CENTER FOR ENERGY ECONOMICS

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Case Study From

NEW ERA IN OIL, GAS & POWER VALUE CREATION

Convergence Merger of Electric and Natural Gas Utilities[1]

In January 2000, Dominion Resources, Inc., owner of an integrated electric utility company in Virginia, acquired Consolidated Natural Gas Company (CNG), owner of a regional natural gas pipeline and several natural gas distributors, including one in Virginia. This type of marriage between electricity and natural gas businesses became known in the 1990s as a convergence merger*.*

- *How can the government most effectively protect the interests of investors, customers, competitors and citizens in deciding whether or not to authorize a convergence merger?*
- *What evaluation methods might be useful in determining whether or not a prospective merger might lessen competition, create a monopoly or be incongruent with the public interest?*
- *Under what conditions should certain potentially anticompetitive behavior be permitted?*

Background

U.S. Antitrust Law prohibits mergers that may substantially lessen competition or create a monopoly. Three types of mergers raise concerns with antitrust regulators: horizontal mergers between competitors, vertical mergers between buyers and sellers, and conglomerate mergers between potential competitors.

Historically, jurisdiction over whether or not a merger violates antitrust law lies with the federal courts – but only after the fact, when someone files a complaint alleging anticompetitive consequences arising from the combination. When two large firms come together, however, they must give prior notice to the Federal Trade Commission (FTC) – a consumer protection agency – and the Department of Justice (DOJ). This gives all parties an opportunity to evaluate the consequences of the proposed combination before completing these very expensive and time-consuming transactions. Though both agencies have jurisdiction over prospective mergers, usually only one will investigate following consultation with the other. In March 2002, FTC and DOJ agreed that FTC would take the lead on investigating energy mergers, including convergence mergers. At the time of the Dominion-CNG[2] merger, however, DOJ generally investigated electric utility mergers while FTC handled gas company combinations. In the case of convergence mergers like this one, clearance disputes as to which agency would take primary responsibility often delayed investigations.

In addition, the merger of two public utilities such as these requires the approval of state regulators. The financial abuses arising from the concentration of U.S. utility operations in a handful of companies prompted Congress, in 1935, to place the investment activities of public utility holding companies operating in more than one state under the watchful eye of the Securities and Exchange Commission (SEC). State regulators presumably have sufficient regulatory capacity to thwart any financial abuses by holding companies with operations confined to one state. The Federal Power Act, also a product of the 1930s, requires that the Federal Energy Regulatory Commission (FERC) approve of any disposal of assets with a value in excess of $50,000 by an electric utility. Whereas SEC regulation focuses on protection of the investor, FERC regulation adds protection for the ratepayer.

This case study focuses on the FERC's merger analysis. From 1966 to 1996, the FERC applied a six-point test which complemented its cost-of-service rate regulation, to determine whether a proposed merger is *consistent with the public interest*:

(1) the effect of the proposed merger on competition;

[1] This case study was prepared using publicly available information.
[2] The merged company retained the name of Dominion Resources, Inc. The Dominion-CNG designation is used here to distinguish the merged company from the pre-merger enterprise.

(2) the effect of the proposed merger on the applicants' operating costs and rate levels;

(3) the reasonableness of the purchase price;

(4) whether the acquiring utility has coerced the to-be-acquired utility into acceptance of the merger;

(5) the impact of the merger on the effectiveness of state and federal regulation; and

(6) the contemplated accounting treatment.

Beginning in the early 1990s, the FERC began requiring electric utilities seeking merger approval to offer open access to their electric transmission lines as a condition for approving mergers involving electric utilities. In 1996, in congruence with its Open Access Rule – requiring all electric utilities to offer open access – the FERC announced a new merger policy (Order 592) designed not to *impede the development of vibrant, fully competitive generation markets*. The FERC replaced its six-point impact analysis with a review of the merger's impact on competition, rates and regulation.

Also, the new merger policy sets forth several practices employed by the FERC to improve the predictability and efficiency of its approval process. First, in analyzing the impact of a proposed merger on competition, the FERC announced it will use the DOJ/FTC's Merger Guidelines. Second, the FERC outlined its practices with regard to overlapping regulation by other agencies. For example, the D.C. Circuit has ruled that the FERC, in a utility rate proceeding, may not contravene the SEC's approval of a transaction between affiliates in a public utility holding company. Thus, to preserve some authority to address affiliate abuses, the FERC gives merger applicants the choice of committing to follow its policies regarding affiliate transactions or submitting to a hearing on the potential for affiliate abuses. With regard to overlapping state regulation, the FERC will refrain from analyzing the impact of proposed mergers on retail competition unless asked to do so by the state authorities. Finally, to expedite the review process, the FERC expects applicants for merger approval:

- to analyze the impact of their proposed merger on competition, rates and regulation, and file the analysis – along with supporting data in electronic form – with the FERC for public review;
- to propose mechanisms for protecting consumers from merger costs; and
- to commit to abide by the FERC's policies regarding affiliate transactions.

