

Walter O. Stadlin nominated for the Platts 2008 Global Energy Lifetime Achievement Award.

Walter Stadlin is one of four finalists nominated for the Platts 2008 Global Energy Lifetime Achievement Award. Platts, a division of The McGraw-Hill Companies, is a leading global provider of energy information. The award honors an individual that has made outstanding contributions to the development and future of the energy industry. Nominees are judged on integrity, achievements, strategic visions, leadership, innovation and peer recognition. The award will be presented during the 10th Anniversary of the Platts Global Energy Awards ceremony to be held at Cipriani Wall Street in New York City on December 3.

Walt has represented KEMA and served as a trusted adviser to leading utilities around the world for the past 25 years. Prior to his consulting career at KEMA, Walt spent 25 years leading the design and development of application software at Leeds &

Northrup Company (L&N). He was usually the head of a design team assigned to a utility customer project to build a new Energy Management System. Walt was active in the initial planning and specification of each application program, he participated in the program's design, coding, testing, and factory checkout. Walt usually participated in the checkout and final acceptance tests at the clients operations control center.

Walt was the prime force behind L&N's economic dispatch, unit commitment, generation maintenance scheduling, power flow, security analysis, automated distribution, control, the application of linear programming to electric power analysis. Walt was always willing to listen to new ideas and formed a strong bond with those around him. He was a mentor to many young engineers at L&N such as Bruce Wollenberg, Ralph Masiello, Jim Resek, and many others.



Walt is a Life Fellow of the IEEE and has been with KEMA since 1983. He has authored and co-authored many technical papers and has been awarded several patents in electric power system optimization, including his first patent for economic dispatch of spinning reserve. During his career he was also active in the IEEE Power Engineering Society and is a past chairman the Power System Economics Committee.

During Walt's 50-year career, he has always exhibited the highest level of adherence to professional and ethical standards. This is frequently demonstrated in the technical evaluations he produces for his clients and the advice that he gives to his colleagues. He has made many contributions that enabled the use of computers to analyze, monitor, and control the interconnected electric power system. He has authored and co-authored many technical papers and holds patents for dispatching and measurement techniques. He holds the following patents:

- U.S. Patent 4,240,149 Measuring System, Inventors: W.O. Stadlin and D.L. Fletcher, 1980.
- U.S. Patent 3,683,161 Computing Economic Power Distribution in Power Pools, Inventors: W.O. Stadlin and B.F. Wollenberg, 1972.
- U.S. Patent 3,400,258 Economic Control of Power Pools, Inventor: W.O. Stadlin, 1968.
- U.S. Patent 3,392,272 Minimum Input Dispatch Computer, Inventor: W.O. Stadlin, 1968.

He has authored or co-authored numerous papers on many solutions to problems in electric power including the following:

- "An Overview Of Approaches To Energy Management In The South-East Asian And Western Pacific Nations"
- "International Power System Transmission Open Access Experience"
- "A Coordinated Approach For Real-Time Short Term Hydro Scheduling"
- "Managing Power System Security And Optimization"
- "Computational Techniques For An Electrical Distribution And Information Control System"
- "Network Flow Linear Programming Techniques And Their Application To Fuel Scheduling And Contingency Analysis"
- "Transformer Tap Position Estimation"

The Origins of Modern Power Systems Control Recognizing the Contributions of Walter Stadlin By Ralph Masiello

Today we take for granted the sophisticated Energy Management Systems and Market Operations systems around which KEMA has built a thriving consulting practice around the world. Most of our consultants began their professional lives when these technologies were already well established, at least in the developed world. But in the 1960's digital computers were a rarity in power system control centers which were mostly operated by hard wired supervisory systems to a few key stations and by analog computers which controlled a few generators over phone lines for economic dispatch and frequency regulation. The 1967 blackout in the US triggered a wave of R&D (and ultimately, the formation of EPRI) in response and out of that grew the operations and optimizations technologies so familiar to us today.

Walt Stadlin is a link to that era and before. The Leeds and Northrup Company was a leader in industrial and utility process control, and in particular generation control and economic dispatch. Nathan Cohn at L&N had invented "Tie Line Bias Control" which is the global paradigm for system regulation. Walter was the leader of the L&N R&D staff working on power system operations and one of his patents, referenced below, was the key to incorporating multiple LaGrange multipliers in the economic dispatch computers so that economics and reserves (for reliability) could be accommodated. Many of us at KEMA in Chalfont began our careers in the 70's working for and with Walt; in my case working with Walter and Bruce Wollenberg. Walter and Bruce were responsible for arguably the first-ever real time network analysis system developed at L&N around 1970 for Commonwealth Edison and for Houston Light and Power (now Centerpoint). They then collaborated on what was to my knowledge, the first implementation of a Linear Programming based Optimal Power Flow – which is the antecedent of the congestion management solutions used by North American ISOs today.

- “Voltage Versus Reactive Current Model For Dispatch And Control”
- “Network Applications In Energy Management Systems”
- “Economy-Security Functions In Power System Operations-A Summary In Production”
- “Adaptive Control Applied To The Economic Dispatch Of Electric Power”
- “The Calculation Of Incremental Transmission Losses And The General Transmission Loss Equation”
- “A Real Time Optimizer For Security Dispatch”
- “Economic Allocation Of Regulating Margin”
- “Real Time Optimal Allocation Of Electric Power Resources”
- “Automated Distribution Network Control.”

Today, 45 years after the first patent listed below, Walter is still one of the industry’s and KEMA’s leading intellects actively working in the field. In the past few years at KEMA, he was one of the key developers behind the KEMA Energy Ecology Model, has supported most of the ISOs in the U.S. around market protocols and processes, and has worked on innovative solutions for New Zealand to use their DC Inter-Island cable to mitigate the system problems caused by high levels of wind penetration, just to name a few. The KEMA consultants working in the PSOC domain still rely on Walt as the ultimate resource for tough questions around power systems operations and optimization. I was delighted when I joined KEMA in 2003 to be re-united with Walt after 30 years. We have a lot of very smart people at KEMA, some of whom are already prominent in their fields. If they are very lucky, in 20 or 30 more years they may be able to look back on a lifetime of accomplishment comparable to Walt’s.