Simi Hoque, P.E.

Associate Professor
Architectural Engineering
Drexel University
Philadelphia PA 19104
215.895.2254
sth55@drexel.edu

Education

Ph.D. (2006)	Design Methods & Theories Department of Architecture University of California, Berkeley CA Graham Foundation Carter Manny Honoree Supervisor: Yehuda Kalay
M.Arch. (2003)	First Professional Design degree Department of Architecture University of California, Berkeley CA Supervisor: Yehuda Kalay and Greig Crysler
M.S. (1997)	Computational Analysis Department of Civil Engineering Carnegie Mellon University, Pittsburgh PA National Science Foundation Graduate Fellow Mellon Scholar Major Advisor: Sunil Saigal
B.A. (1996)	Civil Engineering Department of Civil and Environmental Engineering Johns Hopkins University Beneficial Hodson Scholar J. Trusman Scholar Major Advisor: James Cox

Professional Employment

2016-present	Associate Professor with tenure Dept. of Civil, Architectural, and Environmental Engineering Drexel University, Philadelphia PA
2008-2016	Assistant Professor in Building Systems Department of Environmental Conservation University of Massachusetts-Amherst MA
2006-2008	Lecturer, Design Studio and Research Methods Department of Architecture Massachusetts Institute of Technology, Cambridge MA
2005-2008	Mechanical Engineer (Mechanical, Electrical, and Plumbing Systems) Norian-Siani Engineering, Inc., West Concord MA
2003-2005	Intern Architect and Engineering Consultant ▪ Ruhl-Walker Architects, Boston, MA ▪ Neshamkin-French Architects, Charlestown, MA ▪ EndresWare Architects and Engineers, Berkeley, CA
1997-1999	Mechanical Engineer (Electro-Thermal Analysis Group) Ansys, Inc., Canonsburg, PA

Research and Scholarly Achievements

My research focuses on the development and application of computational methods and tools to reduce building energy and environmental impacts.

Student co-authors underlined.

Books and Book Chapters [2]

1. **Hoque, S.** (2010). *Borrowers, Bricoleurs, and Builders.* Germany: Lambert Academic Publishing.
2. **Hoque, S**. (2007). Transculturation and Translation. In J. Wampler (Ed.), *Conversations about the Design Process* (pp. 48-51), Cambridge, MA: MIT.

Refereed Journal Articles, published or in press [20]:

20. Farzinmoghadam, M., Mostafavi, N., Hamin, E., and **Hoque S.** (TBA). Developing an automated method for the application of LIDAR in IUMAT Land-use Model: Analysis of land-use changes using building form parameterization, GIS, and Artificial Neural Networks. Submitted to *Journal of Green Building*.
19. Mostafavi, N., Gandara, F., and **Hoque, S.** (2018). Predicting Water Consumption from Energy Data: Modeling the residential energy and water nexus in the Integrated Urban Metabolism Analysis Tool (IUMAT). *Energy and Buildings*. 158, 1683-1693.
18. Mostafavi, N., Shojaei, H.R., Beheshtian, A., and **Hoque, S.** (2018). Residential Water Consumption Modeling in the Integrated Urban Metabolism Analysis Tool (IUMAT). *Resources, Conservation, and Recycling*. 131, 64-74.
17. Mostafavi, N., Farzinmoghadam, M., and **Hoque, S.** (2017). Urban Residential Energy Consumption Modeling in the Integrated Urban Metabolism Analysis Tool (IUMAT). *Building and Environment*. 114(0), 429-442.
16. **Hoque, S.** and Weil, B. (2016). The relationship between comfort perceptions and academic performance in university classroom buildings. *Journal of Green Building*, 11(1), 108-117.
15. **Hoque, S.** and Iqbal, N. (2015). Building to Net Zero in a Developing World. *Buildings*, 5(1), 56-68.
14. Mostafavi, N., Farzinmoghadam, M., and **Hoque, S.** (2014). A Framework for Integrated Urban Metabolism Analysis Tool (IUMAT). *Building and Environment*, 82(0), 702-712.
13. Beauregard, S., **Hoque, S.**, Fisette, P. and Weil, B. (2014). Is Boston Building Better: An evaluation of green building policy. *Journal of Green Building*, 9(3), 131-150.
12. Mostafavi, N., Farzinmoghadam, M., and **Hoque, S.** (2013). Envelope Retrofit Analysis using eQuest, IESVE Revit Plug-in and Green Building Studio: a University Dormitory Case Study. *International Journal of Sustainable Energy*, 1-20.
11. Mostafavi, N., Farzinmoghadam, M., **Hoque, S.**, and Weil, B. (2013). Integrated Urban Metabolism Analysis Tool (IUMAT). *Urban Policy and Research*, 1-17.

