

JEFF S. HABERL

Professor, Department of Architecture
Associate Head for Research, Department of Architecture
Associate Director, Energy Systems Laboratory
Texas A&M University, College Station, Texas 77843-3581

PHONE (979)845-6507, LAB (979)845-6065
FAX (979)862-2457, jhaberl@tamu.edu
www.esl.tamu.edu

EDUCATION

Ph.D., 1986, Civil Engineering, University of Colorado at Boulder.
M.S., 1981, Civil Engineering, University of Colorado at Boulder.
B.S., 1978, Architectural Engineering, University of Colorado at Boulder.

PROFESSIONAL REGISTRATION

1990 – present, Registered Professional Engineer (Mechanical), State of Texas #67618.

EXPERIENCE

2009-present Associate Department Head for Research, Department of Architecture, Texas A&M University, College Station, Texas.
2003–present Professor, Department of Architecture, Texas A&M University, College Station, Texas.
1995–present Associate Director, Energy Systems Laboratory, Texas A&M University, College Station, Texas.
1995–2003 Associate Professor, Department of Architecture, Texas A&M University, College Station, Texas.
1990–1994 Assistant Professor, Mechanical Engineering Department, Texas A&M University, College Station, Texas.
1989–1990 Research Engineer, Energy Systems Laboratory, Mechanical Engineering Department, Texas A&M University, College Station, Texas.
1988–1989 Post-Doctorate Research, Center for Energy and Environmental Studies, Princeton University, Princeton, New Jersey.
1984–1988 Graduate Research Assistant, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, Colorado.
1983–1985 Instructor, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, Colorado.
1982–1983 Engineering Intern, Rockwell International, Facilities Engineering and Construction, Rocky Flats Plant, Golden, Colorado.
1981 Engineering Intern, Swanson Rink and Associates, Denver, Colorado.
1979 Engineering Intern, Colorado Office of Energy Conservation, Denver, Colorado.
1978–1980 Graduate Research Assistant, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, Colorado.

HONORS, AWARDS AND SPECIAL RECOGNITION

2010 ASHRAE Appreciation Award, Performance Metrics Procotols Committee Chair, and Guideline 14 participation.
2008 Listed in Who's Who (Strathmore's Who's Who Ltd., and Strathmore's World Wide Who's Who Directory, 26 Bond Street, Westbury, NY, 11590; Lexington's Who's Who, 300 Garden City Plaza, Suite 430, Garden City, New York, 11530; 1999 Listed in Marquis Who's Who, 121 Chanlon Road, New Providence, NJ, 07974).
2007 U.S.E.P.A. National Center of Excellence on Displaced Emissions Reductions (CEDER).
2006 Fellow, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta, Georgia.
2003 Fellow, International Performance Measurement and Verification Organization, Washington, D.C.
2002 ASHRAE Appreciation Award, Guideline 14 Committee Participation.
2002 Listed in International Biographical Centre's Who's Who in the 21st Century, St. Thomas Place, Ely, Cambridgeshire, CB7 4GC, England.
2002 U.S.D.O.E. Letter of Appreciation from IPMVP Executive Committee Chair, Shirlie Hansen, for serving on the International Performance Monitoring and Verifications Protocol's Technical Committee (2001 IPMVP).
2001 ASHRAE Distinguished Service Award, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta, Georgia.
2001 ASHRAE Appreciation Award, Standard 140-2001 Committee Participation.
1998 U.S.D.O.E. Letter of Appreciation from Secretary Frederico Pena for co-authoring the International Performance Monitoring and Verifications Protocols (1997 IPMVP).
1997 U.S.D.O.E. Letter of Appreciation from Secretary Hazel O'Leary for co-authoring the North American Energy Monitoring and Verifications Protocols (1996 NEMVP).
1997 ASHRAE Appreciation Award, Houston Chapter.
1995 Discovery Channel, "U.S.D.O.E. Innovative Programs," Broadcast, October 1995.
1995 U.S.D.O.E. Special Recognition Award, National Awards Program for Energy Efficiency and Renewable Energy -- The Texas LoanSTAR program.
1995 U.S.E.P.A. Award, Innovative State Energy Conservation Program -- The Texas LoanSTAR program.
1995 ASME Solar Energy Division Best Paper Award, "The U.S.D.O.E. Forrestal Building Lighting Retrofit: Preliminary Analysis of Electricity Savings," J. Haberl, T. Bou-Saada, E. Vajda, M. Schincovich, L. D'Angelo, L. Harris.
1995 KBTX Television, "The Texas LoanSTAR Program," News Broadcast.

- 1995 CNN Home Front News, "The Texas LoanSTAR Program," Broadcast, March 1995.
 1995 Discovery Channel, "Innovative Program - The Texas LoanSTAR Program," Broadcast, January 1995.
 1993 Popular Science, "Measuring Energy Efficiency," article highlighting Texas LoanSTAR program.
 1992 National Endowment for the Arts, Federal Design Achievement Award, Entry #2505, "Metered Analysis for Building Operation and Maintenance - Forrestal Building," with Jim Vajda.
 1990 General Services Administration - 1990 GSA Design Award, "Continuous Analysis of Metered Data."
 1989 United States Department of Energy - Special Recognition Award, "U.S.D.O.E. Forrestal Building, Administrative Services, Operation and Maintenance Improvements."
 1987 United States Department of Energy - Program for Energy Innovation Award, Awarded to the University of Colorado Recreation Center and University Memorial Center, Boulder, Colorado.
 1986 Boulder County Energy Conservation Award, "Development of an Artificial Intelligence System for Diagnosing Energy Operational Maintenance problems," University of Colorado Rec Center.
 1985 KUSA. Television, Denver, Channel 9 News Presentation, "Energy Conservation at the University of Colorado Rec Center," Broadcast, December 28, 1985.
 1978 Special Recognition Award, Department of Civil, Environmental and Architectural Engineering, University of Colorado, 1978.
 1969-71 Member, United States Junior National Ski Team, Rocky Mountain Division.
 1967 Eagle Scout.

PUBLICATIONS

1. Pending Publications

1. Bagneid, A., Haberl, J. 2011. "Thermal Simulation of Indigenous Courtyard Houses With High Thermal Mass: Measurements and Analysis of a Case Study House", *ASHRAE Transactions-Research*, In Preparation (March).
2. Bagneid, A., Haberl, J. 2011. "Thermal Simulation of Indigenous Courtyard Houses With High Thermal Mass: Development of the Analysis", *ASHRAE Transactions-Research*, In Preparation (March).
3. Haberl, J., Culp, C., Co-authors, "Chapter XX: Monitoring and Verification," *Energy Management Handbook*, 6th Edition, Wayne Turner, Editor, Fairmont Press, New York, in press (March).
4. Kim, H., Baltazar, J., C., Haberl, J., Yazdani, B. 2011. "Comparative Analysis Implementing the ASHRAE 90.1, 189.1 and IECC Codes in Commercial Buildings in Texas", *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
5. Mukhopadhyay, J., Liu, Z., Baltazar, J. C., Haberl, J., Yazdani, B. 2011. "Analysis of Habitat for Humanity Housing at Frazier Court, Dallas, Texas", *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
6. Kim, H., Baltazar, J. C., Liu, Z., Frazier, E., Lynn, B., Haberl, J. 2011. "Persistence of Energy Savings From Performance Contracts at an Army Base", *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
7. Kim, H., Baltazar, J. C., Haberl, J., Yazdani, B. 2011. "Estimation of NOx Reductions in Texas by Replacement of CFLs from Incandescent Lamps in Residences from 2011 through 2031", *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
8. Kim, H., Baltazar, J. C., Mukhopadhyay, J., Haberl, J., Yazdani, B. 2011. "Statewide Electricity Cost Savings and Peak Demand Reductions From the Implementation of the IECC Code in Texas", *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
9. Baltazar, J. C., Mao, C., Kim, H., Haberl, J., Yazdani, B. "Verification of the Energy Savings obtained from the Implementation of the International Energy Conservation Code in Texas, *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
10. Mukhopadhyay, J., Baltazar, J. C., Haberl, J., Yazdani, B. 2011. "Development of an International Code Compliance Calculator – Commercial (IC4) Tool for Code Compliance", *Proceedings of the 11th International Conference for Enhanced Building Operations (ICEBO)*, New York, N.Y., accepted for publication (April).
11. Song, S., Haberl, J. 2011. "Statistical Analysis for use With Building Energy Simulation Calibration", *ASHRAE Transactions-Research*, In Preparation (March).
12. Song, S., Haberl, J. 2011. "An Analysis of Potential Energy Savings From Selected Improvements Using Calibrated As-built Simulation for a High-Performance Commercial Office Building", *ASHRAE Transactions-Research*, In Preparation (March).

2. Refereed Journal Publications

1. Akleman, E., Haberl, J., Parke, F., Skaria, S., Halstead, J., Andrews, M. 2010. "Demonstration of the use of Multimedia Electronic Information Enhancements for a Chapter Handbook CD-ROM: Rotating Cylinder & Scroll Compressor Animations (1017-RP)," *ASHRAE Transactions-Research*, (January).
2. Song, S., Haberl, J. 2008. "A Procedure for the Performance Evaluation of a New Commercial Building: Part I – Calibrated As-built Simulation", *ASHRAE Transactions-Research*, Vol. 114, Pt. 2, pp. 375-388 (June).
3. Song, S., Haberl, J. 2008. "A Procedure for the Performance Evaluation of a New Commercial Building: Part II – Overall Methodology and Comparison of Results", *ASHRAE Transactions-Research*, Vol. 114, Pt. 2, pp. 389 – 403 (June).

4. Yuill, G., Haberl, J. 2006. "Accuracy Tests for Simulations for Single Zone, Two Pipe, Four Pipe and Induction Air Handling Systems" *ASHRAE Transactions-Research*, Vol. 112, Pt. 1, (January).
5. Yuill, G., Haberl, J. 2005. "Accuracy Tests for Simulations of Constant Volume, Dual Duct and Variable Volume Air Handling Systems (4796)," *ASHRAE Transactions-Research*, Vol. 111, Pt. 2, pp. 137-153, (June).
6. Sreshtaputra, A., Haberl, J., Andrews, M. 2004. "Improving Building Design and Operation of a Thai Buddhist Temple," *Energy and Buildings*, Vol. 36, pp. 481-494.
7. Abushakra, B., Haberl, J., Claridge, D. 2004. "Overview of Literature on Diversity Factors and Schedules for Energy and Cooling Load Calculations (1093-RP)," *ASHRAE Transactions-Research*, Vol. 110, Pt. 1 (February), pp. 164-176.
8. Claridge, D., Abushakra, B., Haberl, J. 2003. "Electricity Diversity Profiles for Energy Simulation of Office Buildings (1093-RP)," *ASHRAE Transactions-Research*, Vol. 110, Pt. 1 (February), pp. 365-377.
9. Kissock, K., Haberl, J., Claridge, D. 2003. "Inverse Model Toolkit (1050RP): Numerical Algorithms for Best-Fit Variable-Base Degree-Day and Change-Point Models," *ASHRAE Transactions-Research*, Vol. 109, Pt. 2, pp. 425-434.
10. Haberl, J., Claridge, D., Kissock, K. 2003. "Inverse Model Toolkit (1050RP): Application and Testing," *ASHRAE Transactions-Research*, Vol. 109, Pt. 2, pp. 435-448, 2003.
11. Akleman, E., Haberl, J., Parke, F., Skaria, S., Halstead, J., Andrews, M. 2003. "Demonstration of the use of Multimedia Electronic Information Enhancements for a Chapter Handbook CD-ROM Overview (1017-RP)," *ASHRAE Transactions-Research*, Vol. 109, Pt. 1, pp. 143-150
12. Elleson, J., Haberl, J., Reddy, T. 2002. "Field Monitoring and Data Validation for Evaluating the Performance of Cool Storage Systems," *ASHRAE Transactions-Research*, Vol. 108, Pt. 1, pp. 1072 - 1084 (January).
13. Reddy, T., Elleson, J., Haberl, J. 2002. "Methodology Development for Determining Long-Term Performance of Cool Storage Systems From Short-term Tests," *ASHRAE Transactions-Research*, Vol. 108, Pt. 1, pp. 1085 - 1103 (January).
14. Beasley, R., Haberl, J., Turner, D., Claridge, D. 2002. "Development of a Methodology for Baseline The Energy Use of Large Multi-building Central Plants," *ASHRAE Transactions-Research*, Vol. 108, Pt. 1, pp. 251 - 259 (January).
15. Akleman, E. Malek, Z., Haberl, J. 2001 "Functional Based Flow Modeling and Animation," *Journal of Visualization and Computer Animation*, Vol. 12, pp. 181 - 189.
16. Sreshtaputra, A., Haberl, J., Andrews, M.J. 2001. "3-D Studies of Heat Transfer and Air Flow in an Unconditioned Thai Buddhist Temple," *Journal of Energy, Heat and Mass Transfer*, Vol. 23, pp. 455 - 471.
17. Reddy, T., Haberl, J., Elleson, J. 1999. "Engineering Uncertainty Analysis in the Evaluation of Energy and cost Savings of Cooling System Alternatives Based Upon Field Monitored Data," *ASHRAE Transactions-Research*, Vol. 105, Pt. 2, pp. 1047 - 1057 (June).
18. Haberl, J., Bou-Saada, T. 1998. "Procedures for Calibrating Hourly Simulation Models to Measured Building Energy and Environmental Data," *ASME Journal of Solar Energy Engineering*, Vol. 120, pp. 193 - 204 (August).
19. Haberl, J., Abbas, M. 1998. "Development of Graphical Indices for Viewing Building Energy Data: Part 2," *ASME Journal of Solar Energy Engineering*, Vol. 120, pp. 162 - 167 (August).
20. Haberl, J., Abbas, M. 1998. "Development of Graphical Indices for Viewing Building Energy Data: Part 1," *ASME Journal of Solar Energy Engineering*, Vol. 120, pp. 156 - 161 (August).
21. Haberl, J., Thamilsaran, S., Reddy, T., Claridge, D., O'Neal, D., Turner, D. 1998. "Baseline Calculations for Measuring and Verification of Energy and Demand Savings in a Revolving Loan Program in Texas," *ASHRAE Transactions-Research*, Vol. 104, Pt. 2, pp. 841 - 858 (June).
22. Haberl, J., Thamilsaran, S. 1998. "Predicting Hourly Building Energy Use: The Great Energy Predictor Shootout II: Measuring Retrofit Savings," *ASHRAE Journal*, Vol. 40, No. 1, pp. 49 - 56 (January).
23. Reddy, T., Haberl, J., Saman, N., Turner, W., Claridge, D., Chalifoux, A. 1997. "Baselining Methodology for Facility-Level Monthly Energy Use - Part 2: Application to Eight Army Installations," *ASHRAE Transactions-Research*, Vol. 103, Pt. 2, pp. 348 - 359 (June).
24. Reddy, T., Haberl, J., Saman, N., Turner, W., Claridge, D., Chalifoux, A. 1997. "Baselining Methodology for Facility-Level Monthly Energy Use - Part 1: Theoretical Aspects," *ASHRAE Transactions-Research*, Vol. 103, Pt. 2, pp. 336 - 347 (June).
25. Haberl, J., Sparks, R., Culp, C. 1996. "Exploring new Techniques for Displaying Complex Building Energy Consumption Data," *Energy and Buildings*, Vol. 24, pp. 27 - 38.
26. Haberl, J., Thamilsaran, S. 1996. "Predicting Hourly Building Energy Use: The Great Energy Predictor Shootout II: Measuring Retrofit Savings -- Overview and Discussion of Results," *ASHRAE Transactions-Research*, Vol. 102, Pt. 2, pp. 419 - 435 (June).
27. Kreider, J., Claridge, D., Curtiss, P., Dodier, R., Haberl, J., Krarti, M. 1995. "Building Energy Use Prediction and System Identification Using Recurrent Neural Networks," *ASME Journal of Solar Energy Engineering*, Vol. 117, pp. 161 - 166 (August).
28. Liu, M., Athar, A., Reddy, T., Claridge, D., Haberl, J., White, E. 1995. "Reducing Building Operating Costs Using Improved Operation Strategies for Constant Volume Air-Handling Systems," *ASHRAE Transactions-Research*, Vol. 101, Pt. 2, pp. 688 - 700 (June).
29. Haberl, J., Bronson, D., O'Neal, D. 1995. "An Evaluation of the Impact of Using Measured Weather Data Versus TMY Weather Data in a DOE-2 Simulation of an Existing Building in Central Texas," *ASHRAE Transactions-Research*, Vol. 101, Pt. 2, pp. 558 - 576 (June).
30. McWatters, K., Haberl, J.S. 1995. "A Procedure for Plotting of a Sun-Path Diagram, and Shading Mask Protractor," *ASME Journal of Solar Energy Engineering*, Vol. 117, pp. 153 - 156 (May).
31. Kreider, J., Haberl, J. 1994. "Predicting Hourly Building Energy Usage: The Great Energy Predictor Shootout: Overview and Discussion of Results," *ASHRAE Transactions-Research*, Vol. 100, Pt. 2, pp. 1104 - 1118 (June).
32. Kreider, J., Haberl, J. 1994. "Predicting Hourly Building Energy Usage: The Results of the 1993 Great Energy Predictor Shootout Identify the Most Accurate Method for Making Hourly Energy Use Predictions," *ASHRAE Journal*, Vol. 35, No. 3, pp. 72 - 81 (March).
33. Haberl, J., Beasley, R., Thompson, D. 1993. "Characterizing Steam and Chilled-water use for a Large Campus in Central Texas," *ASHRAE Transactions-Research*, Vol. 99, Pt. 2, pp. 465 - 476 (June).

34. Ruch, D., Chen, L., Haberl, J., Claridge, D. 1993. "A Change-Point Principal Component Analysis (CP/PCA) Method for Predicting Energy Usage in Commercial Buildings: The PCA Model," *ASME Journal of Solar Energy Engineering*, ASME, New York, N.Y., Vol. 115, pp. 77 - 84 (May).
35. Haberl, J., Bronson, D., Hinchey, S., O'Neal, D. 1993. "Graphical Tools to help Calibrate the DOE-2 Simulation Program to Non-weather Dependent Measured Loads," *ASHRAE Journal*, Vol. 35, No. 1, pp. 27 - 32 (January).
36. Cox, R., Haberl, J., Claridge, D. 1993. "A Study of Energy Use in Grocery Stores," *ASHRAE Transactions-Research*, Vol. 99, Pt. 1, pp. 1301 - 1314 (January).
37. Claridge, D.E., Haberl, J.S., Sparks, R., Lopez, R., Kiscock, K. 1992. "Monitored Commercial Building Energy Data: Reporting the Results," *ASHRAE Transactions-Research*, Vol. 98, Pt. 1, pp. 881 - 889 (January).
38. Haberl, J., Athar, A., Abbas, M., Claridge, D., MacDonald. 1992. "Comparing Monitoring Protocols for Energy Retrofits," *ASHRAE Transactions-Research*, Vol. 98, Pt. 1, pp. 1081 - 1096 (January).
39. Bronson, D., Hinchey, S., Haberl, J., O'Neal, D. 1992. "A Procedure for Calibrating the DOE-2 Simulation Program to Non-Weather Dependent Loads," *ASHRAE Transactions-Research*, Vol. 98, Pt. 1, pp. 636 - 652 (January).
40. Claridge, D., Haberl, J., O'Neal, D., Heffington, W., Turner, D., Tombari, C., Roberts, M., Jaeger, S. 1991. "Improving Energy Conservation Retrofits with Measured Savings," *ASHRAE Journal*, Vol. 33, No. 10, pp. 14 - 22 (October).
41. Culp, C., Haberl, J., Norford, L., Brothers, P., Hall, J. 1990. "The Impact of AI Technology Within the HVAC Industry," *ASHRAE Journal*, Vol. 32, No. 12, pp. 12 - 22 (December).
42. Haberl, J., Komor, P. 1990. "Improving Commercial Building Energy Audits: How Daily and Hourly Consumption Data Can Help," *ASHRAE Journal*, Vol. 32, No. 9, pp. 26 - 36 (September).
43. Haberl, J., Komor, P. 1990. "Improving Commercial Building Energy Audits: How Annual and Monthly Consumption Data Can Help," *ASHRAE Journal*, Vol. 32, No. 8, pp. 26 - 33 (August).
44. Haberl, J., Norford, L., Spadaro, J. 1989. "Diagnosing Building Operational Problems: Intelligent Systems for Diagnosing Operational Problems in HVAC Systems," *ASHRAE Journal*, Vol. 31, No. 6, pp. 20 - 30 (June).
45. Haberl, J., Smith, L., Cooney, K., Stern, F. 1988. "An Expert System for Building Energy Consumption Analysis - Applications at a University Campus," *ASHRAE Transactions-Research*, Vol. 94, Pt. 1., pp. 1037 - 1062 (January).
46. Haberl, J., MacDonald, M., Eden, A. 1988. "An Overview of 3-D Graphical Analysis Using DOE-2 Hourly Simulation Data," *ASHRAE Transactions-Research*, Vol. 94, Pt. 1, pp. 212 - 227 (January).
47. Haberl, J., Claridge, D. 1987. "An Expert System for Building Energy Consumption Analysis: Prototype Results," *ASHRAE Transactions-Research*, Vol. 93, Pt. 1, pp. 979 - 998 (January).
48. Haberl, J., Claridge, D. 1985. "Retrofit Energy Studies of a Recreation Center," *ASHRAE Transactions-Research*, Vol. 91, Pt. 2, pp. 1421 - 1433 (June).

3. Books or Authoritative References

1. Haberl, J.S., principal author of (6) new or revised pages, including: "Heating, Ventilating, and Air Conditioning (HVAC)", (424-427), "Refrigeration", (434-435), "Heating, Ventilating, and Air Conditioning (HVAC)", (440-441), "Heating, Ventilating, and Air Conditioning (HVAC)", (448), *2007 AIA Graphics Standards* (11th Edition).
2. Haberl, J., Culp, C., Co-authors, "Chapter 27: Monitoring and Verification," *Energy Management Handbook*, 5th Edition, Wayne Turner, Editor, Fairmont Press, New York (2005), pp. 715 - 762.
3. Haberl, J.S., principal author of (7) new or revised pages, including: "Solar Path and Solar Angle (66)," "Shading Masks and Shading Devices (358-359)," "Thermal Values of Building Materials (360-361)," "Residential Building Guide to Energy Code Compliance (367)," "Simplified Prescriptive Paths for Building Envelope Compliance (368)," "Warm Air Systems for Small Buildings (374)," "Air Conditioning and Distribution Systems (375-376)," *2003 AIA Residential Graphics Standards for Residential Construction* (1st Edition).
4. Haberl, J.S., contributing author of *International Performance Measurement and Verification Protocol: Concepts and Options for Determining Energy Savings in New Construction*, International Performance Measurement and Verification Protocol, Inc., Washington, D.C. (April 2003).
5. Haberl, J.S., primary author of "Chapter 6: Specific Approaches," *ASHRAE Guideline 14 : Measurement of Energy and Demand Savings*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, pp. 32 - 69 (2002).
6. Haberl, J.S., contributing author of "Chapter 6.2: Simulation and Modeling - Building Energy Consumption," *Handbook of Heating Ventilation, and Air Conditioning*, CRC Press (J.F. Kreider, ed.), New York, N.Y., pp. 6.53-6.99 (2001).
7. Haberl, J.S., contributing author of *ASHRAE Standard 140: A Standard Method of Test For Evaluation of Building Energy Computer Programs (ASHRAE Standard 140)*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia (2001).
8. Haberl, J.S., contributing author of "Chapter 3: Basic Concepts and Methodology," *International Performance Measurement and Verification Protocols (IPMVP)*, United States Department of Energy publication DOE/GO-102001-1187 (January 2001).
9. Haberl, J.S., principal author of "Refrigeration and Heat Transfer Principles (711-721)," "Air Conditioning and Distribution Systems (726-727)," "Warm Air Systems for Small Buildings (728)," and "Multiple Interior Zone HVAC Systems (730-731)," *2000 AIA Architect's Graphic Standards* (10th Edition).
10. Haberl, J.S., principal author of "Air Conditioning and Distribution Systems" and "Multiple Interior Zone HVAC Systems," *1998 AIA Architect's Graphic Standards Supplement*, pp. 321-325 (1998).
11. Haberl, J.S., principal author of "Inverse Modeling," *1997 ASHRAE Handbook - Fundamentals*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, from Chapter 30: Energy Estimating and Modeling Methods, pp. 30.22-30.30 (1997).

12. Haberl, J.S., principal author of "Section 4.0: Description of M&V Options, With Examples," *International Performance Measurement and Verification Protocol (IPMVP)*, United States Department of Energy publication DOE/EE-0157, pp. 49–98 (December 1997).
13. Haberl, J.S., Halverson, M., Panel Leaders, "Commercial Buildings: Technologies, Design, and Performance Analysis," *1996 ACEEE Summer Study on Energy Efficiency in Buildings*, American Council for an Energy Efficient Economy, Washington, D.C., Vol. 4, 337 pages (August 1996).
14. Haberl, J.S., principal author of "Section 4.0: Three M&V Options With Examples," *North American Measurement and Verification Protocol (NEMVP)*, United States Department of Energy publication DOE/EE-0081, pp. 26 – 71 (March 1996).
15. Haberl, J.S., Editor. "The Use of Artificial Intelligence in Building Systems," *ASHRAE Special Publication*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia (January 1995).
16. Haberl, J.S., Editor. "Computer Applications," *1995 ASHRAE Handbook – HVAC Applications*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, Chapter 36: Computer Applications, pp. 36.1 – 36.18 (1995).
17. Haberl, J.S., principal author of "More Sophisticated Economic Analysis Methods," *1995 ASHRAE Handbook – HVAC Applications*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, from Chapter 33: Owning and Operating, pp. 33.8 – 33.10 (1995).
18. Haberl, J.S., Nelson, G., Panel Leaders, "Commissioning, Operation and Maintenance," *1994 ACEEE Summer Study on Energy Efficiency in Buildings*, American Council for an Energy Efficient Economy, Washington, D.C., Vol. 5, 282 pages (August 1994).
19. Haberl, J.S., Editor. "Predicting Hourly Building Energy Use -- The Great Energy Predictor Shootout," *ASHRAE Technical Bulletin*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, Vol. 10, No. 5 (June 1994).
20. Haberl, J.S., Anderson, R., Panel Leaders, "Commercial Performance Analysis and Measurement," *1992 ACEEE Summer Study on Energy Efficiency in Buildings*, American Council for an Energy Efficient Economy, Washington, D.C., Vol. 3, 298 pages (August 1992).
21. Haberl, J.S., principal author of "Part Three: Specify Experimental Design Approach," *1991 ASHRAE Handbook – HVAC Applications*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, from Chapter 37: Building Energy Monitoring, pp. 37.4 – 37.5 (1991).
22. Haberl, J.S., Editor, "Computer Applications," *1991 ASHRAE Handbook – HVAC Applications*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, from Chapter 36: Computer Applications, pp. 36.1 – 36.17 (1991).
23. Haberl, J.S., principal author of "Economic Analysis Techniques," *1991 ASHRAE Handbook – HVAC Applications*, American Society of Heating, Refrigeration and Air Conditioning Engineers, Atlanta, Georgia, from Chapter 33: Owning and Operating, pp. 33.5 – 33.8 (1991).

