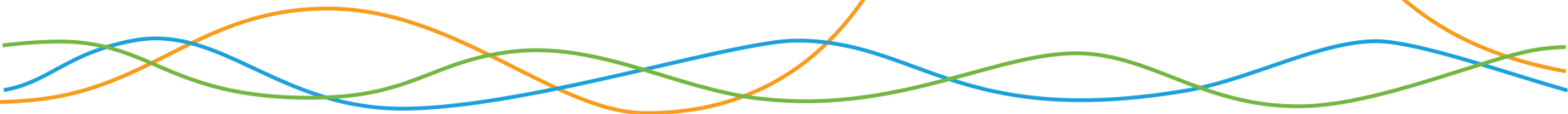




EE \leftrightarrow EA: The Virtuous Circle of Energy Efficiency and Energy Access

Matt Jordan
Senior Manager
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How does energy efficiency
support energy access?



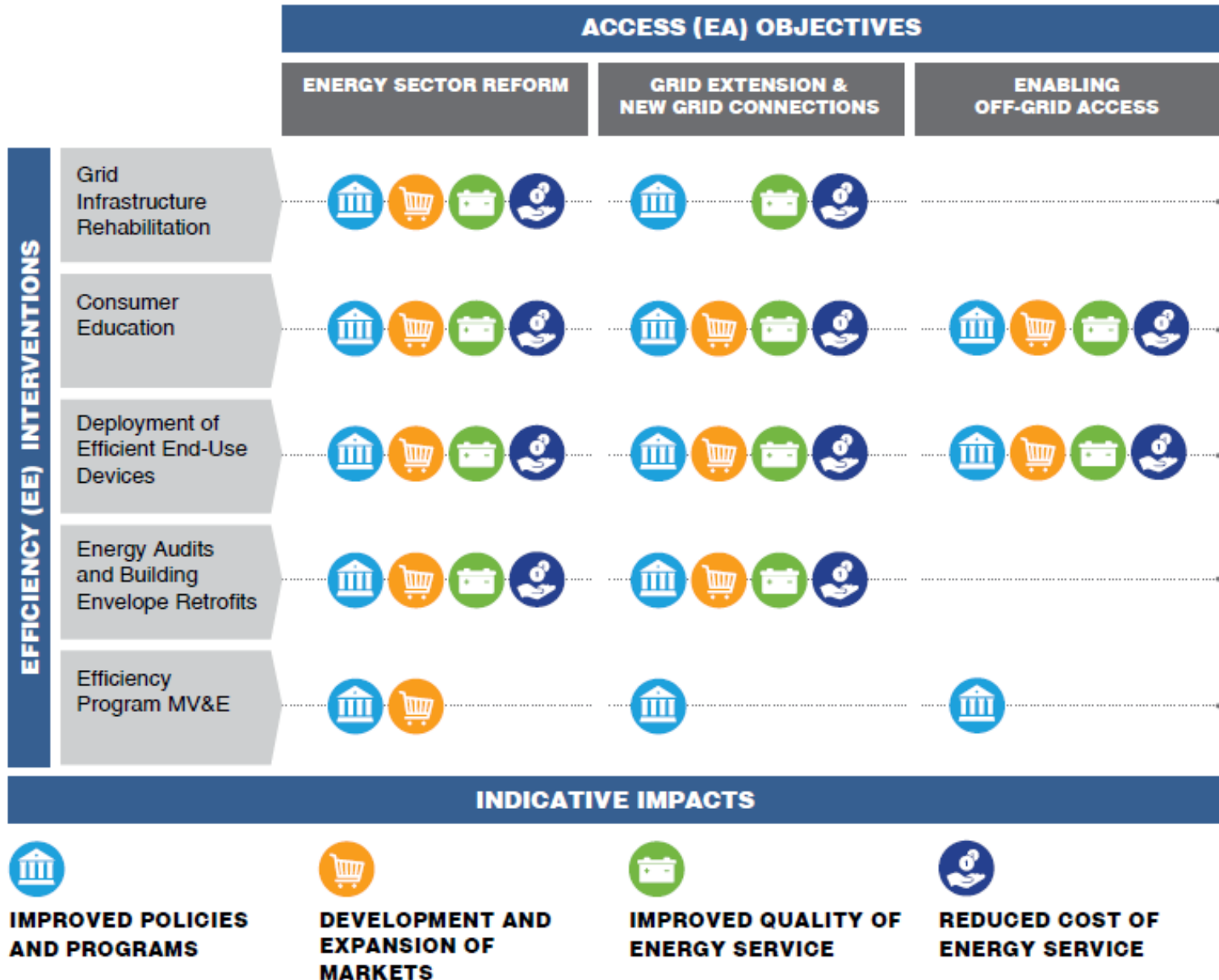
 EA

Energy Access is providing un- or under-served households, businesses and communities with new or enhanced access to reliable, affordable, and adequate modern energy services.

