

# Research Publications by Renewable and Clean Energy Students

2008 - 2016

## 2016

Schuessler, R., Ising, M., Kelley, D., Sturtevant, K., Valigosky, Z., Choi, J. and Kissock, J.K., 2016, "Sustainable Manufacturing for Mid-Sized Manufacturers", Industrial Energy Technology Conference, New Orleans, LA, May 25-26.

Tukur, A., Hallinan, K. and Kissock, K., 2016, "Energy Savings from Robust Control of Static Pressure Based upon Zonal Occupancy", ACEEE Summer Study on Energy Efficiency in Buildings, Asilomar, CA, August 2016.

Amin, M. and Kissock, K., 2016, "Dynamic Modeling And Verification Of An Energy Efficient Greenhouse With An Aquaponic System", ASME International Conference on Energy Sustainability, Charlotte, NC, June 2016.

Bodhanker, P., Bradish, A., Schuetz, M. and Kissock, K., 2016, "Design And Performance Improvement Of Mirror Augmented Photovoltaic Systems", ASME International Conference on Energy Sustainability, Charlotte, NC, June 2016.

Gopalakrishnan, V., Brogan, A., Valigosky, Z. Sturtevant, K Kissock, K, 2016, "Improving Variable Speed Pumping Control to Maximize Savings", ASHRAE Transactions.

Choi, J., Kelley, D., Murphy, S., Thangamani, D., 2016, "Economic and Environmental Perspectives of End-of-Life Ship Management", Resource, Conservation, and Recycling, 107, pp. 82-91.

Choi, J., Bakshi, B.R., Hubacek, K., Nader, J., 2016, "A sequential input-output framework to analyze the economic and environmental implications of energy policies: Gas taxes and fuel subsidies", Applied Energy, doi:10.1016/j.apenergy.2016.05.033.

Razai,A., Hallinan, K. P., Brecha, R. J., "A Clean Energy Utility for Multifamily Housing in a Deregulated Energy Market," *To appear in Energy and Buildings*.

Alrobaian, A., Hallinan, K. P., Brecha, R. J. (2016)., *Multi-Spectral Remote Thermal Imaging of Building Envelopes*. Honolulu, Hawaii: The First Pacific Rim Thermal Engineering Conference Date of Conference.

Alshatshati, S., Hallinan, K. P., Brecha, R. J. (2016), *Estimating Envelope Thermal Characteristics from Single Point in Time Thermal Images*. Charlotte, NC: ASME 2016 10th International Conference on Energy Sustainability.

Al Tarhuni, B., Naji, A., Hallinan, K. P., Brecha, R. J. (2016), *Predicting Residential Energy Savings Using Known Energy Characteristics and Historical Energy Consumption*. Charlotte, NC: ASME 2016 10th International Conference on Energy Sustainability Sustainable Building Energy Systems.

Aldaouab,I., Daniels, M., and Hallinan, K.P., 2016, *Renewable Energy Micro-Grid Optimization for Mixed Use Buildings*, 4th IEEE Global Conference on Signal & Information Processing, December 7-9, 2016, Greater Washington, D.C.

## 2015

Ershad, M., Brecha, R. and Hallinan, K., "Analysis of Solar Photovoltaic and Wind Power Potential in Afghanistan", Renewable Energy, 2015

Ma, Y., Tukur, A., and Kissock, K., 2015, "Energy Efficient Static Pressure Reset in VAV Systems", ASHRAE Transactions, CH-15-010.

Choi, J., Thangamani, D., and Kissock, K., 2015, Enhancing Industrial Sustainability by Improving Resource Efficiency, ACEEE Summer Study on Energy Efficiency in Industry, August 2015, Buffalo NY.

Gopalakrishnan, V., Brogan, A. Das, R., Kissock, K, Chase, D., 2015, Are Your Variable Speed Pumping Applications Delivering The Predicted Savings? Improving Control to Maximize Results, ACEEE Summer Study on Energy Efficiency in Industry, August 2015, Buffalo NY.

Choi, J., Hallinan, K., Kissock, K, and Brecha, R., 2015, Economic And Environmental Impacts Of Energy Efficiency Investment On Local Manufacturers, Proceedings of the ASME 2015 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, August 2-5, 2015, Boston, Massachusetts, USA, DETC2015-46180.

Murphy, S. and Kissock, K., 2015, Simulating Energy Efficient Control of Multiple-Compressor Compressed Air Systems, Industrial Energy Technology Conference, New Orleans, LA, May.