4. Other Publications

a. Peer Reviewed Conference Papers

1. Do, S.,L, Haberl, J. 2010. "A Review of Ground-Coupled Heat Pump Models Used in Whole-Building Computer Simulation Programs", *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, ESL-HH-10-08-08 (September).
2. Gilman, D., Haberl, J. Kayati, M., O'Neal, S. 2010. "Developing a Texas Building Registry", *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, ESL-HH-10-08-15 (September).
3. Mukhopadhyah, J., Baltazar, J-C, Liu, Z., Haberl, J., Culp, C., Yazdani, B. 2010. "A Comparative Analysis of Residential Energy use for 2009 IECC Code Compliance and 2001 IECC Compliance with 2006 NAECA Appliance Standards for Selected Climate Zones in Texas", *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, ESL-HH-10-08-16 (September).
4. Kim, H., Liu, Z., Baltazar, J-C, Mukhopadhyay, J., Do., S, Haberl, J., Culp, C., Yazdani, B. 2010. "Energy Efficiency/Renewable Energy (EE/RE) Projects in Texas Public Schools", *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, ESL-HH-10-08-19 (September).
5. Bermudez-Alcocer, J-L, Haberl, J. 2010. "Low Impact, Affordable, Low Income Houses for Mexico", *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, ESL-HH-10-08-21 (September).
6. Marshall, K., Moss, M., Malhotra, M., Liu, Z., Culp, C., Haberl, J., Herbert, C. 2010. "AIM: Web-based, Residential Energy Calculator for Homeowners", *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, ESL-HH-10-08-22 (September).
7. Kim, S., Haberl, J., "Application of an ASHRAE 152-2004 Duct Model for Simulating Code-Compliant 2000/2001 IECC Residences", *Proceedings of the 10th International Conference for Enhanced Building Operations (ICEBO)*, Kuwait, ESL –IC-10-10-63 (October).
8. Liu, Z., Mukhopadhyay, J., Baltazar, J-C, Haberl, J., Culp, C., Yazdani, B., Montgomery, C. 2010. "Going Beyond A Resnet Certification for Code-Complaint Simulations: A Sensitivity Analysis of Detailed Results of Three RESNET-Certified, Code-compliant Residential Simulation Programs", *Proceedings of the 10th International Conference for Enhanced Building Operations (ICEBO)*, Kuwait, ESL –IC-10-10-66 (October).
9. Haberl, J., Liu, Z., Baltazar, J-C, Mukopadhyay, J., Marshall, K., Gilman, D., Culp, C., Yazdani, B., Montgomery, C., McKelvey, K., Reid, V. 2010. "A Methodology For Calculating Integrated NOx Emissions Reductions from Energy Efficiency and

- Renewable Energy (EE/RE) Programs Across State Agencies in Texas”, *Proceedings of the 10th International Conference for Enhanced Building Operations (ICEBO 2010)*, Kuwait, ESL-IC-10-10-58 (October).
10. Kim, H., Haberl, J. 2010. “Field-test of the New ASHRAE/CIBSE/USGBC Performance Measurement Protocols for Commercial Buildings: Part I: Energy and Water”, *Proceedings of the 17th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Austin, Texas, (September).
 11. Cho, S., Haberl, J. 2010. “Analysis of Integrating Solar Thermal Systems in Whole-building Energy Simulation, *Proceedings of the SIMBUILD 2010 Conference, International Building Performance Simulation Association – USA*, New York, N.Y. (August).
 12. Malhotra, M., Haberl, J. 2010. “Simulated Building Energy Performance of Single-family Detached Residences Designed for Off-grid, Off-pipe Operation”, *Proceedings of the SIMBUILD 2010 Conference, International Building Performance Simulation Association – USA*, New York, N.Y. (August).
 13. Liu, Z., Kim, H., Malhotra, M., Mukhopadyay, J., Baltazar, J., Haberl, J. Culp, C., Yazdani, B. 2010. “Going Beyond A RESNET Certification for Code-compliant Simulations: A Comparison of Three RESNET-certified, Code-compliant Residential Simulations”, *Proceedings of the SIMBUILD 2010 Conference, International Building Performance Simulation Association – USA*, New York, N.Y. (August).
 14. Im, P., Haberl, J. 2010. “Analysis of the Energy Savings Potential in K-5 Schools in Hot and Humid Climates: Application of High Performance Measures and Renewable Energy Systems”, *Proceedings of the SIMBUILD 2010 Conference, International Building Performance Simulation Association – USA*, New York, N.Y. (August).
 15. Andulson, S., Culp, C. Haberl, J. 2010. “EnergyPlus vs DOE-2: The Effect of Ground Coupling on Energy Use of a Slab-on-Grade Code House in a Cold Climate”, *Proceedings of the SIMBUILD 2010 Conference, International Building Performance Simulation Association – USA*, New York, N.Y. (August).
 16. Christman, K., Haberl, J., Claridge, J. 2009. “Analysis of Energy Recovery Ventilator Savings for Texas Buildings”, *Proceedings of the 9th International Conference for Enhanced Building Operation*, Austin, Texas, published on CD ROM (October).
 17. Mukhopadyay, J., Liu, Z., Malhotra, M., Blake, S., Haberl, J., Culp, C., Yazdani, B. 2009. “Recommendations for 15% Above-Code Efficiency Measures on Implementing Houston Amendments to Single Family Residential Buildings in Houston, Texas”, *Proceedings of the 9th International Conference for Enhanced Building Operation*, Austin, Texas, published on CD ROM (October).
 18. Mukhopadyay, J., Liu, Z., Malhotra, M., Blake, S., Haberl, J., Culp, C., Yazdani, B. 2009. “Recommendations for 15% Above-Code Efficiency Measures on Implementing Houston Amendments to Multifamily Residential Buildings in Houston, Texas”, *Proceedings of the 9th International Conference for Enhanced Building Operation*, Austin, Texas, published on CD ROM (October).
 19. Kim, S., Haberl, J., Liu, Z. 2009. “Development of DOE-2-based Simulation Models for the Code-compliance Commercial Construction Based on the ASHRAE Standard 90.1”, *Proceedings of the 9th International Conference for Enhanced Building Operation*, Austin, Texas, published on CD ROM (October).
 20. Kota, S., Haberl, J. 2009. “Historical Survey of Daylighting Calculation Methods and Their use in Energy Performance Simulations”, *Proceedings of the 9th International Conference for Enhanced Building Operation*, Austin, Texas, published on CD ROM (October).
 21. Haberl, J., Culp, C., Yazdani, B., Liu, Z., Gilman, D., Marshall, K., Mukopadyay, J., Baltazar-Cervantes, J-C., Montgomery, C., McKelvey, K. 2009. “Development of a Web-based, Code-compliant 2001 IECC Residential Simulator for Texas”, *2009 Building Simulation Conference*, International Building Performance Simulation Association (IBPSA), University of Strathclyde, Glasgow, Scotland, published on CD ROM (July).
 22. Cho, S., Haberl, J. 2009. “Development of A High-Performance Office Building Simulation Model for a Hot and Humid Climate”, *2009 Building Simulation Conference*, International Building Performance Simulation Association (IBPSA), University of Strathclyde, Glasgow, Scotland, published on CD ROM (July).
 23. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Ahmad, M., Kim, S. 2009. “Development of a Web-based, Code-compliant ASHRAE 90.1-1999 Commercial Simulation for Texas”, *2009 Building Simulation Conference*, International Building Performance Simulation Association (IBPSA), University of Strathclyde, Glasgow, Scotland, published on CD ROM (July).
 24. Liu, Z., Mukhopadyay, J., Malhotra, M., Haberl, J. 2008. “Methodology for Residential Building Energy Simulations Implemented in the International Code Compliance Calculator (IC3), *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
 25. Kim, S., Haberl, J. 2008. “Development of an ASHRAE 152-2004 Duct Model for the Single-Family Residential House”, *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
 26. Malhotra, M., Haberl, J., Im, P., Ramirez, E., Cho, S., Canez, J., Schaidler, N., Fisk, P., Feigenbaum, L. 2008. “Design, Construction, Transportation, Operation And Post-Occupancy Analysis For The Texas A&M Solar Decathlon House”, *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
 27. Liu, Z., Haberl, J., Baltazar-Cervantes, J-C., Culp, C., Yazdani, B., Chandrasekaran, V. 2008. “Calculating Emissions Reductions from Renewable Energy Programs and its Application to the Wind Farms in the Texas ERCOT Region”, *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
 28. Malhotra, M., Haberl, J. 2008. “Analysis of Off-grid, Off-pipe Housing for Hot-Humid and Hot-Arid Climates”, *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).

29. Cho, S., Haberl, J. 2008. "Validation of the eCALC Commercial Code-Compliant Simulation Versus Measured Data from an Office Building in a Hot and Humid Climate", *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
30. Kim, S., Haberl, J. 2008. "Detailed Analysis of Thermal Mass Credits in a Code-Traceable DOE-2 Simulation of the 2001 IECC for a Single-Family Residence in Texas", *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
31. Gilman, D., Marshall, K., Liu, Z., Mukhopadhyay, J., Stackhouse, R., Cordes, J., Montgomery, C., McKelvey, K., O'Neal, S., Culp, C., Haberl, J., Yazdani, B. 2008. "Development of a Residential Code-compliant Web-based Energy Efficiency Calculator for Texas", *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
32. Mukhopadhyay, J., Liu, Z., Malhotra, M., Haberl, J., Gilman, D., Montgomery, C., Culp, C., Yazdani, B. 2008. "An Analysis of the Residential Energy Savings from the Implementation of the 2001 IECC and 2006 NAECA Appliance Standards in the State of Texas", *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
33. Im, P., Haberl, J. 2008. "Analysis of the Energy Savings Potential in K-5 Schools in Hot and Humid Climates", *Proceedings of the 16th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Dallas, Texas, published on CD ROM (December).
34. Haberl, J., Davies, H., Owens, B., Hunn, B. 2008. "ASHRAE's New Performance Measurement Protocols for Commercial Buildings", *Proceedings of the 8th International Conference for Enhanced Building Operation*, Berlin, Germany, published on CD ROM (October).
35. Malhotra, M., Haberl, J. 2008. "Simulation of Off-Grid, Off-Pipe, Single-Family Detached Residences in U.S. Climates", *Proceedings of the 3rd SimBuild Conference*, Berkeley, CA, published on CD ROM (August).
36. Im, P., Haberl, J. 2008. "Development of a Simplified Simulation Tool for High Performance K-5 Schools in Hot and Humid Climates", *Proceedings of the 3rd SimBuild Conference*, Berkeley, CA, published on CD ROM (August).
37. Cho, S., Haberl, J. 2008. "Development of a Simulation Toolkit for the Selection of High-Performance Systems for Office Buildings in Hot and Humid Climates", *Proceedings of the 3rd SimBuild Conference*, Berkeley, CA, published on CD ROM (August).
38. Baltazar-Cervantes, J.C., Im, P., Haberl, J., Liu, Z., Mukhopadhyay, Culp, C., J., Kim, S., Gilman, D., Yazdani, B. 2007. "A Methodology for Calculating Integrated Emissions Reductions From Energy Efficiency and Renewable Energy (EE/RE) Programs Across State Agencies in Texas", *Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, San Antonio, Texas, published on CD ROM (December).
39. Malhotra, M., Mukhopadhyay, J., Liu, Z., Culp, C., Haberl, J., Yazdani, B. 2007. "Recommendaitons for 15% Above Code Energy Efficiency Measures for Single-family Residences", *Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, San Antonio, Texas, published on CD ROM (December).
40. Cho, S., Mukhopadhyay, J., Culp, C., Haberl, J., Yazdani, B. 2007. "Recommendaitons for 15% Above Code Energy Efficiency Measures for Commercial Buildings", *Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, San Antonio, Texas, published on CD ROM (December).
41. Morgan, R., Gilman, D., Mukhopadhyay, J., Marshall, K., Stackhouse, R., Cordes, J., Liu, Z., Montgomery, C., Haberl, J., Culp, C., Yazdani, B. 2007. "Development of a Residential Code-compliant Calculator for the Texas Climate Vision Project", *Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, San Antonio, Texas, published on CD ROM (December).
42. Liu, Z., Haberl, J., Baltazar-Cervantes, J.C., Subbarao, K., Culp, C., Yazdani, B. 2007. "A Methodology for Calculating Emissions Reductions From Renewable Energy Programs and it Application to the Wind Farms in the Texas ERCOT Region", *Proceedings of the 8th International Conference for Enhanced Building Operation*, San Francisco, CA, published on CD ROM (October).
43. Baltazar-Cervantes, J.C., Haberl, J., Culp, C., Yazdani, B., Gilman, D. 2007. "Procedures for the Integration of Complete Year Texas Weather Data Files for eCalc Emissions Reduction Calculator", *Proceedings of the 8th International Conference for Enhanced Building Operation*, San Francisco, CA, published on CD ROM (October).
44. Liu, Z., Haberl, J., Lynn, B., Cook, M. 2006. "Methodology for Analyzing Energy and Demand Savings From Energy Service Performance Contracts Using Short-term Data", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
45. Malhotra, M., Haberl, J. 2006. "An Analysis of Maximum Residential Energy Efficiency in Hot and Humid Climates", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
46. Cho, S., Haberl, J. 2006. "A Survey of High-performance Office Buildings for Hot and Humid Climates", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
47. Im, P., Haberl, J. 2006. "A Survey of High-performance Schools for Hot and Humid Climates", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
48. Ahmed, M., Im, P., Mukhopadyay, J., Malhotra, M., Haberl, J., Culp, C., Yazdani, B. 2006. "Impact of the Implementation of the 2000/2001 IECC on Residential Energy use in Texas: Analysis of Residential Savings", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).

49. Kim, S., Ahmed, M., Im, P., Chongcharoensuk, C., Haberl, J., Culp, C., Yazdani, B. 2006. "Impact of the Implementation of the 2000/2001 IECC on Residential Energy use in Texas: Analysis of Residential Savings", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
50. Mukhopadhyay, J., Haberl, J. 2006. "Comparison of Simulation Methods for Evaluating Improved Fenestration Using the DOE-2.1e Building Energy Simulation Program", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
51. Baltazar-Cervantes, J.C., Haberl, J., Culp, C., Yazdani, B. 2006. "Impact of the Implementation of the 2000/2001 on Residential Energy use in Texas: Verification of Residential Energy Savings", *Proceedings of the Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, Orlando, Florida, published on CD ROM (July).
52. Mukopadyhay, J., Haberl, J. 2006. "Comparing the Performance of High-performance Glazing in IECC Compliant Building Simulation Model", *Proceedings of the 2nd SimBuild Conference*, Boston, MA, published on CD ROM (August).
53. Malhotra, M., Haberl, J. 2006. "An Analysis of Building Envelope Upgrades for Residential Energy Efficiency in Hot and Humid Climates", *Proceedings of the 2nd SimBuild Conference*, Boston, MA, published on CD ROM (August).
54. Bagneid, A., Haberl, J. 2006. "A Finite Difference (FD) Model for the Thermal Simulation of a Courtyard Microclimate", *Proceedings of the 2nd SimBuild Conference*, Boston, MA, published on CD ROM (August).
55. Verdict, M., Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Gilman, D., Ahmed, M., Liu, B., Baltazar, J-C, Muns, S., and Turner, D. 2006. "Quantification of NO_x Emissions Reductions for SIP Credits from Energy Efficiency and Renewable Energy Projects in Texas", *2006 ACEEE Summer Study on Energy Efficiency in Buildings*, American Council for an Energy Efficient Economy, Washington, D.C., published on CD ROM (August).
56. Haberl, J., Case, M., Kettler, G., Hunn, B. 2006. "Development of a New ASHRAE Protocol for Measuring and Reporting the On-site Performance of Buildings Except Low-Rise Residential Buildings", *2006 ACEEE Summer Study on Energy Efficiency in Buildings*, American Council for an Energy Efficient Economy, Washington, D.C., published on CD ROM (August).
57. Liu, Z., Haberl, J., Gilman, D., Culp, C., Yazdani, B., 2006. "Development of a Web-based Emissions Reduction Calculator for High Efficiency Pump/Motor Retrofits", *Proceedings of the 7th International Conference for Enhanced Building Operation*", Shenzhen, China, published on CD ROM (October).
58. Liu, Z., Haberl, J., Gilman, D., Culp, C., Yazdani, B., 2006. "Development of a Web-based Emissions Reduction Calculator for Storm Water/Infiltration Sanitary Sewage Separation", *Proceedings of the 6th International Conference for Enhanced Building Operation*", Shenzhen, China, published on CD ROM (October).
59. Baltazar-Cervantes, J.C., Liu, Z., Gilman, D., Haberl, J., Culp, C. 2005. "Development of a Web-based Emissions Reduction Calculator for Retrofits to Municipal Water Supply and Waste Water Facilities", *Proceedings of the 5th International Conference for Enhanced Building Operation*", Pittsburg, PA, published on CDROM (October).
60. Liu, Z., Gilman, D., Haberl, J., Culp, C. 2005. "Development of a Web-based Emissions Reduction Calculator for Street Light and Traffic Light Retrofits", *Proceedings of the 5th International Conference for Enhanced Building Operation*", Pittsburg, PA, published on CDROM (October).
61. Baltazar-Cervantes, J.C., Gilman, D., Haberl, J., Culp, C. 2005. "Development of a Web-based Emissions Reduction Calculator for Solar Thermal and Solar Photovoltaic Installations", *Proceedings of the 5th International Conference for Enhanced Building Operation*", Pittsburg, PA, published on CDROM (October).
62. Ahmed, M., Gilman, D., Mukhopadhyay, J., Haberl, J., Culp, C. 2005. "Development of a Web-based Emissions Reduction Calculator for Code-compliant Single-family and Multi-family Construction", *Proceedings of the 5th International Conference for Enhanced Building Operation*", Pittsburg, PA, published on CDROM (October).
63. Ahmed, M., Gilman, D., Kim, S., Haberl, J., Culp, C. 2005. "Development of a Web-based Emissions Reduction Calculator for Code-compliant Commercial Construction", *Proceedings of the 5th International Conference for Enhanced Building Operation*", Pittsburg, PA, published on CDROM (October).
64. Liu, Z., Baltazar-Cervantes, J.C., Gilman, D., Haberl, J., Culp, C. 2005. "Development of a Web-based Emissions Reduction Calculator for Green Power Purchases From Texas Wind Energy Providers", *Proceedings of the 5th International Conference for Enhanced Building Operation*", Pittsburg, PA, published on CDROM (October).
65. Haberl, J., Claridge, D., Culp, C. 2005. "ASHRAE's Guideline 14-2002 Measurement of Energy and Demand Savings: How to Determine What was Really Saved by the Retrofit," *Proceedings of the 5th International Conference for Enhanced Building Operation*, Pittsburgh, Pennsylvania, published on CDROM (October).
66. Haberl, J., Culp, C., Gilman, D., Yazdani, B., Fitzpatrick, T., Muns, S., 2004. "Calculation of NO_x Emissions Reductions From Energy Efficient Residential Building Construction in Texas," *Proceedings of the 4th International Conference for Enhanced Building Operation*, Paris, France, Session 8, paper 18 on CDROM (October).
67. Sung, Y.H., Haberl, J. 2004. "Development of a Comprehensive Community NO_x Emissions Reduction Toolkit (CCNERT)," *Proceedings of the 1st SimBuild 2004 Conference*, Boulder, Colorado, published on CDROM only, IBPSA-USA (August).
68. Visitsak, S., Haberl, J. 2004. "A Methodology of Testing and Validating Design Strategies for Climate-Controlled Residences in Selected Climates," *Proceedings of the 1st SimBuild 2004 Conference*, Boulder, Colorado, published on CDROM only, IBPSA-USA (August).
69. Rasisuttha, S., Haberl, J. 2004. "The Development of Improved Energy Efficient Housing for Thailand Utilizing Renewable Energy," *Proceedings of the 1st SimBuild 2004 Conference*, Boulder, Colorado, published on CDROM only, IBPSA-USA (August).
70. Haberl, J., Lewis, T., Im, P., Carlson, K. 2004. "Development of a Measurement and Verification (M&V) Costing Toolkit," *Proceedings of the 14th Symposium on Improving Building Systems in Hot and Humid Climates*, Richardson, Texas (May), pp. 285-301.

71. Culp, C., Haberl, J., Yazdani, B., Fitzpatrick, T., Bryant, J., Turner, D. 2004. "Texas Senate Bill 5 Legislation for Reducing Pollution in Non-Attainment and Affected Areas: An Overview of Legislative Responsibilities, Code Compliance Issues and Accomplishments," *Proceedings of the 14th Symposium on Improving Building Systems in Hot and Humid Climates*, Richardson, Texas (May), pp. 127-137.
72. Haberl, J., Liu, Z., Baltazar-Cervantes, J.C. 2004. "Development of a Monitoring and Verification (M&V) Plan and Baseline for the Fort Hood ESPC Project," *Proceedings of the 14th Symposium on Improving Building Systems in Hot and Humid Climates*, Richardson, Texas (May), pp. 303-311.
73. Haberl, J., Im, P., Culp, C. 2004. "NOx Emissions Reductions From Implementation of the 2000 IECC/IRC Conservation Code to Residential Construction in Texas," *Proceedings of the 14th Symposium on Improving Building Systems in Hot and Humid Climates*, Richardson, Texas (May), pp. 139-150.
74. Haberl, J., Im, P., Culp, C. 2004. "Methodology to Calculate NOx Emissions Reductions From Implementation of the 2000 IECC/IRC Conservation Code in Texas," *Proceedings of the 14th Symposium on Improving Building Systems in Hot and Humid Climates*, Richardson, Texas (May), pp. 113-125.
75. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Bryant, J., Verdict, T., Turner, D., Im, P. 2003. "Calculation of NOx Emission Reduction From Implementation of the 2000 IECC/IRC Conservation Code in Texas," *Proceedings of the 3rd International Conference for Enhanced Building Operation*, Berkeley, California (October).
76. Haberl, J., Im, P., Culp, C., Yazdani, B., Fitzpatrick, T., Turner, D. 2003. "Calculation of NOx Emissions Reductions From Implementation of the 2000 IECC/IRC Conservation Code in Texas," *Proceedings of the 2003 IBPSA Conference*, Eindhoven, Netherlands, August 11-14, 2003, Vol. 1, pp. 443-450.
77. Haberl, J., Claridge, D., Turner, D., O'Neal, D., Heffington, W., Bryant, J., Verdict, M., Liu, Z. 2002. "LoanSTAR After 11 Years: A Report on the Successes and Lessons Learned From the LoanSTAR Program," *Proceedings of the 2nd International Conference for Enhanced Building Operation*, Richardson, Texas, pp. 131 – 138 (October).
78. Culp, C., Haberl, J., Yazdani, B., Fitzpatrick, T., Bryant, J., Turner, D. 2002. "Texas Senate Bill 5 – Reducing Pollution in Non-attainment Areas: An Overview of the Legislation," *Proceedings of the 2002 ACEEE Summer Study*, Vol. 9, pp. 9.43 – 9.54 (August).
79. Kumar, S., Haberl, J., Claridge, D., Turner, D., O'Neal, D., Sharp, T., Sifuentes, T., Lopez, F., Taylor, D. 2002. "Measurement and Verification Reality Check: A Yawning Gap Between Theory and Practice," *Proceedings of the 2002 ACEEE Summer Study*, Vol. 10, pp. 10.163 – 10.176 (August).
80. Schoenemann, T., Haberl, J., Hill, R. 2002. "Design of a Sustainable House for Residents of a Colonia in South Texas," *Proceedings of the 13th Symposium on Improving Building Systems in Hot and Humid Climates*, Houston, Texas, pp. 232 – 243 (May).
81. Sylvester, K., Haberl, J., Turner, D., 2002. "Energy Savings Assessment for the Robert E. Johnson State Office Building in Austin, Texas," *Proceedings of the 13th Symposium on Improving Building Systems in Hot and Humid Climates*, Houston, Texas, pp. 103 – 109 (May).
82. Chulsukon, P., Haberl, J. 2002. "Development and Analysis of a Sustainable, Low Energy House in a Hot and Humid Climate," *Proceedings of the 13th Symposium on Improving Building Systems in Hot and Humid Climates*, Houston, Texas, pp. 219 – 231 (May).
83. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Turner, D. 2002. "Texas' Senate Bill 5 Legislation for Reducing Pollution in Non-attainment Areas: Overview of the Legislation and Responsibilities," *Proceedings of the 13th Symposium on Improving Building Systems in Hot and Humid Climates*, Houston, Texas, pp. 11-24 (May).
84. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Turner, D. 2002. "An Introduction to Texas Senate Bill 5," *Proceedings of the 13th Symposium on Improving Building Systems in Hot and Humid Climates*, Houston, Texas, pp. 1-10 (May).
85. Claridge, D., Liu, M., Deng, S., Turner, D., Haberl, J., Abbas, M., Bruner, H., Veteto, B., Lee, S. 2001. "Cutting Energy and Cooling Use Almost in Half Without Capital Expenditure in a Previously Retrofitted Building," *Proceedings of the Summer Study of the European Council for an Energy Efficient Economy (ECEEE)*, Mandelieu, Cote D'Azur, France (June).
86. Baltazar-Cervantes, J.C., Lim, C., Haberl, J., Turner, D., Claridge, D. 2001. "Development of Load Forecasting Procedures for the Texas A&M University System," *Proceedings of the 1st International Conference for Enhanced Building Operation*, Austin, Texas, pp. 247-254 (July).
87. Farouz, S., Baltazar-Cervantes, J.C., Haberl, J., Claridge, D. 2001. "Monitoring and Verification Procedures Used in the Texas LoanSTAR Program and Rebuild America Program," *Proceedings of the 1st International Conference for Enhanced Building Operation*, Austin, Texas, pp. 235-246 (July).
88. Haberl, J., Sreshthatputra, A., Claridge, D., Turner, D. 2001. "Measured Energy Indices for 27 Office Buildings," *Proceedings of the 1st International Conference for Enhanced Building Operation*, Austin, Texas, pp. 185-200 (July).
89. Haberl, J., Reeves, G., Gillespie, K., Claridge, D., Cowan, J., Culp, C., Frazell, W., Heinemeier, K., Kromer, S., Kummer, J., Mazzucchi, R., Reddy, A., Schiller, S., Sud, I., Wolpert, J., Wutka, T. 2001. "ASHRAE's Proposed Guideline 14P for Measurement of Energy and Demand Savings: How to Determine What was Really Saved by the Retrofit," *Proceedings of the 1st International Conference for Enhanced Building Operation*, Austin, Texas, pp. 25-36 (July).
90. Oh, J., Haberl, J. 2001. "Development of a Computer Model for Solar Simulation and Shaded Fenestration Design," *ASME Solar Engineering Conference*.
91. Akleman, E., Skaria, S., Haberl, J. 2000. "Functional Based 2D Flow Animation," *Visual 2000 Conference*, Mexico City, Mexico, pp. 100-104.
92. Sylvester, K., Haberl, J. 2000. "The Effects of PV Glazing on the Energy Consumption of a High Rise Commercial Building," *Solar 2000 Conference Proceedings*, American Solar Energy Society, Madison, Wisconsin (June).

93. Sylvester, K., Haberl, J. 2000. "Semi-Transparent PV Glazing: Development of Window Properties for Input With the DOE-2 Window Library," *Solar 2000 Conference Proceedings*, American Solar Energy Society, Madison, Wisconsin (June).
94. Sylvester, K., Haberl, J. 2000. "Building Integrated Photovoltaics: An Analysis of the Benefits of PV in High Rise Commercial Buildings," *Proceedings of the 36th Conference of the Associated Schools of Construction*, Purdue University, West Lafayette, Indiana, pp. 307 – 319 (April).
95. Turner, D., Claridge, D., O'Neal, D., Haberl, J., Heffington, W., Taylor, D., Sifuentes, T. 2000. "Program Overview: The Texas LoanSTAR Program: 1989 – 1999, A 10-year Experience," *Proceedings of the 2000 ACEEE Summer Study on Energy Efficiency in Buildings*, Vol. 4, pp. 4.365 – 4.376 (August).
96. Haberl, J., Yazdani, B., Culp, C., Turner, D., Claridge, D., Meyers, M. 2000. "Rebuild America Program in Texas: Update on the Brazos Valley Energy Conservation Coalition," *Proceedings of the 2000 ACEEE Summer Study on Energy Efficiency in Buildings*, Vol. 4, p. 4.117 – 4.130 (August).
97. Kootin-Sanwu, V., Sreshthaputra, A., Haberl, J. 2000. "Short-Term Monitoring to Diagnose Comfort Problems in a Residence in Central Texas," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas, pp. 47 – 61 (May).
98. Yazdani, B., Turner, D., Haberl, J., Myers, M. 2000. "The Brazos Valley Energy Conservation Coalition, Part of the Rebuild America Program in Texas: Program Update," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas (May), pp. 207-215.
99. Turner, D., Claridge, D., O'Neal, D., Haberl, J., Heffington, W., Sifuentes, T. 2000. "Program Overview: The Texas LoanSTAR Program – 10 Years and \$75 Million In Measured Savings (1989 To 1999)," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas (May), pp. 216-225.
100. Kootin-Sanwu, V., Kim, B., Haberl, J. 2000. "Comfort Conditions In A Habitat For Humanity House In Central Texas," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas (May), pp. 129-135.
101. Sylvester, K., Haberl, J., 2000. "An Analysis of the Benefits of Photovoltaic-Coated Glazing on Owning and Operating Costs Of High Rise Commercial Buildings," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas (May), pp. 402-410.
102. Oh, J., Haberl, J. 2000. "Enhanced Software for Displaying Orthographic, Stereographic, Gnomonic and Cylindrical Projections of the Sunpath Diagram and Shading Mask Protractor," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas (May), pp. 234-247.
103. Munger, B., Haberl, J. 2000. "Development of Simplified Calculations for a Multipyranometer Array for the Measurement of Direct and Diffuse Solar Radiation," *Proceedings of the 12th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, San Antonio, Texas (May), pp. 248-259.
104. Haberl, J., Bou-Saada, T., Reddy, A., Soebarto, V. 1998. "An Evaluation of Residential Energy Conservation Options Using Side-by-side Measurements of Two Habitat for Humanity Houses in Houston, Texas," *Proceedings of the 1998 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 1.115-1.134 (August).
105. Haberl, J., Bou-Saada, T., Soebarto, V., Reddy, T. 1998. "Use of Calibrated Simulation for the Evaluation of Residential Energy Conservation Options of Two Habitat for Humanity Houses in Houston, Texas," *Proceedings of the 11th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, Ft. Worth, Texas, pp. 1-15 (June).
106. Turner, D., Claridge, D., O'Neal, Haberl, J., Heffington, W., Harvey, T. Sifuentes, T. 1998. "Program Overview: The Texas LoanSTAR Program; 1989 to August, 1997," *Proceedings of the 11th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, Ft. Worth, Texas, pp. 99-112 (June).
107. Athar, A., Abbas, M., Haberl, J., Turner, D., Claridge, D., Harvey, T. 1998. "Environmental Impact of the Texas LoanSTAR Program," *Proceedings of the 11th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, Ft. Worth, Texas, pp. 113-222 (June).
108. Watt, J., Haberl, J., O'Neal, D. 1998. "Development of Temperature and Humidity-Based Indicators for Diagnosing Problems in Low Tonnage, Split System Air Conditioners," *Proceedings of the 11th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, Ft. Worth, Texas, pp. 136-145 (June).
109. Saman, N., Haberl, J., Turner, D. 1998. "Overview of the Rebuild America Program in Texas," *Proceedings of the 11th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, Ft. Worth, Texas, pp. 185-193 (June).
110. Landman, D., Haberl, J. 1998. "Development of Pre-Screening Methods for Analyzing Energy Use in K-12 Public Schools," *Proceedings of the 11th Symposium on Improving Building Systems in Hot and Humid Climates*, Texas Building Energy Institute, Ft. Worth, Texas, pp. 220-231 (June).
111. Oh, J., Haberl, J. 1997. "New Educational Software for Teaching the Sunpath Diagram and Shading Mask Protractor," *Proceedings of Building Simulation '97 Conference*, International Building Performance Simulation Association, Prague, Czech Republic, pp. 1.307- 1.314 (September).
112. Haberl, J., Sparks, R., Chambers, R. 1997. "LoanSTAR Data Handling and Analysis Software for Measuring Building Energy Data," *Proceeding of the CLIMA 2000 Conference*, Belgium (August).
113. Munger, B., Haberl, J. 1997. "An Improved Multipyranometer Array for the Measurement of Direct and Diffuse Solar Radiation," *Proceedings of the CLIMA 2000 Conference*, Belgium (August).
114. Claridge, D., Haberl, J., Liu, M., Athar, A. 1996. "Implementation of Continuous Commissioning in the Texas LoanSTAR Program: Can you Achieve 150% of Estimated Retrofit Savings?: Revisited," *Proceedings of the 1996 ACEEE Summer Study* (August), pp. 4.31-4.48.