10. Krem, M., **Hoque, S.**, Arwade, S., and Breña, S. (2013). Structural Configuration and Building Energy Performance. *Journal of Architectural Engineering,* 19(1), 29-40.
9. **Hoque, S.** (2012). Building Energy Simulation Tools for Retrofitting Residential Structures. *Energy Engineering*, 109(3), 53-74.
8. **Hoque S.**, Webb, J., and Danylchuk, A. (2012). Building Integrated Aquaculture: can holistic designs increase

system efficiencies and make recirculating aquaculture more successful in the northeastern United States? *ASHRAE Journal*, 54(2), 16-24.

The February 2012 feature article and cover material for the ASHRAE Journal (publication #9) examines the ways that aquaculture processes and building HVAC systems can be integrated to maximize energy efficiency and optimize operations.

7. Damery, D., Webb, J., Danylchuk, A., and **Hoque, S.** (2012). Natural Systems in Building Integrated Aquaculture. In S. Hernandez and C.A. Brebbia (Eds.), *Design and Nature VI* (pp. 87-93), Southampton, UK: WIT Press.
6. Fiocchi, C., Shahadat, M., and **Hoque, S.** (2011). Climate Responsive Design and the Milam Residence. *Sustainability,* 3, 2289-2306.
5. Beauregard, S., Berkland, S., and **Hoque, S.** (2011). Ever Green: A Post-Occupancy Building Performance Analysis of LEED Certified Homes in New England. *The Journal of Green Building,* 6(4), 138-145.
4. **Hoque, S.** (2010). Zero Energy Homes in New England: An Evaluation of Two Homes in the Northeastern United States. *The Journal of Green Building*, 5(2), 79-90.
3. Reed, T., Clouston, P., **Hoque, S.**, and Fisette, P. (2010). An Analysis of LEED and BREEAM Assessment Methods for Educational Institutions. *Journal of Green Building,* 5(1), 132-154.
2. **Hoque, S.** and Sharma, A. (2009). Tools for sustainable development: A comparison of building performance simulation packages. In C.A. Brebbia, N. Jovanovic, & E. Tiezzi (Eds.), *Management of Natural Resources, Sustainable Development and Ecological Hazards II* (pp. 53-64), Southampton, UK: WIT Press.
1. **Hoque, S.** and Moore, E. (2009). Floodspace: Case Studies in Adapting to Climate Change-Related Flooding in Bangladesh. *International Journal of Climate Change,* 1(2), 27-36.

Refereed Conference Proceedings, published or submitted [17]

17. Mostafavi, N. and Hoque, S. (2018) Spatial Development and Energy Consumption Patterns: Investigating the Relationship between Urban Density and Building Energy Use. *National Conference for the Association of Collegiate Schools of Planning*, Buffalo NY, Oct. 25-28, 2018.
16. Yassaghi, H. and **Hoque, S.** (2018). Optimal Strategy Performance of a new Solar Combined Cooling, Heating, and Power System for Small Residential Buildings. *2018 Building Performance Analysis Conference and SimBuild co-organized by ASHRAE and IBPSA-USA,* Chicago, IL, September 26-28, 2018.
15. **Hoque, S.** and Shams-Amiri, S. (2017). Green Building: A Case for Bangladesh*? Proceedings for ASCE – International Conference on Sustainable Architecture*, New York City, Oct. 26-28, 2017.
14. Krem, M., **Hoque, S.,** and Arwade, S. (2015). Quantifying the impact of passive design on high rise buildings. *Proceedings for Architectural Research Centers Consortium/Future of Architectural Research*, ARCC 2015 Conference, Chicago, IL.
13. Krem M., Breña S., Arwade, S., **Hoque S.**, and Nurdeen, A. M. (2015). Concepts in the Design of Lateral-Load Systems in High Rise Buildings to Reduce Operational Energy Consumption. *Proceedings of the 18th International Conference on Composite Structures*, Lisbon, Portugal.
12. **Hoque, S.** and Weil, B. (2014). Cold Comfort: the cost of thermal comfort in Academia. *Proceedings for comfort and energy use in buildings*, Windsor Conference, Windsor, UK.
11. Fiocchi, C., Weil, B. and **Hoque, S.** (2014). Improving Accuracy of Building Energy

Modeling Simulation Programs with Weather Files Compensation Factors. *ASHRAE Transactions,* Vol. 120, pt. 2, ASHRAE Annual Conference, Seattle WA.

