How Electrifying Homes Will Reduce Energy Costs for Families and Help Communities Transition to Clean Energy

Electrifying homes and businesses is a simple, effective way to reduce costs for families and enable communities to transition to clean energy. Electrifying homes and buildings will not only help families save money on household energy costs and healthcare, it will also make homes safer and reduce harmful emissions.

Policies that encourage electrification will create long-term savings, improve public health and help transition communities to affordable clean energy.

Residential electrification is essential to fighting climate change and accelerating the transition to clean energy

Electrification of homes and buildings is essential to reducing carbon emissions and promoting the transition to clean energy. Household energy use is responsible for approximately 20% of greenhouse gas emissions in the United States. Almost two-thirds of households rely on combustion devices for heating, such as furnaces, stoves, water heaters that burn fossil fuels—while only about one third of households use electricity as their primary heating fuel. Households that rely on electricity for space heating produce the least amount of carbon, averaging 1.76 tons per housing unit each year. By comparison, the households that used natural gas for space heating produced 2.53 tons of carbon per year on average.

Electrification of households could help households save between $1050 and $2600 per year

Electrification of buildings and homes will reduce electricity consumption and help lower energy bills for households. Estimates show it would help workers and families save $1050 to $2600 per household. In 2020, almost 30% of U.S. households reported that they had difficulty paying their energy bill or that they had to keep their home at an unsafe temperature because of energy cost prices. Without upgrades to newer technology, households are locked into higher costs for years. These higher costs disproportionately fall on lower-income households, households of color and households with children.

Residential and building electrification provides major health and safety benefits for workers and families

The health risks of exposure to indoor air pollution are greater in homes where household appliances burn fossil fuels. Old and low-quality household appliances endanger the health of families. In the United States, carbon monoxide poisoning sends approximately 50,000 people to the ER and kills more than 400 people every year. Fully electrifying households would eliminate the need for combustion within homes and prevent hospitalizations and deaths, along with thousands of house fires every year.

Electrification dramatically improves health outcomes, especially for the most vulnerable Americans. Gas burners can generate nitrogen dioxide, carbon monoxide, particulate matter and formaldehyde, all of which have significant health consequences. Research has shown that the inhalation of the indoor air pollutants is dangerous for health and can cause early deaths. According to research published in 2012, the cumulative health burden of inhalation of the indoor air pollutants studied amounted to between 400 and 1,100 disability-adjusted life-years lost annually per 100,000 persons. Children living in households with a gas cooking stove have a 42% increased risk of asthma and a 24% increased lifetime risk of asthma. Replacement of gas stoves with electric stoves cut the concentration of nitrogen dioxide in kitchens in half.

Reducing short-term investment costs can help overcome barriers to electrification

Congress can ease economic barriers that discourage household electrification. The upfront transition cost of investing in residential electrification is too expensive for many families, creating an economic barrier between households and long-term investments in lower-cost appliances. Congress can make residential building electrification widespread and affordable through broad based investments in low-carbon technologies, industries and jobs, as well as improving decade old legislation on energy efficiency in buildings.