

BOOK REVIEW

THE 1997 NATURAL GAS YEARBOOK edited by Robert Willett. John Wiley and Sons, 1996.

Reviewed by
*Mary E. Baluss**

I have read the annual *Natural Gas Yearbook* (Yearbook) for several years. All have had significant strengths, but some in the overall are better than others. This is a good one; it is well-edited and arranged. Although there are nits of varying sizes to pick, on the whole it is thoughtful and for the most part, well-balanced. It would be an excellent choice for any industry participant who wants an overview of issues not directly related to his or her own day-to-day focus. The book is designed to be read by non-lawyers who are already aware of the jargon and reach of the industry. The lack of footnotes will frustrate those who might wish to go beyond the overview, but will be profoundly appreciated by many others. All will agree, however, that editor John Willett has chosen articles of both general and specialized interest that, for the most part, leave one enriched.

The introduction by Richard Smead (whose pipeline background is evident but not distracting) urges the "work together" spirit that much of the industry is accepting. Smead sets the stage for many of the authors published in the 1997 Yearbook who are first and foremost market advocates. The book devotes little interest to regulatory solutions but focuses a great deal of attention to finding solutions that will best employ or at least mimic the market. Indeed, the experiences of the last six years have shown that light-handed regulation has worked well, and Smead's introduction reinforces that fact.

Following the introduction, the book is divided into five sections: Regulation, Litigation and Legislation; International Trade; Technology; Finance; and Economic Outlook. There are strong articles in each section. Chapter-by-chapter book reviews are difficult to plow through and, in the interests of assisting the reader to get the feel of the ultimate unity of the book, I will review the sections, rather than each chapter.

REGULATION, LITIGATION AND LEGISLATION

This section makes up just over half of the book and deserves the weight it is given. Certainly, however close one may be to these issues on a day-to-day basis, Robert Means' article "FERC Regulation of Pipeline Rates: The Search for Alternatives," is excellent. Means, who was the for-

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mer director of the FERC's Office of Regulatory Analysis, demonstrates his balance and expertise. He points out that rate regulation serves conflicting goals and to find a substitute for traditional cost-based regulation employing SFV rate design that covers all of those interests is probably fruitless. Two alternatives, market-based rates and incentive structures, are given a careful look. Means notes that market-based rates so far have been approved primarily for production area storage. He sees little likelihood for market-based transportation rates as long as market area storage access is so firmly linked to individual pipelines for transport. Means goes further to review some of the difficulties of understanding market power over secondary rates and carefully refutes the assumption that competition in that market is demonstrated by the number of players. In the end, he views seasonal rates as perhaps the better alternative to unregulated rates for secondary capacity. After a review of alternatives, Means concludes that SFV, for all of its faults, may not be replaced until we find both a better alternative and one that keeps up with the Canadian competition.

Means also takes a close look at why the Commission's 1992 incentive rate policy has been a failure in which no pipeline has been interested. Means' analysis argues that there simply may not be extended savings from incentives sufficient to convince the pipeline or its customers that either will be better off over time.

Remaining chapters in this section include Sheila Hollis' able description of the legislative proposals of 1996. Few were actually enacted, but the concepts they embody may well surface again in the 105th Congress. Electric deregulation measures have already been proposed and counter-proposed. The section also includes a wide ranging summary of FERC issues such as rolled-in rates and business structure standardization under GISB by Mark Seifert. Seifert's description of the secondary market developments is a useful companion for Means' article. Rae McQuade, GISB's Executive Director, provides a GISB overview that will be interesting to the total neophyte of this new standardization of business practices; however, the article would have been stronger if it had discussed not only the outcome but the politics of issue resolution.

