market power. Market shares are then used as screens to determine the level of concentration in the

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[3] FERC Docket No. CP95-61-000.

[4] See also NE Hub Partners, L.P., 83 FERC ¶ 61,043 (1998) and New York State Electric and Gas Corp., 81 FERC ¶ 61,020 (1997).

market by calculating the Herfindahl-Hirschman Index ("HHI")[5]. As indicated in the Policy Statement, a small HHI indicates that sellers cannot exercise market power because customers have sufficiently diverse sources of supply in the relevant market and that no one firm or group of firms acting together could profitably raise market prices. The Commission has indicated that it will use 0.18 HHI (or 1,800 HHI) or larger as an indication that closer scrutiny is warranted because the index indicates that the market is more concentrated and the applicant may have significant market power. In addition, the analysis requires an examination of the ease of entry of potential competitors. This is especially important because a firm will not be able to sustain a price increase of 10 percent or more over a two-year period if competitors can easily enter the market in reaction to price increases above competitive market levels.

The Commission has indicated that if the HHI is above 1,800, the Commission will give the applicant closer scrutiny because the index indicates that the market is more concentrated and the applicant may have significant market power. If the HHI is 1,800 or larger or if the applicant's market share is large, other factors to be considered in connection with granting market-based rate authority are: ease of entry, excess capacity held by competing sellers and buyer market power.[6]

<u>Avoca</u> was the first market area storage facility to receive permission from FERC to charge market-based rates. Avoca is located in New York and the geographic market was defined as New York and Pennsylvania for conventional storage and additionally New England to provide short-term peak day storage as an alternative to LNG storage. Avoca is a salt storage facility (as is Tioga) and the Commission noted that such facilities are distinguished by a high ratio of deliverability to working gas capacity.

The Commission determined that Avoca provides storage services for three types of demand for storage: 1) base load; 2) winter addition to base load; and 3) short-term peaks. During the summer, the base load is the total demand for gas. Other demands are added during the rest of the year. The winter addition to base load consists of the average increase in demand for gas that occurs throughout the winter heating season. Short-term peaks consist of further increases in gas demand that occur over a period of days or even hours, i.e. needle peaks.

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5 The HHI statistic is calculated by summing the squares of the market shares of the individual participants in the relevant market.

6 FERC Staff Paper, "Market-Based Rates for Natural Gas Companies, 70 FERC ¶ 61,139 (1995).

In Avoca, the Commission determined that there are two relevant storage products. The first is conventional storage services, which can be used to satisfy the demand for base load and longer-lasting short-term peaks. The second is storage to satisfy short-term peak demand, which includes salt caverns and liquefied natural gas ("LNG").

In Avoca, the Commission determined that the storage market to be concentrated with an HHI for working gas of 4,900 and an HHI for peak day deliverability of 4,100. Avoca's market shares were 3.0 percent and 9.6 percent, respectively. In the short-term peak demand market, the market was found to be moderately concentrated with an HHI of 1,100. Avoca's market share of the short-term peak demand market was 19.1 percent.

The Commission granted Avoca market-based rate authority based on three conclusions. First, Avoca's market share is small compared to the alternatives available to its customers, and therefore, Avoca can charge no more than the prevailing market price for storage. Second, entry by other small competitors will prevent Avoca from exercising market power. Furthermore, the Commission concluded that even if Avoca's market share was high, that if entry is easy, Avoca may lack market power, especially if there exists excess capacity. Third, the rates of existing storage providers are regulated under just and reasonable rates and therefore, even if the market concentration is high, existing storage providers cannot exercise market power.

Steuben was the second market area storage facility to receive permission from FERC to charge market-based rates. Like Avoca, Steuben is also located in New York and the geographic market was also defined as New York and Pennsylvania. The Commission concluded that the HHI for working gas capacity was 4,000 and the HHI peak day deliverability was 3,600. Although the market is highly concentrated, the Commission concluded that Steuben is too small (market shares of 1.66-3.5 percent) to exercise market power. The Commission determined that the market has more than 28 times the capacity and deliverability of the Steuben storage facility. Therefore, the Commission concluded that Steuben represents a very small part of the market and would not be in a position to control the market.

To anticipate the following discussion, the proposed merger would not significantly change any of the relevant market conditions on which the Commission relied to reach its prior decision. Neither before nor after the merger would NE Hub have an ability to exercise market power over the price of storage services.