115. Bou-Saada, T., Haberl, J., Vajda, J., Harris, L. 1996. "Total Utility Savings From the 37,000 Fixture Lighting Retrofit to the U.S.D.O.E. Forrestral Building," *Proceedings of the 1996 ACEEE Summer Study on Energy Efficiency in Buildings*, Vol. 4, pp 4.31 – 4.48 (August).
116. Bou-Saada, T., Saman, N., Haberl, J., Heneghan, T. 1996. "Computer Energy Modeling Techniques for Simulating Large Scale Correctional Institutes in Texas," *Proceedings of the 10th Symposium on Improving Building Systems in Hot and Humid Climates*, sponsored by the Texas Building Energy Institute, Austin, Texas (May), pp. 193-204.
117. Oh, J., Haberl, J. 1996. "A New MS-Windows-based Educational Software to Teaching the Sunpath Diagram and Shading Mask Protractor," *Proceedings of the 10th Symposium on Improving Building Systems in Hot and Humid Climates*, sponsored by the Texas Building Energy Institute, Austin, Texas (May), pp. 262-268.
118. Wang, J., Reddy, T., Claridge, D., Haberl, J. 1996. "Data Quality Requirements for Determining Energy Savings in the Weatherization Assistance Program (WAP)," *Proceedings of the 10th Symposium on Improving Building Systems in Hot and Humid Climates*, sponsored by the Texas Building Energy Institute, Austin, Texas, pp. 305 - 315 (May).
119. Reddy, T., Claridge, D., Saman, N., Haberl, J. 1996. "Development of Baseline Monthly Utility Models for Ft. Hood, Texas," *Proceedings of the 10th Symposium on Improving Building Systems in Hot and Humid Climates*, sponsored by the Texas Building Energy Institute, Austin, Texas (May), pp. 337-353.
120. Abbas, M., Haberl, J., Claridge, D. 1996. "Analysis of a Cool Storage System at a Multipurpose Municipal Facility," *Proceedings of the 1996 ASME/JSME/JSES International Solar Energy Conference* (March), pp. 379-386.
121. Abbas, M., Haberl, J. 1995. "Development of Graphical Indices for Displaying Large Scale Building Energy Data Sets," *Proceedings of the 30th Intersociety Energy Conversion Engineering Conference*, July 31, - August 4, 1995, Orlando, Florida, pp. 323 - 330.
122. Bou-Saada, T., Haberl, J. 1995. "A Weather-daytyping Procedure for Disaggregating Hourly End-use Loads in an Electrically Heated and Cooled Building from Whole-building Hourly Data," *Proceedings of the 30th Intersociety Energy Conversion Engineering Conference*, July 31 - August 4, Orlando, Florida, pp. 349 - 356.
123. Bou-Saada, T., Haberl, J. 1995. "An Improved Procedure for Developing Calibrated Hourly Simulation Models," *Proceedings of the International Building Performance Simulation Association*, August 14-16, Madison, Wisconsin, pp. 475 – 484 (August).
124. Abbas, M., Haberl, J., Turner, W.D. 1995. "Cool Storage Applications in the Texas LoanSTAR Program: Overview and Preliminary Results," *Proceedings of the 1995 ASME/JSME/JSES International Solar Energy Conference*, Lahaina, Maui, Hawaii, pp. 187-196 (March).
125. Haberl, J., Bou-Saada, T., Vajda, J., Harris, L. 1995. "The U.S.D.O.E. Forrestral Building Lighting Retrofit: Preliminary Analysis of Electricity Savings," *Proceedings of the 1995 ASME/JSME/JSES International Solar Energy Conference*, Lahaina, Maui, Hawaii, pp. 295-304 (March).
126. Thamilseran, S., Haberl, J. 1995. "A Bin Method for Calculating Energy Conservation Retrofits Savings in Commercial Buildings," *Proceedings of the 1995 ASME/JSME/JSES International Solar Energy Conference*, Lahaina, Maui, Hawaii, pp. 111-124 (March).
127. Kreider, J., Krarti, M., Haberl, J., Claridge, D. 1995. "Recurrent Neural Networks for Building Energy Predictors," *Proceedings of the 1995 ASME/JSME/JSES International Solar Energy Conference*, Lahaina, Maui, Hawaii, pp. 157-166 (March).
128. Haberl, J., Watt, J. 1995. "Flow Measurements with Tangential Paddlewheel Flow Meters: Summary of Experimental Results and In-situ Diagnostics," *Proceedings of the 1995 ASME/JSME/JSES International Solar Energy Conference*, Lahaina, Maui, Hawaii, pp. 741-750 (March).
129. Haberl, J., Nelson, G. 1994. "Panel 5 Overview: Commissioning, Operation and Maintenance," *Proceedings of the 1994 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. xi-xvi (August).
130. Liu, M., Houcek, J., Reddy, T., Athar, A., Claridge, D., Haberl, J. 1994. "Identifying and Implementing Improved Operation and Maintenance Measures in Texas LoanSTAR Buildings," *Proceedings of the 1994 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 5.153-5.166 (August).
131. Haberl, J., Kiskoek, K., Sparks, R., Sims, C., Claridge, D. 1994. "LoanSTAR Public Domain Software for Data Analysis and Data Viewing," *Proceedings of the 1994 ACEEE Summer Study on Energy Efficiency in Buildings*, display paper (August).
132. Claridge, D., Haberl, J., Liu, M., Houcek, J., Athar, A. 1994. "Can you Achieve 150% of Predicted Retrofit Savings? Is it Time for Recommissioning?" *Proceedings of the 1994 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 5.73-5.88 (August).
133. Houcek, J., Claridge, D., Haberl, J. 1994. "Pre-retrofit Lighting Study at the University of Texas at Arlington," *Proceedings of the 9th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 13-22 (May).
134. Liu, M., Athar, A., Claridge, D., Haberl, J. 1994. "Reducing Building Energy Costs Using Optimized Operation Strategies for Constant Volume Air Handling Systems," *Proceedings of the 9th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 192-204 (May).
135. Crowley, G., Haberl, J. 1994. "Use of NWS Weather Measurements for Cross-Checking Local Weather Measurements," *Proceedings of the 9th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 32-46 (May).
136. Munger, B., Haberl, J. 1994. "An Improved Multipyranometer Array for the Measurement of Direct and Diffuse Solar Radiation," *Proceedings of the 9th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 125-131 (May).
137. Thamilseran, S., Haberl, J. 1994. "A Bin Method for Calculating Energy Conservation Retrofit Savings in Commercial Buildings," *Proceedings of the 9th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 142-152 (May).
138. Watt, J., Haberl, J. 1994. "Flow Measurements with Tangential Paddlewheel Flow Meters: Analysis of Experimental Results and In-situ Diagnostics," *Proceedings of the Industrial Energy Technology Conference*, Houston, Texas, pp. 252-260 (April).
139. Abbas, M., Haberl, J. 1994. "Development of Graphical Indices for Displaying Large Building Energy Data Sets," *Proceedings of the Ninth Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, TX, pp. 166-181 (May).

140. McWatters, K., Haberl, J.S. 1994. "Development of Procedures for the Computerized Plotting of a Sun-path Diagram, and Shading Mask Protractor," *Proceedings of the 1994 ASME/JSME/JSES International Solar Energy Conference*, pp. 483-491 (March).
141. Haberl, J., Belur, R., Kissock, K., Campbell, S. 1993. "Exploring New Data Displays for Facility Energy Data," *Proceedings of the 1993 Industrial Energy Technology Conference*, Houston, Texas, pp. 257-265 (March).
142. Haberl, J., Kissock, K., Belur, R., Sparks, R. 1993. "Improving the Paradigm for Displaying Complex Building Energy Consumption Data," *Proceedings of the 1993 ASME/ASES Solar Energy Conference*, pp. 475-485 (April).
143. Kissock, K., Reddy T., Haberl, J., Claridge, D. 1993. "EModel: A New Tool for Analyzing Building Energy Use Data," *Proceedings of the IETC Conference*, pp. 237 – 244 (March).
144. Belur, R., Kissock, K., Haberl, J. 1992. "Exploring an Enhanced Data Viewing Facility for Building Operators," *Proceedings of the 1992 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 3.33-3.36 (August).
145. Haberl, J. 1992. "The Use of a Monthly Whole-campus Energy Analysis for Evaluating a Third Party Energy Service Agreement," *Proceedings of the 1992 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 3.95-3.110 (August).
146. Turner, W.D., Haberl, J., Bryant, J., Finstad, C., Robinson, J. 1992. "Calibration Facility for the LoanSTAR Program," *Proceedings of the 1992 ASEE Conference*, Toledo, Ohio, pp. 1389-1393 (June).
147. Lopez, R., Haberl, J. 1992. "Data Management in the LoanSTAR Program," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 205-212 (May).
148. Cox, R., Haberl, J., Claridge, D. 1992. "Survey of Energy use in Grocery Stores," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 149-154 (May).
149. Robinson, J., Bryant, J., Haberl, J., Turner, W.D. 1992. "Calibration of Tangential Paddlewheel Insertion Flowmeters," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 222-228 (May).
150. Palani, M., O'Neal, D., Haberl, J., 1992. "The Effect of Reduced Evaporator Air Flow on the Performance of a Residential Central Air Conditioner," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 20-26 (May).
151. Athar, A., Abbas, M., Challa, V., Haberl, J., Claridge, D. 1992. "Texas LoanSTAR Monitoring and Analysis Program: Improving the Performance of Retrofits by Providing Operator Feedback from Measured Data," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 188-198 (May).
152. Sparks, R., Haberl, J., Bhattacharyya, S., Rayaprolu, M., Wang, J., Vadlamani, S. 1992. "Testing of Data Acquisition Systems for Use in Monitoring Building Energy Conservation Systems," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 197-204 (May).
153. Willis, D., Haberl, J. 1992. "A Collaborative Support System for the Review of Building Energy Data in the LoanSTAR Monitoring Analysis Project," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 213-221 (May).
154. Abbas, M., Athar, A., Challa, V., Haberl, J., Claridge, D. 1992. "Texas LoanSTAR Monitoring and Analysis Program: Characterizing LoanSTAR Buildings and Energy Consumption," *Proceedings of the 8th Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. 178-187 (May).
155. Haberl, J., Bronson, D., Hinchey, S., O'Neal, D., Claridge, D. 1992. "Graphical Tools to Help Calibrate the DOE-2 Simulation Program to Measured Loads," *DOE-2 User's News*, Lawrence Berkeley Labs, Vol. 13, No. 1, pp. 5-14 (Spring).
156. Haberl, J., Turner, D., Glass, M., Finstad, C., Scott, F. 1992. "Calibration of Flowmeters Used in HVAC Systems Monitoring," *Proceedings of the 1992 ASME/JSES/KSES Solar Energy Conference*, ASME, New York, New York, pp. 1277-1283 (April).
157. Turner, W.D., Haberl, J.S., Bryant, J., Finstad, C., Robinson, J. 1992. "Calibration Facility for the LoanSTAR Program," *Proceedings of the 1992 ASME/JSES/KSES Solar Energy Conference*, ASME, New York, New York, pp. 1269-1275 (April).
158. Lopez, R., Haberl, J. 1992. "Data Processing Routines for Monitored Building Energy Data," *Proceedings of the 1992 ASME/JSES/KSES Solar Energy Conference*, ASME, New York, New York, pp. 329-336 (April).
159. Sparks, Bhattacharyya, Rayaprolu, M., Wang, J., Vadlamani, S. 1992. "Testing Data Acquisition Systems for Use in HVAC System Monitoring," *Proceedings of the 1992 ASME/JSES/KSES Solar Energy Conference*, ASME, New York, New York, pp. 325-328 (April).
160. Kissock, K., Claridge, D., Haberl, J., Reddy, T. 1992. "Measuring Retrofit Savings for the Texas LoanSTAR Program: Report of Preliminary Methodology and Results," *Proceedings of the 1992 ASME Solar Energy Conference*, ASME, New York, New York, pp. 299-308 (April).
161. Claridge, D., Haberl, J., Kissock, K., Wu, J. 1991. "The Texas LoanSTAR Program: Early Measured Savings," *Proceedings of the International Symposium of Heating, Ventilating, and Air Conditioning*, Beijing, China, pp. 284-293 (September).
162. Haberl, J., Jagannathan, V., Lopez, R., Sparks, R., Kissock, K., Willis, D., Claridge, D. 1991. "Exploring an Integrated Data Base Structure for Building Energy Monitoring Data," *Proceedings of the 1991 International Building Simulation Association Conference*, Nice, France, pp. 587-591 (August).
163. Katipamula, S., Haberl, J. 1991. "A Methodology to Identify Diurnal Load Shapes for Non-Weather Dependent Electric End-Uses," *Proceedings of the 1991 ASME-JSES International Solar Energy Conference*, ASME, New York, New York, pp. 457-467 (March).
164. Ruch, D., Chen, L., Haberl, J., Claridge, D. 1991. "A Change-Point Principal Component Analysis (CP/PCA) Method for Predicting Energy Usage in Commercial Buildings: The PCA Model," *Proceedings of the 1991 ASME-JSES International Solar Energy Conference*, ASME, New York, New York, pp. 441-448 (March).
165. Haberl, J., Katipamula, S., Willis, D., Weber, K., Matson, J., Rayaprolu, M., Subramanian, V. 1990. "The Texas LoanSTAR Program: Acquiring and Archiving LoanSTAR Data," *Proceedings of the 7th Annual Symposium on Improving Building Systems in Hot and Humid Climates*, Ft. Worth, Texas, pp. 47-52 (October).

166. Claridge, D., Haberl, J., Katipamula, D., O'Neal, D., Ruch, D., Chen, L., Heneghan, T., Hinchey, S., Kissock, K., Wang, J. 1990. "Analysis of Texas LoanSTAR Data," *Proceedings of the 7th Annual Symposium on Improving Building Systems in Hot and Humid Climates*, Ft. Worth, Texas, pp. 53-60 (October).
167. Englander, S., Reynolds, C., Haberl, J. 1990. "The Princeton Boiler Plant Electronic Logbook Project," *Proceedings of the 1990 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 3.91-3.93 (August).
168. Haberl, J., Doruk, B., Heffington, W. 1990. "Evaluation of Institutional Energy Audits Performed for the Texas LoanSTAR Program," *Proceedings of the 1990 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 6.43-6.45 (August).
169. Verdict, M., Haberl, J., Claridge, D., O'Neal, D., Heffington, W., Turner, D. 1990. "The Texas LoanSTAR Monitoring and Analysis Program: Overview," *Proceedings of the 1990 ACEEE Summer Study on Energy Efficiency in Buildings*, pp. 7.261-7.271 (August).
170. Haberl, J., Claridge, D., Harrje, D. 1990. "Design of Field Experiments and Demonstrations," *Proceedings of the IEA Field Monitoring Workshop*, International Energy Agency, Gothenburg, Sweden, pp. 35-58 (April).
171. Haberl, J., Komor, P. 1989. "Investigating An Analytical Basis for Improving Commercial Building Energy Audits: Early Results from a New Jersey Mall," *Thermal Performance of the Exterior Envelopes of Buildings IV*, ASHRAE, Atlanta, Georgia, pp. 302 - 331 (December).
172. Haberl, J., Englander, S., Reynolds, C., Nyquist, T., McKay, M. 1989. "Whole Campus Performance Analysis Methods," *Proceedings of the 6th Annual Symposium on Improving Building Systems in Hot and Humid Climates*, Dallas, Texas, pp. F2 - F9 (October).
173. Haberl, J., Vajda, J. 1988. "Use of Metered Data Analysis to Improve Building Operation and Maintenance: Early Results from two Federal Complexes," *ACEEE 1988 Summer Study on Energy Efficiency in Buildings*, Vol. 3, pp. 3.98 - 3.111 (August).
174. Haberl, J., Norford, L., Allegier, A. 1988. "Expert Systems for Diagnosing Operation & Maintenance Problems in Building HVAC Systems," Poster Paper, *ACEEE 1988 Summer Study on Energy Efficiency in Buildings*, Pacific Grove, California, pp. B-1-B-9 (August).
175. Haberl, J., Smith, L., Kreider, J., 1988. "Metered Data Analysis Utilizing Knowledge Based Methods to Reduce HVAC Operational and Maintenance problems," *Proceedings of the 5th Annual Symposium on Improving Building Energy Efficiency in Hot and Humid Climates*, Dallas, Texas, pp. 65 - 71 (September).
176. Cooney, K., Stern, F., Haberl, J. 1988. "An Action Oriented Team Approach to Building Energy Conservation Using Regression Techniques and Expert Systems," *Proceedings of the ASME Winter Annual Meeting*, Boston, MA, ASME Solar Energy Division, Vol. 4, pp. 141-148 (December).
177. Haberl, J., Claridge, D. 1986. "A Statistical Building Energy Usage Prediction Methodology," *Proceedings from the ACEEE 1986 Summer Study*, V. 9, pp. 9.129 - 9.131 (August).
178. Haberl, J., Volckhausen, T., Claridge, D. 1985. "A Modular Microcomputer Based Data Acquisition System for Monitoring Energy Consumption in Buildings," *Proceedings of the DOE/ORNL Data Acquisition Workshop*, Oak Ridge National Laboratory, Oak Ridge, Tennessee (October).
179. Haberl, J., Kreider, J. 1984. "Effect of Ventilated Trombe Wall Airflow," *Proceedings of the American Solar Energy Society*.
180. Haberl, J., Dow, J. 1982. "Energy Conservation in Masonry Walls," *Proceedings of the Second North American Masonry Conference*, University of Maryland, College Park, Maryland.

b. Other Professional Contributions (w/o substantial peer review)

1. Papesch, P., Haberl, J., Koester, R., Proctor, D., Berkebile, B. 2011. "Buildings, Climate Change, Education and Action: The Role of the Building Sector Systems in Climate Change Mitigation", *The Journal of Sustainability Education*, (March 28, 2001).
2. Haberl, J., Im, P., Culp, C., Yazdani, B., Fitzpatrick, T., Bryant, J., Turner, D. 2005, "A Simulation Methodology to Estimate NOx Emissions Reductions From the Implementation of the 2000 IECC/IRC Conservation Code in Texas", *IBPSA Newsletter*, Vol. 15, No. 2, pp. 39-48 (October).
3. Sreshtaputra, A., Haberl, J., Andrews, M. 2002. "Case Study: Improving Thermal Comfort in a Thai Buddhist Temple," *IBPSA Newsletter*, Vol. 12, No. 1, pp. 24-26 (Spring).
4. Haberl, J.S., Reddy, T.A., Figueroa, I., Medina, M. 1997. "Overview of LoanSTAR Chiller Monitoring and Analysis of In-Situ Chiller Diagnostics Using ASHRAE RP827 Test Method," *Proceedings of the PG&E Cool Sense National Integrated Chiller Retrofit Forum* (September).
5. Haberl, J., Anderson, R. 1992. "Panel 3 Overview: Commercial Performance Analysis and Measurement," pp. 3.xi-3.xiv, *Proceedings of the 1992 ACEEE Summer Study*, pp. 1.269-1.290 (August).
6. Selkowitz, S., Haberl, J., Claridge, D. 1992. "Future Directions: Building Technologies and Design Tools," *Proceedings of the 1992 ACEEE Summer Study*, pp. 1.269-1.290 (August).
7. Bronson, D., Hinchey, S., O'Neal, D., Claridge, D. 1991. "A Toolkit to help Calibrate the DOE-2 Program to Non-weather Dependent Loads," *IBPSA Newsletter*, International Building Performance Simulation Association, Vol. 4, No.3, pp. 5 - 10 (Fall).
8. Haberl, J., Claridge, D., O'Neal, D., Heffington, W., Turner, D., Verdict, M. 1990. "The Texas LoanSTAR Monitoring and Analysis Program: A Brief Introduction," *IBPSANews*, International Building Performance Simulation Association, pp. 7-9 (May).
9. Komor, P., Haberl, J. 1989. "Identification of Conservation Opportunities from Analysis of Energy Consumption Data," *End-Use Load Information And Application Conference*, W.S. Fleming & Associates, Syracuse, N.Y. (May).
10. Haberl, J. 1980. "What's up with Wind Energy?" *Colorado Engineer*, Vol. 77, No. 1, College of Engineering, University of Colorado (Fall).
11. Haberl, J. 1979. "Slipforming: Some Concrete Facts," *Colorado Engineer*, Vol. 75, No. 4, College of Engineering, University of Colorado (May).

12. Haberl, J., Dow, J. 1979. "Application of the Hittman Methodology," *Energy Auditing, Association of Energy Engineers*, Association of Energy Engineers, Atlanta, GA.
13. Haberl, J. 1978. "Medieval Joints - How did they do it?" *Colorado Engineer*, Vol. 75, No. 1, College of Engineering, University of Colorado (October).

c. Reports

1. Liu, Z., Mukhopadhyay, J., Haberl, J., Yazdani, B. 2010. "A comparison of the Stringency of the 2001 IECC Versus the 2009 IECC and 2009 IRC", Energy Systems Laboratory Report No. ESL-TR-10-01-01 (January).
2. Yazdani, B., Culp, C., Haberl, J., Baltazar, J-C, Do, S.L., 2010. "Analysis of Emissions Calculators for the National Center of Excellence on Displaced Emissions Reductions (CEDER)", 2009 Annual Report to the U.S.E.P.A., Energy Systems Laboratory Report No. ESL-ITR-10-04-01 (March).
3. Gilman, D., Haberl, J., Culp, C., Liu, Z., Yazdani, B., Montgomery, C., Claridge, D., O'Neal, S., Kayati, M. 2010. "Report on the Development of the Format for at Texas Residential Registry", Energy Systems Laboratory Report No. ESL-ITR-10-04-01 (April).
4. Haberl, J., Culp, C., Yazdani, B., Lewis, C., Liu, Z., Baltazar-Cervantes, J-C, Mukhopadhyay, J., Gilman, D., Degelman, L., McKelvey, K., Claridge, D. 2010. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP), Preliminary Report: Integrated NOx Emissions Savings from EE/RE Programs Statewide", Annual Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-10-07-01, Texas A&M University (July).
5. Kim, H., Liu, Z., Baltazar, J.C., Haberl, J., Culp, C., Yazdani, B., Montgomery, C. 2010. "Recommendations fo 2009 IECC 15% Above Code Energy Efficiency Measures for Residential Buildings", Energy Systems Laboratory Report No. ESL-TR-10-11-01 (November).
6. Kim, H., Baltazar, J-C, Haberl, J. 2010. "Validation of the International Code Compliant Calculator (IC#) V 3.10 Using the Resnet Verification Procedures (No. 07-003)", Energy Systems Laboratory Report No. ESL-TR-10-11-01 (November), ESL-TR-10-12-05.
7. Haberl, J., Culp, C., Yazdani, B., Lewis, C., Liu, Z., Baltazar-Cervantes, J-C, Mukhopadhyay, J., Gilman, D., Degelman, L., McKelvey, K., Claridge, D. 2010. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP), Volume I – Summary Report", Annual Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-10-12-1, Texas A&M University (December).
8. Haberl, J., Culp, C., Yazdani, B., Lewis, C., Liu, Z., Baltazar-Cervantes, J-C, Mukhopadhyay, J., Gilman, D., Degelman, L., McKelvey, K., Claridge, D. 2010. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)", Volume II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-10-12-2, Texas A&M University (December).
9. Haberl, J., Culp, C., Yazdani, B., Lewis, C., Liu, Z., Baltazar-Cervantes, J-C, Mukhopadhyay, J., Gilman, D., Degelman, L., McKelvey, K., Claridge, D. 2010. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)", Volume III – Technical Appendices", Annual Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-10-12-3, Texas A&M University (December).
10. Haberl, J., Liu, Z., Baltazar-Cervantes, J-C., Gilman, D., Culp, C., Yazdani, B., Turner, D., Chandrasekaran, V. 2010. "Statewide Air Emissions Calculations From Wind and Other Renewables: Summary Report", Energy Systems Laboratory Report No. ESL-TR-10-12-04 (December).
11. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Liu, Z., Baltazar-Cervantes, J-C., Montgomery, C., McKelvey, K., Mukhopadhyay, J., Degelman, L. 2009. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP) Preliminary Report: Integrated NOx Emissions Savings From EE/RE Programs Statewide", Energy Systems Laboratory Report No. ESL-TR-09-08-03 (November).
12. Kim, H., Haberl, J., Verdict, M. 2009. "Review and Recommendations of Existing Methods and Tools for Building Energy Analysis: Subtask 2.4 for the Southern Energy Efficiency Center", Energy Systems Laboratory Report No. ESL-TR-09-04-01 (April).
13. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Muns, S.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2009. "Energy Efficiency / Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality", Energy Systems Laboratory Report No. ESL-TR-09-12-01, Texas A&M University (December).
14. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Muns, S.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2009. "Energy Efficiency / Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Vol. II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-09-12-02, Texas A&M University (December).
15. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Muns, S.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2009. "Energy Efficiency / Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Vol. III – Appendix, Annual Report to the Texas Commission on Environmental Quality", Energy Systems Laboratory Report No. ESL-TR-08-09-03, Texas A&M University (December).
16. Kim, H., Liu, Z., Haberl, J., Verdict, M. 2009. "análisis of Above-Code (2009 IECC) residencial Energy Efficiency Measures in ONCOR Service Area, Energy Systems Laboratory report ESL-TR-09-08-01, (August).
17. Haberl, J., Liu, Z., Baltazar-Cervantes, J., Gilman, D., Culp, C., Yazdani, B., Chandrasekaran, V. 2009. "Statewide Air Emissions Calculations from Wind and Other Renewables: Summary Report, Energy Systems Laboratory report ESL-TR-09-08-02, (August).
18. Kim, H., Haberl, J., Verdict, M. 2009. "Regional Energy Baselines and Measurement and Verification Protocol, A Subtask 3.1 for the Southern Energy Efficiency Center (SEEC), Energy Systems Laboratory report ESL-TR-09-03-01, (March).
19. Kim, H., Haberl, J., Verdict, M. 2009. "Review and Recommendations of Existing Methods and Tools for Building Energy Analysis: Subtask 2.4 for the Southern Energy Efficiency Center (SEEC), Energy Systems Laboratory report ESL-TR-09-04-01, (April).