 EE

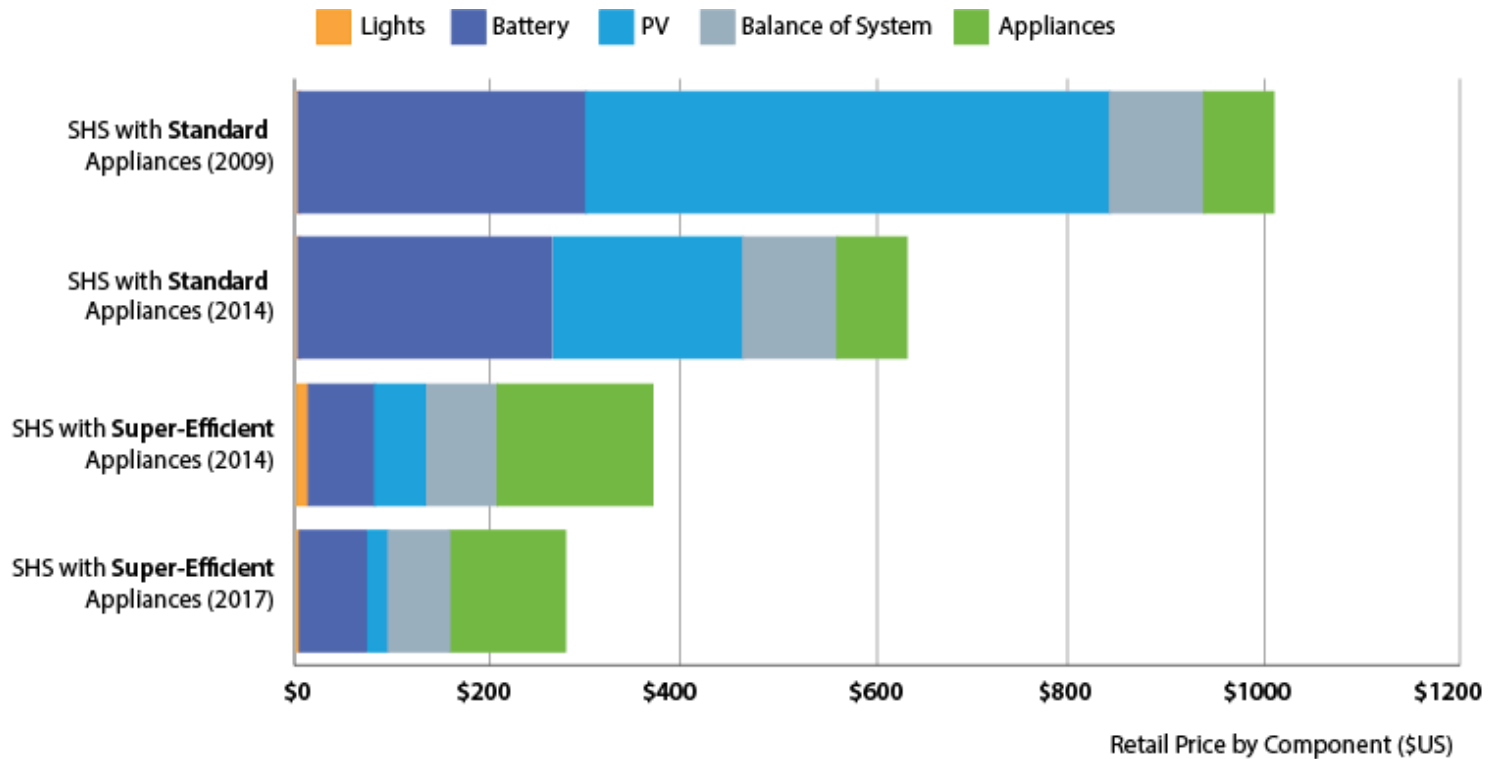
Energy Efficiency is requiring less energy to maintain or improve a given level of energy service.