10. **Hoque, S**. (2013). Low Energy Design: An evaluation of a vacation home in Panama. *Proceedings of the BESS-SB13 Conference*. Cal-Poly, Pomona, CA: Building Enclosure Sustainability Symposium.
9. **Hoque, S.** and Griffith, K. (2013). Evolving Computational Design in the Architecture Studio: An examination of scripted creativity. *Proceedings of the 2013 BTES Conference: Tectonics of Teaching* A. Zarzycki and R. Dermody (eds.) Roger Williams University, Bristol, RI 97-106.
8. Krem, M., **Hoque, S.,** and Arwade, S. (2012). Effect of built form configuration on energy and structural performance of skyscraper buildings. *Proceedings of the Building Enclosure Science and Technology Conference*. Atlanta, GA: Nat. Inst. of Building Sciences.
7. Berkland, S. and **Hoque, S.** (2012). Lessons Learned: Outreach Efforts in Building Science Education. *Proceedings of the ACEEE 2012 Summer Study on Energy Efficiency in Buildings.* Washington, D.C.: American Council for an Energy-Efficient Economy.
6. Kingsley, R. and **Hoque, S.** (2011). Energy Retrofit Advocacy for Historical Structures. *ICSDC 2011: Integrating Sustainable Practices in the Construction Industry* by Chong & Hermreck (eds), Kansas City, Kansas, 482-487.
5. Fiocchi, C. and **Hoque, S.** (2011). Sustaining Modernity: An Analysis of a Modern Masterpiece, the Gropius House. *Proceedings for the 13th Canadian Conference on Building Science and Technology*, Winnipeg, Canada: NBEC, 12-24.
4. Beauregard, S., Berkland, S., and **Hoque, S.** (2010). Ever Green: A Post-Occupancy Evaluation of LEED Certified Homes. *REHVA World Clima 2010 Conference.* Turkey.
3. **Hoque, S.** (2009). An Evaluation of Two Net Zero Energy Case Study Homes in the Northeastern United States. *Proceedings for the International Seminar on Theorizing Sustainable Building Design.* August 12-13, Lancashire UK.
2. **Hoque, S.** (2009). Borrowers, Bricoleurs and Builders of Architecture. *Proceedings of the 25th National Conference on the Beginning Design Student,* 87-92.
1. Schreyer, A. and **Hoque, S.** (2009). Interactive Three-Dimensional Visualization of Building Envelope Systems Using Infrared Thermography and SketchUp." *Proceedings from the 2009 InfraMation Conference,* Las Vegas, Nevada.

Articles in Trade Journals [2]

1. Harb, R. and **Hoque, S.** (2009). No Fossil Fuels Here. *Northeast Sun,* 4, 14-17.
2. **Hoque, S.** (2008). "LEED certifiable vs. LEED certified" from www.greenerbuildings.com

Recent Selected Panels and Presentations [13]

1. Women in Sustainable Buildings Networking Conference, supported by the National Science Foundation, Dalian China, July 2018.
2. World Intellectual Property Day -- Powering Change: Women in Innovation and Creativity Panel Philadelphia PA, April 2018.
3. 5th Arab-American Frontiers of Science, Engineering, and Medicine Symposium, supported by the National Academy of Science, Rabat Morocco, November 2017.
4. Iceland School of Energy seminar on district energy, Reykjavik, Iceland, July 2017.
5. Green Infrastructure, Climate, and Cities Seminar series, lecture on urban resilience. Drexel University, April 2017.
6. Hoque, Simi. "Green building research." Dept. of Architecture Invited Symposium. University of Delaware, March 2017. Research lecture.

