
ACKNOWLEDGMENTS

This research was sponsored by the Wisconsin Energy Bureau under Contract No. 84067 and co-funded by the United States Department of Energy. All aspects of regulatory analysis in this thesis were the direct result of many meetings, phone conversations, and faxes with Michael Arny (former Solar Lab student) of the Public Service Commission of Wisconsin - thank you for the volumes of information and for your incredible tolerance of my many, many questions.

None of this would have been possible without the skillful guidance of my advisers: Thank you for your confidence, your criticisms, and your patience. Professor William Beckman (who intimidates the hell out of most people) puts the "direct" in Director, yet continually supports, respects, and promotes his students and the SEL. Professor Sanford Klein, whose genius is only paralleled by his modesty and humor, is possibly the most disciplined person I have ever met! Thanks also go to Professor John Mitchell, whose support and kindness are always appreciated, for introducing me to the UW. In addition, Professor Jack Duffie's (our "founder's") continued involvement in the classroom and the lab sets an example of commitment to which everyone should aspire.

Nate Blair and Jeff Thornton, TRNSYS engineers new and old, have been of tremendous source of information, assistance, and humor - the San Jose trip was awesome. Shirley, Laurie and Sherri deserve all of the credit for keeping the lab

functioning in addition to “counseling” all of the stressed out grad students who linger in the office to procrastinate their theses - thank you for keeping me sane!. Special thanks go to all "the boys" in the lab for dealing with my sometimes explosive temper, sugar fits, unpredictable mood swings, laughing and crying jags, and misdirected male bashing (during "the spawn" episodes). I owe you all a few hundred packages of McDonald's french fries to compensate for the cumulative effect of stealing one or two every day for 18 months.

Madison would not have been as comfortable, enjoyable or exciting without my "surrogate family", the Flakes. Immeasurable appreciation and love got to: Major Barrett A. Flake (my unofficial academic advisor, relationship counselor, nutritionist and best "honorary woman" friend), Kathy Sims Flake, (my spiritual guide - “voodoo mambo”, editor, and babe watcher), and their beautiful and most extraordinary daughters, Hannah and Leah.

I owe much appreciation to my high school physics teacher, Mr. Gebhard, for encouraging my science studies and not getting me expelled for my hazardous experimenting nature (when I caught the school lawn on fire).

This document, in its entirety, (as with everything I have or have yet to accomplish) is attributable to the love and support of my parents, Dr. John and Elizabeth Cragan, educators by profession and example. Being the only female graduate student in the lab without other women "enginerds" to guide me may have felt lonely and discouraging at times, but ever present are the examples set by my true mentors; Emily Girardi Lamps, Florence Mac Donnell Cragan, Elizabeth Jane Cragan, Kathleen Elizabeth Cragan, Jessica Jean Cragan, and Hilary Elisabeth Hauk: whose strength, intelligence, and compassion are my constant inspiration.

"A certain amount of decent human sympathy ought to be available for the young men and women who are employed by the utilities and then put into those positions...where

they are forced to become slick and crafty liars."

Stephen Raushenbush, THE POWER FIGHT, New Republic Inc, New York, NY 1932