Merger applications that adequately satisfy these requirements and do not raise substantial issues of material fact may not be subject to a trial-type hearing. These new filing requirements should expedite the approval process even for those applications that do raise substantial issues of material impact by reducing the number of issues addressed in a hearing.

Four years after announcing its new merger policy, the FERC, as promised, established filing requirements for merger applications and elaborated on its approach to analyzing the impact of future mergers on competition (Order 642). These policies do not apply to participation in a regional transmission organization (RTO), the divestiture of transmission facilities or internal reorganizations. In fact, the FERC applauds participation in an RTO as a mitigation measure to address excessive market concentration.

Proposing the Merger

When Dominion and CNG proposed the merger, Dominion owned interests in:

- Virginia Electric Power Co. (VEPCO), which:
  - sold and distributed electricity in Virginia and North Carolina;
  - provided open access transmission services;
  - was directly connected to large utilities in three electric reliability councils;
  - had joined with four Midwestern electric utilities to propose the Alliance Regional Transmission Organization.
- domestic and international electricity generation facilities, including an existing coal-fired plant and a natural gas-fired plant under construction, both in Illinois; and
- oil and gas reserves, and exploration and development operations, in the United States and Canada;

- Dominion Capital, Inc., involved primarily in commercial and residential mortgage lending.

At that time, CNG owned interests in:

- CNG Transmission, a regional natural gas pipeline system that delivers natural gas to customers, including gas-fired generators in Massachusetts, New York, New Jersey, North Carolina, Ohio, and Virginia;
- another gas pipeline on the border that transports Canadian gas to customers, including generators, in New England and New York;
- natural gas distributors serving customers in Ohio, Pennsylvania, Virginia (Virginia Natural Gas, VNG) and West Virginia;
- wholesale and retail electricity providers authorized to sell electricity at market-based rates;
- oil and gas exploration and production operations in Argentina, Australia, Canada, Gulf of Mexico and the United States; and
- generation assets in Argentina, Belize, Bolivia and Peru.

The FTC took the lead on investigating this convergence merger. The SEC and several state regulators also had approval authority over the proposed merger. In addition, because the merger involved the disposition of public utility assets valued in excess of $50,000, the proposed transaction was subject to FERC approval.

Having received approval from the shareholders of both companies, Dominion and CNG filed an application with the FERC for approval of Dominion's acquisition of CNG on June 7, 1999. Though both companies engaged in energy distribution – Dominion primarily in electricity and CNG primarily in natural gas – Dominion-CNG argued that their combined strength in did not substantially improve the competitive position of Dominion-CNG in retail markets. Similarly, the two companies' combined strength in oil and gas exploration and production did not significantly increase the market concentration in relevant supply markets. Thus, the merger application included an assertion that the merger posed no *horizontal* competitive issues.

The companies' antitrust analysis, included with their application, instead centered on the proposed *vertical* integration of CNG's transportation and distribution of natural gas to electricity generators like VEPCO and its competitors. Accordingly, the merger application included an analyses of the relevant upstream delivered gas markets and downstream electricity markets to determine whether the new Dominion-CNG would have the incentive or ability to raise competitors' gas costs or deter entry into either market.

Evaluating the Merger

As outlined in Order 592, the FERC evaluated the potential impact of the proposed Dominion-CNG merger on competition, rates and regulations.

Competition

In analyzing the impact of the Dominion-CNG merger on *competition*, the FERC applied the DOJ/FTC's Guidelines to determine, with respect to the FERC's precisely identified geographic and product markets, whether:

(1) the merger would significantly increase concentration and result in a concentrated market, properly defined and measured;

(2) the merger, in light of market concentration and other factors that characterize the market, raises concern about potential adverse competitive effects;

(3) entry would be timely, likely and sufficient either to deter or to counteract the competitive effects of concern;

(4) there are any efficiency gains that reasonably cannot be achieved by the parties through other means; and

(5) but for the merger, either party to the transaction would be likely to fail, causing its assets to

exit the market.