Table 1. Sponsored research and other awards ($1,811,262; 2008-present)

Project Title	**Dates**	**Investigators**[1]	**Supporting Agency**	**Amount**
International Workshop on Connecting Women Faculty in Sustainable Building Research	July 2018	J. Wen S. Hoque Zheng O'Neill Ming Qu Burcin Becerik-Gerber	National Science Foundation – CBET	$50,000
CAREER: Development of an Integrated Analytical Framework for Urban Sustainability	2016-2021	S. Hoque	National Science Foundation –CBET	$508,714
PFI-BIC: Utility Driven Smart Energy Services	2015-2018	P. Shenoy S. Hoque D. Irwin	National Science Foundation - IIP	$1M
College of Natural Science Teaching Grant	2015	S. Hoque	UMass	$1,250
(REU Supplement)II-New: A Programmable Data-Driven Testbed for Sustainable Build	2015	P. Shenoy S. Hoque D. Irwin	National Science Foundation	$8,000
Professional Development Flex Grant	2015	S. Hoque	UMass	$1,000
II-New: A Programmable Data-driven Testbed for Sustainable Building Research	2014-2017	P. Shenoy S. Hoque D. Irwin	National Science Foundation - CRI	$587,012
Research Flex Grant	2014	S. Hoque	UMass	$500
DoA MS-2: Measuring how buildings and construction materials affect energy in New England	2014-2017	S. Hoque B. Weil P. Clouston M. Kelty	US Dept. of Agriculture McIntire Stennis Experiment Station[2]	$150,000
MAEEI: Improved Energy Efficiency through Environmental Control	2015-2017	S. Hoque B. Weil H. Kim	MA Dept. of Energy Resources and UMass Energy Extension Initiative[3]	$40,000
DCR: Energy Impacts of Tree Removal in Massachusetts	2011-2012	B. Weil S. Hoque	MA Dept. of Conservation Resources	$10,000 *(initial)* + $20,000 *(follow-up)*
Research Flex Grant	2012	S. Hoque	UMass	$500
Building Energy Workshops for Low-Income Youth	2009-2011	S. Hoque	UMass Public Service Endowment Grant	$15,000
A Post-Occupancy Assessment of LEED Certified Homes	2008-2010	S. Hoque	UMass Healey Endowment Grant	$15,000
DoA MS-1: Post-Occupancy Assessment of Green Buildings	2008-2013	S. Hoque P. Fisette D. Damery A. Schreyer	US Dept. of Agriculture McIntire Stennis Experiment Station[2]	$250,000

[1] PI is listed first.

[2] The McIntire Stennis Experimental Station grant is a competitive internal process that awards funding to faculty in the College of Natural Science. Funding is variable, based on available allocations from the Dept. of Agriculture, but is typically used to fund equipment, graduate student stipends, and domestic travel for each co-Investigator listed on the grant.

TEACHING

In addition to teaching an average of 12 credits a year, I also supervise independent studies and practica, develop and present guest lectures on sustainable buildings, as well as advise and mentor approximately 30-35 undergraduate students each year.

Awards and Distinctions
University of Massachusetts Distinguished Teaching Award: Nomination 2009 and 2012
BTES Emerging Faculty Award: Nomination 2011

Table 2. Courses and descriptions

Course Name and Institution	Course Description
Architectural Engineering Design I & II Drexel University (2016-present)	Design and analysis of sustainable building systems, including architectural, structural, mechanical, electrical and plumbing systems. Requirement for all AE undergraduate students.
Building Physics 1 | Energy and Buildings, University of Massachusetts (2008-2016)	Design and analysis of sustainable buildings. Requirement for Architecture graduate students and for upper level BCT undergraduate students
Building Physics 3 | Environmental Control Systems and Lab, University of Massachusetts (2008-2016)	Design and analysis of mechanical and plumbing systems with eQuest modeling lab. Requirement for Architecture and Building Systems graduate students
Sustainable Indoor Environmental Systems | Introduction to MEP Systems, University of Massachusetts (2012-2016)	Fundamentals of sustainable MEP systems. Requirement for BCT and Architecture undergraduate students

