Electric Utility Trends—and How Customers Will Benefit

Richard J. Rudden
President
R.J. Rudden Associates

Acronyms used in this article:
HOLDCOs (Holding Companies)
EDCOs (Energy Distribution Companies)
GENCOs (Generating Companies)
TRANSCOs (Transmission (Companies)
DISCOs (Distribution Companies)
ESCOs (Energy Service Companies)
LDCs (Local Distribution Companies)
PBR (Performance-Based Rates)
M&A (Mergers and Acquisitions)

What's ahead for the electric industry? What sort of changes are already taking place? How will energy users profit from these changes? And how will changes in electric utility structures affect the natural gas industry?

Here are some observations and predictions: There is an accelerating trend towards the vertical disaggregation of utility functions into organizationally, and/or legally separate GENCOs, TRANSCOs, DISCOs and ESCOs. As in Gestalt therapy, once the whole is broken down and traditional relationships sundered, we believe the pieces will be reaggregated into healthier and larger organizational entities: utility consolidations will continue; GENCOs will grow through utility GENCO and IPP mergers; broader regional TRANSCOs will emerge; larger DISCOs will be created through horizontal mergers; and LDCs will merge with DISCOs to form EDCOs (energy distribution companies) who will distribute both natural gas and electricity.

Non-regulated utility ESCOs will grow and merge with energy marketers and possibly GENCOs to form super-ESCOs. Generally speaking—and this is very important—electric utilities will divest and recombine in ways that reduce costs significantly and improve market position. (Figure 1)

Competitive forces will compel electric companies to improve efficiencies across the board. We will see major improvements in heat rates, as well as unit availability and plant factor. Greater transmission access will result in highly economic regional generation dispatch. Inter-fuel competition will also keep production costs low. As reliability is unbundled, reliability standards will change and reserve margins may decline. The result of all of this will be substantially reduced average and marginal generating costs.

The industry will be typified by open access at both the wholesale and retail market levels, and both markets will be served by integrated energy marketers who will sell physical and financial products. End-use

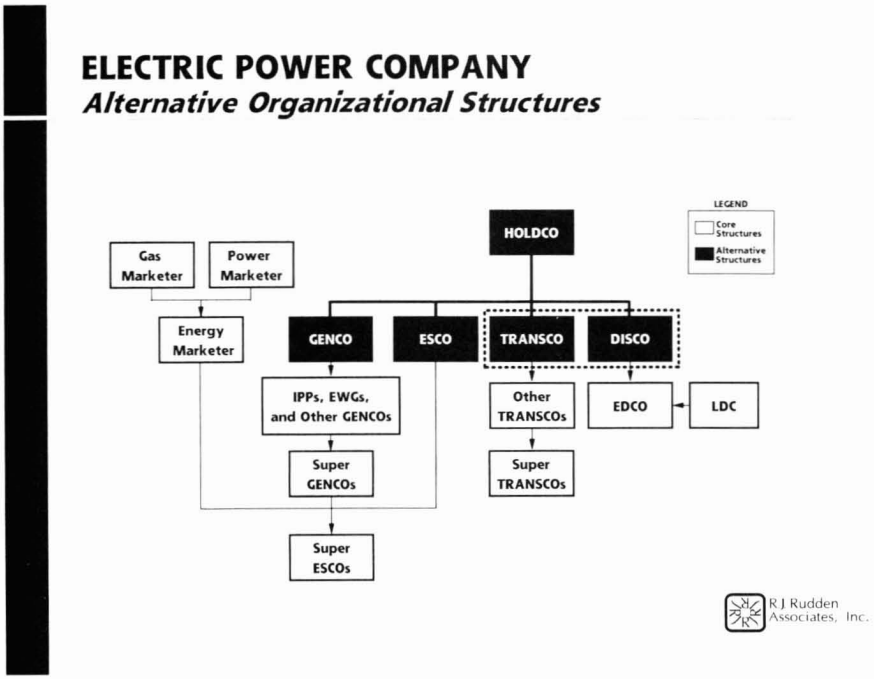

Figure 1. Electric Power Company
(Alternative Organizational Structures)

market pricing will also become more efficient as energy risk management techniques are perfected, as prices are established on a "real-time" basis, and as ESCOs compete for the "behind the meter" market. The number of open access pilot programs, targeting all customers, will expand and then give way to broad scale open access in the future.

TRANSCOs and DISCOs will continue to be regulated, but under performance-based rules, by the FERC and state commissions, respectively, and regulators by and large will permit recovery of a large proportion of stranded costs from customers, probably through surcharges placed "on the wires," exit fees, and/or accelerated depreciation.