An important measure of the impact of a proposed merger on competition is the degree of change in market concentration. Like other agencies, FERC uses the Herfindahl-Hirschman Index (HHI) – the sum of the squares of each participant's share in the market – to measure market concentration in cases of horizontal and vertical mergers. Based on DOJ/FTC's Guidelines, the FERC uses HHI calculations to identify market power problems as follows:

- **Unconcentrated Post-merger Market:** If the post-merger HHI is below 1000, regardless of the change in HHI the merger is unlikely to have adverse competitive effects;

- **Moderately Concentrated Post-merger Market**: If the post merger HHI ranges from 1000 to 1800 and the change in HHI is greater than 100, the merger potentially raises significant competitive concerns; and

- **Highly Concentrated Post-merger Market:** If the post-merger HHI exceeds 1800 and the change in the HHI exceeds 50, the merger potentially raises significant competitive concerns; if the change in HHI exceeds 100, it is presumed that the merger is likely to create or enhance market power.

Generally, the FERC is concerned that holding companies with gas and power utilities would have the upstream market power to limit the ability of gas customers to switch to alternative suppliers and the downstream market power to limit the ability of electricity customers to switch to generators not served by the gas-power holding company. The FERC has no problems with vertical mergers in which:

- the combined companies will not have market power in both upstream and downstream markets;
- the upstream and downstream markets are geographically remote from each other; and
- the upstream product sold by the merged companies produces only minor quantities of the downstream product.

Accordingly, Dominion-CNG first identified nine destination markets for energy – generally corresponding geographically to generators' service areas – and for each of these markets calculated the change in concentration that would result from the merger. In calculating CNG's market share, Dominion-CNG included the capacity of non-affiliated gas-fired generators supplied by CNG. In Order 642, issued after the Dominion-CNG merger, the FERC announced it would require merger applicants to include in their analysis of destination markets any markets where they may be potential competitors. Order 642 also lists non-firm energy, short-term and long-term firm capacity, spinning and non-spinning reserves, and imbalance energy as relevant products to be included in the competitive analysis.

Of the nine markets, the HHI estimated to result from the merger ranged from 1,858 to 6,680 for all seven time periods measured. Except for one market, however, the proposed merger would not increase market concentration, as measured by the HHI, by more than 50. For this one market, Dominion-CNG proposed to undersize or sell part of a planned Dominion-CNG generation joint venture to an unaffiliated party. Dominion-CNG also calculated the projected HHI for each of the states to which Dominion-CNG would deliver gas to distribution markets – ranging from 1,513 in Ohio to 4,400 in Virginia. Though these concentrations are high, Dominion-CNG argued that the merger would not increase market concentration because most of these markets are either served by another pipeline or have access nearby to other gas or fuel supplies. In addition, Dominion-CNG committed to interconnect with any electric generator that agrees to its interconnection requirements – known as an *open tap* policy – and to hold an *open season* for any new pipeline capacity constructed to serve an affiliated generator.

The FERC, nevertheless, found that these high market concentrations may adversely affect competition in downstream electric and gas markets, especially given the growing importance of gas-fired generation. Whereas a horizontal merger analysis focuses on the increase in market concentration resulting from the merger, a vertical merger analysis is only concerned with the presence of high market concentrations in both the upstream and downstream markets. Specifically, it was concerned that CNG pipeline could use competitive information obtained from its non-affiliated generator customers to manipulate costs, services and expansions for the benefit of Dominion-CNG's affiliated generators. Since 1988, the FERC has imposed a Standard of Conduct on interstate pipelines which, among other limitations, prohibits them from sharing with their gas marketing affiliates information that they do not simultaneously share with non-affiliated shippers and potential shippers. In its application, Dominion-CNG offered to limit interactions, in accordance with this Standard of Conduct, between CNG Transmission and:

- affiliates with wholesale market-based authority (as opposed to affiliates using regulated, cost-based rates); and
- affiliates with whom the pipeline conducts transportation transactions.

The FERC noted, however, that Dominion-CNG's affiliated generators who sell electricity at cost-based rates – *e.g.*, VEPCO – also could benefit from higher electricity prices when market rates fall below cost-based rates. Thus, the FERC conditioned its merger approval on the merged company applying the Standards of Conduct to relations between the pipeline and the *corporate family as a whole*. Relying on an earlier FERC order approving another convergence merger, Dominion-CNG interpreted this expansion of the Standards of Conduct to cover all affiliates who engage in wholesale electricity sales. In its May 2000 order approving the Dominion-CNG merger (Merger Order), however, the FERC stated that its condition applied to all affiliated energy companies.

Dominion challenged the FERC's interpretation in the courts. In its appeal, Dominion also argued that non-operating personnel shared by the pipeline and its affiliates should be allowed to receive customers' competitive information without simultaneous release to other shippers so long as these employees did not act as conduits of the information to affiliated generators' staffs. FERC, instead argued that any information received by a shared employee would be automatically imputed to be subject to the Standards of Conduct. The D.C. Circuit, in April 2002, rejected the FERC's application of the Standards of Conduct to the pipeline's interactions with all of its affiliates and declined to address the issue of *no-conduit* vs. *automatic imputation* because Dominion had conceded that the automatic imputation rule should apply to information shared between the pipeline and its gas and electric marketing affiliates.

