
Chapter X

Taking a Close Look at the Evolving Utilities Industry: Factors That Drive Volatility and Methods to Help Manage It

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Background on the Evolution of the Utilities Industry

The electric industry has undergone a radical transformation over the last five years. Prior to the late 1990s, the industry was heavily regulated. Investor-owned utility companies operated in franchise areas, under an agreement with local regulators that no competitors would be allowed, in exchange for the utility to pass through all prudently incurred costs of serving its customers as well as an allowed rate of return for required capital investments. This system worked reasonably well for decades.

Volatility in the Supply and Demand of Electricity

In the early 1990s, a combination of economic recession and aggressive building of generation plants resulted in a surplus of generation (in the electric industry, the amount of capacity surplus is measured as “reserve margin”, calculated as total supply divided by total demand). As a result, wholesale market prices fell. Under the regulatory system in place, rates were established such that utilities could recover all of the generation related costs, which included all fixed and variable costs, inclusive of the excess capacity. Such rates would sometimes contain a fuel adjuster to allow for a pass-through of costs as spot prices changed. Price risk was thus borne by consumers or “rate-payers”.

Under this regime, price volatility was not a major concern. Generally, wholesale transactions were priced at a level closely resembling variable cost of production. Besides regulations on such pricing, there was also no incentive to charge any more, as utility profits were regulated and “excess” profitability would be returned to ratepayers anyway.

It was not long before large customers began noticing the discrepancies between the rates they paid (which were based on average costs and included all fixed as well as sunk capital costs) and the lower marginal prices observed in the spot market. Rates were higher still due to carrying the costs of the excess capacity being spread over the same number of Megawatt-hours (MWhs) in determining rates, perversely causing rates to be higher under conditions of generation surplus. Some began demanding discounts under the threat of moving out of the service territory (they could not seek alternate suppliers within the same service territory). At around the same time, independent generators, who recently had

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