20. Haberl, J., Yazdani, B., Culp, C., Do, S., Baltasar, J. 2009. "Análisis of Emissions Calculations for the Nacional Center of Excellence on Displaced Emissions Reductions (CEDER), 2008 Annual Report to the US EPA, Energy Systems Laboratory Report ESL-TR-09-02-01, (September).
21. Diem, A., Mulholland, D., Yarbrough, J., Baltazar, J., Im, P., Haberl, J. 2008. "Estimation of Annual Reductions of NOx Emissions in ERCOT for HB3693 Electricity Savings Goals", Report by the U.S.E.P.A. and Energy Systems Laboratory prepared for the Texas Public Utility Commission, Report no. ESL-TR-08-12-01, (December).
22. Kim, H.; Haberl, J. S.; Verdict, M. 2008. Regional Energy Baselines and Measurement and Verification Protocol, A Subtask 3.1 for the Southern Energy Efficiency Center (SEEC), Draft, *Energy Systems Laboratory Report No. ESL-TR-09 03 01, Texas A&M University (March)*.
23. Yazdani, B.; Culp, C.; Haberl, J. S.; Im, P. 2008. "Analysis of Emissions Calculators for the National Center of Excellence on Displaced Emission Reductions (CEDER), Annual Report, 2007 Annual Report to the United States Environmental Protection Agency", *Energy Systems Laboratory Report No. ESL-TR-08-03-01, Texas A&M University (March)*.
24. Haberl, J. S.; Kim, S. 2008. "The Application and Verification of ASHRAE 152-2004 (Method of Test for Determining the Design and Seasonal Efficiencies of Residential Thermal Distribution Systems to DOE-2.1e Simulation Program)", *Energy Systems Laboratory Report No. ESL-TR-08-06-01, Texas A&M University (June)*.
25. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2008. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Preliminary Report: Integrated Nox Emissions Savings from EE/RE Programs Statewide", Annual Report to the Texas Commission on Environmental Quality, January 2007 – December 2007, Energy Systems Laboratory No. ESL-TR-08-08-01, Texas A&M University (August).
26. Haberl, J. S.; Liu, Z.; Baltazar-Cervantes, J. C.; Subbarao, K.; Gilman, D.; Culp, C.; Yazdani, B.; Turner, W. D.; Chandrasekaran, V. 2008. "Statewide Air Emissions Calculations from Wind and Other Renewables, Summary Report: A Report to the Texas Commission on Environmental Quality for the Period September 2007 – August 2008", *Energy Systems Laboratory Report No. ESL-TR-08-08-02, Texas A&M University (August)*.
27. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Fitzpatrick, T.; Muns, S.; Verdict, M.; Ahmed, M.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2008. "Energy Efficiency / Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality", Energy Systems Laboratory Report No. ESL-TR-08-09-01, Texas A&M University (September).
28. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Fitzpatrick, T.; Muns, S.; Verdict, M.; Ahmed, M.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2008. "Energy Efficiency / Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Vol. II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-08-09-02, Texas A&M University (September).
29. Haberl, J. S.; Culp, C.; Yazdani, B.; Gilman, D.; Fitzpatrick, T.; Muns, S.; Verdict, M.; Ahmed, M.; Liu, Z.; Baltazar-Cervantes, J. C.; Montgomery, C.; McKelvey, K.; Mukhopadhyay, J.; Degelman, L. 2008. "Energy Efficiency / Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Vol. III – Appendix, Annual Report to the Texas Commission on Environmental Quality", Energy Systems Laboratory Report No. ESL-TR-08-09-03, Texas A&M University (September).
30. Baltazar-Cervantes, J. C.; Haberl, J. S.; Yazdani, B. 2008. "Nox Emissions Reduction from Continuous Commissioning® Measures for the Dallas-Fort Worth International Airport", Energy Systems Laboratory Report No. ESL-TR-08-09-04, Texas A&M University (September).
31. Claridge, D. E.; Haberl, J. S.; Christman, K. 2008. "Preliminary Analysis of Energy Recovery Ventilator Savings", *Energy Systems Laboratory Report No. ESL-TR-08-11-01, Texas A&M University (November)*.
32. Haberl, J. S.; Kim, S. 2007. "Comparative Testing of the Combined Radiant Barrier and Duct Models in the ESL's Code-Compliant Simulation Model", Energy Systems Laboratory Report No. ESL-TR-07-02-01, Texas A&M University (February).
33. Kim, S.; Liu, Z.; Haberl, J. S. 2007. "Comparative Testing of the ESL's Code-Compliant Simulation Model and the FSEC's EnergyGauge Software", Energy Systems Laboratory Report No. ESL-TR-07-05-01, Texas A&M University.
34. Haberl, J. S.; Liu, Z.; Baltazar-Cervantes, J. C.; Subbarao, K.; Gilman, D.; Culp, C.; Yazdani, B.; Turner, W. D. 2007. "Statewide Air Emissions Calculations from Wind and Other Renewables, Summary Report: A Report to the Texas Commission on Environmental Quality for the period September 2006 – August 2007", Energy Systems Laboratory Report No. ESL-TR-07-08-01, Texas A&M University (August).
35. Malhotra, M. ; Mukhopadhyay, J. ; Liu, Z. ; Culp, C. ; Haberl, J. S. ; Yazdani, B. ; Montgomery, C. 2007. "Recommendations for 15% Above-Code Energy Efficiency Measures for Residential Buildings", Energy Systems Laboratory Report No. ESL-TR-07-09-01, Texas A&M University (September).
36. Cho, S.; Mukhopadhyay, J.; Liu, Z.; Culp, C.; Haberl, J.; Yazdani, B.; Montgomery, C. 2007. "Recommendations for 15% Above-Code Energy Efficiency Measures for Commercial Office Buildings", Revised November 2008 Energy Systems Laboratory Report No. ESL-TR-07-09-02, Texas A&M University (September).
37. Kim, S., Liu, Z., Haberl, J. 2007. "Comparative Testing of the ESL's Code-Compliant Simulation Model and FSEC's EnergyGauge Software", Energy Systems Laboratory Report No. ESL-TR-07-05, 37 pages (May).
38. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2007. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality, January 2006 to June 2007, Energy Systems Laboratory Report No. ESL-TR-07-12-01, 15 pages (December).
39. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2007. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, January 2006 to June 2007, Energy Systems Laboratory Report No. ESL-TR-07-12-02, 350 pages (December).

40. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2007. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. III – Appendices, Annual Report to the Texas Commission on Environmental Quality, January 2006 to June 2007, Energy Systems Laboratory Report No. ESL-TR-07-12-03, 10 pages with linked files (December).
41. Haberl, J., Culp, C., Yazdani, B., Subbarao, K., Verdict, M., Liu, Z., Baltazar-Cervantes, J.C., Gilman, D., Fitzpatrick, T., Turner, D. 2007. "Statewide Air Emissions Calculations From Wind and Other Renewables", Annual Report to the Texas Commission on Environmental Quality, September 2005 to August 2006, Energy Systems Laboratory Report No. ESL-TR-07-07-01, 101 pages on CDROM & pdf (August).
42. Baltazar-Cervantes, J. C.; Champeau, K.; Ramirez, E. J.; Haberl, J. S. 2006. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP), Summary Report", Energy Systems Laboratory Report No. ESL-TR-06-2-02, Texas A&M University.
43. Haberl, J., Culp, C., Yazdani, B., Subbarao, K., Verdict, M., Liu, Z., Baltazar-Cervantes, J.C., Gilman, D., Fitzpatrick, T., Turner, D. 2006. "Statewide Air Emissions Calculations From Wind and Other Renewables", Annual Report to the Texas Commission on Environmental Quality, September 2005 to August 2006, Energy Systems Laboratory Report No. ESL-TR-06-08-01, 111 pages on CDROM & pdf (August).
44. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2006. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. III – Appendix, Annual Report to the Texas Commission on Environmental Quality, September 2004 to December 2005, Energy Systems Laboratory Report No. ESL-TR-06-06-07, 14 pages on CDROM & pdf (August).
45. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2006. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, September 2004 to December 2005, Energy Systems Laboratory Report No. ESL-TR-06-06-08, 306 pages on CDROM & pdf (August).
46. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2006. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality, September 2004 to December 2005, Energy Systems Laboratory Report No. ESL-TR-06-06-09, 218 pages on CDROM & pdf (August).
47. Malhotra, M., Cho, S., Im, P., Ramirez, E., Jang, M-H, Liu, X., Ahmed, M., Baltazar-Cervantes, J-C., Haberl, J., Culp, C., Fisk, P. 2006. "Comprehensive Energy Analysis Report for the 2007 Solar Decathlon", Submitted to the U.S.D.O.E., Department of Architecture, Texas A&M University, (December).
48. Baltazar-Cervantes, J.C., Haberl, J.S., Yazdani, B. 2005. "NOx, SOx, and CO₂, Emissions Reduction From Continuous Commissioning[®] (CC[®]) Measures at the Rent-A-Car Facility in the Dallas-Fort Worth International Airport, Energy Systems Laboratory Report No. ESL-ITR-05-12-05, 23 pages (December).
49. Liu, Z, Cho, S., Baltazar-Cervantes, J.C., Song, S., Haberl, J. 2005. Baltazar-Cervantes, J.C., Haberl, J.S., Yazdani, B. 2005. "Savings Report for the Fort Hood Army Base: Nov. 1, 2004 to Oct. 31, 2005, A Research Project for the U.S. Army C.E.R.L. and the Ft. Hood Energy Office", Energy Systems Laboratory Report No. ESL-ITR-05-12-01, 112 pages on CDROM (December).
50. Liu, Z., Haberl, J. 2005. "Water/Wastewater Engineering Report, (Storm Sewer/Infiltration Sanitary Sewage Separation – M1 Model)", Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-05-08-06, (August).
51. Liu, Z., Haberl, J. 2005. "Water/Wastewater Engineering Report, (High Efficiency Pump/Motor Replacement – M2 Model)", Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-05-08-07, (August).
52. Cho, S., Im, P., Haberl, J. 2005. "Literature Review of Displacement Ventilation", Energy Systems Laboratory Report No. ESL-TR-05-05-01, 24 pages, (May).
53. Im, P., Cho, S., Haberl, J. 2005. "Literature Review of Displacement Ventilation", Energy Systems Laboratory Report No. ESL-TR-05-05-02, 24 pages, (May).
54. Haberl, J., Cho, S. 2004. "Literature Review of Uncertainty of Analysis Methods: DOE-2 Program," Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-04-11-01, 28 pages on CDROM (November).
55. Haberl, J., Cho, S. 2004. "Literature Review of Uncertainty of Analysis Methods: F-Chart Program," Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-04-08-04, 19 pages on CDROM (October).
56. Haberl, J., Cho, S. 2004. "Literature Review of Uncertainty of Analysis Methods: PV F-Chart Program," Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-04-10-02, 17 pages on CDROM (October).
57. Haberl, J., Cho, S. 2004. "Literature Review of Uncertainty of Analysis Methods: Inverse Model Toolkit," Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-04-10-03, 31 pages on CDROM (November).
58. Haberl, J., Cho, S. 2004. "Literature Review of Uncertainty of Analysis Methods: Cool Roofs," Report to the Texas Commission on Environmental Quality, Energy Systems Laboratory Report No. ESL-TR-04-10-04, 23 pages on CDROM (November).
59. Haberl, J., Verdict, M., Yazdani, B., Zhu, Y, Im, P. 2004. "NOx Emissions Reduction from Voluntary Energy Efficiency Projects Within the Alamo Area Council of Governments to the Texas Commission on Environmental Quality," Energy Systems Laboratory Report No. ESL-TR-04-08-02, 41 pages on CDROM & pdf (August).
60. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Bryant, J., Degelman, L., Turner, D. 2004. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)," Vol. III – Appendix, Annual Report to the Texas Commission on Environmental Quality, September 2003 to August 2004, Energy Systems Laboratory Report No. ESL-TR-04-12-05, 217 pages on CDROM & pdf (December).
61. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Bryant, J., Degelman, L., Turner, D. 2004. "Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan

- (TERP),” Vol. II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, September 2003 to August 2004, Energy Systems Laboratory Report No. ESL-TR-04-12-04, 351 pages on CDROM & pdf (December).
62. Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Bryant, J., Degelman, L., Turner, D. 2004. “Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP),” Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality, September 2003 to August 2004, Energy Systems Laboratory Report No. ESL-TR-04-12-01, 10 pages pdf (December).
 63. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Bryant, J., Turner, D. 2003. “Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP),” Vol. II – Technical Report, Annual Report to the Texas Commission on Environmental Quality, September 2002 to August 2003, Energy Systems Laboratory Report No. ESL-TR-03-12-04, 175 pages on CDROM & pdf (December).
 64. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Bryant, J., Turner, D. 2003. “Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP),” Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality, September 2002 to August 2003, Energy Systems Laboratory Report No. ESL-TR-03-12-04, 10 pages pdf (December).
 65. Haberl, J., Baltazar-Cervantes, J.C., Liu, Z. 2003. “Baseline Report for the Fort Hood Army Base: Sept. 1, 2002 to Aug. 31, 2003,” Energy Systems Laboratory Report No. ESL-TR-03-12-02, 561 pages pdf (December).
 66. Haberl, J., Powell, T., Carlson, K., Im, P., Turner, D. 2003. “U.S. Army Measurement and Verification (M&V) Costing Toolkit: DACA42-01-T-0119,” Energy Systems Laboratory Report No. ESL-TR-03-12-01, 63 pages with CDROM & pdf (December).
 67. Haberl, J., Im, P., Culp, C., Yazdani, B., Fitzpatrick, T., Verdict, M., Turner, D. 2003. “Procedure to Calculate NOx Reductions Using the Emissions and Generation Resources Integrated Database (eGRID) Spreadsheet,” Energy Systems Laboratory Report No. ESL-TR-03-07-01, 27 pages pdf (July).
 68. Haberl, J., Turner, D., Claridge, D., O’Neal, D., Heffington, W., Bryant, J., Liu, Z., Visitsak, S. 2002. “LoanSTAR After 11 Years: A Report on the Successes and Lessons Learned from the LoanSTAR Program,” submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-01-12-03, 32 pages with CDROM & pdf (December).
 69. Haberl, J., Baltazar-Cervantes, J., Sung, Y., Claridge, D., Turner, D. 2002. “Baseline Report for Selected Buildings on the Fort Hood Army Base,” submitted to the Fort Hood Energy Office, Energy Systems Laboratory, Texas A&M University (December).
 70. Haberl, J., Liu, Z., Sung, Y., Claridge, D., Turner, D. 2002. “Baseline Report for Measured Electric and Cooling Loads at the Federal Reserve Bank in Dallas, Texas,” submitted to the Federal Reserve Bank at Dallas, Energy Systems Laboratory, Texas A&M University (December).
 71. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Turner, D. 2002. “Texas Senate Bill 5 Legislation for Reducing Pollution in Non-attainment and Affected Areas: Annual Report,” submitted to the Texas Natural Resources Conservation Commission, Energy Systems Laboratory Report No. ESL-TR-02-07-01, Texas A&M University, 116 pages pdf (Revised: September).
 72. Yuill, G., K., Haberl, J.S. 2002. “Development of Accuracy Tests For Mechanical System Simulation. Final Report for ASHRAE Research Project 865-RP,” The University of Nebraska at Lincoln (July).
 73. Haberl, J., Saman, N., Bou-Saada, T. 2002. “Air-Side Energy Use Calculations for Severn HVAC Systems: Dual Duct Constant Volume (DDCAV); Dual Duct Variable Volume (DDVAV); Constant Volume With Reheat (CAVRH); Variable Volume With Reheat (VAVRH), Four Pipe Fan Coil Unit (FC), Four Pipe Induction Unit (FI), and Single Zone (SZ) Systems,” Energy Systems Laboratory Report No. ESL-TR-01-02-02, Texas A&M University, 78 pages with CDROM & pdf (June).
 74. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Turner, D. 2002. “Texas Senate Bill 5 Legislation for Reducing Pollution in Non-attainment and Affected Areas: Report for the TERP Advisory Board Meeting,” submitted to the TERP Advisory Committee, Energy Systems Laboratory Report No. ESL-TR-02-06-01, Texas A&M University, 75 pages pdf (June).
 75. Haberl, J., Culp, C., Yazdani, B., Fitzpatrick, T., Turner, D. 2002. “Texas’ Senate Bill 5 Legislation for Reducing Pollution In Non-Attainment and Affected Areas: Procedures for Measuring Electricity Savings From the Adoption of the International Energy Conservation Code (IRC/IECC 2001) in New Residences,” Energy Systems Laboratory Report No. ESL-TR-02-04-01, Texas A&M University, 18 pages pdf (April).
 76. Sylvester, K., Song, S., Haberl, J., Turner, D. 2002. “Sustainability Assessment of the Robert E. Johnson State Office Building,” submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-02-01-02, Texas A&M University, 139 pages pdf (April).
 77. Sweeney, J., Haberl, J. 2002. “Automated Data Quality Analysis Research and Development,” submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-02-02-01, Texas A&M University, 32 pages pdf (February).
 78. Claridge, D., Haberl, J., Turner, D., O’Neal, D., Heffington, W. 2001. “Texas LoanSTAR Monthly Energy Consumption Reports,” Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 2001.
 79. Haberl, J., Im, P. 2001. “U.S. Army Measurement and Verification (M&V) Costing Toolkit,” submitted to the U.S. Army Construction Engineering Laboratory, Energy Systems Laboratory, Texas A&M University (December).
 80. Haberl, J., Sreshthaputra, A., Claridge, D. 2001. “Baseline Report for the 87000 Block Complex at Ft. Hood, Texas,” submitted to the Ft. Hood Energy Office, Energy Systems Laboratory, Texas A&M University (December).
 81. Haberl, J., Sreshthaputra, A., Claridge, D., Turner, D. 2001. “Baseline Report for Measured Electric and Cooling Loads at the Federal Reserve Bank in Dallas, Texas,” submitted to the Federal Reserve Bank at Dallas, Energy Systems Laboratory, Texas A&M University (December).
 82. Haberl, J. 2001. “Annotated Bibliography for Vented Attics: Task 2.1,” submitted to the California Energy Commission through ADM Associates, Energy Systems Laboratory, Texas A&M University (December).
 83. Kissock, K., Haberl, J., Claridge, D. 2001. “Development of a Toolkit for Calculating Linear, Change-point Linear and Multiple-Linear Inverse Building Energy Analysis Models,” submitted to ASHRAE under Research Project 1050-RP, University of Dayton and Energy Systems Laboratory, 80 pages (December).
 84. Sweeney, J., Culp, C., Haberl, J. 2001. “Internet Datalogging and Display,” submitted to the Texas State Energy Conservation Office, Energy Systems Lab Report No. ESL-TR-01-12-02, Texas A&M University, 15 pages pdf (December).

85. Klima, P., Lockhart, D., Haberl, J. 2001. "Internet Polling Development Report," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-01-11-01, Texas A&M University, 49 pages pdf (November).
86. Haberl, J. 2001. "Annotated Bibliography for Attic DHW Heater: Task 2.2," submitted to the California Energy Commission through ADM Associates, Energy Systems Laboratory, Texas A&M University (November).
87. Haberl, J. 2001. "Annotated Bibliography for Envelope Comfort and IAQ: Task 2.4," submitted to the California Energy Commission through ADM Associates, Energy Systems Laboratory, Texas A&M University (November).
88. Haberl, J. 2001. "Annotated Bibliography for Space Conditioning: Task 2.5," submitted to the California Energy Commission through ADM Associates, Energy Systems Laboratory, Texas A&M University (November).
89. Haberl, J. 2001. "Annotated Bibliography for Whole-house Fans: Task 2.6," submitted to the California Energy Commission through ADM Associates, Energy Systems Laboratory, Texas A&M University (November).
90. Haberl, J., Culp, C. 2001. "Workbook for the Measurement and Verification Techniques Workshop," submitted to the Workshop at the 1st International Conference for Enhanced Building Operation, Energy Systems Laboratory, Texas A&M University (July).
91. Abushakra, B., Haberl, J., Claridge, D., Sreshthaputra, A. 2000 "Compilation of Diversity Factors and Schedules for Energy and Cooling Load Calculations; ASHRAE Research Project 1093; Phase III Draft Report," submitted to ASHRAE under Research Project 1093-RP, Energy Systems Lab Report No. ESL-TR-00-06-01, Texas A&M University, 150 pages pdf (June).
92. Haberl, J., Sreshthaputra, A., Claridge, D. 2001. "Development of a Toolkit for Calculating Linear, Change-Point Linear and Multiple-Linear Inverse Building Energy Analysis Models – Detailed Test Results," submitted to ASHRAE under Research Project 1050-RP, Energy Systems Laboratory Report No. ESL-TR-01-05-01, Texas A&M University, 34 pages pdf (May).
93. Abushakra, B., Sreshthaputra, A., Haberl, J., Claridge, D. 2001. "Compilation of Diversity Factors and Schedules for Energy and Cooling Load Calculations – Final Report," submitted to ASHRAE under Research Project 1093-RP, Energy Systems Lab Report No. ESL-TR-01-04-01, Texas A&M University, pdf (April).
94. Haberl, J., Sreshthaputra, A., Claridge, Turner, D. 2001. "Compilation of Electricity, Cooling and Heating Energy Use Indices (EUIs) for a Comparative Baseline Analysis," submitted to the Federal Reserve Bank at Dallas, Energy Systems Laboratory, Texas A&M University (March).
95. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 2000. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 2000.
96. Haberl, J., Reddy, A., Elleson, J. 2000. "Determining Long-Term Performance of Cool Storage Systems From Short-Term Tests, Final Report," submitted to ASHRAE under Research Project 1004-RP, Energy Systems Laboratory Report No. ESL-TR-00-08-01, Texas A&M University, 163 pages pdf (August).
97. Haberl, J., Reddy, A., Elleson, J. 2000. "Determining Long-term Performance of Cool Storage Systems from Short-term Tests: Case Study #1: Application of the Lumped Model Approach to a Large Hotel in San Francisco," submitted to ASHRAE under Research Project 1004-RP, Energy Systems Lab Report No. ESL-TR-00-01-02, Texas A&M University, pdf (August).
98. Akleman, E., Haberl, J., Parke, F. 2000. "Demonstration of the use of Multimedia Electronic Information Enhancements for a Chapter Handbook CDROM: Draft Final Report," submitted to ASHRAE under Research Project 1017-RP, Texas Engineering Experiment Station, Texas A&M University (August).
99. Haberl, J., Claridge, D., Turner, D. 2000. "Energy Management Workshop: A Workshop on Energy Measurement, Verification, and Analysis Technology," submitted to the Energy Conservation Task Force of The Subcommittee on Administrative Services of the Federal Reserve Bank of Dallas, Energy Systems Laboratory, Texas A&M University (April).
100. Sreshthaputra, A., Abushakra, B., Haberl, J., Claridge, D. 2000. "Data Visualization for Quality-Check Purposes of Monitored Electricity Consumption in all Office Buildings in the ESL Database," Energy Systems Lab Report No. ESL-TR-00-03-01, Texas A&M University, 319 pages pdf (March).
101. McKittrick, T., Haberl, J., Graham, C., Claridge, D., Swain, B. 2000. "An Exploratory Initiative for Improving Low-cost Housing in Texas," Texas Engineering Experimentation Station, Texas A&M University, 96 pages (January).
102. Haberl, J., Reddy, T., Elleson, J., Claridge, D. 2000. "Determining Long-term Performance of Cool Storage Systems From Short-term Tests: January 2000 Progress Report," submitted to ASHRAE under Research Project 1004, Energy Systems Laboratory, Texas A&M University (January).
103. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 2000. "Texas LoanSTAR 1999 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University.
104. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1999. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1999.
105. Abushakra, B., Haberl, Claridge, D. 1999. "Compilation of Diversity Factors and Schedules for Energy and Cooling Load Calculations: December 1999 Progress Report," submitted to ASHRAE under Research Project 1093, Energy Systems Laboratory Report No. ESL-TR-99-12-01, Texas A&M University, 120 pages pdf (December).
106. Abushakra, B., Haberl, J., Claridge, D. 1999. "Compilation of Diversity Factors and Schedules for Energy and Cooling Load Calculations: December 1999 Progress Report," submitted to ASHRAE under Research Project 1093, Energy Systems Laboratory Report No. ESL-TR-99-05-01, Texas A&M University, 91 pages pdf (June).
107. Haberl, J., Reddy, T., Elleson, J., Claridge, D. 1999. "Determining Long-term Performance of Cool Storage Systems from Short-term Tests: January 2000 Progress Report," submitted to ASHRAE under Research Project 1004, Energy Systems Laboratory Report No. ESL-TR-99-12-11, Texas A&M University, 76 pages pdf (December).
108. Kissock, K., Haberl, J., Claridge, D. 1999. "Inverse Building Energy Model Toolkit: Software Requirement Specification," submitted to ASHRAE under Research Project 1050, Energy Systems Laboratory, Texas A&M University (December).
109. Akleman, E., Haberl, J., Parke, F. 1999. "Demonstration of the use of Multimedia Electronic Information Enhancements for a Chapter Handbook CDROM: Demonstration CDROM," submitted to ASHRAE under Research Project 1017, Texas Engineering Experiment Station, Texas A&M University (December).

110. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1999. "Texas LoanSTAR 1998 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University.
111. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1998. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1998, 250 pages.
112. Abushakra, B., Haberl, J., Claridge, D. 1998. "Energy Analysis, Baseline and Modeling of Prairie View A&M University Campus, Final Report, Energy Systems Laboratory Report No. ESL-TR-98-12-01, Texas A&M University, 137 pages pdf (December).
113. Haberl, J., Reddy, T., Elleson, J., Claridge, D. 1998. "Determining Long-Term Performance of Cool Storage Systems from Short-Term Tests: Literature Review, preliminary methodology description and final site selection for ASHRAE RP 1004," Energy Systems Laboratory Report No. ESL-TR-98-03-01, Texas A&M University, 200 pages pdf (February).
114. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1998. "Texas LoanSTAR 1997 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University.
115. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1997. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1997, 460 pages.
116. Soebarto, V., Haberl, J., Degelman, L. 1997. "Lighting Survey Results at the Langford Architecture Center and Estimated Savings by Delamping," submitted to the College of Architecture, Texas A&M University, Energy Systems Laboratory Report No. ESL-TR-97-06-01, Texas A&M University, 36 pages pdf (June).
117. Soebarto, V., Haberl, J., Degelman, L. 1997. "Estimated Savings from Turning off Unnecessary Lights at the Langford Architecture Center During the 1996 Christmas Holidays," submitted to the College of Architecture, Texas A&M University, Energy Systems Laboratory Report No. ESL-TR-97-01-01, Texas A&M University, 16 pages pdf (March).
118. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1997. "Texas LoanSTAR 1996 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University, 358 pages.
119. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1996. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1996, 560 pages.
120. Reddy, T., Bou-Saada, T., Haberl, J., 1996. "Side-by-Side Comparison of Energy Efficient and Standard Efficiency Affordable Housing in Houston, Interim Project Report," submitted to the Texas State Energy Conservation Office, Habitat for Humanity Alliance to Save Energy, and United States Department of Energy, Energy Systems Laboratory Report No. ESL-TR-96-11-01 (I), Texas A&M University, 33 pages pdf (November).
121. Haberl, J., Landman, D. 1996. "Development of Prescreening Indices for School Buildings – Summary Report," submitted to Oak Ridge National Laboratory, Energy Systems Laboratory, Texas A&M University (November).
122. Soebarto, V., Haberl, J., Degelman, L. 1996. "Estimated Savings from Turning off Unnecessary Electrical Loads During Unoccupied Periods at the Langford Architecture Center" submitted to the College of Architecture, Texas A&M University, Energy Systems Laboratory Report No. ESL-TR-96-01-02, Texas A&M University, 40 pages pdf (October).
123. Bou-Saada, T., Haberl, J. 1996. "The U.S.D.O.E. Forrestal Building Lighting Retrofit: Analysis of Electrical and Thermal Energy Savings – Final Summary Report," submitted to the U.S.D.O.E. Forrestal Building Administration, Energy Systems Laboratory, Texas A&M University (August).
124. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1996 "Texas LoanSTAR 1995 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University, 274 pages.
125. Haberl, J., Bou-Saada, T. 1996. "Analysis of Energy Savings From Energy Conservation Retrofits in the Old Executive Office Building - Confidential Summary Report, submitted to the U.S. D.O.E. Office of Conservation and Energy, Energy Systems Laboratory Report No. ESL-TR-95-11-01, Texas A&M University, 57 pages pdf (May).
126. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1995. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1995, 540 pages.
127. Abbas, M., Turner, D., Claridge, D., Haberl, J., Saman, N. 1995. "A Report on the Environmental Impact of the Texas LoanSTAR Program from May 1989 to September 1995," submitted to the Texas State Conservation Office, Energy Systems Laboratory, Texas A&M University, 12 pages (November).
128. Saman, N., Reddy, T., Haberl, J., Claridge, D. 1995. "Development of Baseline Monthly Utility Models, Stabilization of Data Logging Environment and Development of Metering Plan and Shopping List for Ft. Hood, Texas," submitted to the U.S. Army Civil Engineering Research Laboratory, Energy Systems Laboratory Report No. ESL-TR-95-10-01, 123 pages pdf (October).
129. Saman, N., Bou-Saada, T., Eggebrecht, J., Haberl, J. 1995. "DOE-2 Analysis of the TDCJ Prison Facilities – Summary Report," submitted to the Texas Department of Criminal Justice, Energy Systems Laboratory, Texas A&M University (September).
130. Haberl, J., Reddy, T., Claridge, D., Turner, D., O'Neal, D., Heffington, W. 1996. "Measuring Energy-savings Retrofits: Experiences from the Texas LoanSTAR Program," Oak Ridge National Laboratory Report No. ORNL/Sub/93-SP090/1, Energy Systems Laboratory, Texas A&M University, 192 pages (February).
131. Haberl, J., Heneghan, T., Sieggreen, R., Claridge, D. 1996. "An Evaluation of Constant Volume to Variable Volume HVAC Retrofits Using Before/After Monitored Data From Texas LoanSTAR Program – Summary Report," submitted to the U.S. Environmental Protection Agency, Energy Systems Laboratory, Texas A&M University (June).
132. Saman, N., Reddy, T., Haberl, J., Claridge, D., Turner, W. 1996. "Data Polling Routine (PlotHood) to Generate Weekly Inspection Plots for Fort Hood, Texas," submitted to the U.S. Construction Engineering Laboratory, Energy Systems Laboratory Report No. ESL-TR-96-04-01, Texas A&M University, 32 pages pdf (April).
133. Reddy, T., Saman, F., Claridge, D., Haberl, J., Turner, W. 1996. "Development and Use of Baseline Monthly Utility Models for Eight Army Installations Around the United States," submitted to the U.S. Construction Engineering Laboratory, Energy Systems Laboratory Report No. ESL-TR-96-03-01, Texas A&M University, 163 pages pdf (March).
134. Haberl, J., Bou-Saada, T. 1995. "The USDOE Forrestal Lighting Retrofit: Analysis of Electricity and Thermal Savings, Energy Systems Laboratory Report No. ESL-TR-95-12-02, Texas A&M University, 60 pages pdf (December).

