ENERGY JUSTICE

Barriers to energy-efficiency

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Though low-income households use less energy overall than high-income households, they use more energy per unit area, indicating less efficient energy use. Some factors, such as improving insulation, are expensive and out of reach for lower-income households who are less likely to own their home. But other factors, such as replacing incandescent and halogen bulbs (IHLs) with LEDs, can be relatively easy to implement irrespective of home ownership. Now, Tony Reames and colleagues from the University of Michigan examine the accessibility and affordability barriers that prevent lower-income households from adopting energy-efficient lighting options at the same rate as their higher-income peers.

The researchers visited 130 retail stores across 19 zip codes representing different poverty strata in Wayne County, Michigan. They found that while most stores carried IHLs, LEDs were only carried by 57% of stores in the lowest income areas compared to 91% in the highest income areas. Furthermore, IHLs were on average US$0.47 cheaper and LEDs US$2.67 more expensive in the lowest versus highest income areas. The kind of large retail stores where LEDs were generally cheapest (relative to for instance hardware stores and pharmacies) were predominantly found in areas with less poverty. Thus, individuals in the poorest areas have a more difficult time finding LEDs, and when they do find them, they are more expensive, indicating that the ability to transition to energy-efficient lighting is not equitably distributed.

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