Guest Lectures and Design Critiques

1. "Sustainability in the Built Environment." Guest lecture for CAEE 220, Drexel University.
2. "Powers of Ten in Research." Guest lecture for Dept. of Civil, Architectural, and Environmental Engineering, Drexel University [Faculty Friday Talks 2018]
3. "Responsive Facades." Guest Lecture for Intensive Study Abroad Design Workshop at Politecnico Milano, Lecco Italy. September 2017.
4. "Mega-Cities and Urban Sustainability." Guest lecture for BCT 150-The Built Environment (UMass-Amherst), 2008, 2010, 2012, and 2013.
5. "Research on Building Systems." Departmental Seminar for Environmental Conservation (UMass-Amherst), November 2010.
6. "Building Energy." Guest Lecture for Physics 118-Energy and Society (UMass-Amherst), October 2010.
7. Masters of Science Thesis. Critic for thesis presentations (MIT), May 2010. 12 students.
8. "The Principles of Green Building." Graduate student seminar for Civil Engineering (UMass-Amherst), May 2009.
9. 1st Year Undergraduate Design Studio. Critic for final architectural design review (Smith College), Northampton MA, December 2008.
10. "Buildings and the Environment." Guest lecture for NRC 100-Environment and Society (UMass-Amherst), December 2008.
11. 2nd Year Graduate Design Studio. Critic for urban design review (Rhode Island School of Design), Providence RI, October 2008.

Mentoring

Table 3. Graduate students who are my principal advisees

Name	Level	Matriculation Dates	Product
Hamed Yassaghi	Ph.D. (Drexel)	2016-present	Research/dissertation
Shideh Shams-Amiri	Ph.D. (Drexel)	2017-present	Research/dissertation
Nariman Mostafavi	Ph.D. (UMass)	2011-2016	Research/dissertation
Soroush Farzinmoghadam	Ph.D. (co-chair in Urban Planning, UMass)	2011-2016	Research/dissertation
L. Carl Fiocchi	Ph.D., UMass	2010-2016	Research/dissertation
Mohamed Krem	Ph.D. (co-chair in Civil Engineering, UMass)	Completed 2013	Research/dissertation
Sandy Beauregard	M.S. (thesis, UMass)	Completed 2013	Research/thesis
Emma Morzuch	M.S. (thesis, UMass)	Completed 2012	Research/thesis
Stephanie Berkland	M.S. (thesis, UMass)	Completed 2012	Research/thesis
Ryan Harb	M.S. (professional, UMass)	Completed 2010	Practicum

In addition to advising graduate and undergraduate students, I also supervise undergraduate and graduate students in research, independent study, and practicum projects that align with my research interests and goals.

Table 4. Student research, independent study, and practicum projects

Name	Project Description	Dates	Product
Daniel Bolton	Urban resilience	Summer 2018	Drexel Star Scholar research
Jonathan Napolitano	Embodied Energy in Historical Buildings- A Philadelphia Case Study	Summer 2017	Research Paper/publication
Mohamed El Shamy	Thermal Comfort in University Office Buildings	2015-2016	Data collection and analysis; publication
Andrew Graff	Practicum: Project Management for Sustainability	Fall 2015	10 page paper
Jasmine Abdollahi & Taylor Marrs	Thermal Comfort in University Classrooms	Spring 2015	Data collection
Timothy Bemis	Practicum: Project Management for Sustainability	Spring 2015	10 page paper
Patrick Duncan	Using Building Automation Software to Increase Energy Savings	Fall 2014	Honors undergraduate thesis
Rachel Kingsley	Deep Energy Retrofit of an historical Amherst Church	Spring 2011	10 page paper

Service

My service to my school, my profession, and my community has focused on energy issues and career development in the building industry. The objective of my service endeavors is threefold: to address core issues of sustainability in the built environment, employment, and STEM education.

Awards and Distinctions
Citation from the Office of the Mayor of Philadelphia: 2018
Girls Inc. of Philadelphia Honoree: 2018
UMASS Distinguished Service and Outreach Award: 2016
ACSA Best Practices in School-Based Community Outreach Programs: Recognition 2010

Outreach Presentations and Workshops
1. "Sustainability in the Built Environment." Presentation with field trip for Latin American environmental professionals at the Institute of Training and Development, Amherst, MA, October and May 2015, 2016.
2. "The Built Environment." Presentation about building impacts on the environment to Boston Tech High School, Amherst MA, October 2014.
3. "Building Sustainability." 2-day STEM workshop with field trip focusing on retrofitting historical buildings for improved performance to high school girls from Project Eureka! with Girls, Inc., Holyoke MA, July 2014.
4. "Green Buildings." 1-day STEM workshop focusing on the analysis and measurements for assessing building performance to middle school girls from Project Eureka! with Girls, Inc., Holyoke MA, July 2013. [Co-taught with Ben Weil]
5. "Green Building." Presentation to Latin American high school science and engineering students at the Institute of Training and Development, Amherst MA, September 2010.
6. "Engineering Sustainability." Panel member at the Society of Women Engineers Regional Meeting, Northampton MA 2009.
7. "Green Buildings, Clean Energy." Panel member at the Conference for Clean Energy Connections, Springfield MA, 2008.

