



**WRITTEN TESTIMONY**

**CHARLES R. ZIMMERMAN, P.E.  
VICE PRESIDENT  
PROTOTYPE AND NEW FORMAT DEVELOPMENT  
WAL-MART STORES, INC.  
BENTONVILLE, ARKANSAS**

**ENERGY EFFICIENCY TECHNOLOGIES AND PROGRAMS**

**BEFORE THE UNITED STATES SENATE  
COMMITTEE ON COMMERCE, SCIENCE & TRANSPORTATION  
SUBCOMMITTEE ON SCIENCE, TECHNOLOGY & INNOVATION**

**THURSDAY, JUNE 21, 2007**

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Chairman Kerry, Ranking Member Ensign and distinguished Members of the Committee:

Wal-Mart Stores, Inc., thanks the Subcommittee for its work on this important issue and for holding this hearing today, and we appreciate the opportunity to participate in this critical discussion.

**BACKGROUND**

Wal-Mart is based in Bentonville, Arkansas. Our company employs approximately 1.3 million Associates from all 50 states and approximately 1.8 million Associates worldwide. Each week over 176 million customers worldwide choose to shop at Wal-Mart, which we feel reflects the success of our dedication to providing Every Day Low Prices to our customers. Wal-Mart does not just operate stores, clubs, and distribution centers in communities; we take a proactive stance in community involvement on a number of issues.

**PURPOSE OF HEARING AND WAL-MART’S ROLE**

The purpose of this hearing is to better understand the technologies and practices available today that increase energy efficiency and reduce greenhouse gas emissions. Wal-Mart is eager to share its information and experiences and we applaud the Committee for its interest in this important subject.

## WAL-MART'S POLICIES AND PROCEDURES

Wal-Mart takes a keen interest in the serious risks - and opportunities - of global climate change. More than two years ago our CEO Lee Scott announced that Wal-Mart would make "sustainability" an organizing principle for the company. In recognizing that climate change is among the greatest issues confronting our business, our customers, and our communities, he announced three goals for our company: to be supplied 100 percent by renewable energy; to create zero waste; and to sell products that sustain our resources and the environment. Since that time we have acted rapidly to become a cleaner, greener and more sustainable company. This past January we announced our support of the effort by the companies and organizations of the U.S. Climate Action Partnership (US-CAP), and endorsed the group's call for strong mandatory national policies and market-based programs for greenhouse gas reductions. Wal-Mart looks forward to working with Congress and the White House to enact meaningful legislation to slow, stop and reverse the growth of greenhouse gas emissions. To be clear, we take this position because we believe it is in the best interest of our customers, our employees, our stockholders and our nation to tackle this challenge. But we also believe that with the right policies, businesses large and small - from Wal-Mart, to our suppliers, to small businesses across the country - can save. We believe this because of what we are seeing every day as we undertake our aggressive sustainability agenda.

As part of this commitment, we intend to be the most energy efficient retailer in the world and we are working hard to achieve this commitment.

While there are no firm statistics, it is widely believed that Wal-Mart is the largest "private" purchaser of electricity in the world. In fact, Wal-Mart is widely considered to be the second largest purchaser in total energy, second only to the U.S. government. Energy is also Wal-Mart's second largest operating expense. Therefore, it should be no surprise that Wal-Mart has been focused on energy efficiency practically since it was founded.

As Wal-Mart has continued to expand into other countries, our primary mode of expansion has been to acquire existing stores in those countries. The stores we have built in the U.S. are more efficient on an "energy per square foot basis" than those we have acquired in any other country. This is even true for stores in countries with much more stringent energy regulations than current U.S. regulations and much higher utility rates, such as the UK and Japan.

Nearly one-third of Wal-Mart's energy is consumed in the form of lighting. Recognizing this as an opportunity for responsible business practice, we have developed over the last decade, what we feel is, one of the most efficient lighting systems in the world. Our installed lighting load is more than 40% less than the baseline requirements established in the Energy Policy Act of 2005.

