## **BOOK REVIEW**

NATURAL GAS TRANSPORTATION: Organisation and Regulation (International Energy Agency, Paris 1994, 344 pages).

## Reviewed by William A. Mogel\*

This is an important reference book for those wanting an analysis of natural gas transportation, storage and regulatory issues for the 23 International Energy Agency's member countries.<sup>1</sup>

*Natural Gas Transportation* contains six major sections: "Introduction and Summary", "The Gas Chain", "Economics of Gas Transportation", "Organisational Aspects of Gas Transportation", "Regulation" and "Transportation Tariffs". The text is amply supplemented with annexes and tables.<sup>2</sup> The book's thesis is as follows:

Understanding gas markets requires an understanding of gas transportation, which to a large extent determines the markets' characteristics. . . The resulting characteristics of gas transportation—high investment costs, a high degree of inflexibility and significant economics of goals—create a different market dynamic from that of oil and have led to a different institutional history.

The primary conclusions reached by *Natural Gas Transportation* are: (1) gas transportation determines the structure of gas markets and their regulation; (2) international gas trade in Europe and the transportation of gas is increasing, but there are few binding rules for transportation, the setting of transit fees, or for the resolution of disputes; (3) the dependence of the OECD countries on imported gas supplies will increase over the next 20 years; (4) the trend for European pipeline ownership and operation will be less direct involvement by the state, and thus increased privatization; (5) OECD governments are considering regulating the construction of, and access to, gas pipelines in order to increase competition and efficiency; (6) financing is a key element in the development of a European transportation serv-

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<sup>1.</sup> The International Energy Agency (IEA) is an autonomous body founded in 1974 to implement international energy programs for 23 of the 25 member countries of the Organization of Economic Cooperation and Development (OECD). The IEA is comprised of the following nations: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

<sup>2.</sup> Some of the tables provide interesting, but possibly unneeded, statistics. For example, one table examines the relationship between transmission pipeline lengths and total gas consumption. Incidentally, France and Canada prevail in this category. On the other hand, one helpful table sets forth the significant characteristics, as of January 1994, of gas transportation and organisation of two argon countries, one of which is the United States.

ices promotes competition; and (8) that different approaches to tariffs for gas transportation may be appropriate.

The approximately 110 pages which comprise the last two chapters ("Regulation" and "Transportation Tariffs") should be of the greatest interest to the *Journal's* readership. In the chapter entitled "Regulation", *Natural Gas Transportation* discusses the trend in the U.S. and elsewhere toward deregulation. It also spends time explaining the theory of natural monopolies, "arguments beyond natural monopolies" and the role of regulation to introduce competition in the following countries: the United States, Canada, the United Kingdom, New Zealand and Australia.<sup>3</sup> In addition to these subjects, mandatory open access, unbundling, queuing procedures (using TransCanada Pipeline as a model), take or pay, capacity problems, and construction of "interconnections" are discussed.<sup>4</sup> Special emphasis is also given to the LNG trade.

With regard to Chapter VI, "Transportation Tariffs", Natural Gas Transportation summaries:

[F]ormal regulation exists only in the United States, Canada and onshore in the United Kingdom. In other countries, transportation tariffs are either not regulated to any significant extent or do not exist as such (page 133).

Included in this chapter is a helpful chart showing a comparison of transit fees for pipelines operating in Russia, Iran, Qatar, Iraq, Turkmenistan and Kazakhstan. Also of interest to the U.S. practitioner is the chapter's discussion of major trends, as well as the public policy objectives, of rate design methodologies. The survey includes: the *Atlantic Seaboard* method, the *United* method, modified fixed variable (with and without D2) and straight fixed variable.

Natural Gas Transportation concludes with what is its real strength- a 150 page Annex which provides a summary (and a country-specific gas pipeline map) for each of the 23 IEA members. This statistical information is indispensable for anyone involved in the international natural gas industry.

In sum, *Natural Gas Transportation* is a worthy addition to your energy library, especially if you require a data source for Eastern and Western Europe, as well as the former CIS countries.

<sup>3.</sup> Natural Gas Transportation points out at page 83 that:

Other countries, such as Sweden and Italy, have provision for access to their pipeline systems[,] but so far[,] little direct competition in the gas market, and in Germany, there is competition[,] but no mandatory access. Germany is particularly interesting, since competition in its gas market has arisen without much government involvement.

<sup>4.</sup> Compulsory transportation is discussed with thoroughness using the Canadian experience as a model. Significantly, *Natural Gas Transportation* states at page 111 that:

<sup>[</sup>A] though freedom of transit is recognized in EU law, individuals do not thereby enjoy a directly enforceable right of transit.