Finally, there is a chapter on litigation that is simply curious. Written by a bankruptcy lawyer, the nineteen pages entitled "Litigation: Further Effects of Columbia Bankruptcy and Order 636 Dominate" should have been entitled "Oil and Gas Bankruptcy Decisions." The chapter has a far narrower appeal than most of the articles in the book although its lively writing style and analysis make it interesting in that narrow perspective. Only four pages involve non-bankruptcy cases. For example, while *UDC v. FERC* may not be any sort of legal breakthrough, it was the major court decision affecting gas regulation during 1996. It is accorded only a one page summary of the remand issues which were identified by the court. In fact, *UDC* gets a far shorter shrift in the four non-bankruptcy pages than the fairly pedestrian *Northwest Pipeline Corp. v. FERC*.¹ *Northwest* fol-

1. 61 F.3rd 1479 (10th Cir. 1995).

lows the long line of cases stemming from *Chevron* that require courts to pay deference to the FERC's expertise in tariff analysis and statutory interpretation. Its main focus is yet another lesson on the differences between NGA sections 4 and 5. The only novelty in this case is that this time the Commission chose the correct statutory vehicle and won the case.

The book is not limited to the FERC or even federal regulation. Although written from a marketer perspective, Kathleen Magruder produced a trenchant and well-written discussion of the necessities and opportunities for state unbundling. She draws together a series of potential models, including Ontario's fore-front consumer choice approach without failing to acknowledge thorny questions that dramatically affect the interest of various players in the market, including the risks of low-income service and the difficulties of allocating a market basket of more and less expensive interstate capacity among a LDC's unbundled customers. Lance Wenmohs summarizes a wide range of environmental statutes and regulations; Jan Phillips and Walter Davis describe new technologies that should permit gas markets to expand. Walter Davis provides developments in producer regulation on a state-by-producing-state basis.

INTERNATIONAL TRADE

This section provides a fascinating tour that follows well on the heels of the domestic developments. Reading them together, one longs for a panel discussion of what international models might bring to the deregulation progress in the United States.

After the discussions of the FERC's flirtation with secondary market deregulation, David Brett and co-authors Marshall Crowe and Christian Hyde, make it clear that Canadian regulators are unfazed by permitting capacity assignment to proceed without posting nor imposing the pipeline's maximum rate as a cap on secondary market prices. Largely unfettered, Canada has allowed pipeline capacity assignment for years, and while differences between the size and complexity of the pipeline structures of Canada and the U.S. are obvious, it is not immediately clear why the Canadian model does not draw more attention in the U.S. Similarly, the matter of customer choice, which (as noted by Kathleen Magruder in her discussion of state unbundling) has been a way of life in several Canadian provinces for several years and has proceeded more and more efficiently as it matures. An interesting summary of the effects of recent consumer protection laws enacted in Ontario, if adopted in the U.S., is also provided. Reading this article, one wonders why incentive rates were accepted by TransCanada Pipelines and its customers while no U.S. pipeline has successfully proposed such an incentive rate. There is a lot to learn here. A more detailed discussion of these issues might inform the lack of transferability of Canadian practices which are otherwise obvious. The authors also include a valuable summary of regional developments and pipeline expansion and provide insights on price convergence between U.S. and Canadian supplies.

The 1997 Yearbook includes two excellent articles on Mexican gas developments. Constance Dever provides an overview of production areas and developmental prospects. She also reviews the factors that will make Mexico either a net importer or a net exporter of natural gas. Industrial demand, she posits, is already higher than supply with the increasing use of gas for power generation. Furthermore, demand will strengthen with the economy and as environmental regulations take effect in 1998. Mexico's ability to develop competitively-priced non-associated gas reserves in the northern part of the country will influence the source of supply. Due to the difficulties of production, U.S. export gas prices would have to rise substantially for Mexico's northern reserves to become competitive. Mexico's status as an exporter will also not increase unless it expands opportunities for private and foreign investment. Imports in the foreseeable future will come from the United States. Although a trans-American pipeline bringing South American gas across Central America to Mexico is an appealing idea, the United States and Canada are positioned to be the suppliers of choice as export pipeline bottlenecks are eliminated.