Villoria-Siegert, R., Brodrick, P., Hallinan, K. and Brecha, R.J., 2015, "Cost-Availability Curves for Hierarchical Implementation of Residential Energy-Efficiency Measures", Energy Efficiency 8 267-279  
DOI: 10.1007/s12053-014-9291-5

## 2014

Choi, J.-K., A. Morrison, K.P. Hallinan, and R.J. Brecha. 2014. "Economic and environmental impacts of community-based residential building energy efficiency investment". Energy. dx.doi.org/10.1016

Roman, V.-S., B. Phil, K.P. Hallinan, and R.J. Brecha. 2014. "Cost-availability curves for hierarchical implementation of residential energy-efficiency measures", J. of Energy Efficiency: 1-14.  
link.springer.com/article/10.1007%2Fs12053-014-9291-5

Pohlman, D., Qayyum, A., Parker, S. and Kissock, K., 2014, "Staging Packaged Air Conditioning Units To Improve Energy Efficiency And Humidity Control By Reducing Cycling Losses", ASHRAE Transactions, SE-14-004.

Choi, J-K, Morrison, A., Hallinan, K., Brecha, R. J., 2014, "Economic and Environmental Impacts of Community-Based Residential Building Energy Efficiency Investment", Energy 78, no. 15: 877-886.

Alshatshati, S., Hallinan, K. P., Brecha, R. J. (2014), *Community Scale Prediction of Building R-Value and Mass Density from Single Point in Time Thermal Images* (2014th ed.). Pacific Grove, CA: ACEEE Summer Study on Energy Efficiency in Buildings.

Raziei, A., Hallinan, K. P., Brecha, R. J. (2014)., *Energy Cost Optimization for System with both Solar Energy and Conventional Energy Production and Energy Storage, and Real Time Pricing*. Washington, DC: IEEE- Innovative Smart Grid Technologies 2014. ieee-isgt.org/

Brecha, R. J., Hallinan, K. P., Kissock, J. K., Villoria-Siegert, R., Phil, B., Austin, M., "Targeting Residential Energy Reduction for City Utilities Using Historical Utility and Building Data," NCSE, Washington, DC. (February 1, 2014)

## 2013

Schubert, T., and K.P. Hallinan. 2013. Improving the efficiency of Stirling engines for use in distributed electricity, heating, and cooling. ASME 7th International Conference on Energy Sustainability, ESFuelCell2013-18093, in Minneapolis, Minnesota.

Mohammed, A.Q., Wenning, T., Sever, F. and Kissock, K., 2013, "Energy Efficient Operation of Ammonia Refrigeration Systems", *ASHRAE Transactions*, DE-13-019.

Kissock, K., Selvacanabady, A., Raghavan, N., 2013, "Simplified Model For Ground Heat Transfer From Slab-On-Grade Buildings", *ASHRAE Transactions*, DE-13-041.

Raffio, T., Abels, B., Zhang, H. and Kissock, K, 2013, "Integrated Systems Plus Principles Approach and Energy Efficiency Guidebook", *ACEEE Summer Study on Energy in Industry*, Niagara Falls, NY, July 23-26.

Pohlman, D., Smith, J., Bu, J., and Kissock, K., 2013, "Net-Zero Carbon Manufacturing At Net-Zero Cost", *ACEEE Summer Study on Energy in Industry*, Niagara Falls, NY, July 23-26.

Mohammed, A.Q., Wenning, T., Sever, F. and Kissock, K., 2013, "Energy Efficient Design Retrofit and Control of Evaporative Condensers in Ammonia Refrigeration Systems", *ACEEE Summer Study on Energy in Industry*, Niagara Falls, NY, July 23-26.

Nagabhairava, M., Ma, Y. and Kissock, K., 2013, "Economic Analysis of Solar PV and Batteries for Common Residential Electricity Rate Structures using Green Button Data", ES-FuelCell2013-18248, ASME 7<sup>th</sup> International Conference on Energy Sustainability, July 14-19, 2013, Minneapolis, MN, USA

Winter, B. Louco, L, Kissock, K. Mariadass, P. and Daniels, M., 2013, "Design And Construction Of A Solar Thermal Refrigeration System For Patna, India", ES-FuelCell2013-18243, ASME 7<sup>th</sup> International Conference on Energy Sustainability, July 14-19, 2013, Minneapolis, MN, USA.

## 2012

Monn, J., Raffio, T. and Kissock, K., 2012, "Energy Efficient Mechanical Press and Hydraulic System Operation", *Society of Automotive Engineers World Congress and Exposition*, 2012-01-0326, Detroit, MI, April 16-19.

