

## References

- [1] C. Balough. Privacy implications of smart meters. *Chicago-Kent Law Review*, 86(1), 2011.
- [2] Robert S. Brewer. The Kukui Cup: Shaping everyday energy use via a dorm energy competition. In *Proceedings of the CHI 2011 Workshop on Everyday Practice and Sustainable HCI*, Vancouver, Canada, May 2011.
- [3] Robert S. Brewer. *Fostering Sustained Energy Behavior Change And Increasing Energy Literacy In A Student Housing Energy Challenge*. PhD thesis, University of Hawaii, Department of Information and Computer Sciences, March 2013.
- [4] Robert S. Brewer. Three shifts for sustainable HCI: Scalable, sticky, and multidisciplinary. In *Proceedings of the CHI 2014 Workshop "What have we learned? A SIGCHI HCI & Sustainability community workshop"*, Toronto, Canada, April 2014.
- [5] Robert S. Brewer and Philip M. Johnson. WattDepot: An open source software ecosystem for enterprise-scale energy data collection, storage, analysis, and visualization. In *Proceedings of the First International Conference on Smart Grid Communications*, pages 91–95, Gaithersburg, MD, October 2010.
- [6] Robert S. Brewer, George E. Lee, and Philip M. Johnson. The Kukui Cup: a dorm energy competition focused on sustainable behavior change and energy literacy. In *Proceedings of the 44th Hawaii International Conference on System Sciences*, pages 1–10, January 2011.
- [7] Robert S. Brewer, George E. Lee, Yongwen Xu, Caterina Desiato, Michelle Katchuck, and Philip M. Johnson. Lights Off. Game On. The Kukui Cup: A dorm energy competition. In *Proceedings of the CHI 2011 Workshop on Gamification*, Vancouver, Canada, May 2011.
- [8] Robert S. Brewer, Yongwen Xu, George E. Lee, Michelle Katchuck, Carleton A. Moore, and Philip M. Johnson. Energy feedback for smart grid consumers: Lessons learned from the Kukui Cup. In *Proceedings of Energy 2013*, pages 120–126, March 2013.
- [9] Robert S. Brewer, Yongwen Xu, George E. Lee, Michelle Katchuck, Carleton A. Moore, and Philip M. Johnson. Three principles for the design of energy feedback visualizations. *International Journal On Advances in Intelligent Systems*, 3 & 4(6):188–198, 2013.
- [10] US Census Bureau. Computer and internet access in the United States (2012). <https://www.census.gov/hhes/computer/publications/2012.html>, 2012.
- [11] George Church. The personal genome project. *Molecular Systems Biology*, 1(1), 2005.
- [12] Sophie Cocke. Want solar panels? You may have to pay HECO thousands in studies. <http://www.civilbeat.com/articles/2012/02/09/14771-want-solar-panels-you-may-have-to-shell-out-to-heco/>, February 2012.
- [13] Sophie Cocke. HECO says residents with solar aren't paying their fair share of costs. <http://www.civilbeat.com/articles/2013/07/11/19488-heco-says-residents-with-solar-arent-paying-their-fair-share-of/>, July 2013.
- [14] Hawaiian Electric Company. Locational value map. <http://www.hawaiielectric.com/portal/site/heco/lvmsearch>, 2014.

- [15] Sarah Darby. The effectiveness of feedback on energy consumption: A review of the literature on metering, billing and direct displays. Technical report, Oxford University Environmental Change Institute for UK Department for Environment, Food and Rural Affairs, April 2006. <http://www.eci.ox.ac.uk/research/energy/downloads/smart-metering-report.pdf>.
- [16] D. Dorr. National Power Laboratory power quality study based on 600 site-months. In *14th International Telecommunications Energy Conference*, October 1992.
- [17] Wade Elston. Don't trust HECO to manage solar energy use. <http://www.staradvertiser.com/s?action=login&f=y&id=227019421>, October 2013.
- [18] Enrique Estelles-Aroles and Fernando Gonzales-Ladron de Guevara. Towards an integrated crowdsourcing definition. *Journal of Information Science*, 38(2), 2012.
- [19] Joseph Eto and Kristina LaCommare. Tracking the reliability of the U.S. power system: an assessment of publicly available information reported to state public utility commissions. LBNL-1092E, Environment Energy Technologies Division, Lawrence Berkeley National Laboratory, 2008. <http://certs.lbl.gov/pdf/lbnl1092e-puc-reliability-data.pdf>.
- [20] Ahmad Faruqui, Sanem Sergici, and Ahmed Sharif. The impact of informational feedback on energy consumption: A survey of the experimental evidence. *Energy*, 2009.
- [21] S. Fatemi, A. Kuh, and M. Fripp. Online and batch methods for solar radiation forecasting under asymmetric cost functions. *to appear in: IEEE Transactions on Neural Networks and Learning Systems*, 2014.
- [22] Ben Foster and Susan Mazur-Stommen. Results from recent real-time feedback studies. Technical Report Technical Report B122, American Council for an Energy-Efficient Economy (ACEEE), February 2012.
- [23] Matthias Fripp. Switch model (website). <http://sourceforge.net/projects/switch-model/>, 2012.
- [24] F. Gao, J. Thorp, A. Pal, and S. Gao. Dynamic state prediction based upon auto-regressive (AR) model using PMU data. In *Power and Energy Conference at Illinois*, 2012.
- [25] Bill Hammack. *Why engineers need to grow a long tail*. Articulate Noise Books, 2010.
- [26] Kukui Cup home page. <http://kukuicup.org>.
- [27] Makahiki home page. <http://makahiki.io>.
- [28] Philip Johnson. Results of the g1 pilot study. <http://openpowerquality.org/technology/g1-pilot-study.html>.
- [29] Philip Johnson. Open power quality (github). <https://github.com/openpowerquality>, 2013.
- [30] Philip Johnson. Open power quality (website). <https://openpowerquality.org>, 2013.
- [31] Philip M. Johnson, Yongwen Xu, Robert S. Brewer, Carleton A. Moore, George E. Lee, and Andrea Connell. Makahiki+WattDepot: An open source software stack for next generation energy research and education. In *Proceedings of the 2013 Conference on Information and Communication Technologies for Sustainability (ICT4S)*, February 2013.