The Commission's NE Hub Order

The fundamental issue addressed in this study is whether any significant and adverse competitive effects might result from the merger of NiSource and Columbia. Adverse effects should be measured relative to the market conditions relied upon by the Commission when it granted NE Hub the authority to charge market-based prices for storage services at the Tioga facility. Therefore, the present analysis begins with an examination of the Commission's explanation of the basis for its April 20, 1998 Order.

The Commission accepted NE Hub's definitions of two relevant markets to be served by the Tioga facility, for analyzing possible market power over storage. These are: (1) conventional underground storage in the two-state area of New York and Pennsylvania and (2) high-deliverability/LNG New York, Pennsylvania and New England.[7] This latter product or service is referred to as short-term peak demand service. This concept of the relevant markets has been used by the Commission in at least three other market-based storage rate proceedings.[8] The present analysis will follow this Commission precedent and its past practice.

In its April 20, 1998 Order the Commission found that economic concentration in the conventional storage market, as measured by the HHI was high (an HHI of 4,692 for working gas capacity and an HHI of 4,196 for peak day deliverability), thus meriting closer market-power scrutiny. However, the Commission did not find the high level of market concentration to preclude NE Hub's being allowed to charge market-based rates for storage services. The Commission cited three reasons for this determination.

First, NE Hub's shares of the relevant markets were small (1.2 percent for working gas capacity, 5.0 percent for peak day deliverability and 11.7 percent of high deliverability/LNG) compared to the alternatives available to customers of the Tioga facility. The Commission went on to point out that NE Hub was a new entrant that could survive only by offering customers prices lower than the prevailing prices for comparable service. The Commission stated that all existing capacity

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7 The Commission rejected a request that other storage facilities owned by affiliates of NE Hub Partners L.C., (i.e. Egan and Moss Bluff) be included in the relevant market. The FERC pointed out that such facilities should be included in the relevant market if, but only if, they were good alternatives for Tioga, and there was no indication that they were. The Commission went on to correctly point out that if Egan and Moss Bluff were included in the relevant market, many other non-affiliated storage facility alternatives would also have to be included in the relevant market.

8 Avoca Natural Gas Storage, 68 FERC ¶ 61,045, July 8, 1994; Steuben Gas Storage 72 FERC ¶ 61,102 July 28, 1995; New York; State Electric & Gas Corporation, 81 FERC ¶ 61,020, October 15, 1997.

provides alternatives to customers considering using Tioga, because existing storage users would have to consider giving up their existing storage provider if they were to use NE Hub's services instead.

Second, the reason for the high concentration of the relevant markets, (high HHIs), was due to control of 80 percent of both working gas capacity and peak day deliverability by CNG Transmission ("CNG") and National Fuel Gas ("National Fuel"). Both firms were viewed as having the capability to expand their facilities such that any attempt by NE Hub to exercise market power would be thwarted. More fundamentally, in a situation where two companies had such a large joint share, the Commission concluded that NE Hub would provide desirable competition to the dominant storage operators.

Third, the rates of the incumbent interstate storage providers, with whom NE Hub would have to compete, were subject to cost-based regulation. They were, therefore, legally, just and reasonable rates. CNG, National Fuel and the other providers, the Commission pointed out, could not exercise market power to increase prices above the cost-base rate cap, because of their regulatory status. Because these suppliers with cost-based regulated rates compete with NE Hub, these regulated prices provide a constraint on prices NE Hub could charge.

The following analysis will focus on the three considerations on which the Commission said it relied in issuing its April 20, 1998 Order. To anticipate, the proposed merger would not affect significantly any of the market conditions cited by the Commission.

MARKET ANALYSIS

As was the situation in 1998, the conventional underground storage market in New York and Pennsylvania is concentrated, as measured by the HHIs for both peak day deliverability and working gas capacity. As shown on Exhibit No. ___ (BMM-1), the merged company has a market share for storage services of only 5 percent as measured by working gas capacity. Consistent with the Commission's prior findings, the market, as measured by working gas capacity, is highly concentrated (HHIs above 1,800) and the pre-merger HHI is 3,858. The current HHI is lower than those calculated earlier due to new entry and expansion of existing facilities.

As shown on Exhibit No. ___ (BMM-2), the merged company has a market share for storage services of 12 percent, as measured by peak day deliverability. Again, consistent with the

Commission's prior findings, the market, as measured by peak day deliverability, is highly concentrated and the pre-merger HHI is 3,989, which is lower than the HHI calculated earlier for the reasons noted above. The merged company's market share is only 12 percent, which is not significant when compared to CNG's dominant market position (62 percent).