COSTS, AND PRICES, WILL GO DOWN

As utilities restructure and unbundle their products in order to compete more effectively, marginal and average costs will decline, with electricity prices in hot pursuit. As prices move downwards, they will also begin to reflect the significant seasonal and time-of-day differences in marginal costs that are not presently exhibited to their full extent in electric rate structures. Due to cost shifting, on-peak rates will tend to increase, especially in uncontested markets; however, general cost cutting will mitigate these increases.

Many economic and institutional drivers will come into play as the electric industry restructures, virtually all of which will have the effect of reducing costs at every level of the industry. Production, transmission and distribution costs will decline. Delivery costs (i.e., those costs associated with the service drop, meter and other downstream customer-specific investments and services) will decline quite significantly as the related services are unbundled and become, in our opinion, deregulated over time. Even though transmission and distribution operations will remain regulated, their costs will decline as a result of M&A synergies and scale economies, as well as performance-based regulation. (Figure 2)

Although profit margins themselves will be thin, the absolute values of the aggregate profits to be derived from just the commodity component of non-regulated power marketing activities are potentially huge. With this very large but as yet virtually untapped potential staring a bunch of traders, arbitrators, and Wall Street types in the face, the natural laws of greed and avarice will come into play, creating tremendous economic and political pressures to accelerate retail open access programs.

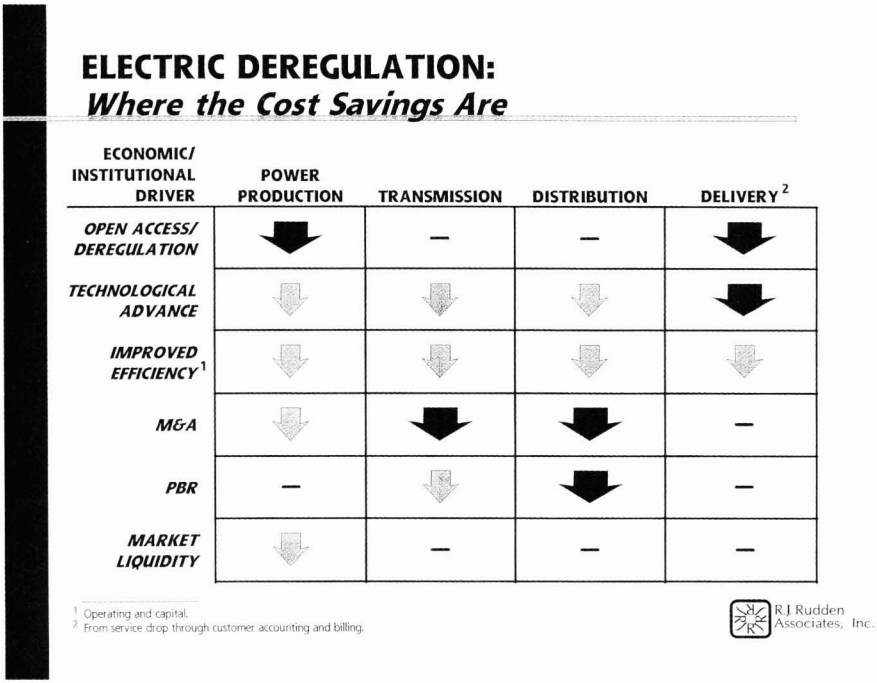

Figure 2. Electric Deregulation (Where the Cost Savings Are)

A study released by R.J. Rudden in 1995, and summarized in Figure 3, suggests that by the year 2010, total cumulative gross profits in the wholesale and retail markets could range from between $23 to $37 billion. During the years 2000-2010, when the market will mature, annual profit margins could range between $1.8 and $3.0 billion per year. If our projections are correct, the total annual gross profitability of the power marketing industry could be in the range of 3 to 10 times that of the natural gas marketing industry. Our projections have been very accurate and our reading of recent developments and current regulatory plans have not, so far, suggested a need for revision.