Kevin Hallinan, Harvey Enns, Stephenie Ritchey, Phil Brodrick, Nathan Lammers, Nichole Hanus, Mark Rembert, Tony Rainsberger, 2012, *Energy Information Augmented Community-Based Energy Reduction*. Sustainability 12/2012; 4(7-7):1371-1396. DOI:10.3390/su4071371

## 2011

Chiasson, A.D., and O'Connell, A. 2011. New analytical solution for sizing vertical borehole ground heat exchangers in environments with significant groundwater flow: parameter estimation from thermal response test data. HVAC&R Research 17(6): 1000-1011.

Hallinan, K. P., Brodrick, P., Northridge, J., Kissock, J. K., Brecha, R. J., 2011, "Establishing Building Recommissioning Priorities and Potential Energy Savings from Utility Energy Data", *ASHRAE Transactions*, ML-11-003.

Abels, B. and Kissock, K., 2011, "Optimizing Compressed Air Storage for Energy Efficiency", *SAE International Journal of Materials and Manufacturing*, June.

Lammers, N., Kissock, K., Abels, B. and Sever, F., 2011, "Measuring Progress with Normalized Energy Intensity", *SAE International Journal of Materials and Manufacturing*, June.

Sever, F., Kissock, K., Brown, D., Mulqueen, S., 2011, "Estimating Industrial Building Energy Savings using Inverse Simulation" *ASHRAE Transactions*, ASHRAE2011-86073.

Jochum, M., Murugesan, G., Kissock, K., Hallinan, K., 2011 "Low Exergy Heating and Cooling In Residential Buildings" Proceedings of ASME Energy Sustainability Conference, ESFuelCell2011-54671, August 7-10, Washington, DC USA.

Abels, B., Sever, F., Kissock, K. and Ayele, D., "Understanding Industrial Energy Use through Lean Energy Analysis, *SAE 2011 World Congress*, Detroit, MI, April 12-14, 2011

Sever, F., Kissock, K., Brown, D., and Mulqueen, S., "Estimating Industrial Building Energy Savings using Inverse Simulation", ASHRAE 2011-86073, Las Vegas, NM, Jan 29-Feb 2, 2011.

Brecha, R.J., Mitchell, A., Hallinan, K., Kissock, K., 2011 "Prioritizing Investment in Residential Energy Efficiency and Renewable Energy – A Case Study for the US Midwest" *Energy Policy* 39 2982-2992

Minor, J. and Hallinan, K. *ML-11-C006 Renewable Energy Design and Performance of LEED EB Platinum Building for Zero Energy Performance*. ASHRAE Transactions 01/2011; 117(2):43; ASHRAE Summer Conference, Montreal, Canada.

Brecha, R., Mitchell, A. Hallinan, K., and Kissock, K., 2011, *Targeting Residential Energy Reduction for City Utilities Using Historical Electrical Utility Data and Readily Available Building Data*. ASHRAE Transactions 01/2011; 117(2):577.

## **2010**

Carpenter, K., Kissock, J.K., Seryak, J. and Moray, S., 2010. "Profiling and Forecasting Daily Energy Use with Monthly Utility-Data Regression Models", *ASHRAE Transactions*, AB-10-026, TRNS-00110-2009.R2, June.

Trombly, D. and Kissock, K., 2010, "How Building Assessment Centers Can Leverage the Success of the Industrial Assessment Centers to Train the Next Generation of Efficiency Experts", ACEEE Summer Study on Energy Efficiency in Buildings, August 17–22, 2010, Pacific Grove, California.

Ahmad, F., Komp, R., Ahmad, I. and Kissock, K., 2010, "Photovoltaic Module Assembly As Appropriate Technology In Pakistan", *ASME International Conference on Energy Sustainability*, Phoenix, AZ, May 17-22.

## **2009**

Wenning, T. and Kissock, K., 2009, "Methodology For Preliminary Assessment Of Regional Wind Energy Potential", *ASME International Solar Energy Conference*, Long Beach, CA, June 27-30.

## 2008

Kissock, K. and Mulqueen, S., 2008, "Targeting Energy Efficiency Programs Using Advanced Billing Analysis", ACEEE Summer Study on Energy Efficiency in Buildings, August 17–22, 2008, Pacific Grove, California.

Carpenter, K., Kissock, K., Schmidt, C., 2008, "Common Boiler Excess Air Trends and Strategies to Optimize Efficiency", ACEEE Summer Study on Energy Efficiency in Buildings, August 17–22, 2008, Pacific Grove, California.

Kissock, J.K. and Eger, C., 2008, "Measuring Industrial Energy Savings", *Journal of Applied Energy*, Vol. 85, Issue 5, pp. 347-361, May.

Eger, C. and Kissock, K., 2008, "Guiding Industrial Energy Management by Measuring Savings from Energy-Efficient Practices", *Society of Automotive Engineers 2007 Transactions, Journal of Materials and Manufacturing*, 2007-01-1336, August.