135. Haberl, J., Bou-Saada, T., Vajda, E., Shincovich, M., D'Angelo III, L., Harris L. 1995. "The USDOE Forrester Lighting Retrofit: Preliminary Analysis of Electricity and Thermal Savings, Energy Systems Laboratory Report No. ESL-TR-94-12-06, Texas A&M University, 10 pages pdf (December).
136. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1995. "Texas LoanSTAR 1994 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University, 245 pages.
137. Abbas, M., Haberl, J., Turner, W. 1994. "Cool Storage Applications in the Texas ESL Program: Overview and Preliminary Results, Energy Systems Laboratory Report No. ESL-TR-94-12-04, Texas A&M University, 9 pages pdf (December).
138. Haberl, J., Bou-Saada, T. 1994. "Analysis of Energy Conservation Options at the USDOE Child Development Center – Draft," submitted to the USDOE Office of Administrative Services, Energy Systems Laboratory Report No. ESL-93-12-09, Texas A&M University, 47 pages pdf (December).
139. Liu, M., Zhu, Y., Claridge, D., Haberl, J., 1994. "Preliminary Study of O&M Opportunities at the University of Texas Medical Branch at Galveston," submitted to the Energy Management and Operations Department at UTMB Galveston, U.S., Energy Systems Laboratory, Texas A&M University, 69 pages (July).
140. Haberl, J., Kreider, J. 1994. "Instructions for the Great Energy Predictor Shootout II: Measuring Retrofit Energy Savings," Energy Systems Laboratory Report No. ESL-94-07-01, Texas A&M University, 12 pages pdf (July).
141. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1994. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1994, 312 pages.
142. Haberl, J., Bou-Saada, T. 1994. "Analysis of Energy Conservation Options at the U.S.D.O.E. Child Development Center - Summary Report," submitted to the U.S.D.O.E. Office of Administrative Services, Energy Systems Laboratory Report No. ESL-TR-94-12-11, Texas A&M University, 49 pages pdf (December).
143. Haberl, J., Heneghan, T., Sieggreen, R., Claridge, D. 1994. "Evaluation of Constant Volume to Variable Volume HVAC Retrofits Using Before/After Monitored Data From the Texas LoanSTAR Program," submitted to the U.S. Environmental Protection Agency, Energy Systems Laboratory, Texas A&M University (December).
144. Haberl, J., Abbas, M., Claridge, D. 1994. "Results of Cool Storage System Monitoring at the Austin Convention Center," submitted to the City of Austin, Energy Systems Laboratory, Texas A&M University (December).
145. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1994. "Texas LoanSTAR 1993 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University, 152 pages.
146. Houcek, J., Claridge, D., Haberl, J. 1993. "Pre-Retrofit Lighting Study at the University of Texas at Arlington," submitted to the University of Texas at Arlington, Energy Systems Laboratory Report No. ESL-TR-93-12-04, Texas A&M University, 25 pages pdf (December).
147. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1993. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1993, 312 pages.
148. Liu, M., Reddy, T., Houcek, J., Claridge, D., Haberl, J. 1993. "Potential Operation and Maintenance (O&M) Savings in the John Sealy South Building at UTMB," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-93-10-06, 39 pages pdf (October).
149. Liu, M., Athar, A., Reddy, T., Claridge, D., Haberl, J. 1993. "Potential Operation and Maintenance (O&M) Savings in the John Sealy North Building at UTMB," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-93-10-07, 36 pages pdf (October).
150. Liu, M., Athar, A., Reddy, T., Claridge, D., Haberl, J. 1993. "Potential Energy Savings from Optimized Schedule and Economizer Cycles in the Moody Library Building at UTMB," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-93-10-08, Texas A&M University, 39 pages pdf (October).
151. Liu, M., Athar, A., Reddy, T., Claridge, D., Haberl, J. 1993. "Summary of UTMB O&M Project: Energy Conservation Potential in Five Buildings," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-93-10-03, Texas A&M University, 23 pages pdf (October).
152. Liu, M., Athar, A., Reddy, T., Claridge, D., Haberl, J. 1993. "Potential Operation and Maintenance Energy in the Clinical Science Building at UTMB," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-93-10-05, Texas A&M University, 32 pages pdf (October).
153. Liu, M., Athar, A., Reddy, T., Claridge, D., Haberl, J. 1993. "Potential Operation and Maintenance (O&M) Savings in the Basic Science Building at UTMB," submitted to the Texas State Energy Conservation Office, Energy Systems Laboratory Report No. ESL-TR-93-10-04, Texas A&M University, 33 pages pdf (October).
154. Turner, D., Heffington, W., O'Neal, D., Claridge, D., Haberl, J. 1993. "Texas LoanSTAR Monitoring and Analysis Program: Monitoring Analysis Review Committee Report," Task C – Data Handling and Retrieval, and Task 6 – Improved Energy Audits," submitted to the Texas Governor's Energy Office, Energy Systems Laboratory Report No. ESL-TR-93-06-03, Texas A&M University, 199 pages pdf (June).
155. Liu, M., Houcek, J., Claridge, D., Haberl, J. 1993. "Potential Operation and Maintenance (O&M) Savings at the Dunbar Middle and Sims Elementary Schools," submitted to Dunbar Middle and Sims Elementary Schools, Energy Systems Laboratory Report No. ESL-TR-93-04-08, Texas A&M University, 76 pages pdf (April).
156. Haberl, J. 1993. "Economic Calculations for ASHRAE Handbook," Energy Systems Laboratory Report No. ESL-TR-93-04-07, Texas A&M University, 13 pages pdf (April).
157. Houcek, J., Liu, M., Claridge, D., Haberl, J., Katipamula, S., Abbas, M. 1993. "Potential Operation and Maintenance (O&M) Savings at the State Capitol Complex, submitted to the State Capitol Complex, Energy Systems Laboratory Report No. ESL-TR-93-01-07, Texas A&M University, 75 pages pdf (January).
158. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1993. "Texas LoanSTAR 1992 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University, 152 pages.

159. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1992. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1992, 280 pages.
160. Haberl, J., Lopez, R., Sparks, R. 1992. "LoanSTAR Monitoring and Analysis Program: Building Energy Monitoring Workbook," submitted to the Texas Governor's Energy Office, Energy Systems Laboratory Report No. ESL-TR-92-06-03, Texas A&M University, 194 pages pdf (August).
161. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1992. "Texas LoanSTAR 1991 Annual Energy Consumption Report," Energy Systems Laboratory, Texas A&M University, 104 pages.
162. Haberl, J., Reddy, T., Claridge, D. 1992. "Development of Monitoring Requirements for Measuring Energy-saving Retrofits in Commercial Buildings - Final Summary Report," submitted to the Oak Ridge National Laboratory, Contract # 19X-SH779V, Energy Systems Laboratory, Texas A&M University (June).
163. Palani, M., O'Neal, D., Haberl, J. 1992. "Monitoring the Performance of a Residential Central Air Conditioner Degraded under Degraded Conditions on a Test Bench, Energy Systems Laboratory Report No. ESL-TR-92-05-05, Texas A&M University, 155 pages pdf (May).
164. Haberl, J. 1992. "Texas LoanSTAR Monitoring and Analysis Program: Monitoring Analysis Review Committee Report," Task 4 - Computer Support, and Task 6 - Improved Energy Audit," submitted to the Texas Governor's Energy Office, Energy Systems Laboratory, Texas A&M University (May).
165. Haberl, J., Claridge, D. 1992. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects - Final Summary Report," submitted to the U.S.D.O.E. Office of Conservation and Energy, Grant # DE-FG01-90CE21003, Energy Systems Laboratory, Texas A&M University (March).
166. Haberl, J., Claridge, D., Turner, D. 1992. "Prairie View A&M University Whole Campus Energy Analysis: Update Report," submitted to the Facilities Engineering Department at Prairie View A&M University, Energy Systems Laboratory Report No. ESL-TR-92-02-23, Texas A&M University, 36 pages pdf (March).
167. Claridge, D., Haberl, J., Turner, D., O'Neal, D., Heffington, W. 1991. "Texas LoanSTAR Monthly Energy Consumption Reports," Energy Systems Laboratory, Texas A&M University, 12 reports submitted in 1991, 240 pages.
168. Haberl, J., Claridge, D., Turner, W. 1991. "Prairie View A&M University Whole Campus Energy Analysis," submitted to the Facilities Engineering Department at Prairie View A&M University, Energy Systems Laboratory Report No. ESL-TR-91-03-01, Texas A&M University, 33 pages pdf (March).
169. Haberl, J., Claridge, D. 1991. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects - Final Summary Report," submitted to the U.S.D.O.E. Office of Conservation and Energy, Grant # DE-FG01-90CE21003, Energy Systems Laboratory Report No. ESL-TR-91-09-02, Texas A&M University, 132 pages pdf (September).
170. Turner, D., Claridge, D., O'Neal, D., Heffington, W., Haberl, J. 1991. "Texas LoanSTAR Monitoring and Analysis Program: Progress Report - Vols. I & II," submitted to the Texas Governor's Energy Management Center, Energy Systems Laboratory Report No. ESL-TR-91-08-01 and ESL-TR-91-08-02, Texas A&M University, 254 and 388 pages pdf (August).
171. Haberl, J., Claridge, D., Bryant, J., Poyner, B., McBride, J. 1991. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects - Third Quarterly Progress Report," submitted to the U.S.D.O.E. Office of Conservation and Energy, Grant # DE-FG01-90CE21003, Energy Systems Laboratory, Texas A&M University, 60 pages (June).
172. Haberl, J., Claridge, D. 1991. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects - Preliminary Engineering Analysis for the Forrestal and Germantown Complexes," submitted to the U.S.D.O.E. Office of Conservation and Energy, Grant # DE-FG01-90CE21003, Energy Systems Laboratory, Texas A&M University (March).
173. Haberl, J., Claridge, D. 1991. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects - Second Quarterly Progress Report," submitted to the U.S.D.O.E. Office of Conservation and Energy, Grant # DE-FG01-90CE21003, Energy Systems Laboratory Report No. ESL-TR-91-03-05, Texas A&M University, 60 pages pdf (March).
174. Haberl, J. 1991. "Texas LoanSTAR Monitoring and Analysis Program: Task 4 Progress Report," submitted to the Texas Governor's Energy Management Center, Energy Systems Laboratory Report No. ESL-TR-91-01-01, Texas A&M University, 177 pages pdf (January).
175. Claridge, D., Haberl, J., Kissock, J., Ruch, D., Katipamula, S. Chen, L., Wang, J. 1990. "Improved Analysis Methods for Retrofit Savings and Energy Accounting (ERAP # 227)," Energy Systems Laboratory Report No. ESL-TR-90-12-02, Texas A&M University, 118 pages pdf (December).
176. Haberl, J., Claridge, D. 1990. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects - First Quarterly Progress Report," submitted to the U.S.D.O.E. Office of Conservation and Energy, Grant # DE-FG01-90CE21003, Energy Systems Laboratory, Texas A&M University (December).
177. Turner, D., Claridge, D., O'Neal, D., Heffington, W., Haberl, J. 1989. "Texas LoanSTAR Monitoring and Analysis Program: Draft Plan," submitted to the Texas Governor's Energy Management Center, Energy Systems Laboratory, Texas A&M University (December).
178. Haberl, J., Norford, L. 1989. "Report on Applications of Artificial Intelligence in Energy Management Systems," submitted to the New Jersey Energy Conservation Lab, Center for Energy and Environmental Studies at Princeton University, Princeton, New Jersey (December).
179. Haberl, J., Claridge, D., Turner, D. 1989. "Prairie View A&M University Whole Campus Energy Analysis: Summary Report," submitted to the Facilities Engineering Department at Prairie View A&M University, Energy Systems Laboratory, Texas A&M University (August).
180. Haberl, J. 1989. "Texas LoanSTAR Monitoring and Analysis Program: Task 4 Progress Report," submitted to the Texas Governor's Energy Management Center, Energy Systems Laboratory, Texas A&M University (July).
181. Komor, P., Kempton, W., Haberl, J. 1989. "Energy Use, Information and Behavior in Small Commercial Buildings," Center for Energy and Environmental Studies Report No. 240, Princeton University, 30 pages (July).

182. Haberl, J., Komor, P., Haberl, J. 1989. "Investigating An Analytical Basis for Improving Commercial Building Energy Audits: Results from a New Jersey Mall," Center for Energy and Environmental Studies Report No. 264 (June).
183. Haberl, J. 1989. "Princeton Campus Energy Consumption Analysis - Interim Report," submitted to the Facilities Engineering Department at Princeton University, Center for Energy and Environmental Studies at Princeton University, Princeton, New Jersey (June).
184. Haberl, J., Komor, P. 1989. "Status Report on Methods for Using Hourly, Daily and Monthly Data to Provide Useful Information on Building Energy Use," submitted to the New Jersey Energy Conservation Lab, Center for Energy and Environmental Studies at Princeton University, Princeton, New Jersey (May).
185. Komor, P., Kempton, W., Haberl, J. 1989. "Field Test of Data-Based Information Packet for Small Businesses – Milestone Report," submitted to New Jersey Energy Conservation Lab, Center for Energy and Environmental Studies at Princeton University, Princeton, New Jersey (February).
186. Haberl, J., Komor, P. 1988. "Identification of Conservation Opportunities From Hourly and Monthly Data – Milestone Report," submitted to the New Jersey Energy Conservation Lab, Center for Energy and Environmental Studies at Princeton University, Princeton, New Jersey (December).
187. Haberl, J., Norford, L. 1988. "Intelligent Systems for Diagnosing HVAC Operational Problems – Milestone Report," submitted to the New Jersey Energy Conservation Lab, Center for Energy and Environmental Studies at Princeton University, Princeton, New Jersey (October).
188. Haberl, J. 1988. "United States Department of Energy - Forrestral and Germantown Facility, Building Energy Monitoring and Forecasting Program - Summary Report," Vols. 1 & 2, submitted to the U.S.D.O.E., Contract No. A.P. 0187-MA-60741, 115 pages (June).
189. Haberl, J. 1988. Using the DOE-2 Building Energy Analysis Computer Program- Session One: Overview-Loads, Systems, Plant, Economics," 1-hour video course and user workbook, Distributed by the Joint Center for Energy Management, University of Colorado (April).
190. Haberl, J. 1987. "T.B.C. Utility Monitoring Program (UMPIRE) - Interim Report," submitted to the Bailey Company (DBA Arby's), Lakewood, Colorado (December).
191. Haberl, J. 1987. "Preliminary Energy Analysis for The Bailey Company's Arby Stores," submitted to the Bailey Company, Lakewood, Colorado (November).
192. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Rec Center, BEACON Technical Reference Manual," submitted to the Student Recreation Center, University of Colorado at Boulder, 95 pages (October).
193. Haberl, J. 1987. "T.B.C. Restaurant Automation Project - Documentation and Reference Manuals," submitted to the Bailey Company (DBA Arby's), Lakewood, Colorado (October).
194. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Rec Center, Final Summary Report," submitted to the Student Recreation Center, University of Colorado at Boulder (October).
195. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Memorial Center, BEACON Technical Reference Manual," submitted to the Memorial Center Administration, University of Colorado at Boulder, 69 pages (October).
196. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Memorial Center, BEACON User's Guide," submitted to the Memorial Center Administration, University of Colorado at Boulder (September).
197. Haberl, J. 1987. "United States Department of Energy - Forrestral and Germantown Facility, Building Energy Monitoring and Forecasting Program: Interim Report," submitted to the U.S.D.O.E. Forrestral Building Administration, Contract No. A.P. 0187-MA-60741, 40 pages (September).
198. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Rec Center, BEACON User's Guide," submitted to the Student Recreation Center, University of Colorado at Boulder, 55 pages (August).
199. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Memorial Center, Final Summary Report," submitted to the Memorial Center Administration, University of Colorado at Boulder (August).
200. Haberl, J. 1987. "United States Department of Energy - Forrestral and Germantown Facility, Building Energy Monitoring and Forecasting Program: Interim Report," submitted to the U.S.D.O.E. Forrestral Building Administration, Contract No. A.P. 0187-MA-60741, 81 pages (August).
201. Haberl, J., Zhang, X. 1987. "Building System Program Tape User's Guide," submitted to the Joint Center for Energy Management/Building Systems Program, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, 215 pages (August).
202. Zhang, X., Haberl, J., 1987. "Building System Program Network User's Manual," submitted to the Joint Center for Energy Management/Building Systems Program, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, 42 pages (July).
203. Zhang, X., Haberl, J., 1987. "Building System Program SAS User's Manual," submitted to the Joint Center for Energy Management/Building Systems Program, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, 17 pages (July).
204. Haberl, J. 1987. "Building Energy Simulation Programs - Computer Manual," submitted to the Facilities Engineering Department, Rockwell International, North American Space Operations, Rocky Flats Plant, Golden, Colorado, Contract ASC-60908-PB, 95 pages (June).
205. Harwood, S., Haberl, J., 1987. "Building System Program Personal Computer Manual," submitted to the Joint Center for Energy Management/Building Systems Program, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder, 83 pages (June).

206. Haberl, J., Smith, L., Cooney, K., Harwood, S., Zhang, X., Stern, F., 1987. "Energy Conservation Study for the Williams Village Complex University of Colorado, Phase I, Energy Monitoring/Forecasting Software Documentation Manual," submitted to the Williams Village Administration, University of Colorado at Boulder, 36 pages (May).
207. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Student Housing Administration, Phase I, Task 2, Summary Report," submitted to the Student Housing Administration, University of Colorado at Boulder (April).
208. Haberl, J., Stern, F., Cooney, K., Smith, L., Meadows, K., 1987. "Energy Conservation Study for the Williams Village Complex University of Colorado, Phase I, task II, Summary Report," submitted to the Williams Village Administration, University of Colorado at Boulder, 61 pages (March).
209. Haberl, J. 1987. "HVAC Maintenance Analysis for Rocky Mountain Region Arby's," submitted to the Bailey Company (DBA Arby's), Denver, Colorado (March).
210. Haberl, J. 1987. "Energy Conservation Study for the University of Colorado Memorial Center, Phase I, Task 2, Summary Report," submitted to the University Memorial Center Administration, University of Colorado at Boulder, 65 pages (February).
211. Haberl, J. 1986. "An Expert System for the Analysis of Building Energy Consumption," unpublished Ph.D. Thesis, Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder.
212. Brothers, P., Haberl, J., Stern, F., Cooney, K., Hildebrand, A. 1986. "Energy Conservation Study for the Williams Village Complex University of Colorado, Phase I, Summary Report," submitted to the Williams Village Administration, University of Colorado at Boulder, 76 pages (November).
213. Brothers, P., Haberl, J. 1986. "Energy Conservation Study for the University of Colorado Student Housing Administration, Phase I, Task 1, Summary Report," submitted to the Student Housing Administration, University of Colorado at Boulder (November).
214. Brothers, P., Haberl, J. 1986. "Energy Conservation Study for the University of Colorado Memorial Center, Phase I, Task 1, Summary Report," submitted to the University Memorial Center Administration, University of Colorado at Boulder (October).
215. Brothers, P., Haberl, J., Stern, F., Cooney, K., Hildebrand, A. 1986. "Energy Conservation Study for the Williams Village Complex University of Colorado, Phase I, Interim Report," submitted to the Williams Village Administration, University of Colorado at Boulder, 69 pages (August).
216. Brothers, P., Haberl, J. 1986. "Energy Conservation Study for the University of Colorado Memorial Center: Phase I, Interim Report," submitted to the University Memorial Center Administration, University of Colorado at Boulder, 21 pages (July).
217. Brothers, P., Haberl, J. 1986. "Energy Conservation Study for the University of Colorado Student Housing, Interim Report," submitted to the Student Housing Administration, University of Colorado at Boulder, (August).
218. Haberl, J. 1986. "Using the DOE-2 Building Energy Analysis Computer Program- Session One: Overview-Loads, Systems, Plant, Economics," a 2-hour video course and user workbook Distributed by CATECS, University of Colorado, 126 pages (June).
219. Haberl, J. 1986. "A Program for the Development of a Restaurant Automation System," submitted to the Bailey Company (DBA Arby's), Denver, Colorado (April).
220. Claridge, D., Brothers, P., Haberl, J. 1986. "Energy Conservation Study for the Student Recreation Center, Phase III, Interim Report," submitted to the Student Recreation Center, University of Colorado at Boulder, 50 pages (April).
221. Claridge, D., Haberl, J. 1984. "Energy Conservation Study for the Student Recreation Center, Phase II, Rapid Payback Options," submitted to the Student Recreation Center, University of Colorado at Boulder, 61 pages (April).
222. Claridge, D., Haberl, J. 1984. "Energy Conservation Study for the Student Recreation Center, Phase II, Preliminary Engineering Study, Vol. I & II," submitted to the Student Recreation Center, University of Colorado at Boulder, 56 pages (June).
223. Claridge, D., Haberl, J. 1984. "Energy Conservation Study for the Student Recreation Center, Phase II, Interim Report," submitted to the Student Recreation Center, University of Colorado at Boulder, 52 pages (October).
224. Haberl, J. 1984. "Design Scheduling System (DSS): Software and User's guide," developed for Rockwell International, Facilities Engineering, Rocky Flats Plant.
225. Haberl, J. 1981. "Energy Conservation in Masonry Walls," unpublished Masters Report, Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder, 201 pages (February).
226. Dow, J., Haberl, J. 1981. "Energy Conservation Study for The Student Recreation Center, University of Colorado at Boulder," submitted to the Student Recreation Center, University of Colorado at Boulder, 240 pages.
227. Dow, J., Davis, H., Feng, D., Haberl, J. 1980. "Boulder Comprehensive Community Energy Management Plan, Final Summary Report," submitted to the U.S.D.O.E. through the City of Boulder, Colorado.
228. Dow, J., Feng, D., Haberl, J. 1980. "Boulder Comprehensive Community Energy Management Plan, Technical Report: Vols. 1 and 2," submitted to the U.S.D.O.E. through the City of Boulder, Colorado.

d. Software

1. Marshal, K., Culp, C., Haberl, J. 2009. "Assess, Improve, Measure – AIM", Version 1.0," <http://aimhome.tamu.edu>, Home Energy Calculator, Energy Systems Laboratory (December).
2. Gilman, D., Marshal, K., Liu, Z., Baltazar, J-C, Haberl, J., Culp, C., Yazdani, B. 2009. "Code Compliant Calculator IC3 Version 3.6.1," <http://ic3.tamu.edu>, Code-compliance Calculator for Single-Family Residential, Energy Systems Laboratory (December).
3. Gilman, D., Haberl, J., Culp, C. 2008. "Texas Climate Vision Code Compliant Calculator TCV Version 1.0," <http://tcv.tamu.edu>, Code-compliance Calculator for the City of Austin, Energy Systems Laboratory (December).
4. Gilman, D., Haberl, J., Culp, C. 2008. "Code Compliant Calculator ICC3 Version 1.0," <http://iccc.tamu.edu>, Code-compliance Calculator for Single-Family Residential, Energy Systems Laboratory (December).
5. Gilman, D., Haberl, J., Culp, C. 2006. "Code Compliant Calculator C3: Beta Version 1.0," <http://ecalc.tamu.edu>, Emissions and Energy Calculator, Energy Systems Laboratory (December).

6. Gilman, D., Haberl, J., Culp, C. 2006. "eCALC: Version 1.1.9.9," <http://ecalcalc.tamu.edu>, Emissions and Energy Calculator, Energy Systems Laboratory (January).
7. Gilman, D., Haberl, J., Culp, C. 2004. "eCALC: Version 1.1.7," <http://ecalcalc.tamu.edu>, Emissions and Energy Calculator, Energy Systems Laboratory (January).
8. Gilman, D., Haberl, J., Culp, C. 2004. "Data Collection for Political Subdivisions (DCPolS)," <http://eslsb5.tamu.edu/dcpols/default.aspx?name=SECO>, Energy Systems Laboratory, Texas A&M University, Version 1.10 (January).
9. Gilman, D., Haberl, J., Culp, C. 2004. "Emissions Reductions Calculator for the State of Texas (eCALC)," Energy Systems Laboratory, Texas A&M University, Beta Version 0.1 (January).
10. Haberl, J., Culp, C., Ahmad, M. 2002. "Code-traceable DOE-2 Input File for the Texas Residential Emissions Reduction Calculator," Energy Systems Laboratory, Texas A&M University, Version IECC1103.INP (December).
11. Haberl, J., Culp, C., Yu, V., Ahmad, M., Im, P. 2002. "Texas Residential Emissions Reduction Calculator," Energy Systems Laboratory, Texas A&M University, <URL:eslsb5ec.tamu.edu> (December).
12. Haberl, J., Im, P. 2001. "U.S. Army M&V Costing Toolkit," Excel spreadsheet software for calculating the costs of M&V projects, Research Project for the U.S. Army, Energy Systems Laboratory, Texas A&M University (December).
13. Abushakra, B., Sreshthaputra, A., Haberl, J., Claridge, D. 2001. "1093-RP Diversity Factor Toolkit," ASHRAE software for calculating diversity factors, ASHRAE Research Project 1093-RP, Energy Systems Laboratory Report No. ESL-TR-01-04-01, Texas A&M University, pdf (April).
14. Haberl, J., Saman, N., Bou-Saada, 2001. "Air-side Accuracy Test Toolkit," ASHRAE software for air-side accuracy tests for seven HVAC systems: Dual-duct, Constant Volume (DDCAV); Dual-duct, Variable Volume (DDVAV); Constant Volume With Reheat (CAVRH); Variable Volume With Reheat (VAVRH); Four Pipe, Fan Coil Unit (FC); Four Pipe Induction Unit (FI); and Single Zone (SZ) Systems; Energy Systems Laboratory Report No. ESL-TR-01-02-02, Texas A&M University, 78 pages pdf (February).
15. Kissock, K., Oh, J., Hur, Y., Haberl, J., Claridge, D. 2000. "IMT," ASHRAE Software for calculating inverse building energy analysis models, ASHRAE Research Project 1050-RP, Energy Systems Laboratory, Texas A&M University (December).
16. Sparks, R., Haberl, J. 1994. "WATCH3D," Honeywell Proprietary Software, Energy Systems Laboratory, Texas A&M University (December).
17. Bailey, G., Sparks, R., Haberl, J. 1994. "IREPLAY," Honeywell Proprietary Software, Energy Systems Laboratory, Texas A&M University (December).
18. Sims, C., Sparks, R., Haberl, J. 1994. "MONITOR," software and user's guide for polling & viewing data from Synergistics loggers, Energy Systems Laboratory, Texas A&M University (June).
19. Sparks, R., Haberl, J. 1994. "LOOK3D," software and user's guide for 3-D visualization of building energy data, Energy Systems Laboratory, Texas A&M University (December).
20. Bailey, G., Sparks, R., Haberl, J. "ANIMATE," software and user's guide for animating multiple channels of building energy use, Energy Systems Laboratory, Texas A&M University (December).
21. Oh, J., McWatters, K., Haberl, J., Degelman, L. 1996. "SOLRPATH for Windows," software for plotting the sunpath diagram using MS Windows, Energy Systems Laboratory, Texas A&M University (December).
22. Sparks, R., Haberl, J. 1993. "POLL180," software and user's manual for polling a Synergistics C180 data recorder, predicted, positive residual, and negative residual, Energy Systems Laboratory, Texas A&M University.
23. Cox, B., Sparks, R., Haberl, J. 1993. "PF," software for calculating power factor given KWH and KVA data on multiple channels from Synergistics Loggers, Energy Systems Laboratory, Texas A&M University.
24. Rife, J., Sparks, R., Haberl, J. 1992. "WAIR," software and user's guide for producing MS Windows psychrometric calculations and psychrometric chart, Energy Systems Laboratory, Texas A&M University.
25. Katipamula, S., Sparks, R., Haberl, J. 1992. "XAIR," software for producing X Windows psychrometric calculations, Energy Systems Laboratory, Texas A&M University (August).
26. Katipamula, S., Sparks, R., Haberl, J. 1992. "AIR," software and user's guide for producing psychrometric calculations, Energy Systems Laboratory, Texas A&M University (August).
27. Sparks, R., Haberl, J. 1992. "DATCON," software and user's manual for converting between julian, decimal, and calendar dates, Energy Systems Laboratory, Texas A&M University (August).
28. Sparks, R., Feuermann, D., Kempton, W., Haberl, J. 1992. "ARCHIVEA&M," software and user's manual for managing columnar data -- a modified version of Princeton's ARCHIVE program by D.Feuermann and W.Kempton, Energy Systems Laboratory, Texas A&M University (August).
29. Sparks, R., Haberl, J. 1992. "REAL2DSK/V_REAL," software for real-time graphic display of Synergistics data, Energy Systems Laboratory, Texas A&M University.
30. Chambers, R., Sparks, R., Haberl, J. 1992. "MIN_SHIFT," software and user's manual for shifting time stamps, Energy Systems Laboratory, Texas A&M University.
31. Bronson, D., Sparks, R., Haberl, J. 1992. "ACTPRE3D," software and user's manual for producing four 3-D plots of actual, predicted, positive residual, and negative residual for use with Lotus 123, Energy Systems Laboratory, Texas A&M University.
32. Belur, R., Sparks, R., Haberl, J. 1992. "MKMOV3D," software and user's manual for producing 3-D plots from Columnar Data, Energy Systems Laboratory, Texas A&M University (July).
33. Belur, R., Sparks, R., Haberl, J. 1992. "MKMOV," software and user's manual for producing animated movies from columnar data, Energy Systems Laboratory, Texas A&M University (July).
34. Kissock, K., Haberl, J. 1992. "MKVOY," software and user's manual for producing Voyager files from LoanSTAR format data, Energy Systems Laboratory, Texas A&M University (July).

