

# HYDE M. MERRILL

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Emeritus Principal  
Merrill Energy LLC

Dr. Merrill earned degrees in mathematics and electrical engineering from the University of Utah (BA 1967, MS 1968) and electrical engineering from MIT (PhD 1972). He was elected to the Tau Beta Pi, Eta Kappa Nu, and Sigma Xi honor societies and is a Distinguished Alumnus of the U of U Electrical Engineering Dept. He is fluent in Spanish, comfortable in French, and reads Portuguese. He has worked in about 40 countries.

Dr. Merrill is a registered professional engineer in New York State. A fellow of the IEEE, he has been active on several committees. He chaired the 1995 PICA (Power Industry Computer Applications) Conference and chaired the PICA Policy Committee for four years. He is author of about 90 technical papers.

## ***Merrill Energy, LLC (1998 – 2014)***

Dr. Merrill founded Merrill Energy LLC to provide advanced risk, engineering, and economic analyses for participants in modern energy markets.

He supervised a 30-year national energy strategy study for the Ministry of Energy and Mines of Peru and the Inter-American Development Bank. He advised the Ministry on a draft agreement to pursue integration of the Peruvian and Brazilian electric systems. He testified on transmission lines before state commissions in Arizona, Arkansas and Maryland. He did studies and testified to the US DOE and Virginia Corporate Commission on National Interest Electric Transmission Corridors and a related transmission line. He testified to the FERC on behalf of power plants having difficulty getting interconnected in Maine and Nevada. He led a major study of power plant reliability and market behavior for a US ISO. In several projects, he developed transmission plans and advised the Peruvian tariff commission and ISO on transmission planning criteria, methods, and economic and institutional issues in a competitive power market. He led an operational audit of the Peruvian power system and developed a new transmission tariff for Peru. He helped develop a grid code and market structure (including transmission tariff) in Pakistan. He developed and compared alternative transmission tariffs for Venezuela.

He helped reduce planning risks for an international consortium seeking to build an IPP in the US. The target region was swamped with IPPs. The region wanted to be responsive, but it ended up with a planning and licensing procedure that Dr. Merrill described to the FERC as “arbitrary . . . makes unreasonably burdensome assumptions . . . [and] is largely irrelevant and ineffectual in determining the transmission costs.” The FERC granted the relief sought, agreeing that the “procedures are based on unrealistic assumptions, produce unreliable cost estimates, and are not otherwise justified.”

He organized a team that assessed market risks in four US regions. He advised a Quebec commission charged with investigating massive power losses in the January 1998 ice storm. He was part of an international consortium guiding the creation of a power pool in southern China. He advised a leading utility in developing a position and a FERC affidavit on IPP governors. He did production simulations to assess market risks for a cogenerator in Mexico. He did a risk assessment and economic analysis for a company considering building a merchant transmission line. He organized and led a team that did an assessment of operating risks for the public utility regulator of Panama. He did a market and risk assessment for power plants in the Philippines.

Dr. Merrill was an adjunct professor at Rensselaer Polytechnic Institute. He develops and teaches seminars on transmission access and wheeling, competitive markets, utility planning and operations, utility economics and finance, and other topics.

### ***Power Technologies, Inc. (1980 – 1998)***

At Power Technologies, Inc. (PTI) he carried out dozens of assignments on economic, engineering, and regulatory issues associated with transmission services access and pricing in restructured power sectors. One was an early application of economic theory to the efficient allocation of New York's transmission system to contenders. He testified on retail wheeling before the Michigan PUC. He led a project that developed a practical approach to pricing transmission access and ancillary services for the Malaysian grid. This included an elegant but easy-to-use way to calculate long-run marginal costs of transmission. As part of a commission-sponsored working group, he studied marginal costs of transmission for the New York system. He contributed to the landmark US Congress Office of Technology Assessment study on competition in power, "Electric Power Wheeling and Dealing." He led two major Inter-American Development Bank studies of the proposed SIEPAC Central American interconnection, redesigning this important link.

He was principal investigator for an Electric Power Research Institute (EPRI) project to develop transmission transfer capability objectives in the presence of risk (TRADE software). He led a second EPRI project on strategic planning and decision making with risk and conflicting objectives; his RISKMIN program became part of the EGEAS system. He extended the decision-analysis work done at MIT and for EPRI, and was the principal developer of the trade off/risk method and of PTI's TO/R computer program.

He was principal developer of other commercial software: PP/MS (power plant maintenance scheduling), Quick Corporate Model, and TOPS (transmission oriented production simulation).

He contributed to the development of least-cost planning. He was project manager for a number of least-cost planning studies, including World Bank studies in Hungary and in Costa Rica.

He did studies to assess risks of coal supply interruption and to set target inventory levels. He analyzed battery storage on the New York subway system. He did a number of strategic planning studies, including a market assessment for power produced in one country and sold in another.

### ***MIT Energy Laboratory (1979 – 1980)***

He was a senior visiting scientist/visiting assistant professor at MIT. He taught a graduate course on energy strategy planning and was technical director of a major research project on energy strategies. He developed powerful new methods for strategic planning in the presence of conflicting objectives and risk.

### ***Dopazo, Merrill, and Sasson (1975 – 1980)***

Dr. Merrill was a member of a partnership consulting to power companies, engineering firms, and research organizations, on real-time control of electric power systems and development of control centers.

### ***American Electric Power Service Corporation (1972 – 1979)***

He was an engineer, senior engineer and section head. He developed software for operations, planning, and management of the AEP System. One was a pioneering power plant maintenance scheduling program. He contributed to state estimation for electric power systems as a graduate student and at AEP. He developed analytic tools to support the storing and shipping of coal at AEP. He evaluated nuclear turbine risks.

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