In Order 642, the FERC notes that it will consider market conditions, ease of entry and market rules, and technical conditions in deciding whether or not to condition merger approval on the divestiture of all anticompetitive subsidiaries and the adoption of behavioral remedies. The FERC also hopes to improve the quality of its analysis through computer modeling simulation analysis. Computer modeling would address the problem of analyzing destination markets in isolation from each other. There is not yet any consensus, however, on how to structure the simulation models.

Rates

With respect to the impact of the proposed merger on *rates*, the FERC strongly encourages applicants to negotiate appropriate rate protection with its customer base. With or without a customer agreement, merger applicants must propose rate protection mechanisms, which the FERC will consider in the approval process. Examples of acceptable rate protection mechanisms include:

- **Open Season for Wholesale Customers:** Applicants agree to allow existing wholesale customers a reasonable opportunity to terminate their contracts (after notice) and switch suppliers. This allows customers to protect themselves from merger-related harm.
- **General Hold Harmless Provision:** A commitment from the applicant that it will protect wholesale customers from any adverse rate effects resulting from the merger for a significant period of time following the merger. Such a provision must be enforceable and administratively manageable.
- **Moratorium on Increases in Base Rates (Rate Freeze):** Applicants commit to freezing their rates for wholesale customers under certain tariffs for a significant period of time.
- **Rate Reduction:** Applicants make a commitment to file a rate decrease for their wholesale customers to cover a significant period of time.

In its application, Dominion-CNG committed to:

- holding its wholesale electric customers receiving cost-based service and its electric transmission customers harmless from paying merger costs in excess of merger savings;
- accepting the burden of proving in future rate cases that merger savings exceed any merger costs included in its cost of service;
- not using merger costs to justify an increase in rates above current levels, or to prevent a decrease in rates precipitated by cost reductions unrelated to the merger; and
- VEPCO not paying to any CNG affiliate a natural gas price that exceeds the lower of cost or market.

The FERC accepted these commitments as satisfying its concerns regarding any adverse impacts of the merger on rates.

Regulation

The *regulation* prong of the FERC's analysis involves the proposed merger's impact on oversight by the Securities and Exchange Commission (SEC) and state governments. Where the new company will be a public utility holding company subject to the jurisdiction of the SEC, the applicants must either commit to comply with the FERC's affiliate transaction policies or expect review of its affiliate relationships in a FERC hearing. Although Dominion was exempt from SEC regulation of public utility holding companies, CNG was not. CNG's status, resulting in the new company's ownership of public utilities in multiple states, made Dominion-CNG subject to SEC regulation. In its FERC application, Dominion-CNG agreed:

- to follow the FERC's policy regarding treatment of the costs and revenues of affiliated non-power transactions;
- not to sell non-power goods and services from CNG affiliates to VEPCO at a price in excess of market value; and
- to purchase non-power goods and services from VEPCO at the higher of market value or cost.

The FERC accepted these commitments as satisfying its concerns regarding limitations on its regulation of affiliate transactions resulting from SEC jurisdiction.

State commissions will be responsible for reviewing and approving or conditioning the merger in accordance with state interests.[3] The FERC will only address the impact of a proposed merger on state regulation if a state either lacks authority to regulate a merger or raises issues about the impact of the merger on its regulation. At the time of the FERC's conditional approval of the merger, all of the states served by Dominion or CNG either approved the merger – one conditionally – or did not raise any

[3] Order No. 592, at 68596.

substantive concerns other than those addressed by the FERC.

Divesting Problematic Assets

The FTC and Virginia Corporation Commission conditioned their approval on the divestiture of VNG within 12 months of the merger. Because public utility holding companies subject to the jurisdiction of the SEC may not own non-regulated businesses functionally unrelated to the public utility, the SEC conditioned its approval on Dominion-CNG divesting Dominion Capital, Inc.

Dominion completed the acquisition of CNG on January 28, 2000. In accordance with the FTC and Virginia Corporation Commission orders, the merged company divested VNG in 2000. In accordance with the SEC order, Dominion had substantially divested the core operating assets of DCI by the end of 2002, and noted that it was required to divest its remaining DCI holdings by January 2006.

Also, with the stated purpose of focusing on U.S. operations, the new company voluntarily divested:

- its interest in a 350-MW gas-fired power plant located 90 miles north of London in September 2000.
- CNG International's Argentine oil and gas assets in October 2000;
- 1200 MW of generation capacity in Argentina, Belize, Bolivia and Peru by the end of 2000.

Sources:

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