35. McWatters, K., Haberl, J. 1992. "SOLRPATH," Fortran software and user's manual for producing Olygay's sunpath diagram for use with Grapher software, Energy Systems Laboratory, Texas A&M University (July).
36. Belur, R., Sparks, R., Haberl, J. 1991. "3DMACXL," software and user's guide for automatically producing 3-D plot with EXCEL, Energy Systems Laboratory, Texas A&M University.
37. Matson, J., Sparks, R., Haberl, J. 1991. "3DMAC," software and user's guide for automatically producing 3-D plot with Lotus 1-2-3 using Intex Solutions 3DGraph, Energy Systems Laboratory, Texas A&M University.
38. Katipamula, S., Sparks, R., Haberl, J. 1991. "PREDFVAL," software and user's guide for producing a daytype using a non-weather sensitive daytyping routine, Energy Systems Laboratory, Texas A&M University (May).
39. Bronson, D., Sparks, R., Haberl, J. 1991. "023-124" and "124-023," software and user's guide for producing four 3-D plots of actual, predicted, positive residual, and negative residual, Energy Systems Laboratory, Texas A&M University.
40. Weber, K., Sparks, R., Haberl, J. 1991. "GETVALUES," software and user's guide for extracting weather information from the NWS airway observations, Energy Systems Laboratory, Texas A&M University.
41. Weber, K., Sparks, R., Haberl, J. 1991. "MISSING," software and user's manual for replacing missing records in columnar data with the LoanSTAR time stamp, Energy Systems Laboratory, Texas A&M University (August).
42. Ruch, D., Sparks, R., Weber, K., Haberl, J. 1991. "CR," software and user's manual for calculating the confidence region of a best least squares, 4 parameter fit to a set of data, Energy Systems Laboratory, Texas A&M University (August).
43. Ruch, D., Weber, K., Sparks, R., Haberl, J. 1991. "FOURP," software for calculating the best least squares, 4 parameter fit to a data set, Energy Systems Laboratory, Texas A&M University.
44. Sparks, R., Haberl, J. 1991. "KWC," software and user's manual to interface to the Accurex logger including a real-time display, Energy Systems Laboratory, Texas A&M University (August).
45. Sparks, R., Haberl, J. 1991. "PRMWATCH," software and user's manual to output the Esterline Angus Power Reporter Module of the PMT system in real time, Energy Systems Laboratory, Texas A&M University (August).
46. Katipamula, S., Sparks, R., Haberl, J. 1991. "PSYPLOT," software and user's manual for plotting the psychrometric chart with Grapher Software, Energy Systems Laboratory, Texas A&M University.
47. Sparks, R., Haberl, J. 1991. "TIMEMERG," software and user's manual for combining two time-stamped data streams, Energy Systems Laboratory, Texas A&M University.
48. Belur, R., Sparks, R., Haberl, J. 1991. "MIN_CONV," software and user's manual for converting n-minute data into m-minute data, Energy Systems Laboratory, Texas A&M University.
49. Matson, J., Sparks, R., Haberl, J. 1991. "COLROW3D," Pascal software and user's manual for producing 3-D plots from Columnar Data, Energy Systems Laboratory, Texas A&M University (August).
50. Weber, K., Sparks, R., Haberl, J. 1989. "RAW2DAT," software and user's guide for preparing Synergistics output for input into ARCHIVE, Energy Systems Laboratory, Texas A&M University (December).
51. Haberl, J. 1987. "Building Energy Analysis Consultant – BEACON Software," building diagnostic software spreadsheet and user's manual developed for the University Memorial Center, University of Colorado at Boulder (September).
52. Haberl, J. 1987. "Building Energy Analysis Consultant – BEACON Software," building diagnostic software spreadsheet and expert system developed for the Student Recreation Center, University of Colorado at Boulder (September).

e. Patents and Copyrights

1. Patent: 7,552,033 B1, "System and Method for Diagnostically Evaluating Energy Consumption Systems and Components of a Facility", 39 claims – U.S. Patent Office, June 23, 2009, (w/C.Culp, D.Claridge, D.Turner, M.Liu).
2. Patent: 7,356,548 B1, "System and Method for Remote Monitoring and Controlling of Facility Energy Consumption", 45 Claims – U.S. Patent Office, April 8, 2008, (w/C.Culp, D.Claridge, D.Turner).
3. Patent: 7,225,089 B2, "System and Method for Remote Identification of Energy Consumption Systems and Components", 26 Claims - U.S. Patent Office, May 29, 2007 (w/C.Culp, D.Claridge, D.Turner).
4. Patent: 6,996,508, "System and Method for Remote Identification of Energy Consumption Systems and Components – Part 2", U.S. Patent Office, February 7, 2006, (w/C.Culp, D.Claridge, D.Turner).
5. Patent: 6,937,946, "System and Method for Remote Identification of Energy Consumption Systems and Components – Part 1", 21 Claims – U.S. Patent Office, August 30, 2005, (w/C.Culp, D.Claridge, D.Turner).
6. Trademark: "Continuous Commissioning" and "CC," (w/C. Culp, D. Claridge, D. Turner, M. Liu), U.S. Patent Office, 2004
7. Patent: 4,490,876 – "Flue Cleaning Device," 14 Claims - U.S. Patent Office, an *in situ* wood stove flue-cleaning device, January 1, 1985.
8. Copyright: TX 2-151-622, "An Expert System for the Analysis of Building Energy Consumption" (BEACON), U.S. Library of Congress, September 17, 1987.

RESEARCH PROJECTS

1979 to present: \$2,337,474 as P.I.

1979 to present: \$32, 857, 501 as Co P.I.

1. External

1. "Senate Bill 5 Energy Program", State of Texas Research & General funds, Bahman Yazdani, Charles Culp, CoPI, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$952,019, September 2010 to August 2011.

2. "Statewide Air Emissions Calculations from Wind and Other Renewables", funded by the Texas Commission on Environmental Quality (TCEQ) through the Texas Environmental Research Consortium (TERC), Bahman Yazdani, Charles Culp, CoPI, 1 research associate, ½ administrative secretary, ½ faculty equivalent, 1 graduate students, \$216,000, September 2010 to August 2011.
3. "Development of a Reference Building Information Model (BIM) for Thermal Model Compliance Testing", sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 1468-RP, M. Clayton, W. Yan, J. Haberl, Co-P.I., ½ faculty equivalent, 2 graduate students, Texas A&M University, \$175,311, March 2010 to August 2011.
4. "Physical Building Information Modeling for Solar Building Design and Simulation (PBIM)", National Science Foundation, Wei Yan, PI, Mark Clayton, CoPI, 1 faculty equivalent, 3 graduate students, \$300,000, March 2010 to February 2012.
5. "Senate Bill 5 Energy Program", State of Texas Research & General funds, Bahman Yazdani, Charles Culp, CoPI, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$952,019, September 2009 to August 2010.
6. "Statewide Air Emissions Calculations from Wind and Other Renewables", funded by the Texas Commission on Environmental Quality (TCEQ) through the Texas Environmental Research Consortium (TERC), Bahman Yazdani, Charles Culp, CoPI, 1 research associate, ½ administrative secretary, ½ faculty equivalent, 1 graduate students, \$216,000, September 2009 to August 2010.
7. "Senate Bill 5 Energy Program", State of Texas Research & General funds, Bahman Yazdani, Charles Culp, CoPI, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$952,019, September 2008 to August 2009.
8. "Statewide Air Emissions Calculations from Wind and Other Renewables", funded by the Texas Commission on Environmental Quality (TCEQ) through the Texas Environmental Research Consortium (TERC), Bahman Yazdani, Charles Culp, CoPI, 1 research associate, ½ administrative secretary, ½ faculty equivalent, 1 graduate students, \$216,000, September 2008 to August 2009.
9. "Outdoor Monitoring and High Voltage Bias Testing of Thin Film PV Modules in Hot and Humid Climates," sponsored by the Midwest Research Institute – National Renewable Energy Lab, W.D. Turner, J. Haberl, M. Davis, Co-P.I., 1 research associate, \$30,000 September 2007 to September 2008.
10. "Continuous Commissioning of Dallas Ft. Worth Airport", DFW Airport Authority, Bahman Yazdani, Dan Turner, Charles Culp, \$1,000,000, April 2007 to April 2010.
11. "Technical Assistance to Advance Quantification of Energy and Environmental Benefits from Clean Air", USEPA, Charles Culp, Bahman Yazdani, CoPI, March 2007 to March 2010
12. "Texas Climate Vision", USDOE through the Texas SECO, a joint project with the City of Austin, Bahman Yazdani (PI), Charles Culp (CoPI), Malcolm Verdict (CoPI), \$497,500, 2 research associates, 2 graduate students, September 2007 to August 2008.
13. "Senate Bill 5 Energy Program", State of Texas Research & General funds, Bahman Yazdani, Charles Culp, CoPI, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$952,019, September 2007 to August 2008.
14. "Statewide Air Emissions Calculations from Wind and Other Renewables", funded by the Texas Commission on Environmental Quality (TCEQ) through the Texas Environmental Research Consortium (TERC), Bahman Yazdani, Charles Culp, CoPI, 1 research associate, ½ administrative secretary, ½ faculty equivalent, 1 graduate students, \$216,000, September 2007 to August 2008.
15. "Continuation of Outdoor Monitoring and High Voltage Bias Testing of Thin Film PV Modules in Hot and Humid Climates," sponsored by the Midwest Research Institute – National Renewable Energy Lab, W.D. Turner, J. Haberl, Co-P.I., ¼ research associate, \$30,000 June 2007 to March 2008.
16. "Continuation of M&V Technical Assistance- Training Fort Hood; US Army- Fort Hood; Jeff Haberl, PI, \$50,000, ½ research engineer, ½ research assistant, December 2007 to October 2008.
17. "Statewide Air Emissions Calculations from Wind and Other Renewables", funded by the Texas Commission on Environmental Quality (TCEQ) through the Texas Environmental Research Consortium (TERC), Bahman Yazdani, Charles Culp, CoPI, 1 research associate, ½ administrative secretary, ½ faculty equivalent, 1 graduate students, \$216,000, September 2006 to August 2007.
18. "Senate Bill 5 Energy Program", State of Texas Research & General funds, Bahman Yazdani, Charles Culp, CoPI, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$952,019, September 2006 to August 2007.
19. "Statewide Air Emissions Calculations from Wind and Other Renewables", funded by the Texas Commission on Environmental Quality (TCEQ) through the Texas Environmental Research Consortium (TERC), Bahman Yazdani, Charles Culp, CoPI, 1 research associate, ½ administrative secretary, ½ faculty equivalent, 1 graduate students, \$216,000, September 2005 to August 2006.
20. "Senate Bill 5 Energy Program", State of Texas Research & General funds, Bahman Yazdani, Charles Culp, CoPI, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$952,019, September 2005 to August 2006.
21. "Continuation of M&V Technical Assistance- Training Fort Hood; US Army- Fort Hood; Jeff Haberl, PI, \$30,000, ¼ research engineer, ½ research assistant, September 2005 to April 2006.
22. "Savings Analysis Report for Fort Hood", US ARMY- Construction Engineering Research Laboratory; Jeff Haberl, PI, \$5,563, 1/8 research engineer, September 2004 to September 2005.
23. "Advanced Building Efficiency Testbed Initiative," Carnegie Mellon University, D. Claridge, D. Turner, G. Wei, C. Culp, M. Verdict, Co-P.I., \$143,000, 1 research engineer, 2 research assistants, June 2004 to August 2005.
24. "Senate Bill 5 Energy Program," State of Texas Research & General funds, W.D. Turner, B. Yazdani, C. Culp, J. Haberl, Co-P.I., 2 research engineers, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$1,200,000, September 2004 to August 2005.
25. "Senate Bill 5 Energy Program," sponsored by the State of Texas Research & General funds, W.D. Turner, B. Yazdani, C. Culp, J. Haberl, Co-P.I., 2 research engineers, 2 research associates, 3 administrative and secretaries, 1 faculty equivalent, 6 graduate students, \$950,421, September 2003 to August 2004.
26. "Texas Energy Efficiency Calculation Project 2003," sponsored by the Texas Commission on Environmental Quality, J. Haberl, C. Culp, Co-P.I., 1 research engineer, 6 graduate students, \$250,000, November 2003 to August 2004.
27. "Outdoor Monitoring and High Voltage Bias Testing of Thin Film PV Modules in Hot and Humid Climates," sponsored by the Midwest Research Institute – National Renewable Energy Lab, W.D. Turner, J. Haberl, M. Davis, Co-P.I., 1 research associate, \$356,594, September 2003 to September 2006.

28. "Development of Default Costs For Measurement and Verification Cost Estimating Tool," sponsored by the United States Army–Construction Engineering Research Laboratory, J. Haberl, P.I., ¼ research associate, 1 graduate student, \$32,895, February 2003 to December 2003.
29. "Metering and Monitoring Services for Port Arthur Independent School District," sponsored by the Port Author Independent School District, D. Turner, Co-P.I., 1 research engineer, 1 research associate, 1 graduate student, \$297,759, August 2000 to December 2004.
30. "Senate Bill 5 Energy Program," sponsored by the State of Texas Research & General funds, W.D. Turner, B. Yazdani, C. Culp, J. Haberl, Co-P.I., 1 research engineer, 1 research associate, 3 administrative and secretaries, ½ faculty equivalent, 4 graduate students, \$285,000 September 2002 to August 2003.
31. "Metering and Monitoring of GSC's LoanSTAR Loan," sponsored by the Texas General Services Commission, D. Turner, C. Ortiz, Co-P.I., ½ research engineer, ½ research associate, \$96,322, April 2000 to December 2004.
32. "Interagency Contract with Del Mar College," sponsored by Del Mar College, D. Turner, Co-P.I., 1/8 research associate, \$9,906, January 2001 to June 2002.
33. "Metering and Monitoring Service Agreement with United Independent School District," sponsored by United Independent School District, D. Turner, Co-P.I., ¼ research associate, \$47,594, March 2001 to August 2005.
34. "Service Agreement between TEES and Federal Reserve Bank of Dallas," sponsored by the Federal Reserve Bank of Dallas, J. Haberl, P.I., ½ research engineer, \$46,202, February 2002 to December 2002.
35. "Metering and Monitoring for North Lake College," sponsored by North Lake College, D. Turner, C.Ortiz, Co-P.I., ; Carlos Ortiz; ¼ research associate, \$39,066, November 1999 to January 2003.
36. "Research Agreement between TEES & CSISD," sponsored by the College Station Independent School District, D. Turner, D. Claridge, Co-P.I., 1 research associate, \$195,000, June 1999 to May 2002.
37. "Energy Management Baseline Measurement and Monitoring Agreement," sponsored by Dallas County Commissioners' Court, D. Claridge, D. Turner, Co-P.I., 2 research associates, \$195,093, November 1997 to December 2003.
38. "Rebuild Texas Plus," sponsored by the U.S.D.O.E. through the Texas State Energy Conservation Office, D. Turner, B. Yazdani, C. Culp, Co-P.I., 1 research engineer, ½ research associate, \$190,000, May 2001 to July 2002.
39. "Rebuild America Grant for Brazos Valley Energy Conservation Coalition," sponsored by the U.S.D.O.E. through the Texas State Energy Conservation Office, D. Turner, D. Claridge and J. Haberl, Co-P.I., 4 research engineers, 3 research associate, 2 graduate students, Texas A&M University, \$499,552, September 1996 to December 2003.
40. "Interagency Cooperation Contract – Alamo Community College District (ACCD) for their Campus – Wide Energy Management Program Rebuild America Initiative," sponsored by the Alamo Community College District, W. Mills, D. Turner, D. Claridge, B. Yazdani, M. Verdict, Co-P.I., 3 research engineers 2 research associates, 4 graduate students, \$1,180,000, January 2002 to November 2004.
41. "Rebuild – Model Communities," sponsored by the Texas State Energy Conservation Office, D. Turner, B. Yazdani, C. Culp, Co-P.I., 1½ research associate, \$100,010, November 2002 to August 2003.
42. "Technical Assistance," sponsored by the Texas State Energy Conservation Office, D. Turner, Co-P.I., 1 research associate, Texas A&M University, \$83,100, September 2002 to August 2003.
43. "Texas LoanSTAR Monitoring and Analysis Program" sponsored by the Texas State Energy Conservation Office, D. Turner, D. Claridge and J. Haberl, Co-P.I., ½ research associate, 1 graduate student, Texas A&M University, \$55,460, September 2002 to August 2003.
44. "Develop M&V System and Baseline at Ft. Hood," sponsored by the U.S. Army Construction Engineering Laboratory, S. Mills, D. Turner, D. Schneider, Co-P.I., J. Haberl, P.I., ½ research engineer, ½ graduate student, \$113,462, May 2001 to December 2003.
45. "Installation of Monitoring and Analysis System and Baseline Analysis," sponsored by the Federal Reserve Bank of Dallas, J. Haberl, D. Claridge, and D. Turner, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$96,000, January 2002 to December 2002.
46. "Legislative Support for Senate Bill 5," sponsored by the Texas State Legislature, C. Culp, B. Yazdani and J. Haberl, Co-P.I., 1 research engineer, 1 research associate, 2 graduate students, 1 secretary, Texas A&M University, \$181,855, September 2001 to August 2002.
47. "Buildings-Related Energy Efficiency RD&D," sponsored by the California Energy Commission through ADM and Associates, J. Haberl, D. Turner, K. Sylvester, C. Culp, Co-P.I., 1 graduate student, Texas A&M University, \$91,313, June 2001 to April 2005.
48. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., 1 research associate, ½ graduate student, Texas A&M University, \$261,000, September 2001 to August 2002.
49. "Texas LoanSTAR Monitoring and Analysis Program: Task C – Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., ½ research associate, Texas A&M University, \$40,000, September 2001 to August 2002.
50. "Installation of Monitoring and Analysis System and Baseline Analysis," sponsored by the Federal Reserve Bank of Dallas, J. Haberl, D. Claridge, D. Turner, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$153,000, January 2001 to December 2001.
51. "Development of M&V Costing Toolkit," sponsored by the U.S. Army Construction Engineering Laboratory, J. Haberl, P.I., 1 graduate student, Texas A&M University, \$23,000, August 2001 to December 2001.
52. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., 1 research engineer, 1 graduate student, Texas A&M University, \$95,000, September 2000 to August 2001.
53. "Texas LoanSTAR Monitoring and Analysis Program: Task C – Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., ½ research associate, ½ graduate student, Texas A&M University, \$40,000, September 2000 to August 2001.

54. "Installation of Metering System for Central Plant 87018 at Ft. Hood, Texas," sponsored by the U.S. Army Construction Engineering Laboratory, J. Haberl, P.I., ½ research associate, ½ graduate student, Texas A&M University, \$75,602, November 1999 to December 2001.
55. "Technical Support for Analysis of the R.E. Johnson Building," sponsored by the Texas State Energy Conservation Office, J. Haberl, K. Sylvester, D. Turner, Co-P.I., 1 graduate student, Texas A&M University, \$75,000, September 2000 to December 2001.
56. "Development of Monitoring and Analysis Plan and Workshop on Monitoring and Commissioning," sponsored by the Federal Reserve Bank of Dallas, J. Haberl, D. Claridge, D. Turner, Co-P.I., Texas A&M University, \$34,918, February 2000 to April 2001.
57. "Development of a Toolkit for Calculating Linear, Change-point Linear, and Multiple-linear Regression," sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 1050-RP through the University of Dayton, D. Claridge and J. Haberl, Co-P.I., 1 graduate student, Texas A&M University, \$23,964, February 1999 to March 2001.
58. "Commissioning Contract with Texas Tech University," sponsored by Texas Tech University, D. Turner, D. Claridge, and J. Haberl, Co-P.I., 2 research associates, 1 graduate student, Texas A&M University, \$294,400, July 1998 to June 2001.
59. "Compilation of Diversity Factors and Schedules for Energy and Cooling Load Calculations," sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 1093-RP, D. Claridge, and J. Haberl, Co-P.I., 1 graduate student, Texas A&M University, \$65,082, January 1999 to March 2001.
60. "Demonstration of the use of Multimedia Electronic Information Enhancements for a Chapter Handbook CDROM," sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 1017-RP, E. Akleman, J. Haberl, F. Parks, Co-P.I., 2 graduate students, Texas A&M University, \$75,713, February 1999 to February 2001.
61. "Methodology Development to Determine the Long Term Performance of Cool Storage Systems from Short Term Measurements," sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 1004-RP, J. Haberl, P.I., 1 graduate student, Texas A&M University, \$86,963, August 1997 to March 2001.
62. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., 1 research associate, 1 graduate student, Texas A&M University, \$105,000, September 1999 to August 2000.
63. "Texas LoanSTAR Monitoring and Analysis Program: Task C – Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., ½ research associate, ½ graduate student, Texas A&M University, \$45,000, September 1999 to August 2000.
64. "Monitoring to Support the Montana Rebuild America Program," sponsored by the National Center for Appropriate Technology, J. Haberl, P.I., Texas A&M University, \$12,000, March 1998 to September 2000.
65. "Verification of Retrofit Energy Savings for Brazos County," sponsored by the Brazos County Commissioners, D. Turner, D. Claridge, J. Haberl, Co-P.I., ½ graduate student, Texas A&M University, \$14,993, January 1998 to June 2000.
66. "Utility System Opportunity Assessment and Utilities Strategic Plan," sponsored by the Penn State University System through E³ Consultants, D. Turner, D. Claridge, J. Haberl, Co-P.I., 1 research engineer, 1 research associate, Texas A&M University, \$126,336, September 1997 to March 1999.
67. "Revised Outside Air Quantities at New Brooke Army Medical Center," sponsored by the U.S. Army through Johnson Controls, D. Turner, D. Claridge, J. Haberl, Co-P.I., 2 research engineers, 2 research associates, 2 graduate students, Texas A&M University, \$339,490, December 1998 to February 1999.
68. "Monitoring and Reporting Services for Harwood, St. Paul's, Gessner, and Richmond Buildings," sponsored by Enershop, Inc. through Brazos Energy Systems and Technologies, D. Claridge, J. Haberl, Co-P.I., ½ research associate, Texas A&M University, \$18,100, July 1997 to September 1999.
69. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$75,000, September 1998 to August 1999.
70. "Texas LoanSTAR Monitoring and Analysis Program: Task C – Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., ½ research associate, ½ graduate student, Texas A&M University, \$50,000, September 1998 to August 1999.
71. "Energy Management Baseline Measurement and Monitoring Agreement," sponsored by the Brazos County Commissioners, D. Turner, D. Claridge, and J. Haberl, Co-P.I., 2 research engineers, 2 graduate students, Texas A&M University, \$196,500, November 1997 to November 1999.
72. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., 1 research engineer, 2 graduate students, Texas A&M University, \$125,000, September 1997 to August 1998.
73. "Texas LoanSTAR Monitoring and Analysis Program: Task C – Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., ½ research associate, ½ graduate student, Texas A&M University, \$50,000, September 1997 to August 1998.
74. "Rebuild America Grant for Brazos Valley Energy Conservation Coalition," sponsored by the U.S.D.O.E., D. Turner, D. Claridge, J. Haberl, Co-P.I., 5 research engineers, 5 graduate students, Texas A&M University, \$449,552, September 1996 to August 2001.
75. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge and J. Haberl, Co-P.I., 1 research engineer, 2 research associates, 2 graduate students, Texas A&M University, \$266,903, September 1996 to August 1997.
76. "Texas LoanSTAR Monitoring and Analysis Program: Task C – Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., 1 research associate, 1 graduate student, Texas A&M University, \$100,000, September 1996 to August 1997.

77. "Development of Accuracy Tests for HVAC System Models," sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 865-RP through Penn State University, J. Haberl, P.I., ½ research associate, Texas A&M University, \$25,000, April 1996 to August 2002.
78. "Support Work for the U.S.D.O.E. National Energy Monitoring and Verification Protocols (NEMVP), sponsored by the U.S.D.O.E., through Lawrence Berkeley National Laboratory (LBNL), J. Haberl, P.I., Texas A&M University, \$4,600, September 1995 to December 1995.
79. "Advise United States Army on Energy Consumption Baselineing procedures for Ft. Hood: Part II," sponsored by the U.S. Army Construction Engineering Laboratory, J. Haberl, D. Claridge, D. Turner, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$60,000, October 1995 to December 1995.
80. "Transfer of LoanSTAR Monitoring and Analysis to TESCOR," sponsored by Tamblyn Engineering Services Corp., Toronto, Ontario, Canada, J. Haberl, D. Claridge, D. Turner, Co-P.I., 1 research associate, Texas A&M University, \$50,000, September 1995 to August 1997.
81. "Advise United States Army on Energy Consumption Baselineing procedures for Ft. Hood: Part I," sponsored by the U.S. Army Construction Engineering Laboratory, J. Haberl, D. Claridge, D. Turner, Co-P.I., ½ research associate, 1 graduate student, Texas A&M University, \$56,000, June 1995 to September 1995.
82. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., 2 research associate, 1 research engineer, 3 graduate students, Texas A&M University, \$257,900, September 1995 to August 1996.
83. "Texas LoanSTAR Monitoring and Analysis Program: Task C - Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., 1 research associate, 2 graduate students, Texas A&M University, \$100,000, September 1995 to August 1996.
84. "State of Minnesota/Northern States Power Monitoring Project,," sponsored by the State of Minnesota and Northern States Power, D. Turner, D. Claridge, D. O'Neal, J. Haberl, Co-P.I., 2 research associates, 2 graduate students, Texas A&M University, \$153,999, June 1995 to June 2000.
85. "Special Proprietary Software Development Project," sponsored by Honeywell, Inc., J. Haberl, D. Claridge, Co-P.I., Texas A&M University, \$45,000, June 1995 to December 1995.
86. "Support Work for Pacific Gas and Electric Contract for Statewide Measure Performance Study," sponsored by the Pacific Gas and Electric Company through Proctor Engineering, J. Haberl, P.I., Texas A&M University, \$2,520, January 1995 to December 1995.
87. "LoanSTAR Monitoring and O&M Workshop," sponsored by the Western Area Power Authority, J. Haberl, M. Liu, Co-P.I., Texas A&M University, \$5,500, May 1995.
88. "Calibrated Simulation Work for the U.S.E.P.A. Energy Star Buildings Program," sponsored by the U.S.E.P.A. through EnviroManagement Consultants, Washington D.C., D. Claridge, M. Liu, J. Haberl, Co-P.I., Texas A&M University, \$24,950, June 1994 - September 1994.
89. "Development of Pennsylvania Green Buildings Program Quality Assurance System," sponsored by the Pennsylvania Green Buildings Program through the National Center for Appropriate Technology (NCAT), D. Claridge, J. Haberl, Co-P.I., Texas A&M University, \$10,273, December 1995 to January 1995.
90. "FlaSTAR - Development of monitoring program for the State of Florida's revolving loan program," sponsored by the Florida Energy Conservation Office, D. Turner, D. Claridge, J. Haberl, Co-P.I., ½ research associate, Texas A&M University, \$41,500, January 1995 to December 1995.
91. "Development of Computerized Energy Management System," sponsored by the Texas Department of Criminal Justice, D. Turner, D. Claridge and J. Haberl, Co-P.I., 2 research associates, 1 research engineer, 1 graduate student, Texas A&M University, \$387,147, January 1995 - August 1995.
92. "Advanced Audit/Prescreening Methods," sponsored by Oak Ridge National Laboratory, J. Haberl, P.I., 2 graduate students, Texas A&M University, \$65,000, January 1995 to December 1995.
93. "PRISM analysis and support work," sponsored by the Texas Department of Housing and Community Affairs, D. Claridge and J. Haberl, Co-P.I., ½ graduate student, Texas A&M University, \$7,500, September 1994 to April 1995.
94. "Support Work for the U.S.E.P.A. Energy Star Buildings Program," sponsored by the U.S.E.P.A. through EMC Consultants, Washington D.C., D. Claridge, J. Haberl, Co-P.I., ½ research associate, Texas A&M University, \$25,000, June 1994 to September 1994.
95. "Support Work for the U.S.E.P.A. Energy Star Buildings Program," sponsored by the U.S.E.P.A. through ICF Consultants, Washington D.C., J. Haberl, P.I., Texas A&M University, \$5,000, July 1994 to September 1994.
96. "Special Proprietary Diagnostics Project," sponsored by Honeywell, J. Haberl, D. O'Neal, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$40,000, June 1994 to December 1994.
97. "Monitoring of the Old Executive Office Building to Verify the Greening of the White House," sponsored by the U.S.D.O.E. through Sandia National Laboratory, J. Haberl, D. Claridge, D. Turner, Co-P.I., ½ research associate, Texas A&M University, \$17,000, March 1994 to August 1995.
98. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$35,000, September 1994 to August 1995.
99. "Texas LoanSTAR Monitoring and Analysis Program: Task C - Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., ½ research associate, 1 graduate student, Texas A&M University, \$75,000, September 1994 to August 1995.