During the day, sales floor lighting, in stores built in the last decade, is off or significantly dimmed. This is possible thanks to a sophisticated daylight harvesting system comprised of hundreds of skylights per store that are connected to state of the art sensors and control technology. This allows our sales floor lighting system to continually modulate the amount of energy needed, based on the natural light available. This system is so dynamic that it gradually ramps up and down as clouds pass over the store. In our non-sales floor areas such as offices, break rooms and restrooms, lighting is controlled by occupancy sensors that turn off the lights when no one is in the space. Beginning in January, even our freezer case lighting has evolved into an amazing display of advanced technology when it became comprised of “motion-activated LEDs”. The lights turn themselves on as a customer approaches, and turn themselves off as the customer leaves. The result is a 200,000 square-foot building where virtually all of the lighting is dynamic and only “on” to the degree that conditions warrant.

From an HVAC and refrigeration standpoint, Wal-Mart has always “reclaimed” or “recycled” the waste heat from our refrigeration equipment to generate our domestic hot water. We are beginning to take this a step further in new stores, testing the concept of heating the entire store with the “waste heat” generated by this equipment. Wal-Mart views the “waste heat” as a source of energy and we are expanding the use of this “free” energy source.

Wal-Mart recognizes the influence and implications of responsible energy policy by a large retailer. We strive to continue to decrease our footprint on the environment. As efficient and forward-thinking as our energy policies already are, we have very aggressive goals in our sustainability and energy efficiency efforts for the future.

In October of 2005, we announced plans to reduce energy consumption in our existing energy-efficient buildings by 20% over the next 7 years. We also plan to develop a new store prototype that will increase efficiency 25% - 30% over the next 4 years.

We also plan to retrofit over 400 of our refrigeration systems and HVAC systems this year with technologies that will reduce our energy consumption by 8% and 6% respectively and have a payback of less than two years. Additionally, we have recently approved an investment of \$25 million to retrofit 500 of our existing stores this year with motion activated LED lighting. This never before utilized technology will result in an energy reduction of 3% and a payback of two years. Wal-Mart plans to continue using energy retrofit efforts to reduce energy consumption; currently over a dozen similar initiatives are in some phase of development or implementation.

In regards to new store prototypes, we opened the first two of our newly developed “higher efficiency” prototypes earlier this year in Kansas City, Missouri, and in Rockton, Illinois. These stores are predicted to be 20% more efficient than our earlier prototypes. By early next year we plan to have met our goal and be opening

stores that are 27% more efficient. Plans are already in development for stores that approach and possibly exceed 50% efficiency in certain climate zones.

As proud as we are of these accomplishments and innovations, we are more proud to share what we are learning with everyone, even our competitors.

Wal-Mart recently opened a new facility in Savannah, Georgia, which included the first low-temperature CO2 secondary loop refrigeration system ever installed in the United States. At the grand opening, we conducted tours of the facility providing detailed descriptions of the systems to Target, Food Lion, Publix, Costco, and many others since.

We have recently shared these details on our initiatives and their related paybacks at the Department of Energy, Pentagon, Defense Science Board, Office of Management and Budget, the National Academy of Sciences and even with our retail competitors, Office Depot and Best Buy. We also recently shared our story of energy efficiency in Mexico City at a meeting of the Commission on Environmental Cooperation. The information we are sharing is not theory; it is real initiatives and real paybacks.

Wal-Mart has often been told by others that there need to be new technologies, or that there is a need for new legislation before energy efficiency becomes something with mainstream attractiveness. While Wal-Mart is not waiting for legislation to act proactively in the area of energy efficiency, we would encourage Congress to continue to look at new incentives that will help others to act proactively like Wal-Mart. Our experience tells us that there is a tremendous amount of opportunity to increase the energy efficiency of our economy, save consumers money, and address the serious threat of global climate change.

Wal-Mart takes pride in the fact that it has committed to invest up to \$500 million dollars per year in innovative, energy saving and climate-friendly technologies, but we are even more proud to pro-actively share our innovations with the world.

## CONCLUSION

Wal-Mart seeks excellence and responsibility in everything we do. We constantly strive to improve our business processes and to enrich the communities in which we are located. We at Wal-Mart applaud Congress in its efforts to communicate the necessity and the benefits of energy efficiency.

Thank you for inviting Wal-Mart to present testimony on this very important topic. We look forward to working with the Committee to effectively and constructively address these issues.