TESTIMONY BEFORE THE UNITED STATES HOUSE OF REPRESENTATIVES COMMITTEE ON ENERGY AND COMMERCE SUBCOMMITTEE ON ENERGY "POWERING AMERICA: CONSUMER-ORIENTED PERSPECTIVES ON IMPROVING THE NATION'S ELECTRICITY MARKETS" WRITTEN TESTIMONY OF MARK VANDERHELM ON BEHALF OF WALMART

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Chairman Upton, Ranking Member Rush, and all members of the Subcommittee, thank you for the opportunity to submit this testimony in regards to the benefits to end-use customers of competitive electricity markets and the role of consumer advocates in electricity markets.

My name is Mark Vanderhelm, and I am Vice President of Energy for Wal-Mart Stores, Inc. ("Walmart"). I lead the team supporting Walmart U.S., which operates in all 50 states, the District of Columbia, and Puerto Rico. I oversee our Energy Regulation and Management, Energy Services, Energy Development, and Solid Waste and Recycling functions. I also oversee Texas Retail Energy, a wholly-owned subsidiary of Walmart which participates in the wholesale markets and operates as a competitive electric supplier, directly serving our stores in 11 states. The Walmart energy team works to deliver on Walmart's mission to save our customers money so they can live better, and does so through focusing on the operational success of our stores, energy cost management, and cost-effective procurement of renewable energy and energy efficiency technologies.

Walmart is unique among our retail peers in that we have a team that focuses on energy regulation and policy at the state and federal levels. At the state level, the team engages in

regulatory and legislative processes to advocate on behalf of Walmart on a broad array of issues, including securing reasonable rates that reflect utility costs to serve our stores, greater access to renewable energy resources, and competitive retail options. At the federal level, the team has engaged in proceedings at the Federal Energy Regulatory Commission ("FERC") and maintains a presence in the independent system operator stakeholder processes as both a customer and a supplier.¹

Customer engagement in regulatory and stakeholder arenas is critical, especially as the industry transitions to a business model in which customer-sited energy management technologies and generation resources become as important to system operations as utilityowned resources.

Competitive wholesale electricity markets and customer choice in retail electricity markets are integral to our success and when paired together create direct economic benefits to our stores and our customers. Competitive wholesale markets also provide a transparent and easily transactable platform for the procurement of renewable energy and allow customer demand to directly contract for supply. For example, Texas Retail Energy has entered into contracts with two wind farms to directly serve our Texas facilities, all without utility and regulatory intervention.

Customer choice gives us the freedom to choose a supplier that best meets our business goals with service offerings that provide choices on price, reliability, generation portfolio mix, and risk management. In contrast to monopoly utility companies that are essentially

¹ Texas Retail Energy is a member of the Electric Reliability Council of Texas, ISO New England, the Midcontinent Independent System Operator, the New York Independent System Operator, and PJM Interconnection.

guaranteed recovery of their costs from captive customers, competitive electric suppliers must offer superior service at better prices than their competitors, and their investment risk is borne by their shareholders.

The benefits of competitive wholesale markets and customer choice are clear. When we compare our cost per kWh in 2016 to our cost per kWh in 2007, we find that our cost in customer choice jurisdictions decreased by almost 7 percent on average.² In contrast, our cost in jurisdictions without customer choice increased by 14 percent on average.

States and utilities should be encouraged to develop new competitive wholesale markets or expand existing markets, and Walmart recommends that the Subcommittee explore policy changes that allow FERC to streamline the regulatory approvals process and more quickly deliver market benefits to customers.

The development of renewable energy and associated infrastructure creates a secure electrical grid in the long term and economic opportunity and jobs in the short term. To that end, Walmart has established aggressive and significant renewable energy goals. In 2005, we set an aspirational goal to be supplied 100 percent by renewable energy.³ In November, 2016, we built upon that goal by announcing that by 2025 we will be supplied by 50 percent renewable energy. Additionally, Walmart has set a science-based target to reduce emissions in our operations by 18 percent by 2025 through the deployment of energy efficiency, the consumption of renewable energy, and the reduction of refrigerant leakage. We have more

² California, Connecticut, Delaware, Illinois, Massachusetts, Maryland, Maine, Michigan, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, and Texas.

³ http://corporate.walmart.com/global-responsibility/environmental-sustainability

than 480 on-site and off-site renewable energy projects in operation or under development in seven countries and in 18 U.S. states and Puerto Rico. As of 2015, 25 percent of our global operations were powered by renewable energy.⁴

Walmart is deploying cutting edge customer-sited technology in order to better manage our energy usage and cost, enhance our energy security, respond to changes in the wholesale markets, and enable new technologies for our customers. Energy storage, such as batteries, can be leveraged for all of those functions, and to date we have installed nine large battery systems and have a significant pipeline in place for future deployments. We have a number of partnerships with electric vehicle charging companies to enable the adoption of EVs by our customers, and to date we have deployed 100 EV chargers across our store fleet. Finally, we have developed a modular LED lighting solution in partnership with our lighting vendors that the Department of Energy's Better Buildings Initiative has recognized as a new industry standard package. For a typical store, this solution can reduce annual energy usage by over 10 percent.

Customer choice should extend to customer activities behind the meter, whether those activities generate or save electricity. A number of states limit the financing mechanisms through which a customer can procure on-site generation technologies, which ultimately limits the adoption of those technologies. Walmart typically utilizes purchase power agreements ("PPAs") to contract for on-site generation. The primary benefits of PPAs are that there are no upfront capital costs, which allows us to focus our capital on our core business, and that the third party takes on the risks of developing and operating the generator. The discussion around

⁴ http://news.walmart.com/2016/11/04/walmart-offers-new-vision-for-the-companys-role-in-society

PPAs and other financing models has largely been focused around on-site solar installations. However, the technology deployed by customers is becoming more responsive to grid conditions and transactive with other customers and market participants. As is the case with on-site solar, new technologies could be construed as challenges to the business of the incumbent utilities and the response could be to limit the financing structures able to be used for deployment.

To unleash the potential benefits of customer-sited technology, the federal government should implement clear policies that give customers the freedom to install the technology on their homes and businesses that they want and finance it however they choose.

Thank you again for the opportunity to speak to the Subcommittee and I look forward to answering any questions you have.