100. "Methodology Development to Measure *in-situ* Chiller, Fan, and Pump Performance," sponsored by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Research Project 827-RP, through the University of Colorado, J. Haberl and D. Claridge, Co-P.I., ½ graduate student, Texas A&M University, \$17,549, May 1994 - December 1995.
101. "Preliminary Study of O&M Opportunities," sponsored by the University of Texas Medical Branch Galveston, D. Claridge, J. Haberl, Co-P.I., ½ research associate, ½ graduate student, Texas A&M University, \$25,440, February 1994 - July 1994.
102. "Special Proprietary Software Development Project," sponsored by Honeywell, J. Haberl, D. Claridge, Co-P.I., 1 graduate student, Texas A&M University, \$25,000, January 1994 to December 1994.
103. "Analysis of Thermal and Electrical Savings from the Forrester Third Party Lighting Retrofit," sponsored by the U.S.D.O.E. through Sandia National Laboratory, J. Haberl, P.I., 1 research associate, Texas A&M University, \$33,440, February 1994 to December 1994.
104. "Advanced Audit/Prescreening Methods," sponsored by the U.S.D.O.E. through Martin Marietta, Oak Ridge National Laboratory, J. Haberl, P.I., 1 graduate student, Texas A&M University, \$35,000, November 1993 to November 1994.
105. "An Evaluation of Energy Savings from LoanSTAR Retrofits and Improved Commercial Air Conditioning Systems," sponsored by the U.S.E.P.A., J. Haberl, D. O'Neal, D. Claridge, Co-P.I., 2 research associates, 2 graduate students, Texas A&M University, \$194,278, October 1993 to May 1996.
106. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas State Energy Conservation Office, D. Claridge, J. Haberl, Co-P.I., 1 research associate, Texas A&M University, \$35,000, September 1993 to August 1994.
107. "Texas LoanSTAR Monitoring and Analysis Program: Task C - Data Collection and Archiving," sponsored by the Texas State Energy Conservation Office, J. Haberl, P.I., 1 research associate, 1 graduate student, Texas A&M University, \$75,000, September 1993 to August 1994.
108. "Monitor the Effectiveness of a Thermal Storage System at the Austin Convention Center," sponsored by the City of Austin, J. Haberl, D. O'Neal, D. Claridge, Co-P.I., 1 graduate student, Texas A&M University, \$33,191, March 1993 to March 1994.
109. "Energy Audit Review and Development," sponsored by the Texas Governor's Energy Office, J. Haberl, P.I., 1 graduate student, Texas A&M University, \$35,000, December 1992 to August 1994.
110. "Texas LoanSTAR Monitoring and Analysis Program: Task D – Analysis and Planning," sponsored by the Texas Governor's Energy Office, D. Claridge, J. Haberl, Co-P.I., Texas A&M University, 1 research associate, 1 graduate student, \$72,627, September 1992 to August 1993.
111. "Texas LoanSTAR Monitoring and Analysis Program: Task C - Data Collection and Archiving," sponsored by the Texas Governor's Energy Office, J. Haberl, P.I., Texas A&M University, 2 research associates, 2 graduate students, \$131,629, September 1992 to August 1993.
112. "Special Proprietary Software Development Project," sponsored by Honeywell, J. Haberl, D. Claridge, Co-P.I., Texas A&M University, 1 research associate, 1 graduate student, \$50,000, January 1993 to December 1993.
113. "Evaluate and Report on the Effectiveness of the Energy Conservation Options at the U.S.D.O.E. Headquarters Daycare Center," sponsored by the U.S.D.O.E., through Sandia National Laboratory, J. Haberl, D. Claridge, Co-P.I., 1 graduate student, Texas A&M University, \$26,728, June 1992 to May 1993.
114. "Special Proprietary Software Development Project," sponsored by Honeywell, J. Haberl, D. Claridge, Co-P.I., 1 graduate student, Texas A&M University, \$30,000, May 1992 to December 1992.
115. "Development of Monitoring Requirements for Measuring Energy-Saving Retrofits in Commercial Buildings," sponsored by the U.S.D.O.E., through Martin Marietta, Oak Ridge National Laboratory, J. Haberl, P.I., 1 research associate, Texas A&M University, \$32,773, September 1991 to August 1992.
116. "Texas LoanSTAR Monitoring and Analysis Program: Task 6: Improved Energy Audit," sponsored by the Texas Governor's Energy Office, J. Haberl, D. Claridge Co-P.I., 2 graduate students, Texas A&M University, \$64,000, September 1991 to August 1992.
117. "Texas LoanSTAR Monitoring and Analysis Program: Task 4: Systems Communications Testing," sponsored by the Texas Governor's Energy Office, J. Haberl, P.I., 2 research associates, 2 graduate students, Texas A&M University, \$195,000, September 1991 to August 1992.
118. "Use of Energy Management and Control Systems for Performance Monitoring of Retrofit Projects," sponsored by the U.S.D.O.E., J. Haberl, D. Claridge, Co-P.I., 2 graduate students, Texas A&M University, \$91,717, September 1990 to August 1992.
119. "Analysis of Historical Energy Consumption for the Texas Prairie View A&M Campus," sponsored by the Texas Governor's Energy Management Center, J. Haberl, D. Claridge, Co-P.I., Texas A&M University, \$10,000, March 1990 to August 1990.
120. "Texas LoanSTAR Monitoring and Analysis Program: Task 4: Systems Communications Testing," sponsored by the Texas Governor's Energy Management Center, J. Haberl, P.I., 1 research associate, Texas A&M University, \$122,000, September 1990 to August 1991.
121. "Texas LoanSTAR Monitoring and Analysis Program: Task 4: Systems Communications Testing," sponsored by the Texas Governor's Energy Management Center, J. Haberl, D. Claridge Co-P.I., 1 research associate, 1 graduate student, Texas A&M University, \$75,000, September 1989 to August 1990.
122. "Exploratory Analysis Toward Extending the Princeton Scorekeeping Method (PRISM H/C) for Application to Commercial Buildings," sponsored by the New Jersey Energy Conservation Laboratory (NJECL), M. Fels, C. Reynolds, L. Norford, A. Reddy, P. Komor, J. Haberl, Co-P.I., Princeton University, \$100,000, August 1988 to June 1989.
123. "Development of Advanced Graphics as Feedback to Building Operators," sponsored by the New Jersey Energy Conservation Laboratory (NJECL), P. Komor, L. Norford, W. Kempton, J. Haberl, Co-P.I., Princeton University, \$10,000, September 1988 to June 1989.
124. "Development of a Data-driven Commercial Building Energy Audit," sponsored by the New Jersey Energy Conservation Laboratory (NJECL), J. Haberl, L. Norford, P. Komor Co-P.I., Princeton University, \$50,000, October 1988 to June 1989.

125. "Development of a Quasi-real Time Expert System for a Commercial Office Building," sponsored by the New Jersey Energy Conservation Laboratory (NJECL), J. Haberl, L. Norford Co-P.I., Princeton University, \$10,000, March 1988 to December 1988.
126. "Development of a Microcomputer Monitoring and Forecasting System for the U.S.D.O.E. Forrestal and Germantown Facility," sponsored by the U.S.D.O.E., Contract: AP-0187-MA-60741 (J. Vajda), J. Haberl, P.I., Management Information Systems, \$10,000, October 1986 to February 1988.
127. "Feasibility Study of an Automated Information System for Restaurants," sponsored by The Bailey Company (Mr. Ray Mueller), J. Haberl, P.I., J.S. Haberl & Associates, Management Information Support, \$7,500, effort, 1987.
128. "Building Energy Computer Simulation Training Programs Support," sponsored by Rockwell International, Rocky Flats Plant, Contract: ASC-60908-PB (A. Eden), J. Haberl, P.I., J.S. Haberl & Associates, \$16,000, 1985 to 1987.
129. "The Design Scheduling Software System," U.S.D.O.E., sponsored by Rockwell International, Rocky Flats Plant, Contract: ASC-60908-PB (D. Kava), J. Haberl, P.I., J.S. Haberl & Associates, \$12,000, 1983 to 1985.

2. Internal

1. "TAMU Physical Plant- FY 2006- TAMU Building Energy Management, Plant Performance, Saving Analysis & Field Study", Texas A&M University, Physical Plant; William D. Turner, David E. Claridge, Jeff Haberl, Song Deng, CoPI, 09-01-05/08-31-06; \$999,500
2. "Contract for Engineering Services for FY04-05," Sponsored by the Texas A&M University, Physical Plant; S. Deng, D. Claridge, W.D. Turner, J. Haberl, Co-P.I., 6 research associates, 3 graduates students, \$700,000, July 2004 to July 2005.
3. "Contract for Engineering Services for FY03-04," Sponsored by the Texas A&M University, Physical Plant; S. Deng, D. Claridge, W.D. Turner, J. Haberl, Co-P.I., 8 research associates, 4 graduates students, \$850,000, July 2003 to July 2004.
4. "Intrasystem Agreement Between TEES and Prairie View A&M University," sponsored by Prairie View A&M University, D. Turner, D. Claridge, B. Yazdani, Co-P.I., 2 research engineers, 2 research associates, 2 graduate students, \$1,342,650, June 2002 to August 2006.
5. "Electric Deregulation Project: the Texas A&M University System Admin. & General Offices," sponsored by Texas A&M University System, D. Turner, Co-P.I., ½ research engineer, 1 graduate student, \$70,000, January 2002 to December 2002.
6. "Intrasystem Agreement for Engineering Services," sponsored by Texas A&M University – Physical Plant, D. Turner, D. Claridge, J. Haberl, Co-P.I., 1 research engineers, 3 research engineers, 2 graduate students, \$425,000, September 2002 to August 2003.
7. "Physical Plant Engineering Services Agreement," sponsored by Texas A&M University, D. Turner, D. Claridge, D. O'Neal, J. Haberl, Co-P.I., 2 research engineers, 6 research engineers, 3 graduate students, \$850,000, Texas A&M University, September 2001 to August 2002.
8. "Support for the Study of Energy Efficient Religious Temples in Thailand," sponsored by the Texas A&M University College of Architecture, J. Haberl, P.I., 1 graduate student, \$1,100, Texas A&M University, 1999 to 2001.
9. "Support for the Study of Energy Efficient Housing in Texas," sponsored by the Texas A&M College of Architecture, J. Haberl, P.I., 1 graduate student, \$641, Texas A&M University, 1999 to 2001.
10. "Physical Plant Engineering Services Agreement," sponsored by Texas A&M University, D. Turner, D. Claridge, D. O'Neal, J. Haberl, Co-P.I., 5 research associates, 2 research engineers, 6 graduate students, \$1,250,000, Texas A&M University, August 1998 to July 2000.
11. "Development of Energy Efficient Housing for Low Income Texas Residents," sponsored by the Texas A&M Center for Energy and Mineral Resources, J. Haberl, P.I., 1 graduate student, \$24,733, Texas A&M University, June 1997 to June 2002.
12. "Physical Plant Engineering Services Agreement," sponsored by Texas A&M University, D. Claridge, D. Turner, M. Liu, J. Haberl, Co-P.I., 5 research engineers, 3 graduate students, \$625,000, Texas A&M University, August 1998 to July 1999.
13. "Baseline and Modeling Project for Prairie View A&M," sponsored by Prairie View A&M University, D. Claridge, J. Haberl, Co-P.I., 1 graduate student, \$10,000, Texas A&M University, September 1997 to December 1998.
14. "Engineering Evaluation of the Central Utility Plant," sponsored by Texas A&M University, D. Turner, D. Claridge, J. Haberl, Co-P.I., 1 research engineer, 2 research associates, 6 graduate students, \$225,000, Texas A&M University, March 1997 to March 1998.
15. "Commissioning and Engineering Services for the TAMU Physical Plant Energy Office," sponsored by Texas A&M University, D. Turner, D. Claridge, D. O'Neal, J. Haberl, Co-P.I., 1 research engineer, 2 research associates, 6 graduate students, \$341,000, Texas A&M University, September 1996 to August 1997.
16. "Monitoring and Operational Improvements on A&M Campus Buildings," sponsored by Texas A&M University, D. Turner, D. Claridge, D. O'Neal, J. Haberl Co-P.I., 3 graduate students, 3 research associates, \$1,750,000, Texas A&M University, June 1995 to March 1998.
17. "Development of whole-campus energy consumption indices for the Princeton University Campus," sponsored by the Facilities Engineering Department, J. Haberl, P.I., \$10,000, Center for Energy and Environmental Studies, Princeton University, Spring 1989.
18. "Energy Conservation Study for the University of Colorado Memorial Center," University of Colorado Memorial Center, P. Brothers, J. Haberl, Co-P.I., four graduate students, \$30,000, University of Colorado, 1986 to 1987.
19. "Energy Conservation Study for the University of Colorado Student Housing Administration," University of Colorado Student Housing Administration, P. Brothers, J. Haberl, Co-P.I., four graduate students, University of Colorado, \$20,000, 1986 to 1987.
20. "Energy Conservation Study for the University of Colorado Rec Center," University of Colorado Student Recreation Center, J. Dow, D. Claridge, J. Haberl, Co-P.I., four graduate students, \$60,214, University of Colorado, 1979 to 1987.

3. Support From Research or Other Funds

Year	Fall	Spring	Summer
2011		Full-time Teaching	
2010	Full-time Teaching	Full-time Teaching	Full-time Research
2009	Full-time Teaching	Full-time Teaching	Full-time Research
2008	Full-time Teaching	Full-time Teaching	Full-time Research
2007	Half-time Research	Full-time Teaching	Full-time Research
2006	Full-time Teaching	Full-time Teaching	Full-time Research
2005	Full-time Teaching	Full-time Teaching	Full-time Research
2004	Full-time Teaching	Full-time Teaching	Full-time Research
2003	Full-time Teaching	Full-time Teaching	Full-time Research
2002	Full-time Teaching	Half-time Research	Full-time Research
2001	Half-time Research	Full-time Teaching	Full-time Research
2000	Full-time Teaching	Full-time Teaching	Full-time Research
1999	Full-time Teaching	Full-time Teaching	Full-time Research
1998	Full-time Teaching	Full-time Teaching	Full-time Research
1997	Half-time Research	Full-time Teaching	Full-time Research
1996	Full-time Research	Full-time Teaching	Full-time Research
1995	Half-time Research	Half-time Teaching	Full-time Research
1991-94	Half-time Research	Half-time Teaching	Full-time Research
1990	Half-time Research	Half-time Teaching	Full-time Research

TEACHING ACTIVITIES

TAMU – ARCH 681	“Ph.D., M.S. Seminar”	Discussion and review of current practice of Ph.D., and M.S. studies in Architecture.
TAMU – ARCH 435	“Integrated Systems”	An understanding of how to integrate sustainable environmental systems into a building through good design: lectures are provided as a support to studio; systems faculty participate in studio critiques throughout the project.
TAMU – ARCH 335	“Fundamentals of Environmental Systems”	Fundamentals of building environmental systems, including: plumbing, electricity design, lightning protection, acoustics, drainage systems, psychrometrics, solar shading, heating, cooling, lighting and transportation systems.
TAMU – ARCH 621	“Energy Optimization in Building Design”	Simulation of building HVAC systems using the DOE-2 computer simulation program, including the calibrated simulations using data gathered from actual buildings.
TAMU – ARCH 633	“Architectural Systems II”	Building environmental systems, including: site analysis, psychrometrics, comfort, daylighting, shading, acoustics, and economics.
TAMU – ARCH 619	"Special Topics in Applied Solar Energy"	Fundamentals of Solar Energy and its conversion, including: solar radiation, fluid mechanics, heat transfer, methods of solar collection and thermal conversion, system analysis, components and economics.
TAMU- ARCH 334	“Architectural Systems I”	Fundamentals of building environmental systems, including: plumbing, electricity design, lightning protection, acoustics, and transportation systems, and drainage systems.
TAMU – ARCH 333/233	“Environmental Systems Concepts”	Fundamentals of building environmental systems, including: psychrometrics, solar shading, heating, cooling and lighting systems.
TAMU – ARCH 615	“Elements of Environmental Control Systems”	Fundamentals of building environmental systems, including: plumbing, electricity design, lightning protection, acoustics, drainage systems, psychrometrics, solar shading, heating, cooling and lighting systems.

TAMU – MEEN 665	“Application of Energy Management”	Calculate energy saving opportunities in commercial buildings using the DOE-2 energy simulation program: includes calibrated simulations using data gathered from actual buildings.
TAMU – MEEN 630	"Intermediate Heat Transfer"	Intermediate heat transfer covering conduction heat transfer using separation of variables, and lumped systems, convection boundary conditions, convection integral solutions, numerical methods, heat and mass transfer, convection correlations, radiation, view factors, and heat exchangers.
TAMU – MEEN 461	"Heat Transfer"	Fundamentals of Heat Transfer, including: 1-D, 2-D, and 3-D steady-state and transient conduction, radiation, view factors, convection, heat exchangers, boiling and condensation.
TAMU – MEEN 462	"Applied Solar Energy"	Fundamentals of Solar Energy and its conversion, including: fundamentals of solar radiation, fluid mechanics, heat transfer, methods of solar collection and thermal conversion, system analysis, components and economics.
TAMU – MEEN 436	"Principles of Heating, Ventilating, and Air Conditioning"	Fundamentals of refrigeration, cryogenics, psychrometrics, fluids analysis, piping design, fans, pumps, AHUs, cooling towers, and heat exchangers.
TAMU – MEEN 437	"Principles of Building Energy Analysis"	Fundamentals of heat transfer in buildings, cooling/heating load calculations, building simulation, and building energy analysis techniques.
Univ. of Colorado Arch. Eng. 350	"Mechanical Systems for Buildings – Part I"	Fundamentals of electrical system, plumbing, mechanical systems, and fire safety.
Univ. of Colorado Arch Eng. 508	"Advanced Building Energy Analysis"	Fundamentals of building energy simulation using the DOE-2 computer simulation program and the SERIRES program, including: BDL language understanding, engineering fundamentals of program algorithms, and advanced programming features.

STUDENT RESEARCH ADVISING

1. Masters

Chair of M.S. Committee (15 completed)

Eduardo Ramirez	“Engineering Design, Construction, Operation and Analysis of the 2007 Texas A&M University Solar Decathlon House” (Final Examination Report), Co-chair with D.Turner.	May 2008
Mini Malhotra	“An Analysis of Maximum Residential Energy-Efficiency in Hot and Humid Climates” Department of Architecture. Now a Ph.D. Student, Texas A&M.	December 2005
Jaya Mukopadhyay	“Analysis of Improved Fenestration for Code-Compliant Residential Buildings in Hot and Humid Climates” Department of Architecture. Now a Ph.D Student, Texas A&M.	August 2005
Piljae Im	“A Methodology to Evaluate Energy Savings and NOx Emissions Reductions From the Adoption of the 2000 International Energy Conservation Code (IECC) to New Residences in Non-attainment and Affected Counties in Texas,” Department of Architecture. Now a Ph.D. Student, Texas A&M.	December 2003
Nayarat Rungchareonrat	“An Analysis of Energy Reductions from the Use of Daylighting in Low-cost Housing,” Department of Architecture.	August 2003
Pattarayut Chulsukon	“Development and Analysis of a Sustainable Low Energy House in a Hot and Humid Climate,” Department of Architecture.	August 2002

Peter Klima	“Improving the Reliability and Accuracy of a Multipyranometer Array Measuring Solar Radiation,” Department of Architecture.	December 2000
Rodney Beasley	“A Methodology for Baseline Energy Use at Large Campus Utility Plants for the Purpose of Measurement of Retrofit Savings,” Mechanical Engineering Department, Co-Chair w/D. Turner.	August 1999
David Landman	“Development of Pre-Screening Indices to Improve Energy Analysis of Public K-12 Schools”, Mechanical Engineering Department.	May 1998
Bryce Munger	“An Improved Multipyranometer Array for the Measurement of Direct and Diffuse Solar Radiation,” Mechanical Engineering Department, Co-Chair w/D. Turner.	December 1997
Jim Watt	“Development of Empirical Temperature and Humidity-based Degraded-condition Indicators for Low-tonnage Air Conditioners,” Mechanical Engineering Department, Co-Chair w/D. O’Neal.	December 1997
Fleming, Jason	“Simplified Thermoeconomic Approach to Cost Allocation in a Combined Cycle Cogeneration and District Energy System,” Mechanical Engineering Department, Co-Chair w/D. Claridge.	May 1997
Michelle Schmode	“Performance of Energy Management Control Systems (EMCS) in Selected LoanSTAR Buildings,” Department of Mechanical Engineering, Co-Chair w/D. Claridge.	August 1995
Tarek Bou-Saada	“An Improved Procedure for Developing a Calibrated Hourly Simulation Model of an Electrically Heated and Cooled Commercial Building,” Department of Mechanical Engineering.	December 1994
Mustafa Abbas	“Development of Graphical Indices for Building Energy Data,” Department of Mechanical Engineering.	December 1993
Ralph Cox	“An Analysis of Grocery Store Energy Use,” Department of Mechanical Engineering.	December 1993

B. Doctorate

Chair of Ph.D. Committee (14 completed)

Mini Malhotra	“An Analysis of Off-grid, Off-pipe Housing in Six U.S. Climates”, Department of Architecture, now at Oak Ridge National Laboratory, Oak Ridge, TN.	December 2009
Piljae Im	“Methodology for the Preliminary Design of High Performance Schools in Hot and Humid Climates”, Department of Architecture, now at Oak Ridge National Laboratory, Oak Ridge, TN.	December 2009
Soolyeon Cho	“Methodology to Develop and Test an Easy-to-use Procedure for the Preliminary Selection of High-performance Systems for Office Buildings in Hot and Humid Climates”. Department of Architecture, now Assistant Professor Catholic University, Washington, D.C.	August 2009
Sopa Visitsak	“An Evaluation of the Bioclimatic Chart for Choosing Design Strategies for a Thermostatically-controlled Residence in Selected Climates”, Department of Architecture, Now Assistant Professor, Kasetsart University, Thailand. ASHRAE Grand-in-Aid Recipient. Caudill Research Fellowship.	December 2007
Amr Bagneid	“The Creation of a Courtyard Microclimate Thermal Model for the Analysis of Courtyard Houses”, Department of Architecture, ASHRAE Grant-in-Aid Recipient, AIA/AAF Scholarships for Advanced Research recipient. Now Assistant Professor, Prairie View A&M University, Texas.	August 2006
Suwon Song	“Development of New Methodologies for Evaluating the Energy Performance of New Commercial Buildings”, Department of Architecture, Now Research Professor, Yonsei University, South Korea.	August 2006

Seongchan Kim	“An Analysis of International Energy Conservation Code (IECC) – Compliant Single-Family Residential Energy Use”, Department of Architecture, Now Assistant Professor, Western Illinois University, Ill.	August 2006
Sakkara Rasisuttha	“An Investigation of Methods for Reducing the Use of Non-Renewable Energy Resources for Housing in Thailand,” Department of Architecture. Now Assistant Professor, Khon Kaen University, Thailand.	May 2005
Yong Hoon Sung	“Development of a Comprehensive Community NOx Reduction Methodology,” Department of Architecture.	August 2004
Victor Kootin-Sanwu	“Development of Energy Efficient Housing for Low-Income Families,” Department of Architecture, ASHRAE Grant-in-Aid Recipient.	May 2004
Atch Sreshthaputra	“Building Design and Operation for Improving Thermal Comfort in Naturally Ventilated Buildings in a Hot and Humid Climate,” Department of Architecture, Co-Chair w/M. Andrews (MEEN), ASHRAE Grant-in-Aid Recipient, 2004 ARCC King Metal. Now Assistant Professor, Chulalongkorn University, Thailand.	May 2003
Kie Whan Oh	“Development and Validation of a Computer Model for Energy-efficient Shaded Fenestration Design,” Department of Architecture, Co-Chair w/L. Degelman, ASHRAE Grant-in-Aid Recipient. Now Assistant Professor, Dongseo University, S. Korea.	May 2000
Keith Sylvester	“An Analysis of the Benefits of Photovoltaic-Coated Glazing on Owning and Operating Costs of High Rise Commercial Buildings,” Department of Architecture, Co-Chair w/L. Degelman, ASHRAE Grant-in-Aid Recipient. 2000 ARCC King Metal.	December 1999
Sabaratham Thamilseran	“An Inverse Bin Methodology to Measure the Savings from Energy Conservation Retrofits in Commercial Buildings,” Mechanical Engineering Department, Co-Chair w/D. Claridge. Now at ADM Assc., Sacramento, CA.	May 1999

SERVICE

1. Professional Service

American Council for an Energy Efficient Economy (ACEEE), 1988 – 1996.

“Panel 5: Commissioning, Operating and Maintenance,” Panel Leader, ACEEE Summer Study, Asilomar, CA., August 1996.

“Panel 5: Commissioning, Operating and Maintenance,” Panel Leader, ACEEE Summer Study, Asilomar, CA, August 1994.

“Panel 3: Commercial Performance: Analysis and Measurement,” Panel Leader, ACEEE Summer Study, Asilomar, CA, August 1992.

American Society of Architectural Engineers, 1978 – 1981.

Student President, University of Colorado Chapter, 1978 – 1981.

American Solar Energy Society, Member, 1996 – present.

American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), 1980 – present.

ASHRAE College of Fellows, 2006 – present, member.

ASHRAE Performance Measurement Steering Committee, Member, 2007-present.

ASHRAE Performance Measurement Protocols Project, Chair, 2006-2010.

ASHRAE Scoping Study of Measuring the Performance of Commercial Buildings, Chair, 2005-2006.

ASHRAE Electronic Communications Committee, Member, 2004 – 2006.

ASHRAE Think Tank member, 2002 – present.

Electronics Advisory Group, August 1997 – August 1998.

GPC 14R – Guideline for Measurement of Energy and Demand Savings, revision committee, 2008 – 2010.

GPC 14P – Guideline for Measurement of Energy and Demand Savings, voting member and author of Section 6, 1996–2001.

Journal/Insights Committee member, Section 5.0 Liaison - Ventilation and Air Distribution, New member training, June 1992–1995.

Presidential Think Tank member, 2001–2002.

Society-wide committee to develop an Worldwide Electronic Communications Network for ASHRAE, June 1995, June 1997.

- Student Chapter Faculty Advisor, Texas A&M University, September 1991 – present.
- SPC 140P - A Standard Method of Test For Evaluation of Building Energy Computer Programs, voting member, 1991–2001.
- Standards Committee: SSPC 140 - A Standard Method of Test For Evaluation of Building Energy Computer Programs, voting member, 2001–2002.
- TC 4.7 - Algorithms Committee, Chair, 2010 – present, vice-chair, 2008 – 2009.
- TC 1.5 - Computer Applications Committee, Handbook Chairman for Chapter #60 – Computer Applications, KBS Subcommittee member, RP-642 & RP-808 Monitoring Committee Member.
- TC 1.8 - Owning and Operating Committee, Handbook contributor for Chapter #49 - Owning and Operating, 1989–1995.
- TC 1.7 - Operation and Maintenance Management Committee, Research Subcommittee member, Handbook contributor to Chapter #35 - Operation and Maintenance Management, 1989–1995.
- TC 9.6 - Systems Energy Utilization Committee, Handbook contributor to Chapter #32 – Energy Management, and Chapter #37 - Building Energy Monitoring, 1990 – present.

ASHRAE Seminar/Symposium Presentations

- Poster Session – “Demonstration of the Use of Multimedia Electronic Information Enhancements for Chapter Handbook CD-ROM (1017-RP), Orlando, January 2010.
- Seminar 43 – Enhancing Your Chapters for ASHRAE Handbook CD+, “Example of an Enhanced Chapter”, Chicago, Ill, January 2009.
- Seminar 4 – An Introduction to Mesoscale Weather Models and Their Application to ASHRAE Building Issues, “Prediction of Hourly Wind Speed at a Wind Farm From Hourly Weather Data From the Nearest NWS Site using Artificial Neural Nets”, Chicago, Ill, January 2009.
- Seminar 45 – Performance Based Energy Labels for Buildings, “Making Building Performance Metrics Meaningful: Texas Residential Certificate Program”, Salt Lake City, UT, June 2008.
- Seminar 67 – Actual Building Energy Performance: Measurement, Benchmarking and Labeling, “ASHRAE/CIBSE/USGBC Performance Measurement Protocols for Commercial Buildings, Salt Lake City, UT, June 2008.
- Poster Session - “An Enhanced Methodology for Energy Performance Evaluation of New Commercial Buildings: Part I - Methodology”, Salt Lake City, UT, June 2008.
- Poster Session - “An Enhanced Methodology for Energy Performance Evaluation of New Commercial Buildings: Part II – Results From Case Study”, Salt Lake City, UT, June 2008.
- Seminar 9 – Application of Simulation in the 2007 Solar Decathlon Competition, “Use of Computer Simulation in the Design of the Texas A&M University Solar Decathlon House”, Long Beach, CA, June 2007.
- Symposium QC-06 – Validation of Building Simulation Programs, “Accuracy Tests for Simulations of VAV Dual-duct, Single-zone, Four Pipe fan Coil and Four Pipe Induction Air Handling Systems (865-RP), Quebec City, Quebec, Canada, June 2006.
- Seminar 7 – Web-based Simulations for Design: Give me a Minute and Your Analysis is Done. “Development of Web-based Residential (IECC), and Commercial (ASHRAE) Code Compliance Calculator for Texas, J.Haberl, C.Culp, B.Yazdani, Quebec City, Quebec, Canada, June 2006
- Seminar 48 – Skip the Plane and Make the Meeting, presentation title: “Virtual Design Studio”, J.Haberl, G. Vasquez de Velasco, Denver, June 2005.
- Seminar 1 – A Vision of eASHRAE: Or How to Give a Seminar in Your Pajamas, presentation title: “A Day in the Life of an ASHRAE member at the ASHRAE Winter Meeting, Chicago, Ill, January 2014”, J.Haberl, Nashville, June 2004.
- Seminar 18 – Establishing Cost Effective Energy Baselines for Measurement and Verification, presentation title: “Developing an M&V Plan and Baseline for the Ft. Hood ESPC Project”, Kansas City, June 2003.
- Seminar 24 – Practical Aspects of Measuring Humidity in Commercial Buildings, presentation title: “Managing Thousands of Financially-critical Humidity Sensors – The LoanSTAR Experience”, Atlantic City, January 2003.
- Seminar 46 – Pattern Recognition Based Fault Detection and Diagnostics for Building Operation, presentation title: “HVAC Data Visualization: Past, Present and Future, Cincinnati, OH, June 2001.
- Seminar 42 – Use of the Internet for Collaborative Efforts in HVAC, presentation title: “Use of the Internet for Monitoring and Analysis in the Texas LoanSTAR Program”, Toronto, June 1998.
- Seminar – How to Avoid Becoming Roadkill on the Information Super Highway, presentation title: “Welcome to ASHRAE Home Page on the World Wide Web”, Atlanta, Georgia, June 1996.
- Seminar - Error Analysis Techniques to Ensure Data Quality in Monitoring Projects, presentation title: “Error Analysis Techniques in the Texas LoanSTAR Program”, San Diego, CA, June 1995.
- Seminar – Experiences with Simulation, presentation title: “Procedures for Calibrating a Simulation Model to Whole-building Measured Data from a Heated/Cooled Commercial Building”, San Diego, CA, June 1995.
- Seminar – Analysis Methods for Building Energy Retrofits, presentation title: “U.S.D.O.E. Forrestal Lighting Retrofit: Preliminary Analysis of the Electrical Savings”, San Diego, CA, June 1995.
- Seminar – Inverse Analysis Methods, presentation title: “Energy Calculations for Analyzing Energy Savings from HVAC Modifications”, New York, NY, January 1995.
- Seminar – Analysis Methods for Measured Building Energy Use Data, presentation title: “The Texas LoanSTAR Program: Current Availability of Data and Improved Graphical Indices for Browsing through Hourly Data”, New Orleans, January 1994.
- Seminar – What’s the Future Hold for ASHRAE Members? Presentation title: “A Day in the Life of a Building Operator in Central Texas: 2002 A.D.”, Denver, Colorado, June 1993.