Super-Efficient Appliances Drive Cost and Performance Benefits for Off-Grid Energy Systems

SHS Purchase Price Based on Appliance Type

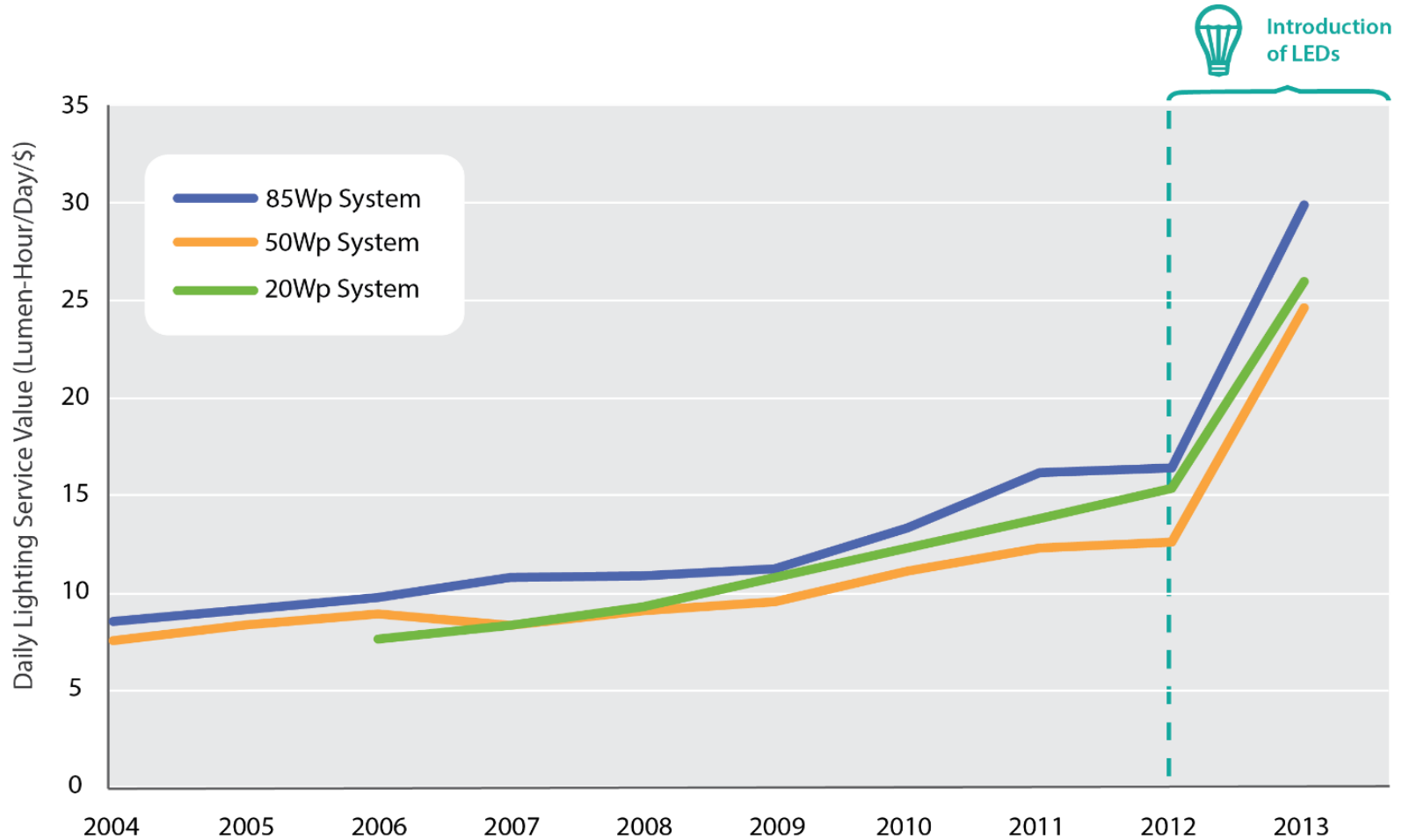


*Systems provide energy for 4 lights, a 19" color TV, a radio, and mobile phone charging

* Appliance use assumption: lights = 4hrs/day, TV = 3hrs/day, radio = 6hrs/day, mobile phone = 1 charge per day

Source: "A Home Energy System in just 25 Watts: Super-Efficient Appliances Can Enable Expanded Energy Access Using Off-Grid Solar Power Systems" (1.usa.gov/1K6yfyf)

Super-Efficient Appliances Drive Consumer Value of Off-Grid Energy Systems



Impact of Super-Efficient LED Technology on the Price of Daily Lighting Service (lumen-hour/day/dollar), Indicative Grameen Shakti SHS configurations, 2004 to 2013

Source: CLASP analysis (forthcoming)

How does energy access
support energy efficiency?



- Economics of off-grid energy are unique—and uniquely favorable to energy efficiency
 - Expensive but cost-effective energy, the payment terms of which are often front-loaded
 - Limited energy supply
 - Extraordinarily poor, price-sensitive consumers
 - The off-grid solar business model places extraordinary “first price” emphasis on end-use super-efficiency
 - Recent analysis: “... development of appliances for off-grid applications should lead to a major acceleration of energy efficiency improvement rates globally, potentially doubling the global rate of improvement in energy efficiency technology.” (Van Buskirk, R. 2015)
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