Community Engagement and Outreach
Project Director, STEM University for Girls, with Girls Inc. and Drexel 2017-present
I am the principal program coordinator for a summer STEM education program for girls at Drexel in Philadelphia. I created, organized and manage a partnership with the non-profit organization Girls Inc. of Philadelphia to run a STEM University for Girls outreach program for middle school girls. The program aims to encourage middle school girls into STEM fields through workshops and field trips run by faculty and students. Every summer, I coordinate the instructors who participate in the program. In past two years of the program, I have recruited over 50 volunteers and helped organize the week long program for the 30 STEM scholars on campus.

Program Coordinator, Project Eureka! 2013-2016
I was the principal program coordinator for a STEM education program for girls at the UMass-Amherst Campus. I worked with the Deans for the UMass College of Natural Science, to organize and manage a long-term partnership with the non-profit organization Girls, Inc. to run Project Eureka!®. Eureka! aims to encourage middle and high school girls into STEM fields through workshops and field trips run by faculty and graduate students. Every summer, I coordinated the instructors who participate in the program. In the initial three years of the program, I recruited over 200 volunteers and helped organize the summer 4-week long program for the 60+ Eureka! scholars on campus. During the academic year, I

continued to work with Girls, Inc. of Holyoke and college administrators to ensure the success of the Eureka! program. This involved evaluations of the summer's workshops, planning and organizing a mid-year symposium to showcase the summer's work, recruiting new volunteers for the next summer, and ongoing weekend workshops with faculty and students.

Designer Selection Panel Academic Member, MassPort and DCAM, Boston 2012-2014
I was elected to a 15-person design panel for MassPort and DCAM, state agencies that manage and maintain public ports and infrastructural projects for the Commonwealth. My role in the panel is to review proposals for public design and construction contracts (between $1 to $10 million dollars) and to recommend (in a vote with the rest of the panel) who will get the contract.

Director, Green Building Training Program, Springfield 2009-2011
I collaborated with Putnam Vocational Technical High School (in Springfield) and the JFYNetworks (a Boston-based youth workforce training organization) to develop and deliver a semester-long training program about energy auditing and weatherization strategies that would be part of the vocational school's building construction "track". This work was funded through a UMass-Amherst Public Service Endowment Grant.

Project Director, Green Building Training Program, Springfield and Holyoke 2008-2010
I collaborated with two local non-profit organizations, YouthBuild-Holyoke and the Center for Ecological Technology to develop and deliver a 12-week green jobs training program that brings together students from UMass and low-income youth and community members to learn about the performance of energy systems in residential housing. The students in my workshops were predominantly African American, Latino, or Hispanic. I trained UMass students to co-teach the workshops.

Engineer Mentor, Future Cities Competition, Westfield Middle School 2008-2009
As an engineering mentor for the Future Cities competition, I met with middle-school students engaged over the year (once a month) to discuss their project and provide advice and guidance about how to make their city (simulation) sustainable.

Affiliations and Memberships
General Editor, the *Journal of Green Building*
Member, American Society of Civil Engineers
Member, Architectural Engineering Insitute
Member, Building Technology Educators Society
Member, Society of Building Science Educators
Associate Member, Am. Society of Heating, Refrigeration, and Air Conditioning Engineers
Member, Association of Energy Engineers
Member, Northeast Sustainable Energy Association
Member, Society of Women Engineers

Panel Member/Grant Reviewer
National Science Foundation 2014, 2015, 2016, 2017 (Panel reviewer)
NSERC of Canada 2013, 2015 (Panel reviewer)
American Council for an Energy Efficient Economy 2011 (Panel reviewer)
Department of Energy Conservation Block Grant 2010
Department of Energy EERE Conservation Grant 2010