Seminar - Measured Energy Performance Data Analysis and Presentation: Pitfalls, Problems and Solutions, presentation Title: "The Texas LoanSTAR Program.", St. Louis, MO, June 1990.

ASHRAE Seminar/Symposium Chair:

Symposium Chair: "Application of Inverse Models", Symposium, ASHRAE Winter Meeting, Chicago, Ill, January, 2006.
Symposium Chair: "The Great Energy Predictor Shootout II - Measuring Energy Savings," Symposium, ASHRAE Annual Meeting, San Antonio, TX, June 1996.
Symposium Chair: "The Great Energy Predictor Shootout: The Aftermath," Symposium, ASHRAE Annual Meeting, Orlando, FL, June 1994.
Seminar Chair: "The Great Energy Predictor Shoot-out," Seminar, ASHRAE Annual Meeting, Denver, CO, June 1993. \
Symposium Chair: "Application of Calibrated Building Energy Simulation Models," Symposium, ASHRAE Annual Meeting, Denver, CO, June 1993.
Symposium Chair: "Characterizing Steam and Chilled Water use for a 40,000 Student Campus in Central Texas," Symposium, ASHRAE Annual Meeting, June 1993.
Symposium Chair: "Application of Artificial Intelligence and Advanced Computing Concepts to HVAC Systems," Symposium, ASHRAE Annual Meeting, Indianapolis, IN, June 1991.
Symposium Chair: "Artificial Intelligence and Advanced Topics for HVAC System Diagnostics," Symposium, ASHRAE Annual Meeting, St. Louis, MO, June 1990.
Seminar Chair: "Demonstrations of Knowledge Base Systems for the HVAC Industry," Seminar, ASHRAE Winter Meeting, Chicago, IL, January 1989.
Seminar Chair: "Applications of Knowledge Base Systems to the HVAC Industry," Seminar, ASHRAE Annual Meeting, Nashville, TN, June 1987.

American Society of Mechanical Engineers (ASME), 1985 – 1996.

Conservation and Solar Buildings Chairperson - 5/93 - 4/96.
Panel Leader: "Space Conditioning in Sports Arenas," Panel, ASME Meeting, New Orleans, LA, December 1993.

Chi Epsilon, member 1978 to present.

Chapter President, University of Colorado Chapter, 1978.

CLIMA 2000 Conference, University of Liege, Belgium

Technical Committee, Summer 1997.

FWF Der Wissenschaftsfonds (Austrian National Science Foundation), Vienna, Austria, 2002 - Present.

Reviewer for a proposals (2002, 2005).

Illumination Engineering Society of North America, Associate Member, 1995 to present.

International Building Performance Simulation Association - Charter member 1985 to present.

Member, Board of Directors, IBPSA USA, 2010 to present.
President, IBPSA USA, 2008 to 2010.
Member Services Bureau, 1998 to present.
Secretary, 1992 to 1994.
Scientific Review Committee member 1987 to present.
IBPSA-US "SimBuild 2004," Conference Organizing Committee, Boulder, Colorado, August, 2004.
IBPSA-US "SimBuild 2006," Conference Technical Co-Chair, Boston, Mass, August, 2006.
IBPSA-US "SimBuild 2008," Conference Organizing Committee, Berkely, Calif, August, 2008.

1st International Conference for Enhanced Building Operation (ICEBO)

Technical Chair, 2010 – present
Paper presentation, Kuwait, 2010
Session Chair, and paper presentation, Austin, Texas, 2009
Session Chair, and paper presentation, Berlin, Germany, 2008
Session Chair, and paper presentation, Pittsburg, PA, 2005
Advisory Committee member, 2001, 2002, 2003, 2004.
Session Chair, and paper presentation, Dallas, Texas 2002.
Session Chair, and paper presentation, Austin, Texas 2001.

National Science Foundation, Washington, D.C., 1995 to present.

Reviewer for proposals (1995).

Symposium on Improving Building Systems Efficiency in Hot and Humid Climates

Technical Program Chair, Session Chair, and paper presentation, Austin, 2010..

Technical Program Chair, Session Chair, and paper presentation, Dallas, 2008.
 Technical Program Chair, Session Chair, and paper presentation, San Antonio, 2007 .
 Technical Program Chair, Session Chair, and paper presentation, Orlando, Florida, 2006.
 Technical Program Chair, Session Chair, and paper presentation, Richardson, Texas, 2004.
 Technical Program Chair, Session Chair, and paper presentation, Houston, Texas, 2002.
 Technical Program Chair, Session Chair, and paper presentation, San Antonio, Texas, 2000.
 Technical Program Chair, Session Chair, and paper presentation, Austin, Texas, June 1998.
 Technical Program Chair, Session Chair, and paper presentation, Ft. Worth, Texas, 1996.
 Reviewer, Session Chair, paper presentation, and Master of Ceremonies, Arlington, Texas, May 1994.
 Reviewer, Session Chair, and paper presentation, May 1992.
 Reviewer, Session Chair, and paper presentation, Fort Worth, Texas, October 1990.
 Reviewer, Session Chair, and paper presentation, Dallas, Texas, October 1989
 Paper presentation, Fifth Symposium, Houston, Texas, September 1988.

Reviewer for Additional Publications:

ACEEE Summer Study Conference Proceedings, ASHRAE Journal, ASHRAE Transactions, ASHRAE Research Journal, ASME Journal of Solar Energy Engineering, ASME Solar Engineering Conference Proceedings, Energy and Buildings, Energy and Environment, IBPSA Conference Proceedings, IBPSA Journal, ICEBO Conference Proceedings, Solar Energy, and the Symposium on Improving Building Systems Efficiency in Hot and Humid Climates.

Invited Significant Seminars or Lectures

Invited presentation, Texas Comptroller's Office, "Assess Improve Measure (AIM)" software to help homeowners reduce their energy use, Austin, Texas, March 2010.
 Invited presentation, Texas Comptroller's Office, "2009 IECC Code Hearings", Austin, Texas, January 28th, 2010.
 Invited presentation, Texas Comptroller's Office, "Development of Easy to Use Software for Code Compliance", Austin, Texas, August 2009.
 Invited presentation, "Accounting for Carbon Emissions from Energy Efficiency and Renewable Energy in the Texas", Senate Hearings for Proposed Legislation, Committee Chaired by Senator Ellis, April 2009.
 Invited presentation, "NOx Emissions Reductions from EE/RE in Texas", ASHRAE Lubbock Chapter, April, 2009.
 Invited presentation, "Quantification of Energy and Emissions Saved in Energy Efficiency/Renewable Energy (EE/RE) Programs in Texas", EPA Sustainable Skyways, Dallas, TX, March 2009.
 Invited testimony, "NOx Emissions Reductions from EE/RE Programs", Texas Senate Natural Resources Committee, Austin, Texas, March 2009.
 Invited presentation, "Quantification of Energy and Emissions Saved in Energy Efficiency/Renewable Energy (EE/RE) Programs in Texas", EPA Blue Skyways Conference, Omaha, Neb, September 2008.
 Invited presentation, "Quantification of Energy and Emissions Saved in Energy Efficiency/Renewable Energy (EE/RE) Programs in Texas", University of Texas, Department of Architecture, September 2008.
 Invited presentation, "Accounting for Energy Efficiency and Renewable Energy in the Texas SIP", Texas Senate Committee on Natural Resources, September, 2008.
 Invited presentation, "Calculation of Emissions Reductions From Energy Efficiency and Renewable Energy," ASHRAE Region VII Meeting, Huntsville, Alabama, August, 2007.
 Featured presentation, "Calculation of Emissions Reductions From Energy Efficiency and Renewable Energy," 2006 Emissions Reduction and Energy Leadership Summit, Texas A&M and Houston Council of Governments, Houston, TX, October, 2006.
 Invited presentation, "Quantification of NOx Emissions Reductions From Energy Efficiency and Renewable Energy Projects in Texas", Civil Engineering Seminar, Rice University, Houston, Texas, September 2006.
 Invited presentation, "Calculating Creditable NOx Emissions Reductions From Green Power Purchases in Texas", USEPA Air Innovations Conference, Denver, Co., September 2006.
 Invited presentation, "Calculating Creditable NOx Emissions Reductions From Energy Efficiency and Renewable Energy Projects (EE/RE) in Texas", USEPA Air Innovations Conference, Chicago, Ill., August 2005.
 Featured presentation, "Calculation of Emissions Reductions From Energy Efficiency and Renewable Energy," 2005 Emissions Reduction and Energy Leadership Summit, Texas A&M and North Central Texas Council of Governments, Fort Worth, TX, October, 2005.
 Featured presentation, "Calculation of Emissions Reductions From Energy Efficiency and Renewable Energy," 2004 Emissions Reduction and Energy Leadership Summit, Texas A&M and the Metropolitan Partnership for Energy, San Antonio, TX, December 2004.
 Invited presentation, "Energy System Laboratory's 2003 Annual Report," Commissioner Briefing (Commissioner White), Texas Commission on Environmental Quality, December 2003.
 Invited presentation, "The Texas Emissions Calculator and NOx Emissions Reductions From Implementation of the 2000 IECC/IRC Conservation Code in Texas," presented at the Texas Energy Partnership Workshop, Texas State Energy Conservation Office, Austin, TX, September 2003.
 Invited presentation, "Energy System Laboratory's Progress With Senate Bill 5," presented to the Texas Emissions Reduction Plan Advisory Committee, Texas Natural Resources Conservation Commission, Houston, TX, November 2002.

- Invited presentation, "Energy System Laboratory's Progress With Senate Bill 5," presented to the Texas Emissions Reduction Plan Advisory Committee, Texas Natural Resources Conservation Commission, Dallas, TX, August 2002.
- Invited presentation, "Energy System Laboratory's Progress With Senate Bill 5," presented to the Texas Emissions Reduction Plan Advisory Committee, Texas Natural Resources Conservation Commission, Austin, TX, June 2002.
- Invited speaker, "ASHRAE-sponsored Research at Texas A&M University," ASHRAE Houston Chapter, April 2002.
- Invited presentation, "Buildings-Related Energy Efficiency RD&D," presentation to the California Energy Commission, Sacramento, CA, November 2001.
- Invited interview, "Conditions Must be Right for Energy-Saving 'Green-Roof', Concept to Become Fertile in U.S., Says Expert," PlanetSave.com, Community Discussion Group, July 2001.
- Invited interview, "Fence Climbing and Skirt Lifting in College Station," Interview with Debora Snoonian, Senior Editor, Architectural Record, April 2001.
- Invited participant, "Bracken Bat Cave Charette," Sponsored by the U.S.D.O.E. Rebuild America Program through Overland Partners, San Antonio, TX, November 2000.
- Invited presentation, "The Texas LoanSTAR Program, M&V and Continuous Commissioning," Oxford University, Oxford, England, July 2000.
- Invited presentation, "The Texas LoanSTAR Program, M&V and Continuous Commissioning," KPF and Associates, London, England, July 2000.
- Invited on-line discussion, "The New Architectural Graphic Standards Material," Vol. 5 Chatroom, www.volume5.com, March 2000.
- Invited speaker, "A Day in the Life of Tony Lopez: A Building Operation in 2009 A.D.," ESOURCE Conference, Colorado Springs, CO, November 1999.
- Invited presentation, "Measuring Energy and Environmental Conditions in Buildings," College Station Independent School District 4th Grade Science Classes, College Station, TX, March 1998.
- Invited speaker, "Deregulation and Free Market Energy Conservation Programs," Texas Energy Coordination Council, Austin, TX, January 1998.
- Invited lecture, "Development and Testing of a Multi-pyranometer Array," Department of Architecture, MIT, July 1997.
- Invited presentation, "The NEMVP and How it Can Help You Make Informed Energy Conservation Purchases," Texas State Agency Energy Administrators Group, Austin, TX, June 1996.
- Invited presentation, "Teaching Solar Energy to Elementary-aged School Children," presented to the Bryan Independent School District, sponsored by the Department of Education, Texas A&M University, College Station, TX, June 1996.
- Invited speaker, "Measuring the Performance of Residential and Small Commercial Buildings," American Institute of Architects – Brazos Valley Chapter, College Station, TX, May 1996.
- Invited speaker, "How Continuous Monitoring and Analysis can Improve the Energy Services Business," Johnson Controls, Inc., Milwaukee, WI, September 1995.
- Invited speaker, "The value of Performance Based Architecture and the Texas LoanSTAR Program," American Institute of Architects Student Chapter, Texas A&M University, College Station, TX, September 1995.
- Invited presentation, "How the Texas LoanSTAR Program Can be Used in Canada," the International Council on Local Environmental Initiatives (ICLEI), Toronto, Ontario, Canada, August 1995.
- Invited video conference participant, "Discussion of the Energy Passport Concept for Russian Buildings," by the U.S. Department of Energy and the National Resources Defense Council, May 1995.
- Invited speaker, "How to Achieve 150% of Audit Estimated Energy Savings: The Texas LoanSTAR Program," Third National Conference on Commissioning, Milwaukee, WI, May 1995.
- Invited speaker, "How to Achieve 150% of Audit Estimated Energy Savings: The Texas LoanSTAR Program," Energy-University-Environment Conference, sponsored by the European Community, University of Bordeaux, Bordeaux, France, March 1995.
- Invited speaker, "Advanced Data Displays for Building Energy Data," California Institute for Energy Efficiency, San Francisco, CA, March 1995.
- Invited brown bag seminar, "How to Achieve 150% of Predicted Energy Savings -- the Importance of Measurement and Feedback," Honeywell, Inc., Arlington Heights, IL, January 1995.
- Invited presentation, "Measured Energy Savings from CV to VAV Retrofits in the Texas LoanSTAR," U.S. Environmental Protection Agency, Washington, D.C., December 1994.
- Invited speaker, "Advanced Building Systems Integration Consortium," Center for Building Performance and Diagnostics, Carnegie Mellon University, Pittsburgh, PA, November 1994.
- Invited speaker, "Development of an Advanced Monitoring System for the Federal Reserve Bank System," Federal Reserve System Energy Task Group, Dallas, TX, October 1994.
- Invited speaker, "The day in the life of a building operator: 2004 A.D.," ASHRAE St. Louis Chapter, St. Louis, MO, October 1994.
- Invited participant, "National Monitoring and Verification Protocols Meeting," U.S. Department of Energy, Washington, D.C., September 1994.
- Invited panelist, "Advanced Building Operations Workshop," Office of Buildings and Community Systems, U.S. Department of Energy, held at the University of Colorado, Boulder, CO, August 1994.
- Invited presentation, "Development of a Monitoring and Analysis Program for the State of Minnesota," Northern States Power and the State of Minnesota, Minneapolis, MN, May 1994.
- Invited presentation, "Development of Advanced Data Displays for Honeywell's Proprietary Software," Honeywell, Inc., Arlington Heights, IL, April 1994.

- Invited presentation, "Advanced Display's for EMCS Operators," Lawrence Berkeley National Lab, San Francisco, CA, March 1994.
- Invited presentation, "The Texas LoanSTAR Program and the U.S. Army," Energy Management Division, U.S. Army Construction Engineering Laboratory, Champagne, IL, October 1993.
- Invited presentation, "The Texas LoanSTAR Program and the Federal Reserve Bank," Federal Reserve Bank of Dallas, Dallas, TX, July 1993.
- Invited presentation, "The Texas LoanSTAR Program and it's Application to Northern States Power's DSM Programs," Minneapolis, MN, July 1993.
- Invited presentation, "How the Texas LoanSTAR Program Can Help the Public Service Company of Colorado and the Colorado Governor's Energy Office With Their DSM Program," Colorado Governor's Energy Office, Denver, CO, July 1993.
- Invited presentation, "The Texas LoanSTAR Program," U.S. Army Construction Engineering Research Laboratory, Champagne, IL, June 1993.
- Invited briefing, "The Texas LoanSTAR Program, Texas Office of State-Federal Relations, Legislative Delegation Briefing, Washington, D.C., April 1993.
- Invited briefing, "The Texas LoanSTAR Program as a Model for DOD's Energy Conservation Programs," U.S. Department of Defense, Pentagon Building, Washington, D.C., April 1993.
- Invited briefing, "Assisting EPA's Energy Star Buildings Program With Data From the Texas LoanSTAR Program," U.S. Environmental Protection Agency, Washington, D.C., April 1993.
- Invited briefing, "The Texas LoanSTAR Program as a Model for the FEMP," Office of Buildings and Community Systems, U.S. Department of Energy, Washington, D.C., April 1993.
- Invited briefing, "The Texas LoanSTAR Program as a Model for Federal Buildings," White House Science Office, Old Executive Office Building, Washington, D.C., April 1993.
- Invited presentation, "Advanced Data Display's for Honeywell's Common Software Documentation Methodology," Honeywell, Inc., Arlington Heights, IL, March 1993.
- Invited brown bag seminar, "Advanced Data Displays and EMC Systems," Honeywell Inc., Arlington Heights, IL, January 1993.
- Invited presentation, "Texas LoanSTAR Program," Hewlett Packard Measurement Systems Department, Palo Alto, CA, October 1992.
- Invited presentation, "Texas LoanSTAR Program," Western Load Research Group (WLRG) Conference, San Francisco, CA, October 1992.
- Invited presentation, "Air-side Efficiency Program," Office of Buildings and Community Systems, U.S. Department of Energy, Washington, D.C., August 1992.
- Invited presentation, "Texas LoanSTAR Program," Alliance to Save Energy, Washington, D.C., July 1992.
- Invited presentation, "Advanced Data Display for Energy Management and Control Systems," Honeywell, Inc., Arlington Heights, IL, April 1992.
- Invited testimony, "Use of Continuous Monitoring and Analysis to Improve Reliability and Persistence," presented to Wisconsin Public Utility Commission through Wisconsin's Environmental Decade, Madison, WI, January 1992.
- Invited presentation, "Texas LoanSTAR Program," Energy Committee, Wisconsin State Legislator, Madison, WI, January 1992.
- Special presentation, "Texas LoanSTAR Program," Deputy Assistant Secretary John Millhone, Office of Buildings and Community Systems, U.S. Department of Energy, Washington, D.C., January 1992.
- Invited presentation, "Texas LoanSTAR Program," Western Load Research Group (WLRG) Conference, Phoenix, AZ, October, 1991.
- Invited presentation, "Grocery Store Energy Analysis," Food Marketing Institute (FMI), San Diego, CA, September 1991.
- Invited presentation, "Integrated Energy and Restaurant Management System," The Bailey Company (Arby's), Lakewood, CO, July 1991.
- Invited presentation, "Texas LoanSTAR Program," Colorado Governor's Energy Office, Denver, CO, July 1991.
- Invited presentation, "Texas LoanSTAR Program," North West Power Planning Association (NWPPA) Conference, Portland, OR, May 1991.
- Special presentation, "Texas LoanSTAR Program," Assistant Secretary for Conservation and Renewables, U.S. Department of Energy, Washington, D.C., March 1991.
- Invited speaker, "The Texas LoanSTAR Program," Buildings Research Group, Solar Energy Research Institute, Golden, CO, June 1990.
- Invited speaker, "Whole-Plant Energy Tracking and Monitoring Technologies," Rocky Flats Plant, Golden, CO, June 1990.
- Invited speaker, "The Texas LoanSTAR Program, Progress Report," United States Office of Technology Assessment (OTA), Washington, D.C., June 1990.
- Invited speaker, "Exploring the Service Industry/Building Monitoring Options," Honeywell, Inc., Arlington Heights, IL, February 1990.
- Invited speaker, "Energy Research Overview at Princeton's CEES," Siemens A/G Corporate Research Center, Princeton, NJ, March 1989.
- Invited speaker, "Obtaining Useful Information From a Building's Metered Energy Consumption Data," Honeywell, Inc., Arlington Heights, IL, February 1989.
- Invited speaker, "Energy Conservation in Commercial Buildings," IEA/CADDET visit, Office of Buildings and Community Systems, November 1988.
- Invited speaker, "Building Systems Seminar Series," Joint Center for Energy Management, University of Colorado, Boulder, CO, September 1988.

- Invited speaker, "Metered Data Analysis to Improve Building Operation and Maintenance," Oak Ridge National Laboratory, Oak Ridge, TN, September 1988.
- Invited presentation, "Obtaining Useful Information From a Building's Metered Energy Consumption Data," Johnson Controls Research Group, Milwaukee, WI, September 1988.
- Invited presentation, "Obtaining Useful Information From a Building's Metered Energy Consumption Data," Lawrence Livermore National Lab, CA, August 1988.
- Invited presentation, "President's Committee For Campus Energy Conservation," State University of New York, Stony Brook Campus, NY, July 1988.
- Invited briefing, "Expert Systems Work at the U.S.D.O.E. Forrestal and Germantown Facilities," United States Congressional Research Service, The Library of Congress, Science Policy Research Division, September 1987.
- Invited briefing, "Expert Systems Work at the U.S.D.O.E. Forrestal and Germantown Facilities," Committee on Energy and Natural Resources, Subcommittee on Energy Regulation and Conservation, United States Senate, Washington, D.C., September 1987.
- Invited panelist, "Conference on Cutting Energy Costs During Multifamily Rehab," National Association of Home Builders, U.S. Department of Housing and Urban Development, Washington, D.C., December 1986.
- Invited presentation, "Energy Conservation Analysis for the City of Denver Maintenance Center, Committee on Energy Conservation, Engineering and Maintenance Division, Denver, CO, 1986.
- Invited presentations, "Energy Conservation Analysis," University of Colorado Memorial Center Administration, Boulder Campus, 1984 – 1986.
- Invited presentations, "Energy Conservation Analysis," University of Colorado Recreation Center Administration, Boulder Campus, 1980 – 1986.

2. University Service

University:

- LMS Selection Committee, Representative for the College of Architecture, Spring 2010 – present.
- Dean of Faculty Grievance Committee (special working group), College of Architecture Faculty Salary Dispute, Spring 2003.
- Legislative support for Senate Bill 5, includes briefings to Texas Energy Reduction Program Advisory Committee, and the Texas Senate Natural Resources Committee, 2001 – present.
- Texas A&M University representative to the Texas Building Energy Institute, member of executive committee and committee chair, 1995 – 1997, 1995 – 2001.

College:

- College Promotion and Tenure Committee, 2008 – 2010.
- Dean's Finance Committee, 2004.
- College Publications Committee, 2002 – 2003.
- College Research and Interdisciplinary Council (CRIC), Appointed Member at Large, 1999 – 2002.
Responsible for creation of College-level archive of all M.S. and Ph.D. thesis and dissertations.
- Facility Management Certificate Advisory Committee, 1999 – present.
Founding member and member of graduate advisory group.
- Ph.D. Qualifying Exam Committee, Member, 1995 – 2001.
Reviewed qualifying exams for apx. 2-4 candidates annually.
- Facility Management Industry Advisory Committee, Faculty Member, 1999 – 2002.
Founding member and member of advisor board.

Department:

- Associate Department Head for Research, 2009 to present.
- Energy Caucus, Chair, 2008 – present.
- Graduate Student Selection Committee for Energy Option, Chair, 2002 – present.
- Energy Undergraduate Instruction Committee, Member, 1995 – 2001.
Responsible for Coordinating Environmental Systems classes.
- Graduate Instruction Committee, Member, 1995 – 2001.
Responsible for Coordinating Environmental Systems classes.
- Promotion and Tenure Committee, Chair, 2010 – present, 2003 – 2006, member 1999 – 2006.
Helped prepared packages for 7 successful tenure candidates, 4 successful promotion candidates.
- Faculty Search Committee, 1997 – present.
Responsible for Environmental Systems Faculty search.
- Departmental Ph.D., and M.S. Coordinator, 2007 – Present.
Responsible for coordinating review and admission of incoming students.

3. Professional Outreach

- "Measurement and Verification Workshop," sponsored by the Energy Systems Laboratory, Austin, TX, October 2009.
- "Commercial Requirements of the International Energy Conservation Code and ASHRAE Standard 90.1," sponsored by the Texas State Energy Conservation Office, Corpus Christi, TX, July 2003 (w/ T. Fitzpatrick).

- “Measurement and Verification Techniques Workshop,” sponsored by the Texas State Energy Conservation Office, Houston, TX, October 2002 (w/ C. Culp).
- “Measurement and Verification Techniques Workshop,” sponsored by the Texas State Energy Conservation Office, Houston, TX, May 2002 (w/ C. Culp).
- “Measurement and Verification Techniques Workshop,” sponsored by the Texas State Energy Conservation Office, Austin, TX, July 2001 (w/ C. Culp).
- “Workshop on Energy Measurement, Verification, and Analysis Technology,” sponsored by the Energy Conservation Task Force of the Subcommittee on Administrative Services of the Federal Reserve Bank of Dallas, Dallas, TX, April 2000 (w/ D. Claridge).
- “Workshop on the Texas Guidelines for Performance Contracting,” sponsored by the Texas Energy Coordinating Council, Houston, TX, March 1999.
- “Workshop on the Texas Guidelines for Performance Contracting,” sponsored by the Texas Energy Coordinating Council, Austin, TX, September 1998.
- “LoanSTAR Monitoring and O&M Workshop,” sponsored by the Western Area Power Authority, San Francisco, CA, May 1995.
- “2nd Texas LoanSTAR Monitoring Workshop,” sponsored by the Texas State Energy Conservation Office, Austin, TX, August 1994.
- “Improved Energy Information for Building Operators,” Texas Energy Intern Training Workshop, sponsored by the Texas State Energy Conservation Office, Texas A&M University, May 1993.
- “Texas LoanSTAR Monitoring Workshop,” sponsored by the State of Minnesota Institutional Building Energy Conservation Program, Minneapolis, MN, May 1993.
- “1st Texas LoanSTAR Monitoring Workshop,” sponsored by the Texas State Energy Conservation Office, Austin, TX, August 1992.
- “Improved Energy Information for Building Operators,” Texas Energy Intern Training Workshop, sponsored by the Texas Energy State Energy Conservation Office, Texas A&M University, May 1992.

4. Consulting

- Fairmont Press, update of (1) new chapter for Energy Management Handbook, 6th edition, New York, NY, 2009.
- John Wiley, updating of pages for the AIA Architect’s Graphic Standards 11th edition, Washington, D.C., 2008.
- Fairmont Press, creation of (1) new chapter for Energy Management Handbook, 5th edition, New York, NY, 2003.
- John Wiley, creation of (7) new pages for 2003 AIA Residential Graphics Standards, Washington, D.C., 2002 – 2003.
- American Institute of Architects, creation of 6 new pages for the 2000 AIA Architect’s Graphic Standards 10th edition, Washington, D.C., 1998 – 1999.
- John Wiley, review of text books, New York, NY, 1999.
- American Institute of Architects, creation of 5 new pages for the 1998 AIA Architect’s Graphic Standards 9th edition Supplement, Washington, D.C., 1996 - 1997.
- Enershop, Inc., monitoring and analysis support work, through Brazos Energy Systems and Technologies, College Station, TX, 1997 – 2002.
- NEOs Corp., consulting work for the California Energy Commission, Sacramento, CA, 1996.
- Proctor Engineering, consulting work for the California Energy Commission, San Rafael, CA, 1996.
- W. D. Turner and Associates, consulting work, College Station, TX, 1995.
- GARD Analytics, consulting work involving DOE-2 programming for ARI calculator, Niles, IL, 1995.
- Portland Energy Conservation Inc., review of O&M manual, Portland, OR, 1995.
- Wisconsin Public Utility Commission, Support Work and Written Testimony Prepared for Wisconsin’s Environmental Decade, Madison, WI, 1994 – 1995.
- Paperback Software Company, beta-tester for VP-planner, and VP-expert, Berkeley, CA, 1987 – 1989.
- The Bailey Company (DBA: Arby’s), 57 store Restaurant Automation Project, through Management Information Support, Lakewood, CO, March 1987 – March 1988.
- The Bailey Company (DBA: Arby’s), 57 store Utility Monitoring Project (UMPIRE), through Management Information Support, Lakewood, CO, March 1987 – March 1988.
- U.S. Department of Energy, Office of Administrative Services, development of a microcomputer utility energy use monitoring and forecasting program, 1987.
- Rockwell International, engineering software and DOE-2 support work, Rocky Flats Plant, Golden, CO, 1983 – 1987.
- Nathan Thompson, energy conservation analysis and passive solar design of private residence, Boulder, CO, 1986.
- Jeff S. Haberl and Associates, development and sale of DOE-2 Video and Training Manual, Boulder, CO, 1985 – present.
- John McKnight, passive solar design and construction of private residence, Broomfield, CO, 1985.
- Jan F. Kreider and Associates, software support for fluids engineering textbook, Boulder, CO, 1985.
- Norris Getty, design of passive solar heating system for private residence, Lakewood, CO, 1985.
- Charles Metz, design of active and passive solar systems for private residence, Idaho Springs, CO, 1984.
- Amber Enterprises, analysis and repair of an active solar system on an apartment complex, Dillon, CO, 1984.
- Frank J. Haberl, design and installation of active solar retrofit system for a private residence, Golden, CO, 1983.
- The Bailey Company (DBA: Arby’s), energy conservation analysis of restaurants, Denver, CO, 1982.
- Swanson Rink and Associates, solar and energy conservation design and analysis, Denver, CO, 1981.
- Robert Nelson, design and construction of passive solar design for private residence, Breckenridge, CO, 1979.