

Richard Reis, P.E. (Maryland)
Conservation Engineering, LLC
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QUALIFICATIONS SUMMARY:

Electrical Energy Management and Design focusing on Conservation:

- Reduce Energy Consumption, utility costs, and environmental impact. Optimize and Extend Infrastructure life by lowering continuous and surge loads.
- Minimize Capital Costs by identifying the most cost-effective improvements and through cost-sharing government, utility, and foundation grants and rebates.
- Produce engineering reports on other topics such as moisture and mold and acoustical noise.
- Produce code-compliant electrical drawings for agency approval and contractor bid.

Sample of Accomplishments:

Conservation Engineering

- Energy measurement, analysis, and report to mitigate moisture and mold for 250 unit condominium.
- Energy study and report for community pool, food wholesaler, coop apartment complex, religious institution, etc. These identify seasonal energy usage and strategies for reducing utility costs.
- Identified and ranked improvements by cost-effectiveness and effected suggested changes.
- These efforts resulted in a 25% year-over-year reduction in electrical energy usage and bills.

System Engineering with Verizon

- Produced policy and standard clearly outlining the benefits of reducing alarms and showing the best practices for implementing those procedures.
- Investigated to identify the largest causes of those alarms.
- Developed spreadsheets highlighting the biggest offenders by time of day, day of week, system, server, type of alert, etc.
- Specified and requested improvements in alerting. Effected changes and verified results.
- Reduced the number of alerts and alarms by 80%

Teaching

- Show colleagues how to formulate spreadsheets to bring out needed information from a sea of data.
- Teach C++, Data Structures, and Verification and Validation at the College Level at the University of Maryland
- Serve on the curriculum advisory board for Capitol College in Laurel, Maryland

PROFESSIONAL EXPERIENCE OR EXPERIENCE

Conservation Engineering, Silver Spring, Maryland 2006 to present Principal Consulting Engineer

Electrical Energy Management and Design focusing on Conservation. Develop code-compliant and energy-savings electrical designs.

Verizon Communications, Silver Spring, Maryland 1996 to 2006 Senior Systems Engineer

Analyze systems to identify broad issues and implement innovative and permanent solutions to reduce alarms and prevent needless work. Design and implement system and procedural solutions to achieve high availability. Audited Verizon systems for ISO 9000 compliance. As part of Verizon Team Energy, identify and implement energy-saving ideas.

Computer Sciences Corporation, Laurel, Maryland 1986 to 1996 Senior Computer Scientist

For Intelsat and NASA, developed, implemented, and tested several well-received systems for command assistance, telemetry display, and hierarchical data storage.

Case Communications, Silver Spring, Maryland 1980 to 1986 Senior Systems Engineer

Initiated, developed, and implemented a bar code based system for automatically monitoring and reporting product quality during manufacture and test.

US Food and Drug Administration (FDA), Rockville, Maryland 1977 to 1980 Scientific Reviewer

Evaluated cardiac pacemakers and related products for FDA premarket approval. Tested pacemakers for electromagnetic susceptibility and wrote and presented on that topic. Assembled, analyzed, and presented evidence that compelled companies to recall defective products.

Case Communications, Silver Spring, Maryland 1974 to 1977 Electronics Engineer

Designed and developed modems and multiplexers. Engineered electronic test equipment, discrete and integrated circuits, and digital signal processing software.

Pacesetter Systems (now part of St Jude Medical), Sylmar, California 1971 to 1974 Electronics Engineer

Designed and developed circuits for cardiac pacemakers and related products.

Properties in Maryland and DC 1974 to present Owner and Maintenance Manager

Designed and implemented many energy-savings projects, Designed and installed solar water heating, Installed solar-powered lighting and vents, Applied for and awarded state solar energy grant.

EDUCATION:

- M. S. Computer Science Johns Hopkins University, Baltimore, Maryland
- M. S. Electronics Engineering,
California State University, Northridge, California
- B. E. Engineering Science,
State University of New York, Stony Brook, NY
- Other courses:
Project Management, Leadership, Advanced Energy Conversion, Solar Energy Design,
Joint Application Design, Quality and Productivity, Windows, and Networking,
- Adjunct Professor, University of Maryland, University College, College Park, MD,

PUBLICATIONS, DOCUMENTS, AND PRESENTATIONS (partial list)

- "Effects of Low Frequency Electromagnetic Radiation on Medical Devices," New York Academy of Medicine, Dec. 1979
- "Implementation of an Automatic Test Data Base," HPUG, Jun. 1985.
- "System Life Cycle Development," INTELSAT internal document, Jan 1990.
- "Energy Savings at WES", Report to the Washington Ethical Society (WES), Oct. 1995
- "Corrective Action Management" (web site), September 1998
- "CFL Energy-Savings Calculator" (web site with Java Script), Feb. 2000
- "OSPS Implementation Procedure", Feb. 2002
- "OSPS Policy and Standard for Alerts", May 2006
- "Earthkeeping: Practical Tips to Save Energy, Resources, and Our Planet", (co-edited), April 2005
- "Report on Trees at WES", Sep. 2005
- "Green Building Concepts and Implementation for the WES Renovation", Report to WES, Oct. 2005
- "Engineering Solar Thermal Systems", Solar Today, planned for early 2009

TECHNICAL PROFICIENCIES

Circuits: Discrete and integrated, digital and analog

Applications: CASE, CAD, databases, word processing, presentation, spreadsheet, project planning, web development

Instructor: CASE tools, System development, Verification & Validation

Auditor: ISO 9000 Standards

Analysis: Utility bills, Alternative energy and Energy conservation.

License: Professional Engineer (PE – Maryland), MSCP