- [32] Jim Kennerly and Autumn Proudlove. Going solar in america: Ranking solar's value to consumers in America's largest cities. Technical report, North Carolina Clean Energy Technology Center, February 2015.
- [33] Power Standards Lab. PQube electric power measurement instrument. <http://www.powerstandards.com/PQube.php>, 2013.
- [34] Kristina LaCommare and Joseph Eto. Understanding the cost of power interruptions to U.S. electricity consumers. LBNL-55718, Environment Energy Technologies Division, Lawrence Berkeley National Laboratory, September 2004. <http://certs.lbl.gov/pdf/55718.pdf>.
- [35] S. Laskar and M. Mohibullah. Power quality issues and need of intelligent PQ monitoring in the smart grid environment. *International Journal of Emerging Technology and Advanced Engineering*, 2(9), September 2012.
- [36] George E. Lee, Yongwen Xu, Robert S. Brewer, and Philip M. Johnson. Makahiki: An open source game engine for energy education and conservation. Technical Report CSDL-11-07, Department of Information and Computer Sciences, University of Hawaii, Honolulu, Hawaii 96822, January 2012.
- [37] Z. Liu and M. Ilic. Toward PMU-based robust automatic voltage control and automatic flow control. In *IEEE Power and Energy Society General Meeting*, 2010.
- [38] Penn Markham. *Data Mining and Machine Learning Applications of Wide-Area Measurement Data in Electric Power Systems*. PhD thesis, University of Tennessee, 2012.
- [39] A. Moreno-Munoz and J. de la Rosa. *Electronic loads and power quality*. Springer, 2007.
- [40] National Energy Technology Laboratory. The modern grid strategy: Characteristics of the modern grid. [http://www.netl.doe.gov/moderngrid/opportunity/vision\\_characteristics.html](http://www.netl.doe.gov/moderngrid/opportunity/vision_characteristics.html), 2008.
- [41] Sergey Negrashov. Opqbox2. <http://openpowerquality.org/opqbox2/>.
- [42] Jonathan Rodriguez and Gavin Saldanha. No harmony in harmonics. Eaton Power Systems White Paper, [http://www.eaton.com/ecm/idcplg?IdcService=GET\\_FILE&allowInterrupt=1&RevisionSelectionMethod=LatestReleased&Rendition=Primary&dDocName=WP10-03](http://www.eaton.com/ecm/idcplg?IdcService=GET_FILE&allowInterrupt=1&RevisionSelectionMethod=LatestReleased&Rendition=Primary&dDocName=WP10-03), January 2010.
- [43] Greg Rouse and John Kelly. Electricity reliability: Problems, progress, and policy solutions. Technical report, Galvin Electricity Initiative, February 2011. [http://www.galvinpower.org/sites/default/files/Electricity\\_Reliability\\_031611.pdf](http://www.galvinpower.org/sites/default/files/Electricity_Reliability_031611.pdf).
- [44] AC Scout. AC scout. <http://www.acscout.com>, 2013.
- [45] Mark Stephens. Power quality standards: Cbema, itic, semi f47, iec 61000-4-11/34. <https://www.sceg.com/docs/librariesprovider5/pdfs/powerqualitystandards.pdf>.
- [46] A. von Meier. Micro-synchrophasers for distribution systems. <http://pqubepmu.com/about.php>, 2013.
- [47] A. von Meier, D. Culler, A. McEachern, and R. Arghandeh. Micro-synchrophasers for distribution systems. In *IEEE Innovative Smart Grid Technologies Conference*, 2014.
- [48] WattDepot home page. <http://wattdepot.googlecode.com/>.
- [49] Wikipedia. Internet of Things. [http://en.wikipedia.org/wiki/Internet\\_of\\_Things](http://en.wikipedia.org/wiki/Internet_of_Things).

- [50] X.Liu, L. Ying, Z. Liu, Z. Huang, Y. Miao, Q. Jiang, and W. Chen. A novel fast transient stability prediction method based upon PMU. In *Power and energy society*, 2009.
- [51] Yongwen Xu, Philip M. Johnson, Carleton A. Moore, Robert S. Brewer, and Jordan Takayama. SGSEAM: Assessing serious game frameworks from a stakeholder experience perspective. In *Proceedings of the First International Conference on Gameful Design, Research, and Applications (Gamification 2013)*, October 2013.
- [52] Alan Yonan. Solar saturation could mean new HECO charges. <http://www.staradvertiser.com/s?action=login&f=y&id=222652251&id=222652251>, September 2013.
- [53] P. Zhang, J. Chen, and M. Shao. Phasor measurement unit implementation and applications. Technical report, Electric Power Research Institute, November 2007.
- [54] Y. Zhang and P. Markham. Wide-area frequency monitoring network (FNET) architecture and applications. *IEEE Transactions on the Smart Grid*, 1(2), September 2010.
- [55] W. Zhao, X. Chen, Y. Cao, and M. Peng. A novel method of fault diagnosis based on synchronized phasor measuring and flow fingerprint identification technology. In *International Conference on Sustainable Power Generation and Supply*, 2009.
- [56] Ira Zunin. Outcry over new solar rules putting pressure on HECO. <http://www.staradvertiser.com/s?action=login&f=y&id=228436641>, October 2013.