

**Testimony of Charles Zimmerman
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Wal-Mart Stores, Inc.**

Before the Senate Committee on Energy and Natural Resources

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Chairman Bingaman, Ranking Member Murkowski and distinguished Members of the Committee:

My name is Charles Zimmerman, and I'm Vice President of International Design and Construction for Wal-Mart Stores, Inc. In my current role, I'm responsible for coordinating the Architectural and Engineering System Design for all of our international retail facilities.

Prior to joining Wal-Mart's international division earlier this month, I was the U.S. Vice President of New Prototype Development and the captain of the Sustainable Buildings Network, where I oversaw our company's efforts to make our buildings more energy and water efficient, and lower their overall environmental impact. In that role, I led a team of architects and engineers to experiment, pilot, and deploy a range of clean technologies in our buildings. I helped design Wal-Mart's most recent two experimental stores—where we test a range of emerging technologies in real world applications; and then develop our fleet of High Efficiency stores across the country where we pilot promising technologies from our experimental stores to see how they succeed in different climatic regions; and finally deploy the most successful technologies across all our new store prototypes and into our retrofit of existing stores.

On behalf of Wal-Mart and our 2.2 million associates around the world I would like to thank the Committee for its

work on this important issue and for holding this hearing today. Wal-Mart appreciates the opportunity to participate in this critical discussion.

Our company holds a unique position in the world of energy. While there are no firm statistics, it is widely understood that Wal-Mart is one of the largest “private” purchasers of electricity in the United States. In fact, the only entity thought to purchase more energy in the U.S. than Wal-Mart is the U.S. Government. Since energy is also Wal-Mart’s second largest operating expense, it should be no surprise that we have been focused on energy efficiency practically since the day we were founded.

Fortunately, our global presence gives us a great opportunity for energy efficiency comparisons. As Wal-Mart has continued to expand into other countries, our primary mode of expansion has been to acquire existing stores in those countries. Therefore, it is interesting to note that the stores we have built in the US are actually more energy efficient than those we have acquired in any other country thus far. This is even true for stores in countries with much more stringent energy regulation and much higher utility rates than the US; such as the UK and Japan. In fact, our stores in the UK actually use twice the energy per square foot, and our stores in Japan one and a half times as much energy per square foot as our stores in the US.

We have always recognized what many others have not: energy is a controllable expense.

Because nearly one-third of Wal-Mart’s energy consumption is in the form of lighting, we have developed during the last decade, what we feel, is one of the most efficient lighting systems in the world. In fact, the installed

lighting load in one of our newer stores is nearly 50% less than the baseline requirements established in the Energy Policy Act of 2005.

This truly innovative system results in the fact that during daylight hours, our sales floor lighting is either off (or at the very least) significantly dimmed. This is possible thanks to a sophisticated daylight harvesting system comprised of hundreds of skylights per store that are connected to a sensor and state of the art 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 even gradually ramps the lighting levels 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. Even our freezer case lighting has now evolved into a display of advanced technology as it is now comprised of “LEDs” or “Light Emitting Diodes”. The result is a building where most of the lighting is dynamic and only “on” to the degree that conditions warrant.

And this is just lighting; similar efforts are underway with HVAC and refrigeration.

At the request of Wal-Mart, Lennox Industries has developed a new rooftop heating and air-conditioning unit that it marketed as “the most efficient unit of its kind”. Lennox also states that this equipment is “up to 66% more efficient than U.S. Dept. of Energy regulations”. EVERY roof top unit purchased in the US for all of our new stores and retrofits for over the past year has been this unit.

Of course as efficient as all of this equipment is, without proper control technology it will never meet expectations. That is why every Wal-Mart store in the US includes a sophisticated energy management system that allows us to monitor and control the lighting, temperature, humidity and refrigeration in each and every one of our stores from our home office in Bentonville, Arkansas.

If an associate in Sacramento leaves the door to a walk-in cooler open, we know it. If a store manager in Chicago over-rides her daylight harvesting system, we know it. And if a freezer in Miami is icing up and needs to be defrosted, we know it. And we can correct the situation from Bentonville.

As efficient and forward-thinking as our energy practices have always been, we have very aggressive goals in our sustainability and energy efficiency efforts for the future.

In October of 2005, we announced plans to reduce the greenhouse gas emissions in our already energy-efficient existing buildings by another 20% by 2012. We also announced plans to develop a new store prototype that will increase efficiency another 25% - 30% by October of 2009.

So, how are we doing in achieving these goals?

With regards to our existing stores we recently approved capital for more than 1,200 energy related retrofit projects in our existing 4,000 US stores. This is on top of a similar program last year, and more than likely a similar program next year. A majority of these projects have paybacks between two and three years. And remember, these are in already efficient stores that have daylight

harvesting systems, heat reclaim systems, energy management systems, etc.

When it comes to our new store program, we have opened in the last two years 8 of what we refer to as our “higher efficiency” prototypes. These stores are predicted to be up to 20-40% more efficient than our earlier prototypes, depending upon the climate zone. We are now in the midst of a 6 month strenuous audit of these facilities until the end of July in order to quantify exactly what the savings are prior to rolling them out to our entire program.

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

In the past two years or so we have shared the details on our energy initiatives and their related paybacks with the Environmental Protection Agency, the US Department of Energy, the Defense Science Board, the Office of Management and Budget and with our retail competitors, Office Depot and Best Buy. We have even shared our story with the Pentagon and with the National Academy of Science. We have also taken representatives from Food Lion, Target, Publix, Costco and many others on tours of our recently opened stores that featured some of our newer energy efficient technologies. The best thing about the information we are sharing is that it is not theory; it is the proven result of real initiatives with real paybacks.

I am often told by others that until there are new technologies or until there is additional legislation, energy efficiency will never achieve mainstream attractiveness. Believe me, the technology exists, we are proof of that, and while Wal-Mart is not waiting for legislation to cause us 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 as well, whether it be expanding the penetration of “smart metering” and “smart grid” technologies that would allow utilities, businesses and individuals to enjoy the kind of energy saving information management abilities that we have adopted; or adopting energy efficient building codes which set a floor for building performance to ensure that the lowest hanging fruit of efficiency upgrade benefits are met at a broader range of buildings. We hope that our experience proves insightful and helpful and stand ready to assist you in any way we can.

Finally, as you contemplate energy policy, we encourage you to remember the kinds of everyday Americans like the roughly 150 million shoppers who pass through our U.S. stores every week. More than ever before, we see these consumers struggling to make ends meet—we see them choosing between healthy food or their prescription medication; we see them leaving the toys out of the cart to make room for baby formula and diapers. At Wal-Mart, our energy efficiency practices not only help us save energy and protect the environment, they also help us keep costs low for our consumers.

And by making sure we have everyday low prices on products like energy efficient light bulbs, home winterization kits, and cold-water laundry detergent, we are helping Americans save money on energy costs, and live better.

In conclusion, I’m very proud to work for a company that has committed to, and is actively moving towards, a goal of eventually being supplied by 100% renewable energy; I am proud to work for a company that is demonstrating its commitment to environmental sustainability while saving

consumers money; and I am proud that the company encourages me to pro-actively share our innovations with the world.

We at Wal-Mart applaud Congress in its efforts to communicate the necessity and the benefits of energy efficiency.

Thank you for your time in allowing me to speak on behalf of Wal-Mart on this very important topic. We look forward to working with you to effectively and constructively address these issues.