Dana Contratto contributes a fascinating description of the new energy regulatory body of Mexico, the Commission Reguladora de Energia (CRE) in his article, "International Focus: New Opportunities in Mexico." Mr. Contratto reviews the development of a regulatory body that was designed intentionally to be "comfortable and familiar" to entering parties and is therefore a close copy of the FERC. He states that "Mexico has created a stable transparent, rational and understandable legal and institutional foundation for the development of a robust natural gas industry." The CRE regulates supply and sale of electricity, electric generation by private parties, electric transmission, first hand sales of gas, transportation and distribution of natural gas, and LPG transportation and distribution. However, CRE does so with a presumption of competition in competitive products and areas. For example, PEMEX, the state-owned energy company, must follow the regulations as if it were a private company. There is a presumption that the market-place, not the regulators, will determine what infra-structure projects get a market. Capacity assignment (eventually via EBBs) is provided for and gas marketing is not regulated. Cross-subsidies are prohibited and the "obligation to serve" is contract-based and limited to economically viable markets—an easier provision in Mexico where the poorest citizens have little realistic hope of receiving natural gas service on anything approaching the short-term. PEMEX sales are indexed to competitive U.S. markets at the Houston Ship Channel. Transportation and distribution rates are set through a cap on average revenue per unit indexed over five years. Gas costs are capped and the distributor can profit from canny below-cap purchases. All such regulations were developed through industry consultative processes.

Taken together, the authors of the articles on Mexico outline not only the hazards of the economy but the development of a regulatory infrastructure that has the potential to respond to market force dominance more quickly and to be flexible in light of changing developments. By contrast,

“Natural Gas in Latin American: Facing a Critical Juncture” by Tara Rethore and James K. Meneely, III, presents not only the difficulties of development in an array of uncertain economies, but a regulatory structure that is jumbled at best. Foreign investors face both regulatory uncertainty and tremendous hurdles to financing infrastructure development.

The international section of the 1997 Yearbook closes with a roundup of world market developments that put the foregoing in context. Margaret Carson does a workman-like job of summarizing world-wide markets by region and defining the major incentives and hurdles for natural gas. Of particular interest is the brief summary of privatization progress and accessibility to foreign investment.”

TECHNOLOGY

This section consists of one well-included chapter entitled “Upstream Sector Productivity: The Role of R&D in Gas Technology Development” by Mark Haas. The chapter is, to some extent, a chronicle of what the author believes to be declines in serious investment in R&D technology by U.S. energy companies. The trend raises concerns about productivity losses over time.

Mr. Haas begins with an interesting survey of new technologies that haven't quite made it to commerciality and highlights some developments such as horizontal drilling and electronic information networks which are in commercial use. Mr. Haas then discusses the importance of forecasting the effectiveness of technological developments so that industry decision-makers can channel R&D dollars effectively. On the whole, he contends we don't do a good job at technology forecasting. Reasons include the forecaster's personal stake in the outcome, failure of statistical applications, overly optimistic ideas about how the new technology will improve over the current approaches, failure to fully understand markets for theoretical technologies, poor ability to extrapolate R&D developments into the “real world” of full scale production, and assumptions that technical breakthroughs necessarily will lead to greater profits by failing to correctly understand the complexity of markets and the infrastructure required to commercialize those breakthroughs. He also blames corporate restructuring for its diminution of the R&D workforce. In recent years, major R&D initiatives have come from other industries such as electronics and communication. He closes with several suggestions for improvement through more effective management and evaluation of research choices (so the recipient and not the researcher drives the development) and aggressive commercialization of research results rather than a focus on academic dissemination. Much of Mr. Haas' evaluation is drawn from other works in the field of technological management, but he has done a valuable job of synthesis and presentation.

FINANCE

The two articles in this section focus on the financial market rather than the market for natural gas. "Futures and Options: New Contracts Enhance Risk Management," by NYMEX President R. Patrick Johnson, is a review of new NYMEX contracts and products for reducing volatility and profiting from market changes. New gas products include a Permian Basin contract and an Alberta contract that was still under development at the time the article was written but is now well underway. He adds a good summary of electric market evolution which, despite more complexity, is coming along at great speed largely because of the preceding gas market development. He closes with an explanation of "strip" trading and an outline of electricity futures contract specifications. The necessary convergence of electric and gas markets and the likelihood that gas industry participants will be trading in both commodities makes this explanation valuable.

David Bole draws on corporate research by his firm, Randall & Dewey, which addresses industry merger developments from the perspective of both buyer and seller. He summarizes major strategies and players over the last year, taking note of the comparatively active role of independents vis-a-vis the majors. Mr. Bole includes a very interesting comparison of the perceived future prices for oil and gas for each year through 2000 by the industry and the financial markets. The comparison indicates that the financial markets are more optimistic than the industry about future prices. Industry participants appear cautious. They anticipate a generally stable merger/acquisition pace with fewer predicting a sellers' market than last year and a very small percentage predicting the emergence of a buyers market.