Also unchanged is the major reason for the high level of concentration, to wit, the major market shares held by CNG and National Fuel. My analysis calculated CNG's market shares to be 58.6 percent and National Fuel Gas to be 19.0 percent, as measured by working gas capacity. CNG's and National Fuel Gas' market shares are 61.7 percent and 8.4 percent, respectively, as measured by peak day deliverability.

The short-term peak demand market includes salt cavern and LNG storage facilities in Pennsylvania, New Jersey, New York and New England. This market is not concentrated and has a pre-merger HHI of only 648. Exhibit No. ___ (BMM-3) presents a listing of these facilities. Exhibit No. ___ (BMM-3) shows that the merged company's market share is 10.4 percent.

As shown on Exhibit Nos. ___ (BMM-1) to (BMM-3), none of the merged company market shares indicate a concern for potential market power, no matter how the market for storage services is measured. As noted above, the market circumstances have not changed substantially, even after the merger of NiSource and Columbia, to warrant a finding of market power in connection with the Tioga facility.

EASE OF ENTRY

The Commission concluded in Avoca that: "Even with a large market share, however, an applicant may lack market power if entry is easy or there are other competitive forces at work in the market [i.e., excess capacity]." Exhibit No. ___ (BMM-4) provides a listing of potential new entrants into natural gas storage services in the relevant geographic market.

Currently, there are six storage projects being planned in New York and Pennsylvania. As shown on Exhibit No. ___ (BMM-4), these projects will add working gas capacity ranging from 35,440 to 37,100 MMcf and peak day deliverability of 1,820 MMcf/day to the market place. The proliferation of such projects coupled with the fact that Commission policy generally favors the development of new storage facilities, where such facilities do not adversely affect existing and potential customers or competitors, supports a conclusion that there is ease of entry in the Tioga market.

OTHER COMPETITIVE MARKET FACTORS

The Commission also reviews other competitive market factors when considering granting an Applicant market-based rate authority. Most of the prices charged for underground storage in Pennsylvania and New York are just and reasonable rates regulated by the FERC on the basis of cost-of-service. In its grant of market based pricing authority to NE Hub and other new entrants, the FERC emphasized that this fact mitigates the high level of concentration. The FERC also emphasized that the regulated status of its competitor's prices would constrain NE Hub (and other firms with market-base pricing authority) should an exercise of market power be attempted. Actual or potential customers of NE Hub or any other storage company charging market-based rates would have abundant opportunities to seek an alternative supplier that is, by virtue of FERC regulation, required to charge a regulated, cost-based just and reasonable price.

This situation would be unchanged by the proposed merger. After the merger, the vast majority of the storage capacity and deliverability in Pennsylvania and New York would continue to be offered at FERC regulated rates. All of the constraints and mitigating effects cited by the Commission in its April 20, 1998 NE Hub Order would continue to apply.

My analysis is very conservative because the market shares of Columbia and NE Hub were added together as though each firm will operate its storage facilities independently of one another. NE Hub offers its services at market based rates; Columbia's rates are subject to traditional cost-based price regulation. In the interest of analytical conservatism, this distinction has been ignored to this point in this report. However, the distinction is very important.

In reality, the rates at the storage facilities that Columbia will bring to the merger are now regulated with respect to the prices that can be charged for the services of those facilities. The rates at these facilities will continue to be regulated after the merger. This status is unaffected by the merger. After the merger, the services at Tioga, and only the services at Tioga, will continue to be priced at market-determined rates by the new firm. In other words, the competitive constraint imposed by regulated rates in the relevant market would not be affected by the merger. Thus, it is fair to say that with respect to market power of NE Hub, Columbia or the combination of these two storage suppliers, the merger will change nothing. Tioga will continue to offer market-based rates and the formerly-Columbia-owned facilities will continue, as in the past, to charge regulated cost-based rates. There will be no change in pricing authority as a result of the merger.

CONCLUSION

This reexamination of the market power conditions in the relevant markets served by NE Hub and Columbia reveals that the proposed merger would not have a significant effect on concentration or market shares. Moreover, examining the other factors cited by the Commission in support of its Order in 1998 granting market-based pricing authority to NE Hub, reveals that the merger would produce no significant, adverse changes. The proposed merger would not significantly or adversely affect market power over storage services in the relevant markets served by NE Hub and Columbia.