The Financial and Operational Impacts of FERC Order 636 on the Interstate Natural Gas Pipeline Industry*

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Abstract
The Federal Energy Regulatory Commission's Order 636 fundamentally altered the regulatory and operational environment of the natural gas industry in 1992, as the culmination of several directives aimed at relaxing regulation and fostering competition. We hypothesize that gas pipeline firms subsequently changed their operational and financial behavior in ways consistent with reduced balkanization, increased competition, and reduced expense preference behavior. Our results indicate that these firms have become more homogeneous financially but less so operationally. We find evidence that the marginal profitability of various pipeline activities has responded more to financial market conditions than to the regulatory environment.

Key words: gas pipeline, expense preference, regulation

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1. Introduction

In 1992, the Federal Energy Regulatory Commission (FERC) issued Order 636 fundamentally changing the services and rate structures of natural gas interstate

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pipelines. Known in the industry as a mega-NOPR (Notice Of Proposed Rulemaking), this Order created a discrete shift in the regulatory and operational environment facing gas pipeline utilities. The major components of the Order included the requirement that pipelines unbundle sales and storage from transport, maintain an open access network to both transport and storage, implement capacity release programs, and switch rate design to the straight fixed variable (SFV) method (FERC Order 636, 1992). Prior to this Order, each of these dimensions had permitted the transmission network to evolve into a disjointed network of supply channels and markets with few opportunities for arbitrage—a structure we refer to as “balkanized,” following De Vany and Walls (1994a). Ex ante, it was expected that, since the pipeline network was a bottleneck transportation facility (Cramer 1992), these changes would lead to increased competition in the industry.2

A major intent of Order 636 was to break up the monopsony power of pipelines and allow consumers to benefit from a freer flow of market-based field pricing signals. To remove the market power of the bottleneck facilities required the abandonment of regulatory policies intended to foster end-to-end service.3 Collectively, the unbundling of storage, capacity release program, and rate design changes were all intended to improve the efficiency of transport price signals. At the same time, this complete overhaul of the pipeline function, marketing niche, and pricing structures entailed substantial operational changes. Three clear examples illustrate this point. First, a major operational consequence of Order 636 was the shifting of load balancing obligations downstream. Second, with the unbundling of storage, pipelines were absolved of their responsibility of storing gas to meet variations in demand. Third, the Order caused a fundamental change in the flow diagrams of pipelines. Under an open network, points of injection and withdrawal may be completely different than under end-to-end service, resulting in altered flows.

The earlier policies of natural monopoly regulation had cultivated the development of the balkanized market. Deliberate obstacles to the free flow of market-based pricing signals across pipeline systems and idiosyncratic rate-base regulation fostered the evolution of heterogeneous pipeline behavior. In the absence of competitive discipline, balkanization allowed the formation of disparate, potentially inefficient, cost structures. A widely studied example of such differentiated cost structures results from expense preference behavior, which has been addressed empirically for several regulated industries including depository institutions (Edwards 1977; Mester 1989; Gropper and Hudson 2003), electric utilities (Mixon and Upadhyaya 1999b), transportation (Mixon and Upadhyaya 1996, 1999a; Obeng 2000), and hospitals (Oswald et al. 1994; Dor et al. 1997).

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1 An excellent review of the events and federal policy changes leading up to the issuance of Order 636 can be found in Gorak and Ray (1995).

2 Many players in the industry were critical of the mega-NOPR. They feared it was too sweeping a generalization, not allowing for the natural heterogeneity of firms and markets in the industry, possibly reducing system reliability, and possibly reducing competition in capacity brokering (Boier 1991).

3 The effects of rate of return regulation have been analyzed extensively following the seminal paper of Averch and Johnson (1962). While the theoretical literature has been generally conclusive that unregulated firms are more efficient than regulated firms, this has not uniformly been reflected in the empirical literature (Atkinson and Halvorsen 1986).