ECONOMIC OUTLOOK

Finally, authors tackle the murky world of prediction without going out very far on any limb. William R. Hughes assures us that change is the only constant in "The Next Era of the Natural Gas Industry: Competition." Although many of us would have thought we were already in the competitive era, Mr. Hughes posits that we are still in "the early stages. . . of competition and more flexible regulation." He states that the secondary market will be deregulated, interruptible service may be deregulated, and incentive regulation will replace cost of service. (The contrast with Mr. Means is striking.) He predicts that pipeline certification must be "simplified and made more friendly," allowing pipelines and new customers to bear the risk of pipeline expansion. He adds that LDCs are sophisticated and well-performing, but notes that they have been made cautious and are without incentive to move aggressively into a competitive structure. The tendency to defer risk by regulation has diluted and distorted the abilities of intrastate and interstate regulated entities, while slow growth in the demand for natural gas has forced participants to fight over shares of an existing pie.

Mr. Hughes focuses more, however, on what stands in the way to competition than on how it will be achieved. He is convinced that the certificate process is chillingly slow, expensive, and a serious barrier to change. Undoubtedly, huge capital investments in critical industries are made in this country without much regulatory scrutiny. Still, it is hard to say for certain that the certificate process seriously restricted competition among pipelines. At the local level he points to an unproductive competition through regulation that he contends hinders the real competitive focus of regulated utilities. He urges, however, that distribution will become more flexible and competitive outside the core markets. (It already has had to respond to competition in those areas although real issues of full unbundling remain.)

Mr. Hughes states that "incentive regulation could make electric-gas competition more effective and mergers of gas and electric utilities might lead to more rational development of both fuels." He does not address what forces shape an incentive program that will be acceptable to the industry and capture sustained efficiencies. He does predict that gas and electric mergers and acquisitions by gas and electric companies of related assets will strongly impact the industry over the next ten years. Perhaps Mr. Hughes' most valuable observation is that the industry has been riddled with change in its comparatively short life. Every era has been radically different from its predecessors, and all change has been poorly predicted. In the end, he believes that all industry performers will be more aggressive and will have more freedom of action, there will be a proliferation of services, and substantial cost reductions.

Charles Stalon closes the book well with his conviction that gas and electric industries will become far better integrated. He foresees the end of long term gas contracts which, he contends, cause pricing errors at a single location and pricing errors between locations. These, in turn, lead to investment inefficiencies that the industry cannot afford. He describes a process by which pipelines laid project risk off through long term contracts which forced LDCs to accept substantial risk but also conditioned them to fight to pass through all costs without a competitive focus. This, Stalon believes, left rate payers as the ultimate risk bearers and further inefficiencies as states regulators occasionally resisted that outcome. Shorter contracts with a robust short term market, efficient and reliable spot markets and acceptance of price volatility, and use of strategies to reduce exposure are all essential elements of change. Predicting the FERC's surrender on the issue, in the face of a D.C. Circuit remand of Order 636, he makes a convincing case that market logic dictates the end of the long term contract as the other elements have appeared. The results will be felt in the extensive recontracting that interstate pipelines face between now and 2001.

Mr. Stalon knows the electric industry intimately and devotes a portion of his work to assessing the convergence of gas and electric markets. He predicts that gas will become an ideal fuel for electric generation because of its ability to work efficiently at off-peak levels and to react quickly to swings in load. This will be the case only if electric utility inves-

tors trust the gas spot market reliability. Efficient spot markets into which to sell electricity are also essential for convergence and will reward generators that can respond quickly to market developments. Mr. Stalon appears optimistic that these features will develop quickly as the electric industry benefits from the natural gas experience.

Each section of the book interacts with others and the whole is readable and interesting. Although the exigencies of publication deadlines presumably dictated that the 1997 yearbook was actually written by those who were living in 1996, the contrast between title and content does not distract from the overall work. Publishing on an annual cycle means that there is no way to make the timing come out right. The 1997 Yearbook itself, however, came out just fine.