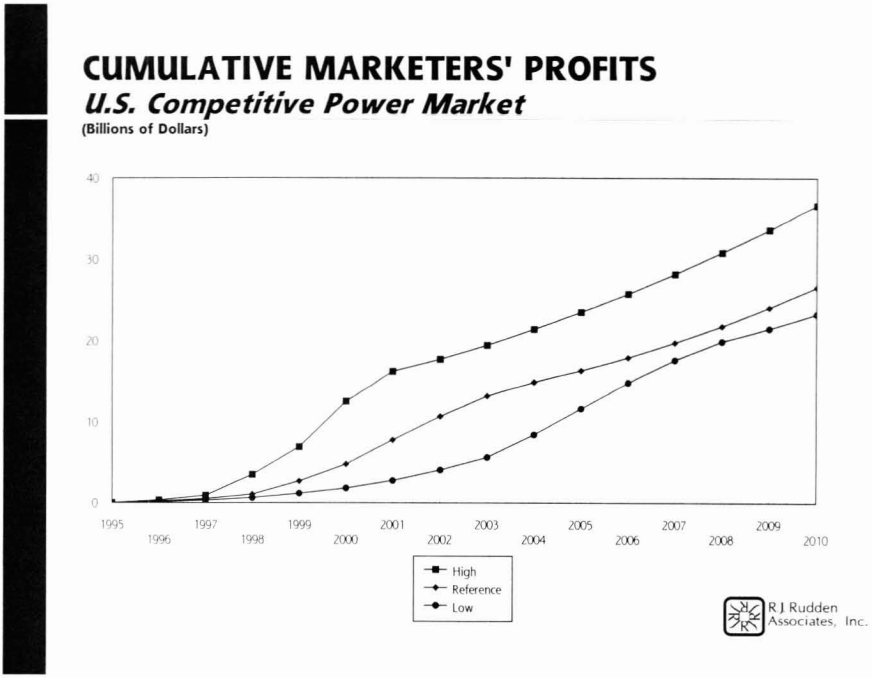

Figure 3. Cumulative Marketers' Profits (U.S. Competitive Power Market)

HOW WILL ELECTRIC DEREGULATION INFLUENCE THE NATURAL GAS INDUSTRY?

At the highest level, electric industry restructuring will affect the natural gas industry in three significant ways:

(1) More gas will be supplied for power generation;

(2) Natural gas will lose some of its present price advantage in many markets, even though it will gain in some; and

(3) Gas and electricity will converge as complimentary energy sources in the Btu market, while gas and electric utility consolidations through merger and acquisition activity will accelerate.

Studies recently completed by RJRA for GRI and other clients have shown that with electric industry restructuring, natural gas is in a very good position to capture a substantially larger share of the power generation market by the year 2010. More than 60 percent of new generating capacity additions will be natural gas-fired over that period. With the growth in electricity consumption that will result from declining electricity prices, as well as improvements in the heat rate efficiency of new gas-fired units, gas consumed for electric generation by 2010 could be as high as 30 percent greater than presently projected.

Figure 4. Electric Deregulation
(Effects on the Natural Gas Industry)

SUPPLY:	MORE NATURAL GAS CONSUMED FOR ELECTRIC GENERATION
PRICE:	GAIN IN NATURAL GAS' COMPETITIVE ADVANTAGE IN THE SUMMER
	LOSS OF NATURAL GAS' COMPETITIVE ADVANTAGE IN E WINTER
	OVERALL LOSS IN COMPETITIVE ADVANTAGE
STRUCTURE:	CONVERGENCE AND CONSOLIDATION OF THE ENERGY INDUSTRY

ABOUT THE AUTHOR

Richard J. Rudden, president of R.J. Rudden Associates, is a nationally recognized utility expert with more than 20 years of experience in executive, management, technical, and consulting positions within the electric, independent energy and natural gas industries. During the last decade, he has been extensively engaged in a variety of strategic planning, product definition, market analysis, financial analysis, and organizational assignments pertaining to the restructuring of the electric and natural gas industries. He has been engaged by a variety of utility and non-utility energy companies to assist in the development of their stra-

tegic, marketing and pricing plans, as well as to facilitate their own internal strategic planning and product development processes.

Prior to founding R.J. Rudden Associates, Inc. in 1981, Mr. Rudden was vice president of Rate and Regulatory Services at Stone & Webster Management Consultants, Inc. and manager of the Rate Design Division at Con Edison. He is a member of the California Competitive Electric Markets Working Group and its market power subgroup. He is also a member of the Rate Committee of the American Gas Association (A.G.A.), is an A.G.A. Financial and Marketing Associate, and has been a faculty member at the A.G.A.'s Advanced Regulatory Seminar at the University of Maryland. A lecturer at numerous other symposia, Mr. Rudden is a member of the Edison Electric Institute, the Corporate Planning Roundtable of Business Economists, and the Association of Energy Service Professionals.